

# **Ministry of Petroleum & Natural Gas background material for Economic Editors' Conference 2005 17<sup>th</sup> NOVEMBER 2005**

## **BACKGROUND**

The Ministry of Petroleum and Natural Gas is enjoined to take measures for exploration for and exploitation of petroleum resources including natural gas and coal bed methane, take measures for production, supply, distribution, marketing and pricing of petroleum including natural gas, coal bed methane and petroleum products, as well as additives for petroleum and petroleum products..

2. The critical elements for the mandate therefore are measures for energy security through exploration for and production of petroleum and natural gas resources, sourcing alternative sources of energy including renewable fuels that can be blended in petroleum products and natural gas, pricing, marketing and distribution network and the regulatory mechanism, and strengthening of the public sector undertakings in the oil and gas sectors.

## **A. UP STREAM SECTOR - EXPLORATION FOR DOMESTIC OIL AND GAS**

3. In order to explore hydrocarbon resources in the country in an estimated sedimentary area of 3.14 Million square kilometer, the Government has been making efforts since 1970s to attract foreign investors with technologies and funds. A systematic effort on a regular basis to attract private investment, along with the efforts of National Oil Companies (NOC) was made in 1991. This policy was reviewed and significant changes were incorporated based on inputs from various stakeholders such as international and domestic oil companies, consultants, financial institutions as well as experience gained in the past. This policy named as **New Exploration Licensing Policy (NELP)** was approved by the Government in 1997 and operationalised in January, 1999 after completion of various documentation, changes in laws and concurrence of the State Governments. This policy is proving to be successful as 108 contracts have been signed in the first five rounds of NELP and 2 more contracts are expected to be signed shortly. An investment commitment of about US\$ 5 Billion for exploration in 3 phases has been made. Over 500 Million Metric Tonne of in-place Oil and Oil-Equivalent Gas (O+OEG) have been discovered. Significant discoveries have been made in Rajasthan (oil discoveries) and in Krishna – Godavari deepwater. One of the key successes of NELP has been to open deepwater areas for exploration. A list of discoveries made is given at **Annex-I**.

### **NELP – V : A successful round**

4. The Government signed production sharing contracts (PSC) for 18 exploration blocks under the fifth round of New Exploration Licensing Policy (NELP-V). These included 7 foreign companies namely Birckbeck Investment Ltd. (Mauritius), Cairn Energy Plc. of UK (through its seven (7) subsidiaries), ENI (of Italy), GeoGlobal Resources (Barbados), Hardy Exploration and Production India Inc., UK, Jubilant Capital Pvt. Ltd. (Cyprus) and Niko Resources (NELP-V) Ltd. (a subsidiary of Niko Resources Ltd., Canada) and 7 Indian companies namely Focus Energy Ltd. (formerly known as Phoenix Overseas Ltd.), GAIL (India) Limited, Gujarat State Petroleum Corporation Limited, Hindustan Petroleum Corporation Limited, Oil India Limited, Oil & Natural Gas Corporation Limited and Reliance Industries Limited.

5. The 18 blocks for which contracts were signed include 6 deepwater blocks (2 blocks each in the Andaman seas and Kerala-Konkan offshore and one block each in Krishna-Godavari and Mahanadi offshore), 2 offshore shallow water blocks (one each in Cambay offshore and Gujarat Saurashtra offshore) and 10 on land blocks (3 blocks in Rajasthan, 2 blocks in Gujarat and one block each in Andhra Pradesh,

Assam, Maharashtra, Tamil Nadu and Uttar Pradesh). The contract for the remaining 2 blocks – one each in Assam and Arunachal Pradesh will be signed shortly.

6. The Ministry is constantly in dialogue with various stakeholders for improvements in parameters for future offers for exploration. The Government targets to offer blocks under **NELP-VI** in the first quarter of 2006.

## **B. UP STREAM SECTOR- DOMESTIC RESERVES AND PRODUCTION**

7. Total **Prognosticated Resources** of the country has been estimated about **28 billion tonnes**. As on **1.4.2005**, oil and gas reserves are of the order of **1888 of oil equivalent (MMTOE)**. The break-up of Initial In-Place, Ultimate Reserves and Recoverable reserves is given below:

	Initial In Place(MMT)			Ultimate Reserves (MMT)			Reserves(MMT) *		
	Oil	Gas	O+OEG	Oil	Gas	O+OEG	Oil	Gas	O+OEG
<b>ONGC</b>	4498.55	1616.77	6115.33	1264.72	913.86	2178.58	562.43	517.02	1079.45
<b>OIL</b>	676.18	242.74	918.92	205.71	164.97	370.68	79.42	108.96	188.38
<b>Pvt/JV</b>	485.87	721.81	1207.67	135.19	483.32	618.51	144.18	475.54	619.72
<b>Total</b>	5660.60	2581.32	<b>8241.92</b>	1605.62	1562.15	<b>3167.77</b>	786.03	1101.53	<b>1887.56</b>

\* *Note : Reserves denote balance recoverable reserves of hydrocarbons*

- a) **Established in place hydrocarbon : 8.2 billion tonnes**  
*Established oil-in place : 5.7 billion tonnes*  
*Established gas- in place : 2.6 billion tonnes*
- b) **Established Ultimate recoverable reserves : 3.2 billion tonnes**  
*Established Ultimate oil reserves : 1.6 billion tonnes*  
*Established Ultimate gas reserves : 1.6 billion tonnes*
- c) **Balance Recoverable reserves : 1.8 billion tonnes**  
*Balance oil reserves : 0.7 billion tonnes*  
*Balance gas reserves : 1.1 billion tonnes*

- i) **Crude oil Production [in million metric tonnes (MMT)]**

Organization	1999-2000	2000-01	2001-02	2002-03	2003-04	2004-05 (Provisional)
<b>ONGC</b>	24.648	25.057	24.708	26.005	26.057	26.485
<b>OIL</b>	3.261	3.286	3.183	2.950	3.002	3.196
<b>Private/JV</b>	4.018	4.083	4.140	4.088	4.314	4.300
<b>Total</b>	<b>31.927</b>	<b>32.426</b>	<b>32.031</b>	<b>33.043</b>	<b>33.373</b>	<b>33.981</b>

ii) **Natural Gas Production [in billion cubic metre (BCM)]**

Organization	1999-2000	2000-01	2001-02	2002-03	2003-04	2004-05 (Provisional)
<b>ONGC</b>	23.252	24.020	24.042	24.238	23.583	22.985
<b>OIL</b>	1.729	1.861	1.618	1.744	1.887	2.010
<b>Private/JV</b>	3.465	3.596	4.054	5.407	6.491	6.782
<b>Total</b>	<b>28.446</b>	<b>29.477</b>	<b>29.714</b>	<b>31.389</b>	<b>31.961</b>	<b>31.777</b>

iii) **Total investment made by National Oil Companies, Private / JV companies**

**Total Investment up to March 2005 (Provisional) in US \$ Million**

	<b>NOC</b>	<b>Pvt.</b>	<b>Foreign</b>	<b>Total</b>
Medium Size	613.32	438.83	480.27	1532.42
Small Size	127.9	13.52	82.3	223.72
<b>Sub Total</b>	<b>741.22</b>	<b>452.35</b>	<b>562.57</b>	<b>1756.14</b>
Pre-NELP	240.05	248.52	630.56	1119.13
NELP-I	60.48	483	172.62	716.1
NELP-II	190.17	12.76	48.93	251.86
NELP-III	45.38	17.96	1.6	64.93
NELP-IV	1.03			1.03
<b>Sub Total (NELP)</b>	<b>297.06</b>	<b>513.72</b>	<b>223.15</b>	<b>1033.92</b>
<b>Sub Total (pre-NELP+NELP)</b>	<b>537.11</b>	<b>762.24</b>	<b>853.71</b>	<b>2153.05</b>
<b>Grand Total</b>	<b>1278.33</b>	<b>1214.59</b>	<b>1416.28</b>	<b>3909.19</b>

## **C. UP STREAM SECTOR- HYDROCARBON DISCOVERIES MADE DURING 2004-05**

### **ONGC (4 discoveries)**

SN	Name of the discovery	Type
1	Tiphuk (Assam)	Oil & Gas
2	Wamaj (Gujarat)	Oil
3	D-33 (West Coast Offshore)	Oil & Gas
4	Vashista (East Coast Offshore)	Gas

### **OIL (3 discoveries)**

SN	Name of the discovery	Type
1	North Tinali (Assam)	Oil & Gas
2.	West Zaloni (Assam)	Oil & Gas
3.	Samdang (Assam)	Oil & Gas

### **Pvt./JV companies (12 discoveries)**

SN	Area/State	Operator	Name of Discovery	Type
1	Rajasthan (RJ-ON-90/1)	Cairn	NC (Shakti)	Oil
			NV (Bhagyam)	Oil
			Vijaya (NR-1)	Oil
			Vandana(NR-2)	Oil
2	Gujarat (CB-ONN-2000/1)	GSPC	PK#2	Oil
3	Eastern Offshore (KG-DWN-98/3)	RIL	Dhirubhai-7	Gas
			Dhirubhai-8	Gas
			Dhirubhai-16	Gas
4	Eastern Offshore (NEC-OSN-97/1)	RIL	Dirubhai-9	Gas
			Dirubhai-10	Gas
			Dirubhai-11	Gas
			Dhirubhai-15	Gas

8. Significant discoveries have been made in new area / new formations. Reliance Industries Limited (RIL), apart from making huge gas discoveries in Krishna Godavari deepwater, has made gas discoveries in North – East coast offshore. Gujarat State Petroleum Corporation Limited( GSPC made a significant gas discovery in Krishna-Godavari shallow offshore in old rock (Cretaceous), which has opened a new frontier for exploration in the area.

## **D. UP STREAM SECTOR- DOMESTIC EXPLORATION FOR OTHER GASEOUS FUEL**

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

9. The Government formulated a CBM Policy to attract technology and investment for exploration and production of coal bed methane from coal producing areas. Already 16 exploration blocks for CBM have been awarded to National Oil Companies (NOCs) and private companies by the Ministry of Petroleum & Natural Gas. Out of 16 blocks, 13 exploration blocks were awarded through international competitive bidding under first two rounds of CBM Policy. Two blocks were awarded on nomination basis to ONGC-CIL and one block to Great Eastern Energy Corporation Ltd. (GEECL) through Foreign Investment Promotion Board ( FIPB) route.

10. Exploration work in all the awarded CBM blocks is in progress. The results of the blocks operated by GEECL, Reliance Industries Ltd. (RIL) and ONGC-CIL in the areas of Raniganj, Sohagpur West, Sohagpur East and Jharia are encouraging. Commercial production of CBM is expected in 2007-08. Seven exploration blocks have been carved out jointly by Coal Mining Planning & Designing Institute (CMPDI) and DGH, which are planned to be offered shortly under the third round of CBM Policy.

### **(ii) Underground Coal Gasification(UCG)**

11. As per the estimates of ONGC, the recoverable energy from Mehsana-Ahmedabad block alone with coal reserves of 63 billion tonnes in the form of gas could be equivalent to 15, 000 Billion Cubic Meters (BCM) of natural gas. ONGC has signed an MOU with Skochinsky Institute of Mining (SIM), Russia which has expertise in the field of UCG. GAIL (India) Ltd. has also signed an MOU with Ergo (a Canada based company) for exploitation of UCG potential.

### **(iii) Gas Hydrates**

12. Gas hydrates, generally found in deep sea, are basically methane molecules trapped in ice. At present, there is no commercial production of gas hydrates in any part of the world and the technology is only at research and development stage. The Ministry of Petroleum and Natural Gas has a roadmap regarding exploration of gas hydrates, which is under implementation. Prioritization of areas of operations have since been made and a road map for National Gas Hydrate Programme (NGHP) has been prepared. The Directorate of Hydrocarbons is the nodal agency. Possibility of taking up coring/drilling programme for gas hydrates through collaboration with National Science Foundation (NSF) and Joint Oceanography Institute of USA, who have specialized equipment, technical know-how and “Joides Resolution” a riserless ship being used for similar purpose by International Ocean Drilling Programme (IODP) are also being explored. Collaboration for getting science support for NGHP coring/drilling programme is being taken up with United States Geological Survey (USGS) Dept of Energy (DOE) of USA. MoU with them is in advance stage of signing.

### **(iv) Revision in Royalty rates under Oil Fields Regulation & Development Act (ORDA), 1948**

13. The Government has put in place a new royalty regime. The notification under ORDA has been brought out in December, 2004, specifying various rates of royalty for various nomination blocks, NELP and pre-NELP PSCs and discovered field PSCs. These notifications under ORDA were pending for a significant period.

## **E. UP STREAM SECTOR- EQUITY OIL AND GAS FROM ABROAD**

14. In view of unfavorable demand – supply balance of hydrocarbons in the country, acquiring equity oil and gas assets overseas is one of the important components of enhancing energy security. The Government is encouraging NOC to aggressively pursue equity oil and gas opportunities overseas. OVL, today has presence in 13 countries. OVL has made an investment commitment of over US\$ 3 Billion and has an oil and gas production (O+OEG) of about 5.07 MMT in the year 2004-05. OVL has a target to acquire 20 MMTPA of O+OEG production by 2010 (earlier target was to achieve this production rate by 2020). OIL, IOC and GAIL are also engaged in acquiring overseas E&P assets. OIL – IOC has an exploration block in Libya apart from being OVL partners. GAIL has interest in one Myanmar offshore block. Details of current overseas E&P assets are given at **Annex-II**. Recently, OVL has signed an MOU with the Mittal Group for leveraging their presence in some hydrocarbon rich countries such as Kazakhstan. Some of the major E&P opportunities being pursued by OVL at present are in Ecuador, Thailand, Venezuela etc.

## **F. STATUS OF NATURAL GAS**

### **(i) Natural Gas**

15. Natural Gas has emerged as the most preferred fuel due to its inherent environmentally benign nature, greater efficiency and cost effectiveness. The main producers of natural gas are ONGC, OIL and the Joint Ventures of Tapti, Panna Mukta and Ravva. Out of the total production of around 90 MMSCMD, after internal consumption, extractions of LPG and un-avoidable flaring, around 75 MMSCMD is available for sale to various consumers. In addition, 5 MMTPA of re-gasified LNG (about 18 MMSCMD) is also being supplied to domestic consumers.

16. Gas produced by ONGC/OIL from the existing nominated blocks is sold at administered prices fixed by the Government. As against total allocation of 118 MMSCMD of gas, actual supplies are 62 MMSCMD. Around 32% is supplied to fertilizer sector, 41% to power, 4% to sponge iron and balance goes to other sectors.

17. According to the India Hydrocarbon Vision 2025, the share of natural gas in the energy basket is projected to grow from the current level of about 9% to about 20% in the year 2025. Accordingly, additional gas supplies are required to be organized from domestic resources and through gas imports, both in the form of Liquefied Natural Gas (LNG) as well as piped gas via Trans National Gas Pipelines.

18. In recent years, use of natural gas for the automotive sector has gained importance for reducing chronic vehicular pollution in big cities. Mahanagar Gas Limited (MGL) in Mumbai and Indraprastha Gas Limited (IGL) in Delhi are engaged in developing CNG infrastructure in the Metros. Assam Gas Company Limited (AGCL) and Gujarat Gas Company Limited (GGCL) are also engaged in distribution of piped natural gas in different cities in Assam and Gujarat respectively. There are plans to extend CNG facilities in some other highly polluted cities like Kanpur, Lucknow, Agra, Bareilly, Faridabad and Pune etc.

### **(ii) Pricing of Natural Gas**

19. The consumer price of Administered Price Mechanism (APM) gas produced by ONGC & OIL from their existing fields has been revised by the Government w.e.f. 1.7.2005. The salient points of the Government Order are as follows:-

(i) The determination of producer prices of ONGC and OIL will be referred to Tariff Commission. Transportation tariff of GAIL has already been referred to Tariff Commission.

(ii) Till the Tariff Commission submit its recommendation and decision is taken thereon, the consumer price of APM gas has been increased from Rs.2850/MMSCM to Rs.3200/MSCM on an ad-hoc basis.

(iii) Power and fertilizer sectors are critical to the economic development of the country and the output price of these sectors is either controlled or regulated by the Central and State Governments, who have to bear subsidy to a large extent for any increase in the output price. The specific end users committed under Court Orders/small scale consumers with allocations up to 0.05 MMSCMD also deserve priority in gas supply. Accordingly, it has been decided in the public interest that all available APM gas would be supplied to only the power and fertilizer sector consumers against their existing allocations along with the specific end users committed under Court orders/small scale consumers having allocations up to 0.05 MMSCMD at the revised price of Rs.3200/MCM. However, the gas price for transport sector (CNG), Agra-Ferozabad small industries and other small scale consumers having allocations up to 0.05 MMSCMD would be progressively increased over the next 3 to 5 years to reflect the market price.

(iv) The price of gas for the North-Eastern region will be pegged at 60% of the revised price for general consumers. Thus, the consumer price for the North-East region will increase from the existing price of Rs.1700 to Rs.1920/MCM.

(v) Subject to the determination of producer price, based on the recommendations of the Tariff Commission, any additional gas as well as future production of gas from new fields to be developed in future by ONGC/OIL will be sold at market-related price in the context of NELP provisions.

20. Apart from APM gas, gas produced by JVs is sold at market price in terms of their respective PSCs. Similarly LNG is also sold at market price.

## **G. IMPORT OF LIQUEFIED NATURAL GAS (LNG)**

21. Liquid Natural Gas is being imported and such import is permitted under open general license category. Petronet LNG Limited (PLL), a joint venture promoted by GAIL, IOCL, BPCL and ONGC was formed for import of LNG to meet the growing demand of natural gas. PLL has constructed a 5 MMTPA capacity LNG Terminal at Dahej in Gujarat where commercial supplies have already commenced in March 2004. This Terminal is being expanded to 10 MMTPA capacity. Shell's 2.5 MMTPA capacity LNG Terminal at Hazira has been commissioned in April 2005. Other LNG terminals under implementation/considerations are the Dabhol LNG Terminal and LNG terminals at Kochi, Mangalore and Ennore. In June 2005 Sale Purchase Agreement (SPA) for import of 5 MMTPA of LNG from Iran was signed between GAIL/IOC/BPCL and National Iranian Gas Export Co.Ltd. (NIGEC) and imports are likely to start from 4<sup>th</sup> Quarter of 2009.

22. With the expected increase in gas availability from domestic sources, particularly in KG Basin, additional production from Tapti, JV field, projected imports of LNG and piped gas through trans-national pipelines, there is a need for commensurate increase in gas pipeline infrastructure. While, the Petroleum & Natural Gas Regulatory Board Bill, containing appropriate provisions for gas sector regulator, is under finalization for introducing in the Parliament, simultaneously, a policy for development of natural gas transmission pipelines and city or local gas distribution networks is being worked out.

## **H. IMPORT OF NATURAL GAS TO INDIA THROUGH TRANSNATIONAL GAS PIPELINES.**

23. The Government has approved the proposal of the Ministry of Petroleum and Natural Gas to pursue natural gas imports from Iran, Myanmar and Central Asian countries through on-land trans-national pipelines.

### **(a) Iran-Pakistan-India (IPI) Pipeline Project**

24. In pursuance of Government decision in February 2005, Minister (P&NG) led a delegation to Pakistan during June 2005. A Joint Working Group (JWG) at the Secretary level was set up thereafter for reporting the progress to the Ministers to facilitate definitive decisions by them. Further, with a view to undertaking further studies and discussions in regard to relevant issues so that the project could take off by early next year, it was agreed to establish a special JWG on the Iran-Pakistan-India gas pipeline project.

25. Two meetings of the JWG and one meeting of the special JWG have been held since. The Indian side has already appointed financial consultants and is in the process of finalizing appointment of legal & technical consultants for the project. During the second JWG meeting, the Pakistani side informed that they will also shortly be appointing their Financial Consultants.

### **(b) Myanmar-Bangladesh-India Gas Pipeline Project.**

26. To pursue the matter at the Government level, for bilateral and trilateral discussions with Myanmar and Bangladesh, the Minister (P&NG) visited Yangon during January 2005. A Memorandum of Understanding (MOU) for cooperation in the petroleum sector between the two Governments was signed. A trilateral meeting of the Petroleum Ministers of India, Myanmar and Bangladesh was also held. After the meeting a Joint Press Statement was issued by the three Ministers. The three sides agreed to transport of natural gas from Myanmar to India by pipeline transiting through Bangladesh. The route of the pipeline will be determined by mutual agreements of the three Governments. It was also decided to establish a Techno-Commercial Working Committee (TCWC) comprising duly designated representatives of the three Governments to prepare a draft MOU prescribing the framework of cooperation among the three Governments, including the Myanmar-Bangladesh-India gas pipeline project. The MOU would be signed at Dhaka at the earliest mutually convenient date.

27. The TCWC has been constituted by the three Governments and it has finalized the draft MoU proposed to be signed by the three oil Ministers. However, there are certain bilateral issues for India vis a vis Bangladesh, which need to be sorted out, with attempts to bring Bangladesh on board. Simultaneously, India is also exploring the other option of import of natural gas from Myanmar directly through North-eastern Indian States. Both options are being simultaneously pursued, and a decision is expected very shortly.

### **(c) Turkmenistan-Afghanistan-Pakistan (TAP) pipeline**

28. Daulatabad area of Turkmenistan has reported to have sufficient gas reserves. The Governments of Turkmenistan-Afghanistan-Pakistan (TAP) proposed the transnational gas pipeline to exploit the available gas reserves in Turkmenistan. Although, India is not yet formally involved in TAP project, Minister (P&NG) has been invited to the next Steering Committee Meeting to be held in Ashgabat in early December, 2005.

## **I. DOWNSTREAM SECTOR- REFINING**

### **Refining Capacity and Performance**

29. The refining capacity during last two years (2003-04 & 2004-05) increased from 119.868 MMTPA (2003-04) to 127.368 MMTPA (2004-05), an increase of 9.0 MMTPA. The details of the increase in installed capacity during the period are given below:

<b>Year</b>	<b>Sector</b>	<b>Refinery</b>	<b>Capacity Addition (MMTPA)</b>
2003-04	PSU	IOC (Haldia)	1.4
	Private	RIL-Jamnagar	6.0
<b>Total</b>			<b>7.4</b>
2004-05		CPCL	3.0 (commissioned 7.4.2004)

The following projects of creating additional capacity are under execution at present:

<b>Anticipated date of commissioning</b>	<b>Refinery</b>	<b>Capacity Addition (MMT)</b>
December,2005	IOC, Panipat	6.0
March, 2008	-do-	3.0
February, 2007	HPCL, Mumbai	2.4
February,2007	HPCL, Visakh	0.8
September,2009	KRL, Kochi	2.0
	Total	14.2

BPCL Expansion of 5.1 MMTPA is under commissioning.

30. The details on throughput and capacity utilisation of refineries are given below:

<b>Year</b>	<b>Installed Capacity (MMTPA)</b>	<b>Actual Throughput (MMT)</b>	<b>Capacity Utilisation (%)</b>
2003-04	119.87(Prorated)	121.84	101.6
2004-05	127.37	127.12	99.8
2005-06 (P)	63.86 (Apr-Sept 05)	62.78 (Apr-Sept 05)	98.3

## **G. DOWNSTREAM SECTOR - CONSUMPTION OF PETROLEUM PRODUCTS**

31. The consumption of petroleum products during the year 2004-2005 was 111.6 MMT with a growth rate of 3.6%. The consumption and growth rate for the first three years of 10<sup>th</sup> Five-Year plan is given below:

<b>YEAR</b>	<b>CONSUMPTION (TMT)</b>	<b>GROWTH RATE (%)</b>
2002-03	104126	3.7
2003-04	107751	3.5
2004-05	111592	3.6
2005-06(Apr-Sep 05) (P)	52986	-0.9

## **J. DOWNSTREAM SECTOR – IMPORTS/EXPORTS OF CRUDE OIL AND PETROLEUM PRODUCTS**

32. India imports 78 % of its crude oil requirement. The country is, however, a net exporter of petroleum products. The details of import bill for last two years, both in terms of quantity and value are given below:

Year	Crude Oil Import			Petroleum Product Import			Gross Import		
	Qty (MMT)	US\$ (Million)	Rs. (Crore)	Qty (MMT)	US\$ (Million)	Rs. (Crore)	Qty (MMT)	US\$ (Million)	Rs. (Crore)
2003-04	90.4	18268	83528	8.0	2114	9723	98.4	20382	93251
Variation (%)	10.3	15.9	9.4	10.7	16.0	9.9	10.3	15.9	9.7
2004-05	95.9	25990	117032	8.9	3270	14950	104.7	29277	131982
Variation (%)	6.0	42.3	40.1	10.6	54.7	53.8	6.4	43.6	41.5
2005-06 (Apr-Sept 05) (P)	47.92	17993	79429	5.8	3118	12002	53.71	21111	91431
Variation (%)	3.5	35.2	30.3	65.6	168.1	124.4	1.1	45.8	37.9
Year	Product Export			Net Import					
	Qty (MMT)	US\$ (Million)	Rs. (Crore)	Qty (MMT)	US\$ (Million)	Rs. (Crore)			
2003-04	14.6	3661	16781	83.8	16721	76470			
Variation (%)	42.1	62.6	54.4	6.2	9.1	3.1			
2004-05	17.5	6317	28386	87.2	22943	1034596			
Variation (%)	19.9	72.5	69.2	4.1	37.2	35.5			
2005-06 (Apr-Sept 05) (P)	9.2	4573	19807	44.5	16538	71624			
Variation (%)	23.1	79.7	70.1	-2.6	38.6	31.1			

## **K. DISTRIBUTION AND MARKETING OF PETRO-PRODUCTS**

### **(i) Distribution of petroleum products**

33. The following new pipelines have been commissioned since 1.4.2002:

Pipeline	Company	Length (KMs)	Capacity (MMT)
<b>Product – Pipelines</b>			
Kochi-Karur	Petronet	292	3.30
Mathura-Tundla	IOC	56	1.20
Koyali-Navgam	IOC	78	1.80
Koyali-Viramgam-Sidhpur	IOC	249	4.10
Mangalore-Hasan-Bangalore	Petronet	361	2.30
Panipat-Rewari	IOC	155	0.75
<b>LPG Pipelines</b>			
Vizag-Vijaywada-Secunderabad	GAIL	600	1.33

34. The country has a network of 20 pipelines (product and LPG Pipelines) with a length of 8863 Km. and capacity to carry 65.45 MMT of products as of 1.4.2005.

## **(ii) Fuel Quality:**

35. All the four metros and major cities (total 13 destinations) are being supplied auto fuel equivalent to Euro III standard. Rest of the country is supplied with auto fuels confirming to BS-II standard.

## **(iii) Liquid Petroleum Gas (LPG)**

36. There has been substantial expansion of LPG in the country. As of 1.4.2005 there are:

- ?? 4105 LPG markets
- ?? 9001 LPG Distributors
- ?? 7702 TMT of bottling capacity
- ?? 845 lakh LPG customers
- ?? 465 lakh DBC population

37. Apart from existing 14.2-Kg cylinders for domestic customers, industry had introduced 5-Kg cylinders for low-income group customers. About 2.5 lakh customers have been enrolled in this category. LPG customers' population covers approximately 43.5% of country's total households.

## **(iv) Distribution of Superior Kerosene Oil (SKO)**

38. The initiatives taken by the Government/Public Sector Oil Marketing Companies (OMCs) in containing the menace of adulteration including diversion of PDS kerosene, include inter alia new tamper proof tank-truck locking systems to prevent en route adulteration by transporters. Further, Information Technology (IT) solutions like monitoring movement of tank trucks through Global Positioning System (GPS) and monitoring level of fuel tanks in Retail Outlets through retail automation are being introduced. Branding of Retail Outlets and third party certification of Retail Outlets have been initiated by the OMCs. Measures to check adulteration are kept under continuous review of the Government

39. In order to check diversion of SKO for adulteration as well as its unauthorized use (in automobiles) and to ensure that this heavily subsidized product reaches the targeted beneficiaries, Government have started a pilot scheme from 2<sup>nd</sup> October 2005 to strengthen the PDS Kerosene distribution network. Under this scheme, the OMCs are being given the responsibility of supplying the product to the wholesalers/sub wholesaler level and the kerosene distribution is to be monitored under the supervision of Panchayati Raj Institutions (PRIs). This scheme has been initially launched in 420 blocks effective 2.10.2005 and would be considered for extending to the whole country, in case it is found effective in meeting the desired objective.

## **(v) Marketing Rights for transportation fuels**

40. In terms of the Resolution dated 8<sup>th</sup> March 2002 of Ministry of Petroleum and Natural Gas, guidelines to grant authorization to market transport fuels, namely, motor spirit (MS), high speed diesel (HSD) and aviation transport fuel (ATF) were issued by the Government. So far, under the Resolution, the following companies, both PSU and Private, have been granted marketing rights to sell transport fuels:

- ?? Essar Oil Ltd. (EOL)
- ?? Reliance Industry Limited (RIL)
- ?? Oil & Natural Gas Corporation Ltd. (ONGC)
- ?? Numaligarh Refinery Ltd. (NRL)
- ?? Shell India Pvt. Ltd. (SIPL)

M/s RIL, EOL, NRL & ONGC have started marketing of transportation fuels through their Retail Outlets.

41. It is proposed that all disputes arising among entities or between an entity and any other person / consumer would be settled by a Regulatory Board. The Government would continue to lay down the policy relating to downstream petroleum sector activities keeping in view the objective of oil security and interest of consumers, but the Government would not directly regulate or issue directives to the Board on day to day matters.

#### **(vi) Petroleum and Natural Gas Regulatory Board**

42. The Government had introduced the bill in Parliament for setting up of the Petroleum and Natural Gas Regulatory Board in December 2003. However, the bill was not taken up the House owing to lack of time. A fresh draft bill has been prepared in consultation with the concerned departments and is under consideration of Group of Ministers (GOM). After the approval of GOM, the matter would be placed before the Cabinet for consideration.

### **L. STATUS RELATING TO PRICE AND SUBSIDY**

#### **(i) International Oil Price Scenario**

43. The price of Indian basket of crude oil imported touched \$62.78/Barrel on 1<sup>st</sup> September 2005. The average price of Indian basket of crude during the period April - October 21, 2005 has been \$54.35/Barrel as compared to \$39.22/Barrel during the financial year 2004-05, showing an increase of 38.5%. The composition of Indian basket of crude represents average of Oman and Dubai crude for sour grades and Brent (Dated ) for sweet grades in the ratio of 57 : 43. The ratio has been revised to 58:42 with effect from 1<sup>st</sup> April'2005. The prices of major petroleum products have also increased in tandem. Some of the major drivers of volatile international prices which existed in the earlier year still continue to plague the international oil price scenario. These were increased speculative activity in oil, political instability in oil exporting countries like Iraq, Venezuela and Nigeria, political tension over nuclear installation in Iran, dispute regarding taxes between the Russian Government and Yukos oil company, the largest oil exporting company in Russia, perceived threat to major oil installations of the world from terrorist organizations, tight supply position in the OPEC countries, sharp growth in demand from China, US and India, and disruptions in supplies due to Hurricane Katrina, Rita etc.

44. The trend in the international prices of crude oil and major petroleum products is given below:

Period	Crude oil (Indian Basket)*	Petrol	Diesel	Kerosene	LPG*
				\$/bbl	\$/MT
March 02	23.33	26.43	23.27	26.56	194.00
2002-03	26.59	30.11	28.91	29.28	280.40
2003-04	27.98	35.01	30.39	31.11	278.45
2004-05	39.21	48.97	46.91	49.51	368.52
Apr 05	49.47	60.24	61.36	69.00	416.80
May 05	47.02	53.37	56.45	61.09	421.80
Jun 05	52.75	58.38	65.61	66.98	394.80
Jul 05	55.05	63.43	66.89	67.75	399.80
Aug 05	60.05	72.52	68.09	73.42	403.60
Sep 05	59.74	78.39	71.78	75.70	438.20
Oct 05 (Up to 21/10/05)	56.28	62.85	67.97	71.33	517.00
Average Apr-21 <sup>st</sup> Oct'05	54.47	65.08	68.50	69.47	427.43

\*Source: PPAC (period April-21<sup>st</sup> October 2005)

## (ii) Impact of International Prices on Domestic Prices and Adjustments in Tariff Levels

45. With import dependence as high as 76% and with the dismantling of APM and shift over to import parity pricing in April 2002, the impact of volatile international prices needs to be reflected in the domestic prices. The Government attempts to distribute equitably the severe burden of oil price hike amongst various stakeholders, i.e., oil marketing companies, Government and consumers. Further, from time to time have customs and excise duty on crude and petroleum products have been restructured to mitigate the burden of price rise on common man. The changes in Customs and Excise duties in respect of major petroleum products is given below:

	As on 28/2/05 (%)	With effect from 01/03/2005 (%)
<b>Customs Duty</b>		
Petrol	15	10
Diesel	15	10
SKO (PDS)	5	Nil
LPG(Domestic)	5	Nil
Others	20	10
<b>Excise Duty</b>		
Petrol	23+Rs.7.50 per litre	8+Rs.13 per litre
Diesel	8+Rs.1.50 per litre	8+Rs.3.25 per litre
SKO (PDS)	12	Nil
LPG(Domestic)	8	Nil

Education Cess @ 2% is leviable on the above rates.

## (iii) Impact on Oil Marketing Companies

46. However, the oil marketing companies have incurred under-recoveries owing to non-revision of selling prices in line with the ruling international prices. The year-wise under-recovery of oil companies are tabulated below:

Rs./Crore

Under-recovery	2003-04	2004-05 (Estimated)	Apr- Jun'05
PDS Kerosene and domestic LPG *	9274	17842	4831
Petrol and Diesel	-	2304	4940
	9274	20146	9771

\*On gross basis, i.e. before sharing of losses by upstream oil companies.

47. The oil marketing companies have reported losses for the period April-June 2005. A comparative statement of profit after tax (PAT) for April-June 2005 vs. April-June 2004 is shown below:

Rs./Crore

	April-June 2005	April-June 2004
IOC	-54.23	1472.17
BPC	-431.30	147.30
HPC	-507.89	247.30
IBP	-233.97	-8.65
Total	-1227.39	1858.12

48. In view of the continued and unrelenting price increase and under-recoveries suffered by OMCs, the Government increased the prices of petrol and diesel by Rs.2.50 per litre and Rs.2.00 per litre (at Delhi) respectively effective midnight of 20th/21st June 2005 with corresponding increases in the country, and with effect from 7<sup>th</sup> September 2005. Prior to that, Prices of petrol and diesel were earlier revised in November 2004. Having reviewed the this dismal situation faced by oil marketing companies, the Government was forced to increase the petrol and diesel prices further by Rs. 3 per litre and Rs 2 per litre respectively with effect from 7<sup>th</sup> September 2005. However, it is noteworthy that the prices of PDS Kerosene and domestic LPG have not been increased on both the price revisions effected on 21<sup>st</sup> June 2005 and 7<sup>th</sup> September 2005. The upstream oil companies will contribute Rs 3220 crore for the second quarter i.e. July-September 2005 in respect of under recoveries suffered in marketing sensitive petroleum products. The Government is also contemplating issue of Bonds to oil marketing companies for losses suffered due to non-revision of prices in respect of sensitive petroleum products. It is expected that above steps will help improve the bottom line of oil marketing companies that are faced with financial crisis for the first time.

#### **(iv) Sharing of Losses on PDS Kerosene and Domestic LPG**

49. The loss sharing mechanism formulated by the Government in the financial year 2003-04 for sharing the under-recoveries suffered by oil marketing companies in marketing PDS Kerosene and domestic LPG continued for the first two quarters, i.e. April-June 2005 and July-September 2005 of the current year. The amounts contributed by upstream oil companies towards reduction in losses/under-recoveries suffered by oil marketing companies are tabulated below:

Rs./Crore

	ONGC	GAIL	Oil India Ltd.	Total
2004-05	4104	1137	706	5947
Apr-June'05	2876	153	228	3257
Jul-Sept'05	2830	167	223	3220

#### **(v) Determination of the amount of subsidy for Kerosene and LPG**

50. The subsidy on PDS Kerosene and Domestic LPG are met from the budgetary Grants of Ministry of Petroleum and Natural Gas. The amount of subsidy per selling unit is equal to the difference between the cost price and the issue price per selling unit and is computed ex -depot price for PDS Kerosene and ex - bottling plant for Domestic LPG. The amount of subsidy per selling unit for a given depot/bottling plant for the year 2002-03 was based on the issue price of the product and the cost price as on 01.04.2002. The subsidy was to be phased out in 3-5 years. It was decided that the oil companies participating in these schemes might raise their claims during 2003-04 on ad hoc basis at the rates equal to 2/3<sup>rd</sup> of the rates allowed during 2002-03. Government has further decided that the subsidy for the years 2004-05 to 2006-07 should be paid at 1/3<sup>rd</sup> level of the rates applicable for 2002-03.

#### **(vi) Impact of Subsidy**

51. The average subsidy per selling unit on Domestic LPG & PDS Kerosene works out as under:-

Year		Domestic LPG Rs./Cyl.	PDS SKO Rs./Litre
2002-03		67.75	2.45
2003-04	At 2/3 <sup>rd</sup> level	45.17	1.63
2004-05	At 1/3 <sup>rd</sup> level	22.58	0.82
2005-06	At 1/3 <sup>rd</sup> level	22.58	0.82

The actual payments released from the Union Budget under this scheme has been as under:

Rs/ Crore

Year	Actual payments released during the year
2002-03	4,495.80
2003-04	6,292.44
2004-05	2,930.31
2005-06 (Budget Estimates)	3,600.00

#### **(vii) Freight Subsidy (For Far Flung Areas) Scheme 2002**

52. The freight subsidy for supplies and sales of products in the notified far-flung areas is provided for Kerosene under Public Distribution System (PDS Kerosene) and Liquefied Petroleum Gas for domestic use (domestic LPG). The quantity of PDS Kerosene on which subsidy is allowed for each state are limited to the allocations made by Ministry of Petroleum & Natural Gas subject to actual quantities sold. The subsidy was to be phased out in 3-5 years. It was decided that the oil companies participating in these schemes might raise their claims during 2003-04 on ad hoc basis at the rates equal to 2/3<sup>rd</sup> of the rates allowed during 2002-03. Government has further decided that the subsidy for the years 2004-05 to 2006-07 should be paid at 1/3<sup>rd</sup> level of the rates applicable for 2002-03.

53. The actual payments released from the Union Budget under this scheme are as under:

Rs/Crore

Year	Actual payments released during the year
2002-03	62.35
2003-04	58.74
2004-05	26.07
2005-06 (Budget Estimates)	44.00

### **M. STATUS OF BIO-FUELS AND HYDROGEN AS SUPPLEMENTS TO FOSSIL FUELS**

#### **(i) Ethanol**

54. Under the notification dated 27.10.2004, 5 per cent ethanol blended petrol is to be sold in notified areas if ethanol for such blending can be procured domestically and in terms of the programme parameters.

55. The NOC invited tenders for purchasing indigenous ethanol, and after negotiations, purchase orders have been placed in Uttar Pradesh, and supply of ethanol has commenced in the current year. Tenders have been also invited for purchasing ethanol for other States, and the tender process is scheduled to be completed in November 2005, except in such cases ( in Western and Southern regions) where few bidders had moved the High Court and the Court has allowed tender negotiations to continue but has restrained awarding of letters of intent on any vendor, pending further orders from the Court.

56. Also, in compliance of an initiative taken by the Ministry of Ministry of Petroleum and Natural Gas suggesting that the ethanol suppliers could enter into a long term memoranda of understanding (MoU) with the oil industry about uninterrupted supply of ethanol of requisite quantity for the programme, for an additional comfort factor, a MoU has been signed on 4.8.2005 between Indian Sugar Mills Association and Indian Oil Corporation, the latter being the industry coordinator representing other oil companies in the public sector also.

### **(ii) Bio-diesel**

57. Under instructions of the Ministry of Petroleum and Natural Gas, Indian Oil Corporation and Hindustan Petroleum Corporation are experimenting with various mixes of bio-diesel with diesel in State Transport buses in Haryana, Gujarat (IOC) and Mumbai (HPC), and are in continuous discussion with the automobile industry, in particular with the Tatas and sharing results of the experimentation. IOC has also a Memoranda of Understanding (MOU) with Indian Railways for plantation of *Jatropha curcus* on railway land.

58. Further, under instruction of the Ministry of Petroleum and Natural Gas, Petroleum Conservation and Research Association (PCRA) has opened a bio-fuel centre during January 2005, and is working on building awareness for *Jatropha curcus* cultivation and manufacture of bio-diesel.

59. On 9.10.2005, the Ministry of Petroleum and Natural Gas has announced a bio-diesel purchase policy which comes into effect from 1.1.2006. The policy prescribes that the oil marketing companies in the public sector shall purchase bio-diesel of prescribed BIS specification from registered authorised suppliers through 20 purchase centres at a uniform price of Rs 25 per litre. The purchase price would be reviewed by the oil companies every six months with due consideration to market conditions.

### **(iii) Hydrogen**

60. The Ministry of Petroleum and Natural Gas has set up a Hydrogen Corpus Fund with a corpus of Rs 100 crore with contribution of oil and gas companies and the Oil Industry Development Board (OIDB) for supporting research and development in various aspects of hydrogen, which could substitute part of natural gas as transport fuel in future. Recently, on 9.10.2005, a hydrogen-CNG dispenser was inaugurated at IOC R&D Centre at Faridabad.

61. IOC (R&D) has signed a Memoranda of Cooperation with MINDA Industries for development of hydrogen and hydrogen-CNG mixed fuelling system for Internal Combustion engines. Further, a project proposal has been submitted to the National Hydrogen Energy Board (NHEB) for taking up demonstration of 10-30% hydrogen-CNG run buses, taxis and three wheelers.

## **N. STATUS OF CROSS-HOLDING IN OIL PSUs**

62. In January 1999, ONGC had acquired 9.1% of total equity in IOC and 4.8% in GAIL and IOC acquired 9.6% in ONGC and 4.8% in GAIL. Similarly, GAIL had acquired 2.4% of total equity in ONGC. The current total market capitalization of all these cross holdings (as on 28.9.2005) is estimated to be about Rs. 25252 crore.

63. Such small cross-holdings are now being seen by these Oil PSUs as a locked investment without serving any business or strategic purpose. On the other hand, the requirement of funds by these Oil PSUs to meet their capital expenditure is enormous. Keeping this in view, these Oil PSUs are seeking to offload their cross-holdings for funding their expansion and growth plans.

64. The proposal is under active consideration of the Government. The manner and timing of offloading these cross-holdings would be left to the Boards of the respective Oil PSUs who would take the decision, keeping in view their fund requirements as well as market conditions, under the overall supervision of the Ministry of Petroleum and Natural Gas and in consultation with the Ministry of Finance.

## Discoveries made in the pre-NELP and NELP blocks operated by private/JVs

Name Block/field	Operator	Type of Block / Area	Name of Discovery	Oil / Gas	Date of Discovery	Oil & Gas In Place (BCM/MMT)	Status			
Ravva	Cairn	Producing Area	Ravva Satellite	Gas	May'99	12	Producing			
RJ-ON-90/1	Cairn	Pre-NELP	Guda	Oil	1998	Very small field. Reserve not established.				
			Saraswati	Oil	Nov.'2001	2.24	Initial In-place Hydrocarbon Reserves. Reserves as per operator. Declared commercial by MC of the block on 15.10.2004			
			Rageshwari	Oil	Feb-2003	4.2				
			Mangla NA (Aishwaria)	Oil	March'04	120.2				
						Kameshwari	Oil	October'03	Under evaluation by operator	
						NC ( Shakti)	Oil	April'04		
						NV (Bhagyam)	Oil	August, 04		
						(GR-F)	Oil	Jan'04	1.21	Commerciality under evaluation by operator.
						Vijaya (NR-1)	Oil	Sep '04	Under evaluation by operator	
						Vandana (NR-2)	Oil	Sep '04		
						NI-2	Oil	June '05		
CB-OS/2	Cairn	Pre-NELP	Lakshmi	Gas / Oil	May, 2000 / April '02	7.31	Producing since Nov. 2003.			
			Ambe	Oil / Gas	November,2000	Under estimation				
			Gauri	Oil / Gas	December,2000	3.23	Production commenced in April 2004.			
			Parvati	Oil	January 2001	Under estimation				
			CBX Structure	Gas	February 2004	Under estimation				
CB-ON/3	Essar Oil Limited	Pre-NELP	ESU-1	Oil / Gas	July 2005	Under evaluation by operator.				
KG-DWN-98/2	Cairn	NELP-I	Annapurna	Gas	June, 2001	18.41	Under appraisal			
			Kanak Durga	Oil / Gas	August, 2001	23.27				
			Padmavati	Oil / Gas	October, 2001	18.46				
KG-DWN-98/3	RIL	NELP-I	Dhirubhai-1	Gas	October, 2002	323 Dhirubhai-1,2 & 3 declared as commercial.	Development plan of Dhirubhai1 and 3 has been approved by Management Committee.			
			Dhirubhai-2	Gas	October, 2002					
			Dhirubhai-3	Gas	October, 2002					
			Dhirubhai-4	Gas	January, 2003	21.2	Under appraisal/ decision on commerciality being determined			
			Dhirubhai-5	Gas	July, 2003	8.5				
			Dhirubhai-6	Gas	July, 2003	41.2				
			Dhirubhai-7	Gas	May, 2004	17.7				
			Dhirubhai-8	Gas	May, 2004	10.5				
			Dhirubhai-16	Gas	August,2004	Under evaluation				
			Dhirubhai - 18	Gas	April, 2005	Under evaluation				
			Dhirubhai - 19	Gas	April, 2005	Under evaluation				
NEC-OSN-97/2	RIL	NELP-I	Dirubhai-9	Gas	June'04	11.3	To be appraised further.			
			Dirubhai-10	Gas	June'04	9.1				
			Dirubhai-11	Gas	June'04	6.8				
			Dhirubhai-15	Gas	August,2004	Under evaluation				
			Dhirubhai-20	Gas	April,2005	Under evaluation				
			Dhirubhai-21	Gas	April,2005	Under evaluation				
CB-ONN-2000/2	Niko	NELP-II	Bhima-1	Gas	November, 2002	0.06	As per D&M report.			

			NS	Gas	January, 2003	0.71	Under production since May,04
<b>Name Block/field</b>	<b>Operator</b>	<b>Type of Block / Area</b>	<b>Name of Discovery</b>	<b>Oil / Gas</b>	<b>Date of Discovery</b>	<b>Oil &amp; Gas In Place (BCM/MMT)</b>	<b>Status</b>
CB-ONN- 2000/1	GSPC	NELP-II	PK#2	Oil	August,2004	Under evaluation	
KG-OSN-2001/3	GSPC	NELP -III	KG #8	Gas	June 2005	Under evaluation	Further testing in progress.

## Annex -II

### OVERSEAS E&P ASSETS ACQUIRED BY OIL PSUs

Name of the Project and country	Participating Interest with details of other partners	Planned Investment by OVL (US \$)	Status of the project	Expenses incurred till 31 <sup>st</sup> January, 2005	Expected Oil & Gas Production for the project (Total Plateau Production from the project)	Production during 2003-04 & 2004-05* (OVL's Share)
<b>Block 06.1</b> Vietnam	OVL – 45% BP-35% (Operator) PV-20%	228 Million	Commercial production of Gas started from the project from Jan. 2003	Approx US\$ 162 Million	Gas -266 MM scf/d	In 2003-04 Gas= 523MCN & Condensate= 0.022 MM In 2004-05 Gas= 1.325 Bt & Condensate = .04 MMT
<b>Sakhalin-1</b> Russia	OVL – 20% Exxon–30% (Operator) Sodeco – 30% SMNG – 11.5% RN Astra – 8.5%	2770 Million	Project is in development stage	Approx US\$ 1546.63 Million	Oil–250,000 BOPD Gas-1050 MMscf/d	Under Development
<b>Greater Nile Oil Project</b> Sudan	OVL – 25% CNPC – 40% Petronas – 30% Sudapet – 5% (Joint- Operatorship)	669 Million	Project is under production	Approx US\$ 669.1 million	Current production: Oil-3,00,000 BOPD (Approx)	In 2003-04 Oil= 3.323 M In 2004-05 Oil = 3.66 MN
<b>Block -8</b> Iraq	OVL 100% (Operator )	15 million (Minimum expenditure obligation)	Exploration project. Currently, under force majeure.	Approx UR\$ 1 Million	N/A	Under exploration
<b>Block A-1</b> Myanmar	OVL – 20% Daewoo–60% (Operator) KOGAS – 10% GAIL – 10%	27.5 Million in exploration phase upto 30 June, 2005	Project is in exploration stage	Approx US\$ 14 Million	N/A	Under exploration
<b>Farsi Offshore Block</b> Iran	OVL – 40% (Operator) IOC – 40% OIL – 20%	31.60 Million in exploration phase	Project is in exploration stage	Approx US\$ 5 Million	N/A	Under exploration
<b>Block NC -188 &amp; NC – 189</b> Libya	OVL - 49% TPOC – 51% (Operator)	30 Million in exploration phase	Project is in exploration stage	Approx US\$ 14 Million	N/A	Under exploration
<b>Block # 24</b> Syria	OVL – 60% IPR International – 40% (Operator)	6 Million in exploration phase	Project is in exploration stage	Approx US\$ 1.5 Million	N/A	Under exploration
<b>Block 5A</b> Sudan	OVL – 24.125% Petronas– 68.875% (Operator ) Sudapet – 7%	Acquisition cost of stake in Block 5A approx US\$ 108 Million.	Project is in exploration stage	Approx US\$ 121 Million	N/A	Under exploration
<b>Block 5B</b> Sudan	OVL – 23.5% Petronas– 41% (Operator) Sudapet – 11% Lundin – 24.5%	Acquisition cost of stake in Block 5B approx US\$ 25 Million.	Project is in exploration stage	Approx US\$ 25 Million	N/A	Under exploration

<i>Assets under Finalization of Acquisition</i>		
1034 Offshore	15 % joint	Equator Exploration
Participating Interest being negotiated		Equator Exploration
4300 Deep offshore	80 to 100 %	Possible Partner, Cupet
11231 Offshore	30%	Repsol, Norsk Hydro
OVL's bid for these blocks and has been selected as the best bidder		

<b>Block WA-306P,</b> Australia	OVL – 55% Antrim Energy Inc. -32.5% with Operatorship Magellan - 12.5%	Approx US\$ 7.2 Million	Project is in exploration stage	Approx US\$ 7 Million	N/A	Under exploration
<b>Block CI-112,</b> Ivory Coast	OVL – 23.5% Oil India Ltd. -11.5% Vanco - 30% with Operatorship, Sinopec - 30% Petroci - 5%	Approx US\$ 21.83 Million	Project is in exploration stage	Approx US\$ 5 Million	N/A	Under exploration
<b>Najwat Najem Oil</b> Structure, Offshore, Qatar	OVL – 100% (Operator)	Approx US\$ 15.5 Million (Minimum Commitment)	Project in appraisal /delineation phase		N/A	Under appraisal /delinea
<b>Block -6-</b> North Ramadan, Egypt	OVL- 70% IPR -30% (OVL and IPR will jointly develop the block with IPR taking the lead during exploration phase.)	Approx US\$ 14 Million (Minimum Commitment)	Project is in exploration stage		N/A	Under exploration
<b>Block 86,</b> Libya	OIL- IOC-		Project is in exploration stage		N/A	Under exploration
<b>Block 102 (4)</b> Libya	OIL- IOC-		Project is in exploration stage		N/A	Under exploration

\* Approx