PRESENTATION

On

Petroleum Sector of Pakistan

BY

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SEQUENCE

- **Introduction**
- **Upstream Petroleum Sector**
- **Downstream Petroleum Sector**
- **Investment opportunities in Refining sector**

INTRODUCTION

- Pakistan's Oil and Gas sector has been a major contributor in economic development of the country.
- Current contribution of oil and gas sector to the National Exchequer is approximately Rs 230 billion per annum.
- Success rate of oil and gas discoveries in Pakistan is high as compared internationally. (Pakistan 1:3.5 against international 1:10).
- Projected import bill of Pakistan is US$ 30.7 billion out of which POL share is estimated to be US$ 11 billion (on current prices) during the year 2007-08.

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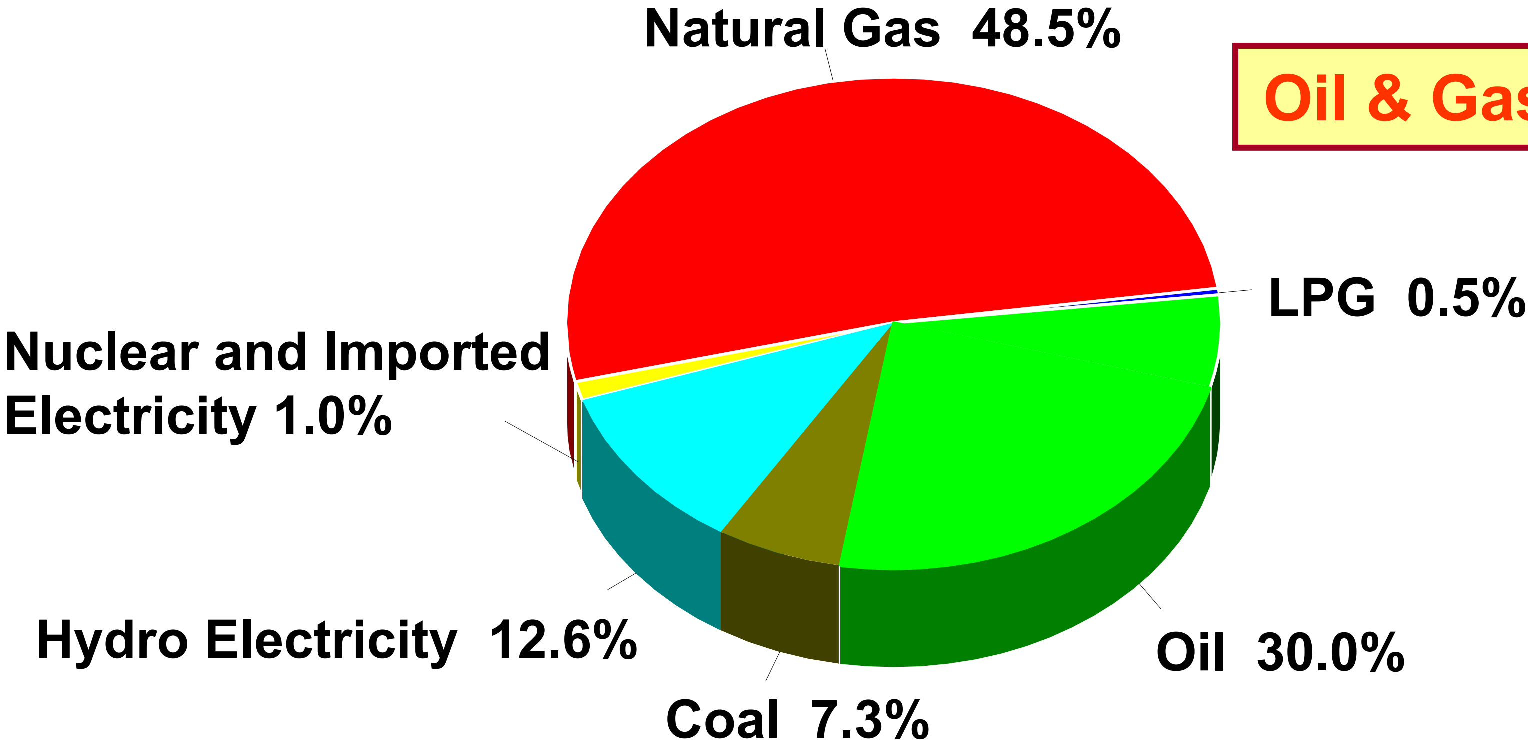
Pakistan Energy Supply Mix: 2006-07

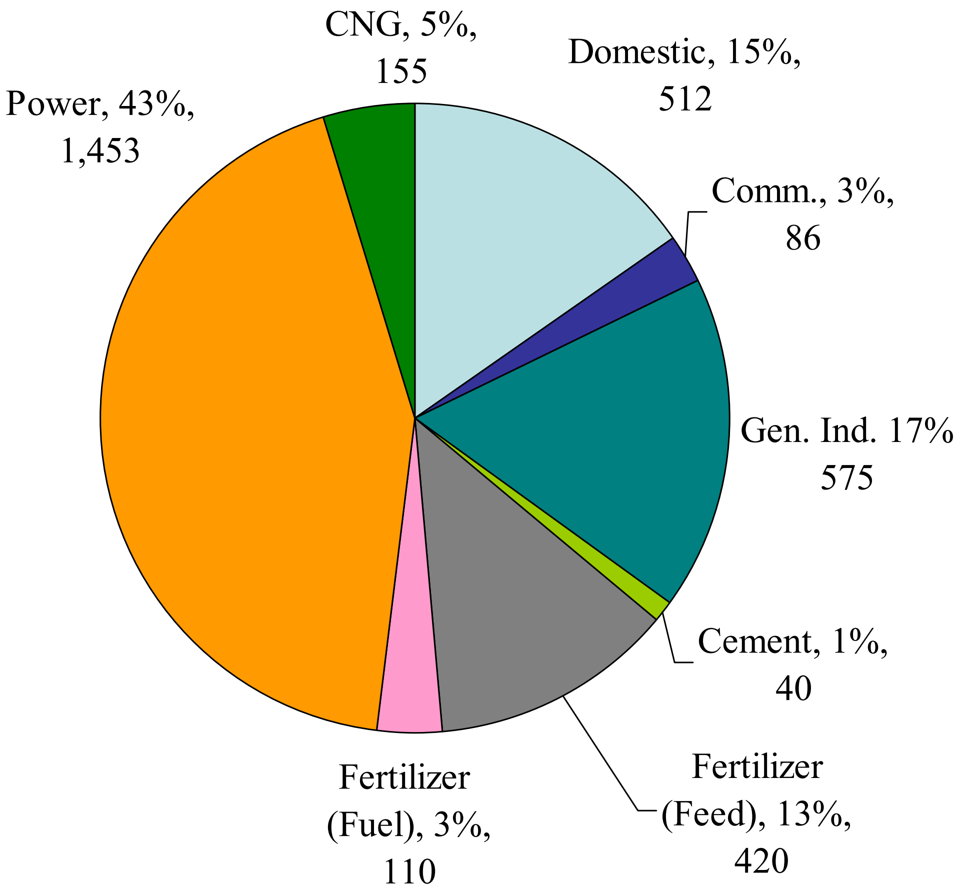
60.4 Million Tonnes Oil Equivalent



Oil & Gas: 79 %

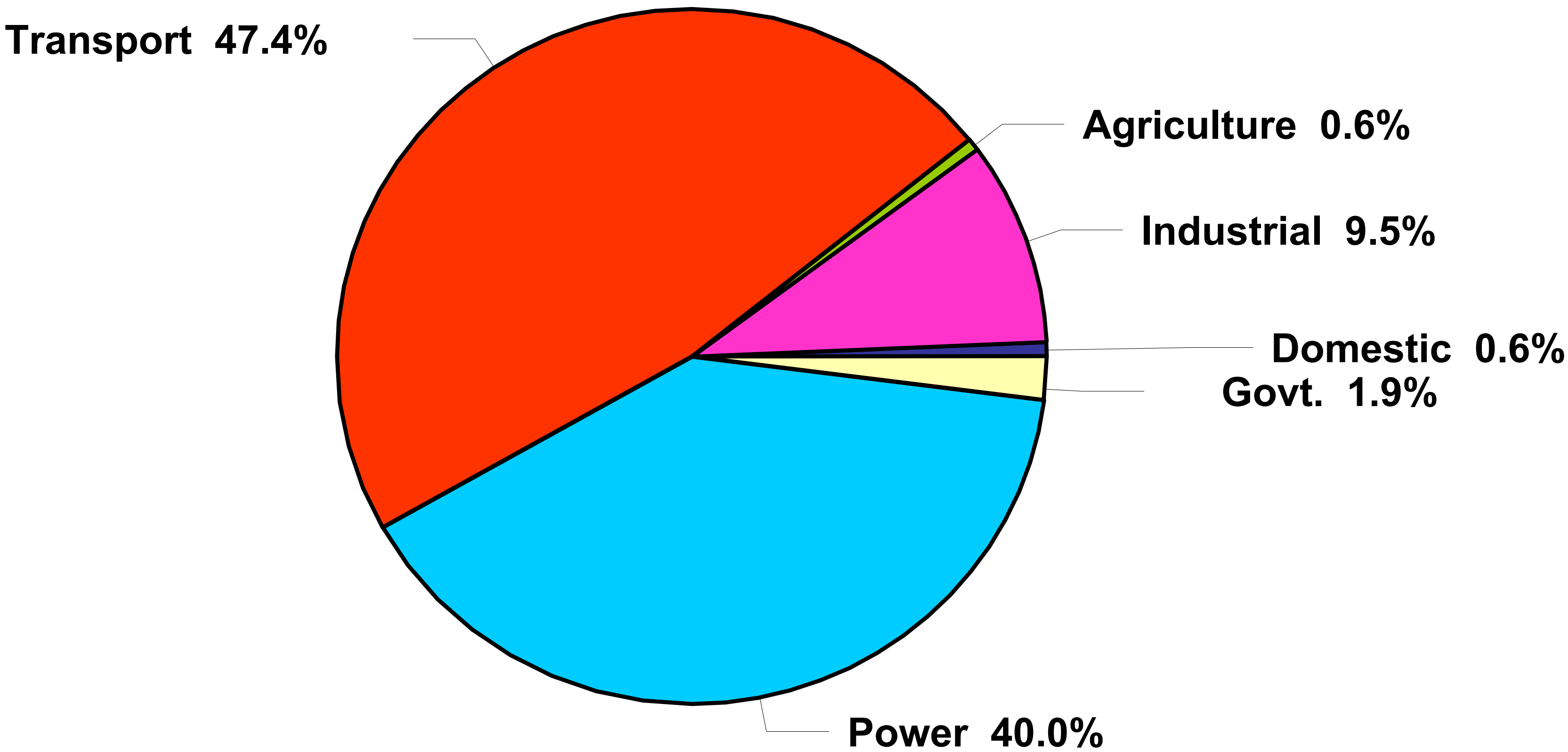
Oil Import Bill $ 7.45 billion

SECTOR-WISE GAS CONSUMPTION

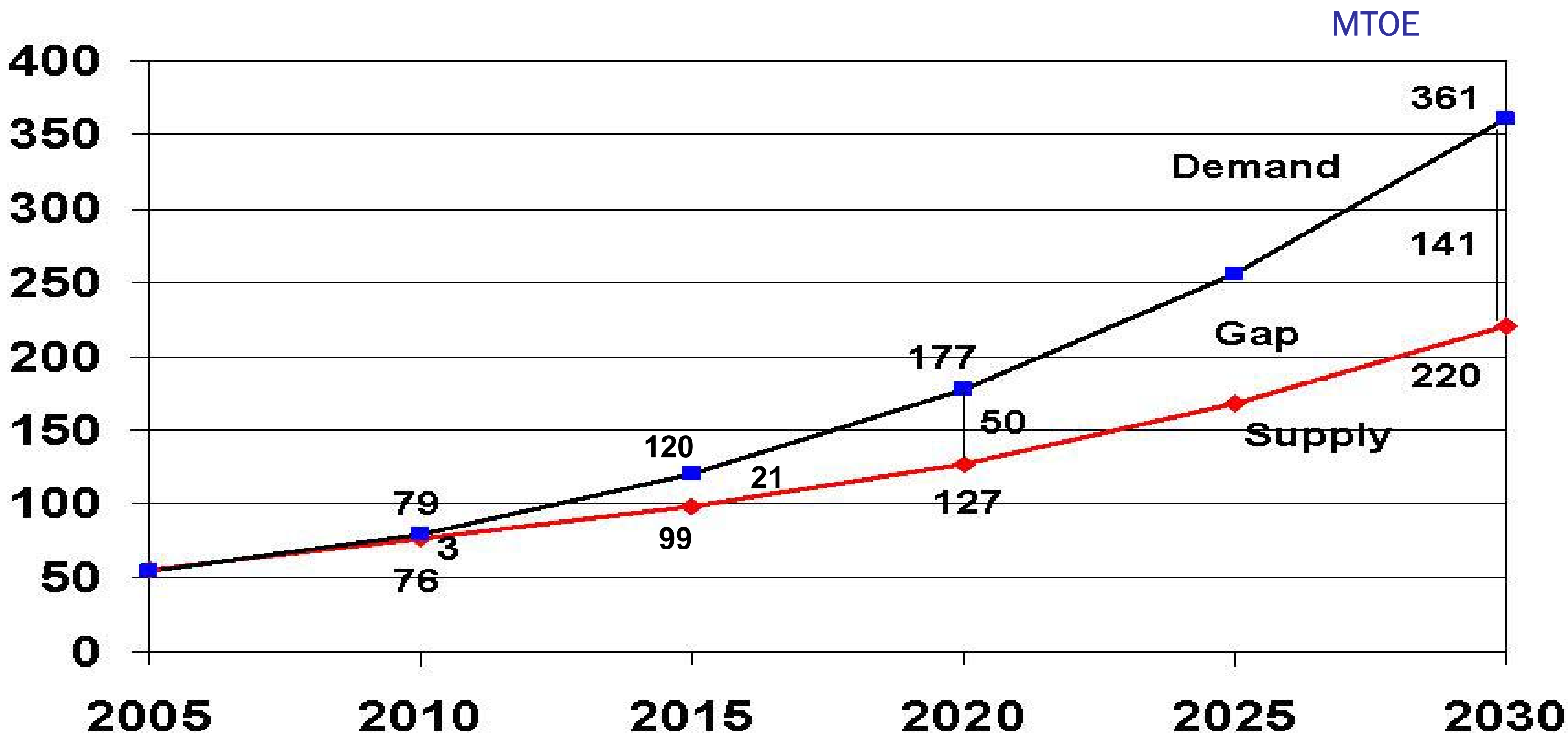


Sectoral Oil Consumption
2006-07

16.85 Million Tonnes



ENERGY SUPPLY AND DEMAND PROJECTIONS TO 2030

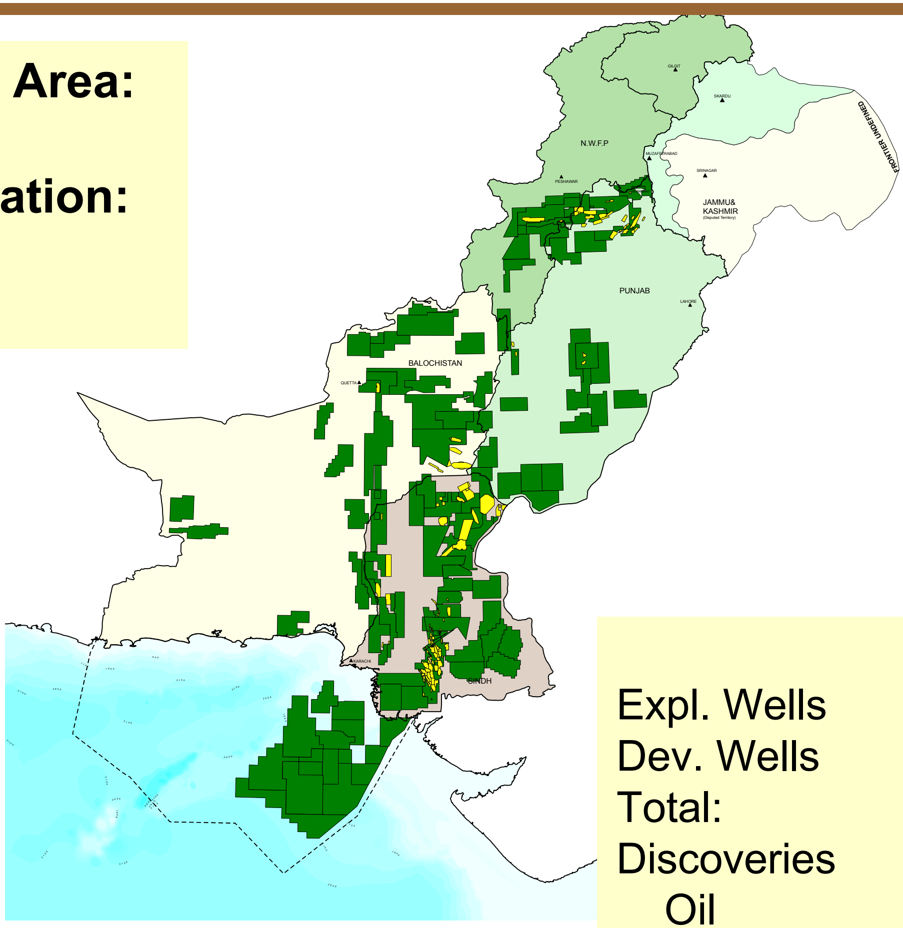


* Source: Planning Commission

UPSTREAM OIL & GAS SECTOR

EXPLORATION ACTIVITIES

Total Sedimentary Area:
827,268 Sq.kms
Area under Exploration:
255,391 sq.km.



	Dec. 2007
Expl. Wells	698
Dev. Wells	901
Total:	1,599
Discoveries	209
Oil	52
Gas	157
Success Rate	***1:3.3***

Exploration Licenses	120
D&P Leases	127

UPSTREAM PETROLEUM POLICY 2007

- New petroleum policy 2007 is investment friendly in the region by, predictability and transparency in award of blocks and later on its development and production

- New policy has been aimed to offer better pricing terms for oil and gas.

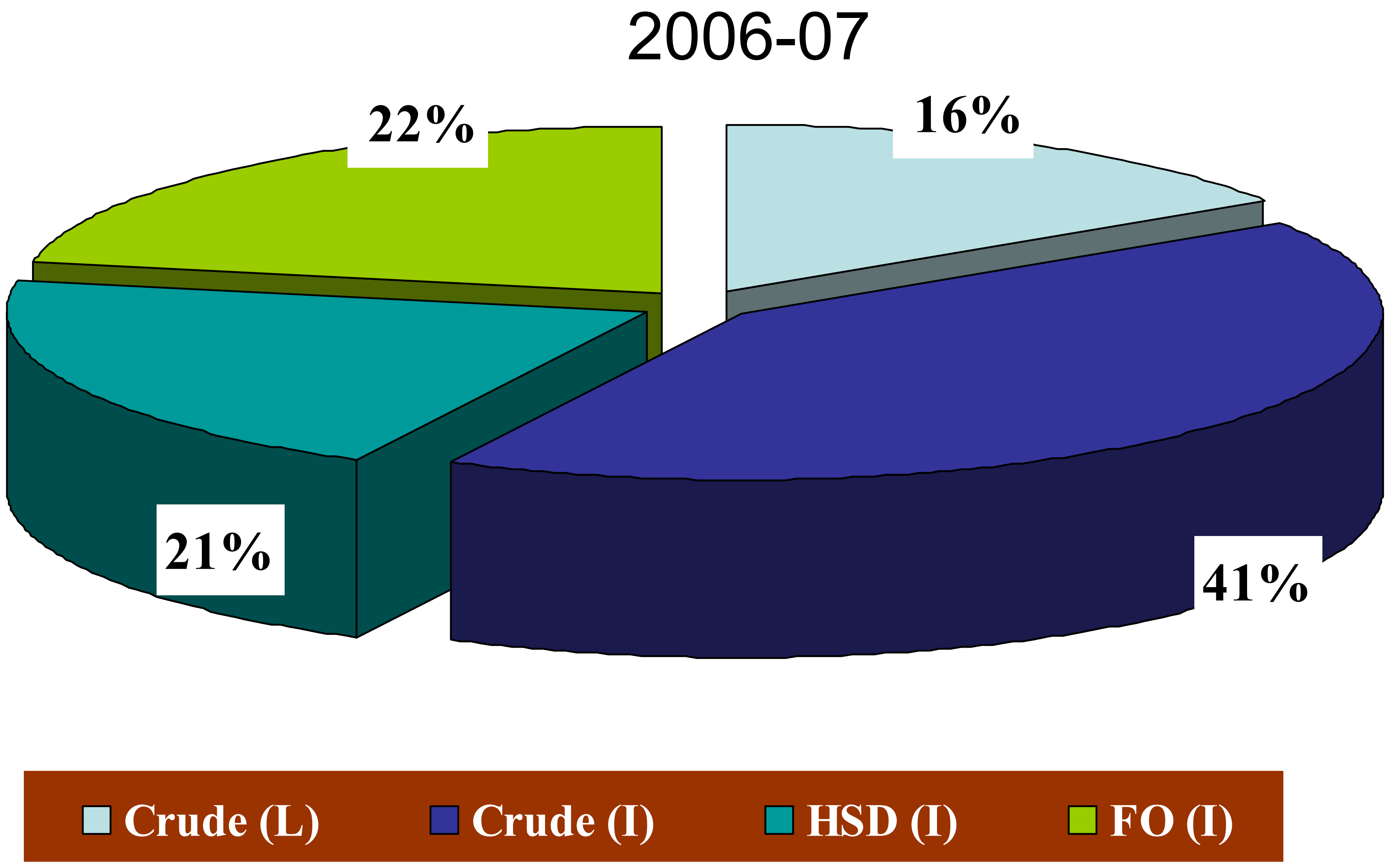
- According to the independent review of Merrill Lynch Pakistan's Policy is termed as one of the best investment friendly policy in the region.

- Plan to sign 30 plus concessions during 2008-09

- Basin study has been entrusted to an International consultant M/s Fugro Robertson of UK. The final report will be submitted by the consultant by August 2008

DOWNSTREAM OIL SECTOR

Supply Pattern of POL Products & Crude Oil



Downstream Oil sector of Pakistan

- Annual consumption of POL products in the Pakistan is about 17 million tons.
- Motor gasoline annual consumption is about 1.4 million tons.
- HSD is about 3.3 million tons from local production and about 4.2 million tons per annum through import.
- Furnace oil requirement is about 7 million tons i.e. about 3 million tons produced by the local refineries and remaining 4 million tons is imported.

OMC's MARKET SHARE (2006-07)

OMC	Incorporated in Year	Market Share %age
➢ Pakistan State Oil Co. Ltd.	(1976)	66.3
➢ Shell Pakistan Ltd.	(1947)	13.8
➢ Attock Petroleum Ltd.	(1997)	7.0
➢ Chevron (Pakistan) Ltd.	(1947)	5.4
➢ Total-PARCO Pak. Ltd.	(2000)	3.1
➢ Admore Gas Pvt. Ltd.	(2003)	0.7
➢ PARCO (Pearl)	(1999)	0.6
➢ Hascombe Storage Pvt. Ltd.	(2005)	0.3
➢ Askar Oil Services Pvt. Ltd.	(2005)	0.1
➢ Overseas Oil Trading Co. Ltd.	(2005)	2.6
➢ Bosicor Pakistan Ltd.	(2002)	-
➢ Bakri Trading Pakistan Ltd.	(2005)	-

REFINING CAPACITY

Refinery	Location	(Million Tons)
• PARCO	Mahmoodkot	4.50
• NRL	Karachi	2.71
• PRL	Karachi	2.10
• ARL	Rawalpindi	1.82
• Dhodak	D.I.Khan	0.12
• Bosicar	Hub, Balochistan	1.50
• Total		12.75

Refining Process

- PARCO refinery is capable of mild residue-upgrading by using UOP's Diesel Max Process, while all remaining refineries in Pakistan (NRL, PRL, ARL, Bosicor) are of the Hydroskimming type which is an old technology.
- Refineries therefore require up gradation and Modernization.
- The priority issue is to reduce sulphur content from HSD as the limit of sulphur in HSD for local production is 1.0 wt% and for impoted 0.5wt%.

Specification in Pakistan

- **Motor gasoline**
  - **Research octane number (RON) = 87**
  - **Lead content gm per ltr = zero**

- **HSD Local**
  - **Sulphur content wt % = 1.0**
- **HSD Imported**
  - **Sulphur content wt % = 0.5**

Furnace oil

- **Sulphur content wt % = 3.5**

Initiative for Clean Fuels

- **In order produce clean fuels and to improve the specification of petroleum products, various have been taken**
- **Mono grade 87 RON Gasoline was introduced in the country with effect from 1st October 2000, to eliminate the menace of adulteration of super grade with regular grade.**
- **Unleaded gasoline was introduced in the country with effect from 1st July 2002.**
- **HSD of 0.5 wt % sulpher is being imported w.e.f. July 2002**
- **Attock refinery limited is producing low sulphur fuel oil (less than 1 wt %) which is being supplied to a power project, KAPCO.**

PRESENT SULPHUR CONTENTS

Sr #	Refinery	wt.%	Production (2006-07) (M.Ton)
•	PARCO	0.70	1255750
•	NRL	0.70	794118
•	ARL	0.20	440316
•	PRL	0.90	479587
•	Bosicor	0.95	234971
	Total		3204742
•	Imported	0.50	4023000

Specification improvement plans

- The domestic refineries are upgrading their facilities to produce Euro II specification HSD. The planned commissioning date is 2010 at an estimated cost of US $ 700 million, as under:-

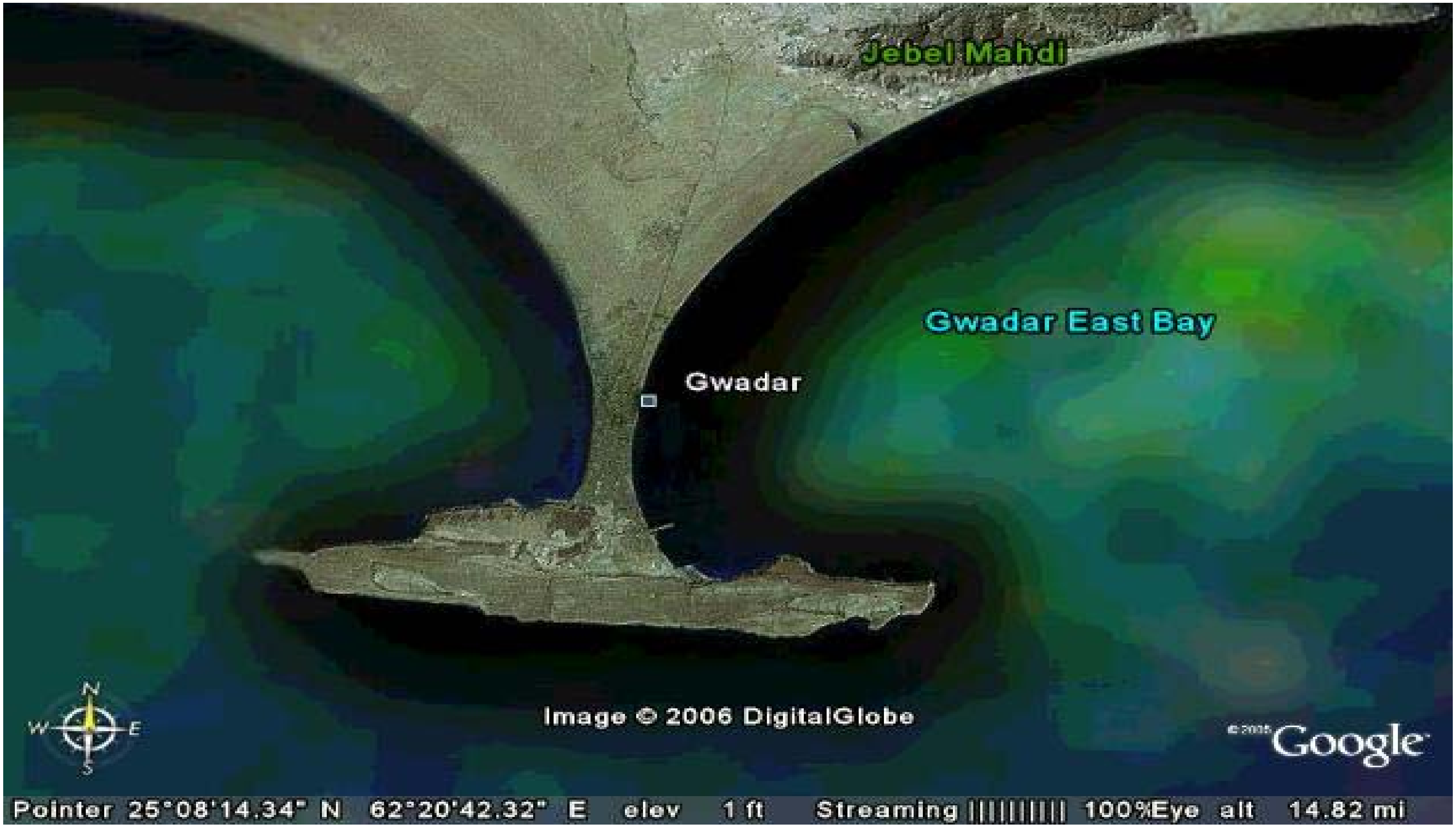
    - PARCO $ 150 million
    - PRL $ 325 million
    - ARL $ 85 million
    - NRL $ 90 million
    - Bosicor $ 50 million

NEW COASTAL REFINERY AT KHALIFA POINT

- A new stat of the art refinery of 200,000 – 300,000 barrels per day capacity is being set up at Khalifa Point near Hub, Balochistan.
- Abu-Dhabi Government owned International Petroleum Investment Company - IPIC [74%] and PARCO [26%].
- Implementation Agreement signed between GOP and IPIC on 13.11.2007
- Estimated cost $ 5 billion.
- Expected completion by 2012.

Investment opportunities in Refining sector

Gwadar – Potential Energy Hub



Gwadar Port

- Gwadar is the third port of Pakistan bordering Arabian Sea located at the mouth of Persian Gulf and outside ‘Strait of Hormuz’ near the key shipping routes used by sea vessels in the region with connections to Africa, Asia & Europe.

- About 80% of the world energy export flows through the ‘Strait of Hormuz’

- Major Oil Resources of the region are concentrated in the adjoining areas of Arabian Gulf especially booming oil trade in the region provides potential for the effective utilization of Gwadar as Deep Sea Port on the Arabian Sea.

Plans to develop Gwadar

- GOP intends to develop the entire area and build industrial complexes.

- There is great potential of setting up of an Export based Petroleum Refinery in Gwadar.

- GOP has given various incentives to expand the Refining sector in Pakistan

Incentives for new Refinery project in Pakistan

- No prior permission is required for setting up of new refineries or for expanding the existing ones.
- Import parity price formula for new oil refinery projects has been linked to a market related mechanism of refined products' prices based on Singapore Mean FOB spot price along with all applicable local charges .
- Other income earned from non-refinery operations can be retained by the refineries.
- Import of crude oil will be permitted from any source, Export of surplus products will be allowed freely.
- Refineries are allowed to sell products to any marketing company or they can setup their own companies.
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Additional incentives for Gwadar

- The GOP has recently approved following additional incentives for all new mega Refinery projects of minimum 100,000 barrels per day production capacity to be installed along the Coastal belt of Baluchistan, particularly Gwadar as under:-

- 20 years income tax holiday.

- Waiver of 5% Workers Profit Participation Fund (WPPF) subject to the condition that the entire proceeds will be exclusively spent for the benefit of the local labour and their welfare, through a Board of Trustees, to be specially established for this purpose.

- Waiver of Development Surcharge @ 0.5% of the value of exports under the EPZA Rules 1981.

Conclusion

- U.S Trade and Development Agency may consider technical/financial assistance for Pakistan,s Refineries up gradation plans.

- U.S companies may invest in Petroleum sector especially in setting up of a mega Refinery project in Pakistan.

THANK YOU