The Potential for the growth of HSD retail in the state of West Bengal

THE INDIAN INSTITUTE OF PLANNING AND MANAGEMENT, NEW DELHI

The Potential for the Growth of HSD Retail in West Bengal

bp

TOTAL FINA elf

इंडियनऑयल

ESSAR

Mobil

IndianOil

CONTENTS

Part 1 :
The Oil Industry - India

Note

The study has been divided into 2 parts. Part 1 gives the general information of the oil industry in context to India and covers all the areas of HSD and MS retailing right from refining to marketing.

Part 1 is sourced from The Indiainfoline web-site and has been included with the permission of my academic guide, **Prof. Sumanta Sharma – Indian Institute of Planning and Management, New Delhi**

The report on my topic i.e. the potential of HSD retail in the state of West Bengal starts from Part 2

Table of Contents

Historical Perspective

The Indian petroleum industry dates back to 1890 when oil was first struck at Digboi in northeastern India.

Oil exploration and production activities were largely confined to the northeast until the 1970s when the most prolific and important Indian producing basin, Bombay High, was discovered. While the exploration and production sector remained under the state control until 1991, the Government policy now allows joint as well as private sector to participate in this sector.

India's first refinery was built at Digboi in 1901. Thereafter, more refineries were set up in the late 1950s and early 1960s with the assistance of international oil companies such as Shell, Caltex and Esso to meet India's growing petroleum product needs.

In 1976, India nationalized the refining and marketing sector in response to the oil crisis of the 1970s and introduced regulatory controls on production, imports, distribution and pricing of crude oil and petroleum products. The Oil Coordination Committee was formed to act as a regulatory body in this regard.

With the key objective of providing basic necessities to the economically weaker sections of the society at affordable rates, the Administered Pricing Mechanism subsidized prices for products like kerosene and LPG by correspondingly charging higher prices for other products like gasoline and aviation fuel. Diesel prices were kept neutral.

The Administered Pricing Mechanism ensured fixed 12% post-tax return on net worth deployed for refining, distribution and marketing of petroleum products. Also, petroleum product prices were maintained at an even level throughout the country by balancing various subsidies through a number of pool accounts.

However, in 1991, critical balance of payment position impelled the Indian government to launch general economic reforms with the objective of transforming the regulated economy into a market-driven one and attract investments from the private sector.

Under the liberalization policy, a number of structural changes have already been effected in form of the private sector being allowed to carry out refining as well as marketing of a limited number of petroleum products e.g. LPG, naphtha, Aviation fuel, fuel oil etc.

The most significant step towards liberalization in the oil industry however was announced in November 1997 in form of a blueprint for de-regulation of the Indian oil industry.

As per the de-regulation policy, the Indian oil sector is scheduled to be completely deregulated from April 2002 in all aspects of pricing, imports and exports of crude and petroleum products.

Demand for Petroleum Products

Demand growth from 1991 - 2001

The Indian GDP and energy consumption have each grown at the rate of about 6% per annum from 1991 to 2001. Correspondingly the demand for petroleum products has been growing steadily as shown below:

Table 1: Growth rates: Crude processing & demand for petroleum products (1990-91 to 2000-01)

		Consumption in year ended 31.03.1991	**Consumption in year ended 31.03.2001**	**Compound Avg. growth rate**

*	Crude oil processing	52 million tons	103 million tons	5.1 %
*	Demand for total Petroleum products	55 million tons	94 million tons	5.5 %

While the overall demand for petroleum products grew at 5.5% over the last several years, the growth rates have been more pronounced for the light and the middle distillate fuels as shown in the following table.

Table 2: Growth rates: Demand for petroleum products (by group) (1990-91 to 2000-01)

		Avg. Growth Rate (Fiscal years : 1990 to 2000)
*	Light distillates(LPG, Naphtha & gasoline)	8.5 %
*	Middle distillates(Aviation fuel, Superior Kerosene & High Speed Diesel)	5.8 %
*	Residues(Fuel oil, bitumen etc.)	3.0 %

Demand growth over the past years

The demand growth for various petroleum products over the past years is summarized in the following table.

	Consumption of products for year ended March 31 (Million Tons)	Growth in demands for products for year ending March 31 (Million Tons)

	1999	2000	2001	2000	2001
1. Light Distillates	19.6	22.9	22.3	16.8%	-2.6%
a. Naphtha	8.9	10.8	8.4	21.3%	-22.2%
b. LPG	5.2	6.2	7.3	19.2%	17.7%
c. Gasoline	5.5	5.9	6.6	7.3%	11.9%
2. Middle Distillates	51.5	53.4	53.5	3.7%	0.2%
a. Aviation fuel	2.1	2.2	2.4	4.8%	9.1%
b. Kerosene	12.2	11.9	12.9	-2.5%	8.4%
c. Diesel	37.2	39.3	38.2	5.6%	-2.8%
3 Residue	13.7	14.5	14.3	5.8%	-1.4%
a. Fuel Oil/LSHS	11.3	11.6	11.7	2.7%	0.9%
b. Bitumen	2.4	2.9	2.6	20.8%	-10.3%
4 Others	5.6	5.5	3.8	-1.8%	-30.9%
Grand Total	90.6	96.3	94.3	6.3%	-2.1%

Source: CRIS INFAC / Indian Oil & Gas

There has been a slowdown in demand growth or stagnation of demand in 2001 in India due to the following:

- Economic slowdown
- Lower industrial growth
- Infrastructural bottlenecks

This is expected to be only a temporary phenomenon considering the huge demand potential in the country.

Per capita consumption of petroleum products: India and other countries

In order to understand the level of Indian demand for petroleum products in a global perspective, the following table furnishes a comparison of per capita consumption of petroleum products in the various parts of the world.

(Kilograms per annum)

Table 4: Fuel Consumption

*	India	98
*	China	165
*	North America	2,610
*	World average	585

With the per capita consumption level in India being only about 60% of that in China, a strong growth potential exists in India, given particularly a large population base of over a billion.

Major contributory factors for high demand growth rates in India

The steady growth in GDP and purchasing power on part of the Indian population has resulted into a corresponding growth in consumption of petroleum products in India. A few factors, which have particularly been significant in this regard, are:

1. Significant growth in passenger car population (From 2.3 million private motor vehicles in 1991 to 3.9 million in 1998 - Annual growth of more than 7% From 14.1 million two-wheeled motor vehicle in 1991 to 27.9 million in 1998)

2. Significant growth in transportation vehicles like trucks (From 21.3 million trucks and tankers in 1991 to 40.4 million in 1998)

3. Replacement of conventional cooking fuels including kerosene in urban regions by LPG (The use of LPG is increasing in rural areas and is expected to contribute to future growth.)

Exploration and Production

Major oil fields accounting for the bulk of the Indian crude oil production are located in the northeastern region (the state of Assam) and the western region (the Bombay High offshore fields and onshore fields in the state of Gujarat.) While oil production was first started in 1890 in the northeastern region of India, the discovery of Bombay High fields having 3.5 billion barrels equivalent of reserves in 1974 gave a major boost to oil production in India.

Table 5: Oil production & consumption in India (Million tons)

	1997	1998	1999	2000	2001
Crude oil production	32.9	33.9	32.7	32	32.5
Crude oil consumption	62.9	65.2	68.5	86	103.5
Deficit (Met by Imports)	(33.9)	(34.5)	(39.8)	(54.0)	(71.0)

Source: Indian Economic Survey 2000-2001 / Centre for Monitoring Indian Economy

In absence of any major discovery in the recent years, crude oil production has been marginally declining leading to increasing level of crude oil imports due to the growing demand.

While Oil & Natural Gas Commission and Oil India Ltd., the state-owned companies dominated the oil production scene until the liberalization of the Indian oil industry, the private sector players are now allowed to carry out the Exploration and Production activities under the New Exploration Licensing Policy of the Indian government. In this context, it may be mentioned that the Oil and Gas division of RIL has development rights to 23 blocks in India comprising onshore, shallow water offshore and deep water offshore region.

Refining

Most of India's refineries were commissioned between 1950s and 1970s.

Shell, Esso and Caltex set up one refinery each in the 1950s. Indian Oil Corporation was formed in 1964 with 100% government ownership as a result of the merger of two government-owned companies (one of which owned two refineries.). Cochin Refineries Limited and Madras Refineries Limited were established in the 1960s by the Indian government in association with Philips Petroleum, and Amoco, and National Iranian Oil Company, respectively.

All private sector oil companies were nationalized in 1976. Oil refining was thereafter allowed to be carried out only by the government oil companies.

However, with the liberalization and deregulation measures implemented since early 1990s, private sector players are allowed to own refineries in India.

Currently there are seventeen refineries in India totaling up to a refining capacity of 112 million tons per annum. Fifteen out of these belong to the state-owned oil companies and one each is owned by a joint sector company (Mangalore Refinery & Petrochemicals Ltd.) and a private sector company (Reliance)

Table 6: Refineries in the country

No.	Name of the company	Location of the Refinery	Capacity (MMTPA)
1.	Indian Oil Corporation Limited (IOCL)	Guwahati	1.00
2	*IOCL*	Barauni	6.00
3	*IOCL*	Koyali	13.70
4	IOCL	Haldia	6.00
5	IOCL	Mathura	8.00
6	IOCL	Digboi	0.65
7	IOCL	Panipat	6.00

8.	Hindustan Petroleum Corporation Limited (HPCL)	Mumbai	5.50
9	HPCL	Visakhapatnam	7.50
10.	Bharat Petroleum Corporation Limited (BPCL)	Mumbai	6.90
11.	Chennai Petroleum Corporation Limited (CPCL)	Manali	9.50
12	CPCL	Nagapattnam	1.00
13.	Kochi Refineries Ltd. (KRL)	Kochi	7.50
14.	Bongaigaon Refinery & Petrochemicals Ltd. (BRPL)	Bongaigaon	2.35
15.	Numaligarh Refinery Ltd.(NRL)	Numaligarh	3.00
16.	Mangalore Refinery & Petrochemicals Ltd. (MRPL)	Mangalore	9.69
17.	Tatipaka refinery (ONGC)	Andhra Pradesh	0.078
18	Reliance Petroleum Ltd. (RPL).Pvt. Sector	Jamnagar	33.00
	TOTAL		**127.37**

Table 6: The proposed refineries

Refinery	**Capacity**
BORL (Bharat Oman Refinery Ltd), Central India	**6.00**
IOC, East Coast	**9.00**
HPCL,Punjab	**9.00**
Essar	**10.00**

These are expected to come up by 2005 while the projected demand for the same period as per Tata Research Institute would be about 157mtpa. Thus contrary to the belief the refinery capacity would be lesser than the estimated demand.

Marketing

The marketing of petroleum products in India today is dominated by the four state-owned oil companies. Their market shares as on 31st March 2001 were as follows:

Table 7: market shares

*	Indian Oil Corporation	54 % approx.
*	Bharat Petroleum Corporation	20 % approx.
*	Hindustan Petroleum Corporation	19 % approx.
*	IBP Company	4.5 % approx.
*	Reliance, EOL, ONGC, Shell & NRL	2.5 % approx.

The marketing of most petroleum products was completely controlled by the government through the above corporations until the early 1990s. The Oil Coordination Committee, a regulatory body of the government of India, allocated the refined products to various marketing companies. Also, the prices of most petroleum products were fixed under the administered pricing mechanism.

As a result of economic liberalization measures of the government of India, implemented over the past few years, many products have been de-controlled for private sector companies to market them at the market-determined prices, e.g. lubricants, greases, benzene, toluene, naphtha, LPG, aviation turbine fuel, kerosene, fuel oil, bitumen etc.

Also, imports and exports of all petroleum products, except gasoline, diesel, kerosene (for the public distribution system), and LPG (for domestic fuel consumption) have been deregulated as of April 1, 1998 allowing private sector entities to import and export these products.

However, four products, namely LPG (for domestic fuel consumption), gasoline, kerosene (for the public distribution system) and high-speed diesel continue to be exclusively marketed by the state-controlled corporations only.

As per the de-regulation policy announced by the Government of India, private sector refiners and other companies will be allowed to market diesel, LPG, gasoline and kerosene at market-driven prices from April 1, 2002 provided they satisfy the criteria laid by the government for acquiring the marketing rights. (These criteria include a condition of minimum investment of Rs.20, 000 million ($429 million) in exploration and production or refining or pipelines or terminals)

Marketing share

Currently, IOC, HPCL, BPCL and IBP market all the petroleum products. With the introduction of parallel marketing scheme, SKO and LPG is being marketed by a few new entrants into the sector. However, their share of marketing is miniscule, given the price distortion between the products marketed by PSU oil majors. Thus, their market shares are not expected to grow unless prices of these products marketed by PSU oil companies are determined. In the year 1995-96, of the estimated total consumption of 74,688 tmt about 690 tmt was sold by parallel marketers, 72,542tmt was sold by PSU majors and the balance being, direct imports by industrial consumers.

Table 8: The market share of each of these companies during the past years

Year	IOCL	BPCL	HPCL	IBP

	tmt	%	tmt	%	Tmt	%	tmt	%
1994/95	36300	55.43	13228	20.20	12588	19.22	2991	4.57
1995/96	39846	54.94	14780	20.38	14150	19.51	3273	4.51
1996/97	42180	54.52	15800	20.43	15400	19.93	3475	4.49

While the market share of IOC and IBP has been continuously falling, the market shares of BPCL and HPCL have been on the rise.

Of the products marketed by oil companies, MS & HSD can be categorized as retail products where the oil companies fight for the market share and sales growth. A portion of MS/ HSD is also sold to direct industrial consumers. The importance of these two products lies in the fact that they together not only constitute more than 50% of the total sales volumes but also form the constituents of aggressive growth.The break-up of MS/ HSD sales into retail and direct, over the last two years is below.

Table 9: MS/ HSD - Retail and Direct Sales (tmt)

Year	MS			HSD			Total	Total
	Retail	Direct	Total	Retail	Direct	Total	Retail	Direct
1995-96	4511	177	4688	24240	8019	32259	28751	8196
1996-97	4820	166	4986	26660	8590	35250	31480	8756
1995-96	96.22%	3.78%	-	75.14%	24.86%	-	-	-
1996-97	96.67%	3.33%	-	75.63%	24.37%	-	-	

Table 10: The share of each of the oil companies in MS & HSD segment-wise for the past years

Year	HSD Retail			HSD Direct			Total		
	IOC	BPCL	HPCL	IBP	IOC	BPCL	HPCL	IBP	HSD
1994-95	8575	5507	4913	2028	5639	712	803	102	28279
1995-96	9885	6346	5737	2271	6036	953	937	94	32259
1996-97	10888	7014	6264	2491	6525	1031	978	55	35246

Table 11: MS/ HSD Segment-wise sales of oil companies

Year	MS Retail			MS Direct			Total		
	IOC	BPCL	HPCL	IBP	IOC	BPCL	HPCL	IBP	MS
1994-95	1349	1240	1068	306	172	5	5	1	4146
1995-96	1554	1392	1218	347	159	9	8	1	4688
1996-97	1672	1492	1287	371	150	8	7	1	4988

Thus, IOC is a very large player in the direct market with 90.4% share in MS-Direct and 76.0% share in HSD-Direct.

Infrastructure

Marketing Infrastructure

Table 12: Salient information in respect of the marketing infrastructure in India

	Particulars	Total
*	Terminals/ Depots	436
*	LPG Bottling Plants	125
*	Pipelines	12
*	Retail Outlets (1)	17,159
*	LPG Distributorships	6,161
*	Kerosene/ Light Diesel Oil Distributorship	6,404

Source: Annual Reports

The retail outlets are not all owned by the respective companies, and include varying proportions of franchised outlets/agents.

Transportation infrastructure

Crude oil imports are handled in different vessel sizes depending on the available facilities at various ports such as Jamnagar, Mumbai, Mangalore, Cochin, Chennai, Vizag and Haldia. Inland transportation of crude from the production sites or ports is primarily undertaken via pipelines.

Transportation of refined products on the other hand is carried out through pipelines, the rail system, coastal shipping using tankers and the road system. Approximate shares of these transportation systems in refined product distribution are shown below:

- Pipelines: 40 % approx.
- Marine transportation: 12 % approx.
- Rail transportation: 37 % approx.
- Road transportation: 11 % approx.

Pipelines

There are 12 major pipelines across the country connecting refineries and major consumption centers. As of October 1, 2000, the total length of refined product pipelines in India was approximately 4,948 kilometers with a capacity of 41.95 million tons per annum.

Rail system

India's rail system is owned by Indian Railways. Petroleum products move from refineries to distribution and storage terminals or depots in other areas of the country. Approximately 35.1 million tons of petroleum products were transported via the rail system in the year ending March 31, 2000.

Coastal tankers

Approximately 117 million tons of petroleum products were transported by means of coastal tankers along the Indian coastline in the year ending March 31, 2000.

Transportation and distribution of products

Considering the geographical spread of the country, the infrastructure for movement of petroleum products is woefully inadequate for handling the growing volume of POL products. Not much thought has been given for development of pipelines. Due to non-availability of tank-wagons, oil movement is undertaken by road which is not only hazardous and polluting but also 15 to 20 times costlier (in terms of energy consumption as per SRC report) compared to pipelines and 5 times costlier than railways. In a country where oil is being imported, expenditure on movement of POL products by road results in serious drain of foreign exchange. The losses due to road/ rail transportation are also 3 to 5 times higher compared to transportation through pipelines.

Storage and distribution infrastructure

Installations, depots and tankages

Installations are large storage points attached to refineries or to a port and serve as supply sources to small locations in the region. Depots are very small storage & distribution centers that generally cater to the needs of a city or town. At present oil companies have installations in almost all major cities and port locations and depots at all district headquarters.

The total tankage capacity of the industry at the middle of 1995 stood at 10.75 mmt, representing a capacity of about 1.72-month's sale.

Table 13: The company-wise tankage infrastructure

	IOC	HPCL	BPCL	IBP	Refiners	Total
LPG	0.014	0.010	0.005	0.000	0.024	0.053
MS	0.402	0.187	0.195	0.015	0.056	0.855
Naphtha	0.342	0.143	0.174	0.023	0.191	0.873
ATF	0.350	0.106	0.091	0.004	0.038	0.589

SKO	0.993	0.259	0.312	0.026	0.119	1.709
HSD	2.031	0.680	0.842	0.057	0.216	3.826
LDO	0.197	0.066	0.028	0.000	0.036	0.327
FO	0.431	0.179	0.072	0.001	0.063	0.746
LSHS	0.185	0.053	0.048	0.000	0.079	0.365
Others	0.769	0.202	0.304	0.017	0.115	1.407
Total	5.714	1.885	2.071	0.143	0.937	10.750

De-Regulation : Liberalisation

Till Q1 FY99, the Indian oil & gas industry has been under state control vide the Administered Pricing Mechanism (APM). The production pattern, capital expenditure and pricing of petroleum products were determined by the state. The pricing system assured all players a normative post-tax return of 12% on net worth.

Decontrol measures were initiated and retention pricing for refineries has been abolished w.e.f Apr '98. However, controls on 5 products (MS, HSD, ATF, SKO and LPG) that contribute 70% of the volumes, continue to remain. Subsidies on LPG and SKO will be limited to 15% and 33% of import parity prices and tariff on crude and petroleum products will be reduced to 0-5% and 15% respectively.

The major gainers of deregulation process will be old players with old and depreciated units like - MRL, CRL, BPCL, HPCL, IOCL etc. New refineries like MRPL, Essar Oil and Reliance Petroleum will be hard hit, as their refining margins under the market determined pricing mechanism would be lower than that under the APM. In addition, net profit will be affected by high interest and depreciation outgo. It is important to note that a six mtpa refinery (current minimum economic size) will cost Rs36bn.

Global oil & gas production is skewed with most of the reserves concentrated in the Middle East, which supplies to deficit countries in the Americas and the Asia-Pacific. As at end 1998, the world had proven oil reserves of a little over 1 bbl and proven gas reserves of a little less than 140 trillion cubic meters.

Amongst players, ONGC has a virtual monopoly in upstream crude oil and gas production, while GAIL has a monopoly in marketing and distribution of gas. The refining and marketing sector is again dominated by PSUs, which account for nearly 95% of the total refining capacity and 100% of products

marketed. IOCL is the market leader in both refining and marketing followed by BPCL and HPCL. MRPL was the first non-PSU in the sector, followed by Reliance and Essar by 1999-2000.

Stock valuations continue to remain depressed. The two negative factors for the sector are dim outlook on global refining margins and supply of stock in the form of government disinvestment. Investors should use all disinvestment programs as a buying opportunity because the long-term fundamental story is still intact.

Need for deregulation

As given above, the oil industry is totally controlled and the policies relating to the industry are fully regulated by the Government of India. Right from the source of crude procurement, controls exist till the final distribution of finished products, prices, pattern of production, sales plan of oil companies, product availability, expansion of the industry, and consequently earnings of the players in the sector. To be fair to policy makers, the current controls did succeed to achieve macro-economic goals of the Government for more than two decades. With the ushering of liberalization since early 90's, the situation has however undergone a sea change and the policy makers have begun to feel that the APM may no longer work successfully as it had in the past and the energy security of the country would be under threat if a robust industry is not created. The factors that have caused this change can be summarized as under.

- A sharp increase in demand for petroleum products and increasingly felt need for large investments: In the last five years the demand for petroleum products is increasing compounded annual growth rate of about 6% but investments in the industry has not kept pace with the demand resulting in large imports of crude and finished products. Crude oil production has been plateauing with no new exploratory wells found. The value of imports has increased from less than US$4bn in 1990-91 to about US$13bn in 2000. Large imports can have hazardous effect on the macro economic management, especially the exchange rate and inflation and hence there is need to cap the imports within manageable levels. All this is possible only if the sector is fully opened to attract substantial foreign and domestic investments.
- Difficulties in periodic adjustment of prices resulting in serious financial problems for the industry participants: With the responsibility of fixing the prices of petroleum products, popular Governments postpone the decision of hiking the prices, even when it is inevitable. This has led to burgeoning oil pool deficit that is slowly threatening to get out of control. The only long-term

solution to this problem is that the government should get out of the responsibility of fixing prices leaving them to market forces.

- Loss of precious foreign exchange due to inefficient use of fuel: Due to cross-subsidization, the market prices of key petroleum products are not reflective of the underlying economic value of the products leading to mass scale inefficiency in use of fuel and sub-optimal inter-fuel substitution. The growth of the industry is more skewed towards subsidized products, resulting in continuous inefficient use of precious foreign exchange.
- Need to make available inputs to user industries at competitive prices: Petroleum products are vital inputs to key industries and with the economy opening up for international competition, the user industries can become competitive only if the inputs are made available at competitive prices and not at prices fixed by the government which could be at variance with underlying international prices.
- Difficulty in administration of APM: Administration of APM is becoming increasingly difficult with the partial opening up of the sector allowing private sector refineries.

Company Profiles

Bharat Petroleum Corporation Ltd

Bharat Petroleum Corporation Ltd (BPCL) is a public sector undertaking with a 6mtpa refinery at Mumbai and an overall market share of 20%. The company also market products produced by Madras Refineries Ltd.

BPCL has a well-spread marketing infrastructure comprising of 4489 retail stations, 147 installations/ depots, 16 aircraft fueling stations and 27 LPG bottling plants, which is a prerequisite in a decontrolled scenario.

Government has a 66% stake in the company, which it plans to divest in due course of time. The contenders for the same include MNCs like Shell along with domestic companies like Reliance Industries. A possible cross holding between BCP and HPCL is also proposed.

The Indian oil sector is at the threshold of decontrol. The government is gradually slackening controls over the 5 products (MS, HSD, ATF, SKO and LPG) that contribute 70% of the volumes. However with crude prices touching new highs with no corresponding rise in product prices the refining margins are largely affected.

BPCL has entered into a 10-year pact with its unions for wage revision. The company has recently launched the "SmartFleet" card targeted at fleet owners and corporate customers.

Essar Oil Ltd

Essar oil ltd. (EOL) is emerging as a leading integrated oil and gas company snapping the entire value chain, from deep with in the earth and all the way to the consumer. Essar have exploration and production (E&P) rights in some of India are most valuable oil and gas blocks. EOL is building a state-of-the-art refinery and a county wide network of modern retail fuel outlets. EOL is the first private sector company to enter petroleum retailing in India in over 100 years. It already has 500 retail outlets fully operational and plans to set up 5,000 retail outlets over next 5 years. It is also setting up a 10.5 MPTA petroleum refinery at vadinar in Gujarat and owns the Ratna R-series development blocks and exploration blocks of coal Bed methane.

EOL is the first to enter the refining sector when it was open to private participation. The refinery at vadinar, Gujarat, which has achieved full financial closure, is two third completed and will be commissioned in months. This world-class refinery complex will focus on producing middle distillates like aviation turbine fuel, kerosene oil and high speed diesel which form over 60% of India's demand. Essar will also produce LPG and transport fuels including petrol conforming to Euro 3 and Euro 4.product quality standards for the domestic and export markets.

To serve retail customers under the retail brand 'Essar Oil', EOL is building a modern, country wide distribution network of 5,000 filling stations. Essar is designing them as complete retail outlets, offering the value added amenities and services that customers look for in individual markets. Looking beyond the saturated urban markets, is reaching out to customers deep in India's heartland. EOL is the first oil company to import high-speed diesel. Essar is marketing this at competitive to bulk industrial consumers. In addition to petrol, diesel and lubricants, Essar will market a full range of fuels including naphtha, kerosene and fuel oil.

Essar pipelines division is putting in place the central India pipeline network. This 2,260 km long pipeline will connect their refinery in demand centers across the northern, western and central parts of India.

Hindustan Petroleum Corporation Ltd

Hindustan Petroleum Corporation Ltd (HPCL), is a public sector undertaking with two refineries at Mumbai and Vishakhapatnam (vizag) and a 20% market share. The company is also a co-promoter of Mangalore Refineries and Petrochemicals Ltd (MRPL)-a stand alone refinery. However due to infrastructure constrains HPCL has the exclusive rights to market MRPL's products.

HPCL has a well established marketing infrastructure with 4400retail outlets, of which 46% are owned by the company. Besides the company also owns product pipelines to evacuate products from its refineries. The pipelines include those from Mumbai to Pune, Visakhapatnam to Vijayawada, to be extended to Secunderabad, and another pipeline from Mangalore to Bangalore.

Government has 51% stake in the company, which it plans to divest in due course of time. The contenders for the same include MNCs like Totalfina, Exxon etc and domestic companies like Reliance Industries. A possible cross holding between BPCL and HPCL is also proposed.

Indian Oil sector is at the threshold of decontrol. The government is gradually slackening controls over the 5 products (MS, HSD, ATF, SKO and LPG) that contribute 70% of the volumes. However with crude prices touching new heights with no corresponding rise in product prices the refining margins are largely effected.

The company incurred capital expenditure of Rs 10bn for projects during FY01. HPCL would contribute Rs 20bn towards equity to fund the Rs 98bn refinery project to be set up by its subsidiary, Guru Gobind Singh Refineries. The company registered a net profit of Rs 10880mn as compared to Rs 10574mn in the previous year.

Indian Oil Corporation Ltd

IOC is India's leading oil refining and marketing company and processes crude oil to produce petroleum products such as petrol, diesel, LPG, kerosene, naptha etc. The company holds over 53% of the petroleum products market in India with sales of 47.8 million tonnes in FY01. It owns more than 82.5% of the total pipeline capacity, which will play an important role post deregulation.

The Government has implemented deregulation of the Indian hydrocarbon sector in a phased manner over a 4 year time frame, beginning FY99. While retention pricing for refineries has been abolished wef Apr '98, controls on 5 products (MS, HSD, LPG, SKO, ATF) which account for over 70% of volumes, continues. On controlled products, refineries will get adjusted import parity prices. Profits of established PSU refineries with low cost of production will jump and new refineries will be badly hit due to higher fixed costs outgo. Marketing/ distribution network will be under APM till FY2002.

Earlier, the oil refining and marketing sector was tightly regulated and dominated by the state. Under the old regime of administered pricing, the refining and marketing companies were allowed a 12% post tax return on net worth. Diesel, kerosene, LPG (domestic), Naptha (used in fertilizers) were subsidized at the cost of mainly petrol and LPG (industrial).

Post deregulation, Indian refining margins would track global refining margins. These margins, however would be relatively insulated because of tariff barriers and transportation costs. Marketing margins would continue to remain under administered pricing till FY2002. In FY2003, IOC will see another quantum jump in earnings with decontrol of marketing/ distribution network.

IOCL is expected to be one of the largest beneficiaries of deregulation process especially after the redemption of oil bonds, which will create considerable cash flows for the company. The company will continue to witness considerable revenue growth as product prices move up in phases. However, the poor refining yield of around 70% due to old and smaller refineries remains a cause of concern.

IBP Co Ltd

IBP is a pure marketing company with 60% government holding. The company has 1504 retail outlets with about 10% market share. As a pure marketing company with comparatively less gross block, the profit potential is limited under administered pricing mechanism (APM). In the absence of sufficient internal cash generation, IBP could not develop its infrastructure network compared to other integrated oil majors.

Beyond FY02 (decontrol), ownership of retail outlets would be a matter of concern. IBP owns only 13% of its outlets, which is a negative factor especially since in a deregulated scenario, dealer-owned and dealer-controlled outlets become potential target for new entrants. IBP has plans of building 13 new depots at a cost of Rs2.1bn.

The company has significant presence in the commercial explosives market. The chemical division's turnover is comparable to that of leading players in the industry like ICI and IDL industries. However,

the inability to pass on increasing costs to the single largest buyer- Coal India and the over supply in the industry has deteriorated business economics.

Slow economic growth has effected the Engineering Division, which is the smallest division of IBP. However contribution from this division is rather insignificant to have any impact on the bottom-line.

Oil and Natural Gas Corp. Ltd

ONGC dominates the exploration and production of crude oil/ natural gas in India with 90% market share. The company's earnings are insulated from vagaries in global crude oil prices. When crude oil prices decline, ONGC is guaranteed a net floor price of Rs1991/ton ($6.3/bbl) but the corollary is not true.

The company registered a net profit growth of 44% in FY01 to Rs 52bn as compared to Rs 36bn in the previous year.

Since April 1998, the cost plus formula for crude oil pricing was withdrawn and local crude prices were linked to international prices. However during the transition period (FY99-02) ONGC is paid only part of the import parity prices and the balance flows to the oil pool account. Therefore in FY00, ONGC realized 77% of import parity, which would increase by 2.5% every year until FY02.

ONGC's downside in the short run is protected because of the floor price guaranteed by the government. However, medium to long term profitability will depend on oil and gas prices and volume of production.

Under the current situation a steep decline in oil prices are unlikely.

Reliance Petroleum Ltd

Reliance Petroleum Ltd (RPL), promoted by Reliance Industries, is the world's largest greenfield refinery complex with an installed capacity of 27mtpa. The company's highly complex secondary processing facilities would optimize product pattern and provide higher distillate yield. Economies of scale coupled with superior refinery configuration would help the company post better refining margins than its competitors. The company has registered a net profit of Rs15bn in FY01.

The company has marketing tie up with IOC, BPCL and HPCL for regulated products. IOC has also signed a 10-year agreement starting 2002, which includes a take-or-pay clause. The agreement with HPCL and BPCL are valid only up to March 2002, when the APM system would be dismantled. These companies have not entered into long-term agreements and have expressed reservations about the take-or-pay clause.

The Indian oil sector is at the threshold of decontrol. The government is gradually slackening controls over the 5 products (MS, HSD, ATF, SKO and LPG) that contribute 70% of the volumes. However with crude prices touching new heights with no corresponding rise in product prices the refining margins are largely effected. For FY01, domestic production from refineries is estimated to be 109.58mtpa (about 2.31 million barrels per day). During the said period, the 17 refineries together would process about 112mtons of crude. The domestic crude supply is expected to be around 31.97mntons and imports, including imports by Reliance Petroleum Ltd and Mangalore Refinery and Petrochemicals Ltd is estimated to be about 80.9mnt.

PART 2: West Bengal

Contents

Acknowledgement

I would like to acknowledge the contribution of the following whose contributions helped me in completing the study. This study covered a lot of areas on which I needed a lot of understanding and access to a lot of resources which were provided by the following –

- **Mr. Avrojit Kar (Project Guide – Industry) – Essar Oil Ltd, Kolkata**
- Mr. Amod Dasgupta
- Ms. Prasidha Menon
- Mr. Subhojit Ghosh
- Mr. Ajay Gupta
- Mr. Manoj Shrivastava
- Mr.Shivendra Lal
- Mr. Rakesh Mishra
- Mr. Bharat Sharma
- Essar Oil Ltd
- M/S. Inda Filling Station (Kharagpur)
- **Mr. Sumanta Sharma (Project Guide – Academic) – IIPM, New Delhi**

Sincere thanks to everybody else from the people who helped in filling up of the questionnaires too. Without the contribution of the above this study would not have been possible.

Synopsis

The study is undertaken to find out the potential for HSD sales in the state of West Bengal to gauge the scope for new entrants as well as identifying the issues which plague the current problems so that the existing players can improve on them or the new entrants could exploit them to provide better value to the consumers.

The methodology involved interacting with various Retail outlet owners to gauge their satisfaction levels. I also interacted with a lot of oil company officials to understand the various strategies and other aspects of the oil industry. I also consulted a lot of reports journals and web-sites to gather information on the industry.

I covered around 115 ROs in Kolkata and the surrounding states and the findings showed various issues like that of supply and availability. There were also issues of adulteration and unfair competitive practices. There is also the problem of smuggled fuel from Bangladesh and the loss of sales due to the sales tax which is higher as compared to states like Jharkhand and Assam.

The solutions are better customer service as well proper supplies using innovative and technology to aid this process. There also needs to be political will to help all the players to prosper. With the entry of big Indian players and MNCs, the future is going to very competitive.

There is enormous growth opportunity and there is enough space in the market for all the players to create a niche for themselves.

INTRODUCTION

West Bengal the erstwhile capital of British India was the forerunner in Industrial development in the early 1900's; the pace has followed considerably today. There is a revival of sorts under Mr. Buddhadeb Bhattacharya, the Hon. Chief Minister of West Bengal. A detailed list of the demography is included in the study.

West Bengal spreads from the Himalayas in the north to Bay of Bengal in the south. The state is having significant share in basic industries of steel, petrochemicals, coal, tea, leather etc and is the main entry point of import of crude for refineries and petroleum products in eastern India.

There are several cross-country pipelines for transportation of petroleum products and crude from refinery to refinery and others. The state of West Bengal has its significant presence in the petroleum industry, consumption, and distribution of the petroleum products among he neighboring states. In the north of the state, products are being received at Siliguri through pipelines and tank wagons from north east refineries.

Petroleum products MS, HSD, SKO & LDO are being distributed for mass consumption and LDO, FO for industrial use through an intricate network of transportation through pipelines, railway's tank wagons, tank trucks etc. Oil industry is also keen partner is improving the environment. It has already introduced eco-friendly auto fuel and auto LPG in Kolkata.

The main objective of the study is to find the opportunities of growth for HSD in the state of Bengal.

Due to various factors like local taxes and transportation costs etc, the cost of HSD is lower in the neighboring states like Assam and Jharkhand. The sales of HSD for West Bengal are concentrated in the southern part of the state. Hence the focus would be on these districts namely – North & South 24 Parganas, Hooghly, Howrah, Midnapore (east & west) and Nadia

The private companies which are new entrants as compared to the big state owned companies like Indian Oil Ltd, BPCL and HPCL as they have had a monopoly till 2002-2003. With the advantage of time and state patronage, they have become very big in operations as well as financial clout as well as have created a kind of cartel amongst themselves. Indian Oil Ltd till very recently was the only representative for India in the Fortune 500 list.

The private players have their task cut out and have to face major hurdles to compete with these companies, who have established set-ups all across the country and spreading across the globe.

The private players are as follows –

- Essar Oil Ltd
- Reliance Petrochemical Ltd
- Shell

Out of the above Essar and Reliance, have already started setting up their operations across the country while Shell has just three in Chennai and Bangalore. In West Bengal, only Essar and Reliance have a presence as of now, both having a total of 8 ROs in the state.

As compared to the rest of the country the growth for number of vehicles and the number of ROs is very less. West Bengal has 1257 ROs as compared to 400 odd in New Delhi alone. There has been steady growth and the oil companies have been left behind and have a long way to catch up.

This study envisages finding out the problems plaguing the industry as such and how they can be resolved. The focus will be on HSD as this is the segment which the private players are targeting namely Reliance and Essar. Natural gas is also one of the areas of growth but only Reliance is the player with any significant presence in this segment while Shell and Essar are just marketing company as of now (Essar refinery is supposed to be up in 2006).

DEMOGRAPHY OF THE STATE

Capital	Kolkata
Date of formation of state	15.08.1947
Area	88752 sq.km.
Total cultivated area	134 lacks acre
Total Irrigated area(Minor)	47.6 lacs acre
Temperature	Min: 11° Cen. Max 38° Deg. cen. In Kolkata
Major crops	Paddy, wheat, jute, potato, cashew, coconut, oranges, tobacco, oil seeds & pineapples.
Total population	68077965(1991 census)
Rural population	72.50%
Urban population	27.50%
Male population	35510633(1991 census)
Female population	32567332(1991census)
Sex ratio	F/m =917:1000
Language	Bengali , Hindi , English, Urdu &. Nepali
Literacy rate	57.7
Per capita income	5901 (Rs.at current price in 92-93)
Number of divisions	4
Number of districts	19
Number of tehisils	345
Number of Blocks / Mandals	339
Total villages	40889
Number of Mun.Corporations	6
Power (Installed capacity)	4725.1 mw
Villages Electrified	31367
Number of Polling Stations	61522
Length of Roads	Nh:1863 sh:3445 mdr:24557 vr:32780
Vehicular population	1870551(mar2001)
Mode of Transport	Rail, road, river ways, air
Airport locations	Kolkata, bagdogra,Hasimara(af) & Panagarh
Seaport locations	Kolkata & Haldia
Public representatives	MP(LOKSABHA):42 MP(RAJYA SABHA):16 mlas:294 mlcs:NIL
Major Festivals celebrated	Durgapuja, Diwali, Holi, Id, Christmas & Muharam.
Major Minerals	Coal, iron, limestone & stone chips
Major Industries	Steel,heavy eng. ,automobile, tea, textile, petro-chemical, power plant jute & Fertilisers
Tourist locations	Darjeeljng, Gaur , Murshidabad, Kalighat, Bakkhalij & Digha
Major pilgrim locations	Gangasagar, Tarapith. Kalighat & Dakhineshwar
Disaster prone areas	Coastal Medinipur & 24pgs (s)


Districts of
West Bengal
SIKKIM
NEPAL
BHUTAN
ASSAM
DARJEELING
JALPAIGURI
COOCHBEHAR
NORTH
DINAJPUR
MEGHALAYA
SOUTH
DINAJPUR
BIHAR
N
MALDA
BANGLADESH
MURSHIDABAD
BIRBHUM
NADIA
BURDWAN
BANKURA
PURULIA
24 PRGANAS
NORTH
HOOGHLY
CALCUTTA
HOWRAH
24 PARGANAS
South
ORISSA
MIDNAPUR
BAY OF BENGAL
State Capital
District Head Quarter
District Boundary
International Boundary
Map not to Scale

OBJECTIVES

Before any work on the study can be started, the most important aspect which needs to be discussed is that of the objectives of the study. The objectives help us in ascertaining the purpose of the study as well as gives direction to the study.

The objectives of the study can be divided into two parts –

1. The Primary objective
2. The Secondary Objective

The Primary Objective

- The primary objective is to look for opportunities by finding out the performance levels of the PSU oil companies so as to compare them with the private players. The objective is to find out the areas where the new entrants can exploit the weaknesses and incorporate them in their strategies. This would help them create a foot-print in the already saturated market with ROs.

  Through this we would be gauging the potential for growth in the state of West Bengal for HSD.

- Kolkata being the biggest market in the state has the highest number of ROs in the state. Hence, it is an area where all the oil companies want to target. The major problem is that of space and opportunity. Therefore, one of the objectives would be to analyze the opportunities and problems in the city of Kolkata.

The Secondary Objectives

As we work on the primary objective we would also be looking at some other factors which would affect the primary objective as well as bring out new factors and opportunities for the oil companies to exploit.

The secondary objectives are given as follow -

- The problems faced by the industry which is affecting the growth of retail of HSD in the state. The objective is also to find out the solutions to these problems. We would be analyzing the various aspects from the sales tax to political to demography.

- One of the objectives would be to understand the road network in and around Kolkata so that the understanding can be utilized to for better planning and strategizing for the future.

- What are the various opportunities which the companies can alternatively look it? Which areas have higher potential? It would also involve various trading areas and identifying the areas where there is potential to set up a RO.

- We will also discuss the New Roads that are coming up like the East West Corridor, and the Golden Quadrilateral. What impact would this have in the Bengal Market? volumes would increase but then again retail outlets would also increase and maybe not in the

same proportion. Hence this will lead to the per RO sales plummeting, which will further lead to the death of some RO's. So now is the question of the fittest surviving. How does one do that and still make a profit?

Methodology

The study aims to cover ROs in diverse areas as well as in different trading zones so that the data we get can be more exhaustive hence it is very important have clear demarcation so that data collection can be easily done. The target audience for the study is everyone involved with ROs right from the owner to the manager to the attendants.

To make data collection easier and more useful, I have divided the area into two parts. They are given as follow –

1. The Kolkata and Howrah region
2. North & South 24 Parganas, Hooghly, Howrah, Midnapore and Nadia districts.

Kolkata and the town of Howrah, is considered one area as they are separated by the river Hoogly and Howrah is considered the logistical and the trading area of Kolkata. Therefore, evaluation for Kolkata would be incomplete if it does not include Howrah.

The rest are the states at the southern part of the state and around the city of Kolkata. These are the areas with most of the industries due to their proximity to Kolkata. Thus, they can be clubbed in one group and analysed together.

Thus, we will discuss them separately as both have different growth aspects which would be discussed as follows.

North & South 24 Parganas, Hooghly, Howrah, Midnapore and Nadia districts.

These regions with the exception of Midnapore(Haldia) are still virgin territory for the companies in terms of the HSD retailing facilities. These are the districts which would fall in the Golden

Quadrilateral as well The East West corridor. Hence, their contribution to the state would be immense in the following years.

I would be ascertaining the objectives through a detailed questionnaire which would be targeted at existing petrol pump owners to gauge the current problems and requirements face by them.

To ascertain the requirement of the consumer i.e. the HSD users and the shortcomings of the current setup personal interviews are to be undertaken who are mostly based out of Kolkata as most of the commercial operators operate out of Kolkata.

To understand the road networks and areas primary data is to be used.

The Kolkata and Howrah region

Kolkata is the capital of the state as well as the most important city in the eastern zone. It is also the commercial hub of the area having 200 odd ROs in the city while having 8,39,216 vehicles at the end of the year 2004. That makes it 4400 vehicles serviced by one RO, thus we can see that there is huge opportunity in the city with the huge growth in the number of vehicles in the city while the growth of number of ROs is not consistent with the increase in the number of vehicles.

The problem does not lie only with the oil companies but with the constraints of space and capital in the city. With a premium on the space as well as opportunity, the focus is on the existing ROs.

There are government regulation that regulate any kind of poaching for the next five years but that period gets over in 2007.

Therefore, we need to study the mindset for the future so as to educate and create the need for the future. We would be gauging the response through the questionnaire which is being made in such a way so that it can be used both for the city as well as the for the districts which would make data collection easier.

This differentiation is only for data collection as during analysis the data will be analyzed together to get an overall picture of the state.

Methodology of the Questionnaire:

The questionnaire would be designed in such a way that it derives detailed information through least time. It would be a closed ended questionnaire and would be conducted by the interviewer through a personal interview.

Secondary Data

Data about the industry would be gathered through industry reports and annual reports of the company. Another source of data would be from the company's web-sites or sites of any petroleum related association. Attempts are also to be made to make contacts with company representatives to learn more information about the companies strategies. I would be using personal interviews for this.

Limitation of the study

The study has been base on the data collected through Annual Report, Website, journals, interviews as well as reports on the industry but this information has its limitations as well. The details are as follows.

- The findings are based on purely secondary data. Sometimes it could be possible that some data that is incorrect has been passed to the site or annual report with the intention to show false data.

- Ignorance on part of the subject could result in some data being incomplete or wrong

- The data from the publications are based on studies and surveys which have their own limitations

- The Data may vary from different sources.

The above were the limitations of the study.

Questionnaire

Name of Respondent:_____

Location:_____

- Which company holds the licence for selling HSD
  - Indian Oil Ltd and IBP
  - HPCL
  - BPCL
  - Essar Oil
  - Reliance
  - ONGC

- How old is the Retail Outlet?
  - Less than 1 yr
  - More than 1 yr but less than 5 yrs
  - More than 5 yrs

- What is the approx. sale of HSD in a month? (kl)
  - 0 – 100
  - 101 – 250
  - 251 – 350
  - 351 – 500
  - > 500

- What are the benefits derived from the company supplying the HSD?
  - Service
  - Quality
  - Commercial
  - No Options _____
  - Others_____

- Are you fully satisfied with the service provided?
  - Yes
  - No

- Is the quality of the product up to the desired standards?
  - Yes
  - No

- How do you plan to counter the growing competition in the face of higher volumes and increased competition?
  - Through better service
  - Through better quality
  - Providing other amenities like restrooms, stores, toilets etc
  - Other revenue options
  - Others_____

- What is the category of RO allotted?
  - A Site
  - B Site
  - C Site

- When was the lease signed and when does it expire?

  _____

- Do you get the exact quantity as indented by you?
  - Yes
  - No

- How much of your sales are through barrel sales?
  - Less than 10%
  - 10% - 20%
  - 20% - 30%
  - More than 30%

- Would you consider choosing another company if given the right reasons
  - Yes
  - No

- Any comments or suggestions:

  _____

  _____

  _____

Thank you

Details of Retail outlets visited

Nos.	Company	Location	District
1	BPCL	Near Station Rd, Kharagpur	Midnapore
2	HPCL	College	Midnapore
3	BPCL	Chowringhee	Midnapore
4	Indian Oil Ltd	Inda	Midnapore
5	HPCL	Southside	Midnapore
6	HPCL	IIT, Kharagpur	Midnapore
7	BPCL	Pailan	South 24 Parganas
8	IBP	Haribheria	South 24 Parganas
9	HPCL	D.H. Road	South 24 Parganas
10	Indian Oil Ltd	Bishnupur	South 24 Parganas
11	BPCL	Amtolla	South 24 Parganas
12	HPCL	Amtolla Crossing	South 24 Parganas
13	Reliance	Rajarhat	South 24 Parganas
14	HPCL	Gangarampur	South 24 Parganas
15	BPCL	D.H Road (S)	South 24 Parganas
16	Indian Oil Ltd	Janak Kalyan	South 24 Parganas
17	Essar Oil Ltd	Khalpole	South 24 Parganas
18	IBP	Gopalpur	South 24 Parganas
19	BPCL	Kona Expressway	Hoogly

Nos.	Company	Location	District
20	Indian Oil Ltd	NH 6 - Salap	Hoogly
21	Indian Oil Ltd	Bonsal Rd	Hoogly
22	IBP	South Chamrail	Hoogly
23	Indian Oil Ltd	PS. Liluah	Hoogly
24	HPCL	Dankuni (Town)	Hoogly
25	HPCL	Chanditala	Hoogly
26	Indian Oil Ltd	Borai	Hoogly
27	Indian Oil Ltd	Ajasnagar	Hoogly
28	IBP	Singur	Hoogly
29	BPCL	Gopal Nagar	Hoogly
30	Indian Oil Ltd	Hanipal, Mahioli Thigri	Hoogly
31	IBP	Raghunathpur	Nadia
32	HPCL	Kalyani More	Nadia
33	BPCL	Central Park	Nadia
34	IBP	Buddha Park	Nadia
35	Indian Oil Ltd	Birohi More	Nadia
36	BPCL	Dakghar (Nadia town)	Nadia
37	BPCL	Bagh more	Nadia
38	BPCL	Municipal Market	Nadia

Nos.	Company	Location	District
39	Indian Oil Ltd	Prince Anwar Shah Rd	Kolkata (South)
40	HPCL	Jadavpur Thana	Kolkata (South)
41	BPCL	Selimpur	Kolkata (South)
42	Indian Oil Ltd	Dhakuria	Kolkata (South)
43	BPCL	Golpark	Kolkata (South)
44	BPCL	Deshapriya Park	Kolkata (South)
45	HPCL	Sarat Bose Rd	Kolkata (South)
46	HPCL	Southern Avenue	Kolkata (South)
47	BPCL	Harish Mukherjee Rd	Kolkata (South)
48	Indian Oil Ltd	Kashba	Kolkata (South)
49	BPCL	Ruby Park	Kolkata (South)
50	IBP	Gariahat	Kolkata (South)
51	BPCL	Ballygunge Circular Rd	Kolkata (South)
52	BPCL	Taratolla	Kolkata (South)
53	Indian Oil Ltd	Bye-Pass	Kolkata (South)
54	HPCL	New Alipur	Kolkata (South)
55	HPCL	Alipur	Kolkata (South)
56	Indian Oil Ltd	Garia	Kolkata (South)
57	Indian Oil Ltd	Netajinagar	Kolkata (South)

Nos.	Company	Location	District
58	BPCL	Mudiali	Kolkata (South)
59	IBP	Statesman house	Kolkata (North)
60	Indian Oil Ltd	Jadunath Dey Rd	Kolkata (North)
61	BPCL	Ganesh Ch Avenue	Kolkata (North)
62	HPCL	Eden Hospital Rd	Kolkata (North)
63	HPCL	Bartolla Street	Kolkata (North)
64	BPCL	C.R. Avenue	Kolkata (North)
65	BPCL	C.R.Avenue	Kolkata (North)
66	HPCL	Jatindra Mohan Rd	Kolkata (North)
67	BPCL	Jorabagan	Kolkata (North)
68	HPCL	Hatibagan	Kolkata (North)
69	HPCL	Acharya Prafulla Ch. Rd	Kolkata (North)
70	Indian Oil Ltd	Entally	Kolkata (North)
71	HPCL	Sealdah	Kolkata (North)
72	IBP	Bidhan Sarani	Kolkata (North)
73	BPCL	B.T.Road 1	Kolkata (North)
74	Indian Oil Ltd	B.T.Road 2	Kolkata (North)
75	Indian Oil Ltd	Dunlop	Kolkata (North)
76	HPCL	Shakespeare Sarani	Kolkata (North)

Nos.	Company	Location	District
77	HPCL	Minto Park	Kolkata (North)
78	IBP	Shibpur	Howrah
79	IBP	Unsani	Howrah
80	IBP	Omkarti Prasastha	Howrah
81	Indian Oil Ltd	Ankurhati	Howrah
82	BPCL	Junglepura	Howrah
83	BPCL	Alampur	Howrah
84	IBP	NH6	Howrah
85	Indian Oil Ltd	New Karolla	Howrah
86	HPCL	Dhulorre	Howrah
87	Indian Oil Ltd	Kandua	Howrah
88	Indian Oil Ltd	Raghudevpur	Howrah
89	IBP	Uluberia	Howrah
90	BPCL	Uluberia Town	Howrah
91	HPCL	Mourigaon	Howrah
92	HPCL	Champadally	North 24 Parganas
93	Indian Oil Ltd	Colony More	North 24 Parganas
94	BPCL	Airport Colony	North 24 Parganas
95	BPCL	Near Airport	North 24 Parganas

Nos.	Company	Location	District
96	HPCL	Birati	North 24 Parganas
97	BPCL	Madhamgram	North 24 Parganas
98	Indian Oil Ltd	Char Bangalow	North 24 Parganas
99	Indian Oil Ltd	Barasat-Barakpore Rd	North 24 Parganas
100	IBP	Barasat P.O	North 24 Parganas
101	HPCL	S.P.Mukherjee Rd	Kolkata(Central)
102	HPCL	DUM DUM Rd	Kolkata(Central)
103	Indian Oil Ltd	Chetla Rd	Kolkata(Central)
104	Indian Oil Ltd	Camac St.	Kolkata(Central)
105	BPCL	Camac St.	Kolkata(Central)
106	BPCL	Near Nandan	Kolkata(Central)
107	HPCL	A.J.C Bose Rd	Kolkata(Central)
108	Indian Oil Ltd	Near Kalamandir	Kolkata(Central)
109	Indian Oil Ltd	Sarat Bose Rd	Kolkata(Central)
110	Indian Oil Ltd	Gurusaday Rd	Kolkata(Central)
111	IBP	Elgin Rd More	Kolkata(Central)
112	BPCL	14, Ashutosh Mukherjee Rd	Kolkata(Central)
113	HPCL	7/1, Ashutosh Mukherjee Rd	Kolkata(Central)
114	BPCL	Park Circus	Kolkata(Central)

Nos.	Company	Location	District
115	BPCL	C.I.T Rd	Kolkata(Central)
116	BPCL	Salt Lake, Sector 3	Kolkata(Central)
117	BPCL	Park Street	Kolkata(Central)
118	HPCL	Park Street	Kolkata(Central)
119			
120			

Total number of Retail outlets covered in the study - 118

Total number of Districts covered – 7

- Kolkata Municipal Area
- North 24 Parganas
- South 24 Parganas
- Nadia
- Howrah
- Hoogly
- Midnapore

Abbreviations
BPCL – Bharat Petroleum Corporation limited
HPCL - Hindusthan Petroleum Corporation Limited
IBP - Indo-Burma Petroleum
IOCL - Indian Oil Corporation Limited
MS - Motor Spirit
HSD - High Speed Diesel

The Questionnaire

This is the questionnaire which was used to gather information from the target audience.

For better understanding of the results and the findings it's very important to understand what the questionnaire was meant to find out from the elaborate study in the first place.

Therefore, we would examine each of the questions to find out the objective. The questionnaire is an open-ended and is conducted as an interview by the researcher

Firstly, the questionnaire asks for the name of the respondent and then the location so that during analysis, the data could be assigned to the districts as well as help in going back to some specific cases as and when required.

- **Which company holds the licence for selling HSD**
  - **Indian Oil Ltd and IBP**
  - **HPCL**
  - **BPCL**
  - **Essar Oil**
  - **Reliance**
  - **ONGC**

This is the first question which aims to find out which company does the particular RO deal with? This is important to also find out the number of ROs of the various companies given in the question as this would also help us in determining the number of ROs each has in the studied area.

- **How old is the Retail Outlet?**
  - **Less than 1 yr**
  - **More than 1 yr but less than 5 yrs**
  - **More than 5 yrs**

In this question we are trying to find out how old is the RO? We have divided it into three broad categories of less than 1 year which are the very new ones, then the ones which have been around for a year but not older than 5 years. These are the pumps which are relatively new and lastly, the ones

which have been around for more than 5 years; these are the very old ones which have been around for many years.

- **What is the approx. sale of HSD in a month? (kl)**
  - **0 – 100**
  - **101 – 250**
  - **251 – 350**
  - **351 – 500**
  - **> 500**

This question sought out to find the avg monthly sale of HSD from the RO?

It has been divided into four parts in which the first ones of the 0-100 KL are basically on urban roads and in towns and cities while the ones at the lower end of the range they are usually on the highways where the sale of HSD is higher.

This question is also important GAP analysis to find out if there are any gaps in the trading areas which the companies can target.

- **What are the benefits derived from the company supplying the HSD?**
  - **Service**
  - **Quality**
  - **Commercial**
  - **No Options _____**
  - **Others_____**

This question was incorporated into the questionnaire to understand the benefits which the ROs derive from the oil companies?

The objective was to find out what make the RO owner opt for a particular company and the benefits which he gets from the company. This helps in understanding the various models employed by the companies and would help the new entrants.

- **<u>Are you fully satisfied with the service provided?</u>**
  - **Yes**
  - **No**

Here we tried to find out the level of satisfaction from the service especially fro the PSU oil companies as they had a monopoly over oil marketing till liberalisation.

With MS and HSD being the same for all companies the differentiation is basically through the service offered by the company. Hence, it's very important to know if there is any scope or any dissatisfaction in the current environment for the new entrants to exploit.

- **Is the quality of the product up to the desired standards?**
  - **Yes**
  - **No**

This question was put in the question to find out if the customers were happy with the quality of fuel provided to them?

In India, a big problem is that of adulterated fuel which helps the retailer to make higher profits while the consumers suffer through low mileage and engine damage. The fuel is usually adulterated before it reaches the RO. It could be at the depot or even during transits which are undertaken by third party distributors but the overall responsibility is that of the fuel company.

- **How do you plan to counter the growing competition in the face of higher volumes and increased competition?**
  - **Through better service**
  - **Through better quality**
  - **Providing other amenities like restrooms, stores, toilets etc**
  - **Other revenue options**
  - **Others_____**

This is to find out how the ROs are using newer strategies and ways of earning extra revenue to survive and stay ahead of the competition in today's cut throat competition.

The PSU oil companies have taken a step ahead in this aspect keeping in mind the threat of the new entrants. Lots of quality control measure and extra benefits. The question tries to find what is happening at the RO level and how the same philosophy at the company level is being implemented at the RO level. With ROs mushrooming everywhere in some cases even sharing the same boundary wall in a trading area, the extra which the RO provides to the customer is very critical.

- **What is the category of RO allotted?**
  - **A Site**
  - **B Site**
  - **C Site**

This question was used to find out the status of each of the ROs in respect to who owns it and who runs it.

Various companies have various models which they employ in the case of ownership or running of the RO. It is difficult to compare the model of the PSUs with that of the private players but on a level playing ground the competition will be very high, so the understanding of each others model is very important.

The three statuses which have been given in the question are –

1. Company Owned and Company Operated
2. Company Owned and Dealer Operated
3. Dealer Owned and Dealer Operated

- **When was the lease signed and when does it expire?**

This question finds out if the RO is a leased one, then when the leased was signed and when does it expire

The answers to these questions determine for how long the RO is tied down to a particular company. This is important when post 2007 when situations change where a lot of riders set by the government would be removed. In this scenario it could be possible for a RO owner to switch companies or in some cases poaching by the rival companies.

For situations like this in the future this information has been used but it would be very difficult to actually get this information out of the target audience as this is very confidential information.

- **Do you get the exact quantity as indented by you?**
  - **Yes**
  - **No**

A RO owner has to keep on indenting for HSD and MS as per his requirement to sell. The indents are the quantity desired by the RO from the oil company. This question tries to find if the RO gets the quantity which was indented for.

One of the major problems plaguing the ROs over the years has been that of short supplies where the RO does not get the quantity of fuel it requires which results in the RO running dry and hence incurring losses on the return on the huge investment made on the RO.

- **How much of your sales are through barrel sales?**
  - **Less than 10%**
  - **10% - 20%**
  - **20% - 30%**
  - **More than 30%**

This question finds out the percentage of the total HSD sold from the RO are through bulk.
The government regulations state that ROs can sell HSD only at bulk. Small industries or logistic companies buy it at bulk. Barrel sales are majorly undertaken in the rural areas as well as the industrial areas. In rural areas the HSD is bought by small time operators who sell at a premium in the remote areas. This information could be useful to find out where a small size RO or a mobile RO could be set up.

- **<u>Would you consider choosing another company if given the right reasons</u>**
  - **Yes**
  - **No**

This question itself is very difficult to answer as the concept of switching companies is non existent as of now, this question attempts to find out the mindset of the RO owner towards the new entrants.
The information would be useful to the companies as this would help them to know what the mindset to target.

FINDINGS

❖ Which company holds the licence for selling HSD

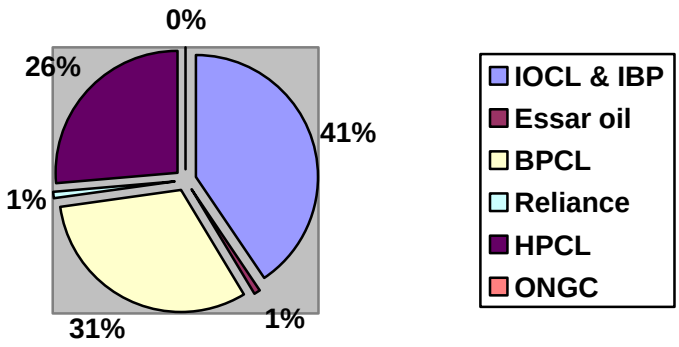

Figure 1: Percentage of total RO's owned by the companies

The first question was the easy of all as it was easily ascertained even without interacting with the RO owner or manager. The study also tries to find out the current status of the industry and where each of the company stand today. The study covers around 118 ROs in Kolkata and the districts around Kolkata like Hoogly, Midnapore etc which is a fair indication of the overall situation state which has 900 odd ROs.

As is the case with the rest of the country the biggest player is the combine of IOCL and IBP which have merged. Indian Oil on its own has around 32 ROs in the study while IBP has around 16. A point to be made is that most of IBP pumps were outside the city limits while IOCL has a uniform spread. Following the leader come the next big two which are BPCL and HPCL respectively. BPCL has the highest number of pumps in if taken company by company. The relatively new players – Reliance and Essar oil ltd have negligible presence as of now having three and eight respectively in the entire state. In the study I have come across one of each and one under construction RO of Essar oil ltd. ONGC still doesn't have any operations in retail in West Bengal.

❖ How old is the Retail Outlet?

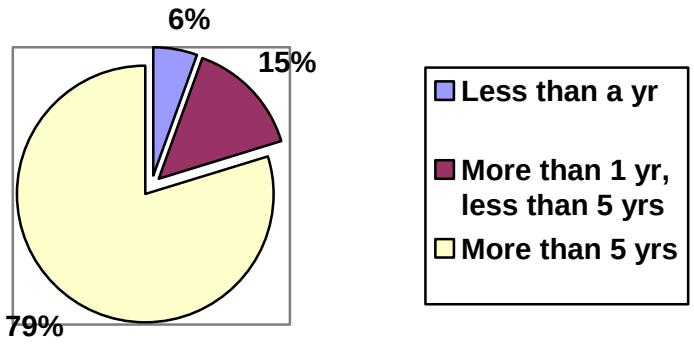

Figure 2: How old are the ROSs?

Kolkata (formerly, called Calcutta) being the erstwhile capital of British India, was very developed and had big international players of that time like Caltex, Burmah Shell and Texaco were present in this area. After nationalisation, these companies were transferred to ICOL, BPCL and HPCL. This bit of information is very important as most of these pumps still exist today. During the study we came across pumps which were more than 65 yrs old. A lot of the pumps were more than 50 yrs. Kolkata being a very cramped city in terms of space; there have been very less number of pumps which have come up in the recent past. This is apparent from the findings from this question which shows us that nearly 80% of the pumps are more than 5 yrs old and the new ones have basically come around in the district and the newly developed satellite townships.

This does not auger well for the new entrants as there is a sever space crunch in the city but there also ample opportunities for these companies to target the districts as well as newly developed areas like Salt Lake, Rajarhat, Sonarpur and the districts.

❖ **What are the approx. sale of HSD in a month**

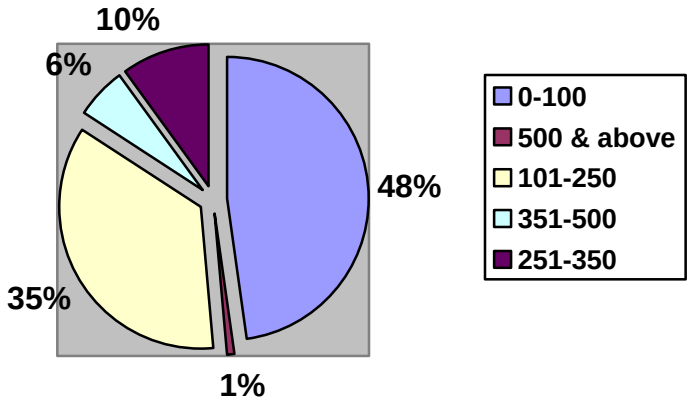

Figure 3: Sales of HSD in the ROs

HSD in India is sold at a subsidised rate so that infrastructure costs can be kept low. Therefore, all commercial usage is mostly of HSD and hence in huge volumes. Most of the ROs on the highways usually sell higher volume of HSD due to commercial usage as well as agricultural usage and in some case industrial use as well.

The study covered a mix of ROs in the city limits as well ROs on the highways and the rural belt, there is a bit of inconsistency between the ROs of the two types but for the sake of simplicity we would be studing them at par. The difference being that the ROs in the city sell mor of MS as compared to HSD which is opposite to that of the ones on the highway as they would sell more HSD than MS.

The results show that around 48% of the ROs sell less than 100 KL/month but most of these numbers include the ROs in the city. 35% of the pumps sell between 101KL – 250 KL per month which itself is a big range. The remaining are the high volume pumps which have locational etc benefit and of the 500+ KL selling ROs one of them is in Kolkata(North)

The largest retailing RO is one that is company owned and run by BPCL near Dankuni town which retails around 2000 KL to 3000 KL per month.

- **Why the preferred PSU company to sell its HSD?**

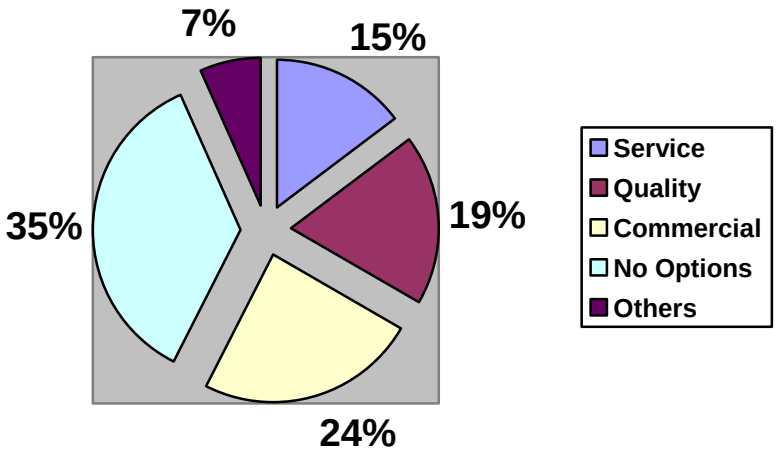

Figure 4: The most preferred Oil Company

In India, RO allocation was a very lengthy process as compared to today which left a lot of space for bias and irregularities. Whenever an oil company issues an advertisement in a newspaper announcing the sale of a pump, an average of 5,000 people bid for it. Only one lucky person will get the allotment. Every city/district has a three-member committee that decides on the allocation of petrol pumps. The committee consists of a retired high court or session's court judge and two officers from any of the four oil companies -- Indian Oil Corporation, Hindustan Petroleum, Bharat Petroleum Corporation Limited and Indo-Burma Petroleum. The judge, who is the committee's most important member, can allot 200 points whereas the oil company officials have 100 points each. The candidate who gets the maximum points from the committee gets to own the RO. Hence, in a situation like this the option for a PSU is more by choice then option.

This question tries to find out the mindset of the applicants even though there is so much of bureaucracy involved. As per the information given the choice was not made by them put the lack of

options which is evident fro 35% choosing “no options”. While the next biggest section is that for the commercial motive by 24%.

They are followed by quality and service respectively.

- **Are you fully satisfied with the service provided?**

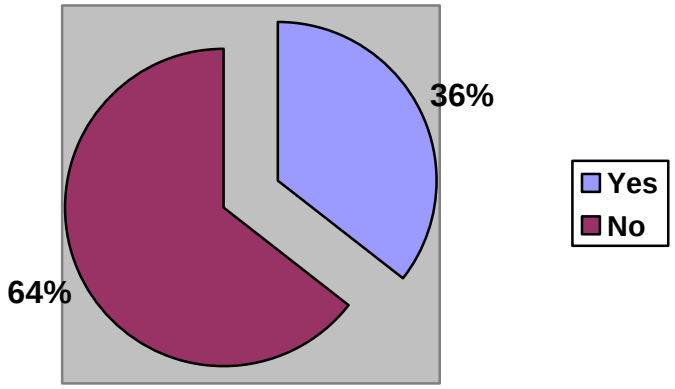

Figure 5: Satisfaction index

Retailing of MS and HSD involves the product as well as the service which is offered. Service which is offered by the RO to its customer and the service offered by the oil marketing company to its franchisee. The scope of the study is limited to the franchisee only. Service includes the supply of fuel as well as order taking and complain handling. With the huge number of ROs in the country the requirement of customer service is very high. Complains could be because of late deliveries or complains of adulteration. This question sought out to gauge the attitude towards the customer service provided by the PSU companies.

More than 60% are not happy about the service provided by the companies. The figure would have been higher but very few would want to bring it out in the open as the PSUs had a monopoly over the industry. There is a provision for loss due to evaporation and loss in transit but it is rarely given to the dealers who have to absorb it as normal loss.

The rest of them seem to be happy with the service but overall the satisfaction levels are very low.

❖ **Is the quality of the product up to the desired standards?**

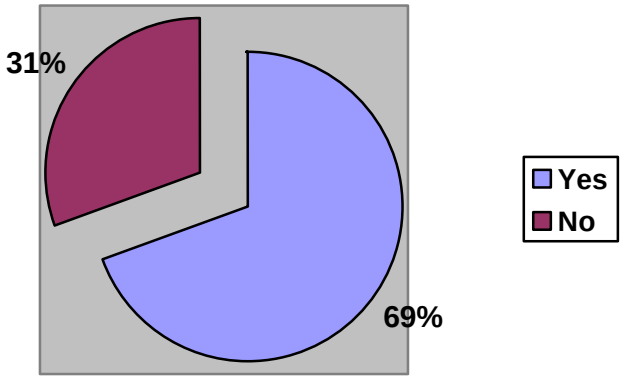

Figure 6: Quality Standards

As given above the problem of adulteration is very prevalent in the country, only recently have the companies have stood up and now started noticing the problem of adulteration. A point to be made here is that most of the adulteration happens at the RO itself.

To begin with, the station owner gets a commission of 53 paise on every litre of petrol sold. On diesel, he earns a commission of 33 paise. The petrol sold in India is always mixed with 20 per cent naphtha. Pure petrol is not available in most petrol pumps here. If we provide pure petrol, the margin of profit will be too low," says a dealer on condition of anonymity.

Naphtha costs Rs. 24 per litre, while petrol costs approximately Rs. 42 per litre; so you can imagine the killing a pump can make by selling adulterated petrol. The only risk comes in the form of surprise checks by the petroleum ministry's anti-adulteration cell.

This adulteration is also undertaken by the depot owners and the transportation companies who are third party companies but the responsibility lies with the oil company.

This question finds the dealers perception on the quality of the fuel. Around 70% of the respondents were happy with the quality of the fuel while the rest were unsatisfied. The satisfaction levels are lower outside the city.

❖ **How do you plan to counter the growing competition in the face of higher volumes and increased competition?**

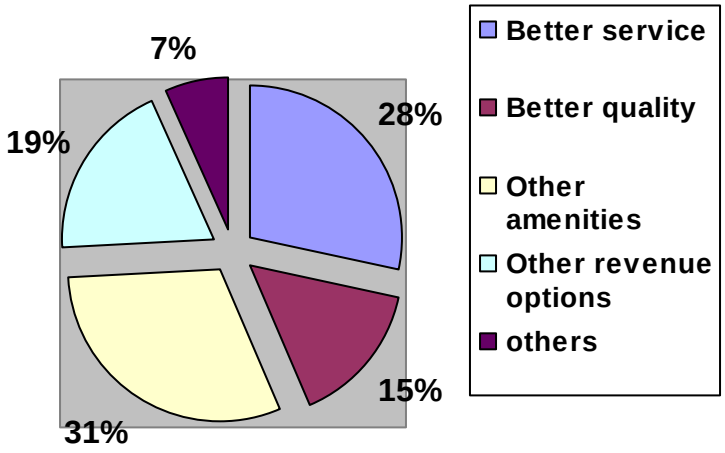

Figure 7: Various strategies

In today's competitive scenario, where there are ROs just adjoining each other, it has become very important for each RO to offer something in terms of service or other amenities. The oil companies have taken big strides in this field. Quality measures like Q&Q, Pure for sure etc, better quality fuel like Speed, 91 Octane, 97 Octane and extra-premium are some of the steps taken by these companies. Stores are now offering shopping experiences through convenio stores, in&out etc, coffee shops and providing amenities like booking airline tickets to movie tickets. The options are galore.

The question is trying to find out how the RO owner is incorporating the above in his scheme of things.

31% of them feel that they have the edge due to the various amenities that they have started offering the customer like toilets, ATMS etc.

28% feel that they have the edge through the better service and the goodwill created out of it. Some of them have been around for more than 50 years, for most of them they have a regular clientele who have been around as long as the RO has been, this has been possible due to the goodwill.

19% have alternative revenue earning provisions through advertisements, publicity etc.

15% feel that the better quality fuel i.e. the various grades help them cater to larger section of the customers.

❖ What is the category of RO allotted?

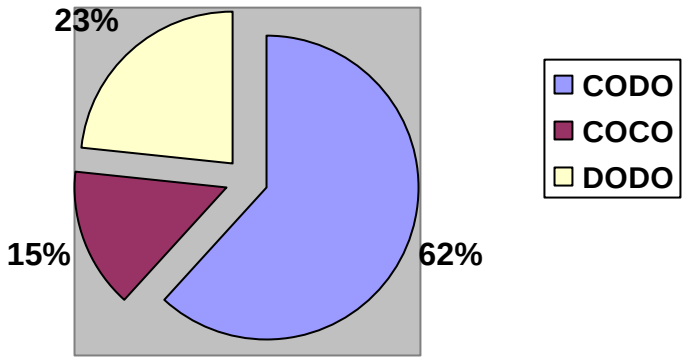

Figure 8: Various categories of ROs

There are three categories of ROs in the country. They are –

1. COCO
2. CODO
3. DODO

Company owned and Company operated (COCO) are pumps which are entirely owned and maintained by the company. These are usually flagship ROs of the company. Company Owned and Dealer operated (CODO) are pumps where the company owns the RO but it is maintained and run by the dealer who earns commission on the quantity of fuel he sells. Dealer owned and Dealer operated (DODO) are the pumps where the entire investment is made by the dealer as well as the cost to maintain it. In this case the dealer earns a commission as well as a return on the capital invested.

In the study of the 118 ROs, 62% of the ROs are in the CODO category while 23% are of the DODO category while the least is that of COCO, which is obvious due to the huge costs involved in setting up the pump.

- **Do you get the exact quantity as indented by you?**

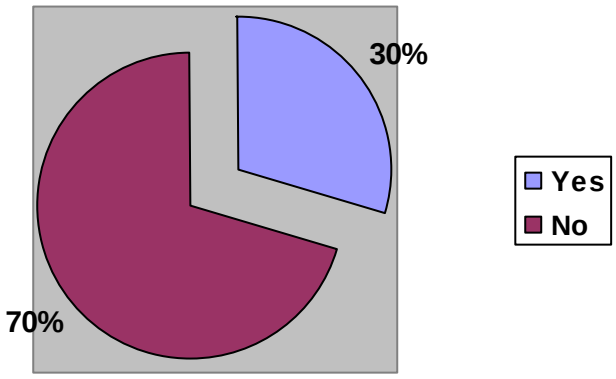

Figure 9: Satisfaction levels of indenting

India produces only 35% of its own energy requirements and the rest is imported putting a pressure on the foreign reserves of the country. This perhaps plagues the country as well. How many times have you passed through a RO and had to go to another one due to non-availability of fuel?

It is still a prevalent trend where ROs go dry. During my research, I found an IOCL COCO pump which was closed due to no supply. If a pump which is owned and run by IOCL could run dry then the ones of the dealer are at higher risk of running dry. A dry pump means a lot of opportunity cost lost through the loss of fuel sales.

The findings of the survey reflect the above. More than 70% of the respondents faced the problem of irregular supply while 30% claimed to have faced no problems. This is one problem area which the new entrants can exploit.

❖ **How much of your sales are through barrel sales?**

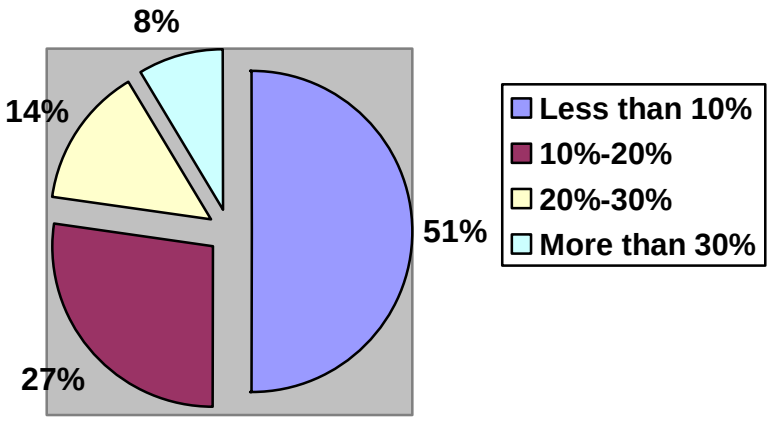

Figure 10: volume of sales through barrel sales (percentage)

In India, government regulations state that only HSD can be sold in bulk as this would assist industrial development. This is particularly the reason why HSD is sold at a subsidy in India. Bulk sales which are made at the RO are called Barrel sales. It is called barrel sales because the oil is packed in barrels and drums which are used for industrial usage. In some cases, HSD is bought from the RO and then is sold at remote areas at a premium. This type of practise also holds the threat of adulteration. In Kharagpur (WB) MS is actually sold through bear bottles due to lack of ROs to target the consumers there.

Barrel sales are lower in the city areas and are concentrated in the agricultural belt and the industrial belt. Since the state has low industrial activity but has higher agricultural usage.

More than 51% of the respondents sell less than 10% of their HSD through the barrel sale rout. Primarily a majority of these ROs are in the city. 27% of the pumps sell more than 10% but less than 20%, these pumps are majorly in the agricultural areas.

The rest are high volume sellers in bulk and they are in the industrial areas. There is a RO in the district of Howrah which sells 250 KL of HSD through bulk sales only.

❖ Would you consider choosing another company if given the right reasons

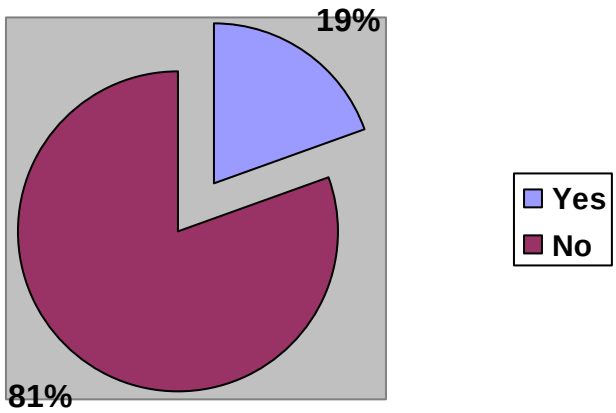

Figure 11: Target Audiences Mindset

The most important question of the study. The whole purpose of the study is so that the new entrants could get some idea about the market from the study so as to plan their strategies. One of the important aspects is to find out if the present RO owners are open to the idea of actually setting up a RO transferring from their company to that of a rival. It's a concept which is not allowed today but after 2007 when the government regulations on the new entrants are removed maybe this would be an option. Therefore, understanding of the existing mindset is very important as this would help in planning for future strategies. As of now not many are even aware of an option like this as poaching was not happening during the monopolistic times of the PSUs.

In The United States of America, you are allowed to own a RO and can source your product from any supplier from anyone you want. It will take time but in a few years the same would be repeated in this country as well.

More than 81% of the respondents were adverse to the idea of shifting the company even though the numerous problems faced by them. This is a problem area which the new entrant needs to pay attention to. Creating a need for the Ro owners as well as educate them on different possibilities.

Problems

The main objective of the study was to find the problem areas so that they can be improved and create opportunities for the growth of HSD in the state of West Bengal. By problems it is referred to the areas of concern for the entire industry and not necessarily the PSU oil companies.

The various problems which has come out of the survey and the research are given as follows -

- **Non-Poaching Clause** –Internationally a retailer is allowed to source HSD/MS from any supplier that he want but the situation is totally opposite in the country where a franchisee is bound by a long term contract with only one supplier.

  When the new entrants namely Essar, Reliance, Shell and ONGC were given marketing rights for HSD and MS, a clause attached to the permission was that there would be no poaching of existing ROs for period of five years ending on 2007 which has a high chance of being extended to a later date so as to cushion the already financially hit PSU oil companies like IOCl, HPCL, BPCL and IBP but there isn't any kind of restriction of these sort on the existing companies to do the same to the new entrants.

  This is an unfair trade practice which would stunt the growth of these new companies throughout the country while given an extra edge to the PSU companies.

- **The Sales Tax Regime –** A very interesting situation is the sales tax which is charged on HSD. It's a fact that due to the lower rate of sales tax on HSD in the states of Jharkhand and Assam, the cost of HSD is actually lower as compared to the price per

litre in the state of West Bengal. Therefore, a commercial vehicle filling up in the state of Jharkhand and Assam would actually save a portion of his costs for fuel.

West Bengal lies in between the states of Jharkhand and Assam, therefore, vehicles which are passing through the state to go onto the north east, fill oil at Jharkhand and then refill in Assam and even if they have to refill then the quantity is just about enough to cross the state. Thus, there is a loss of sale to the other states. This has resulted in the concentration of HSD sales in the southern part of the state only which is the area where the study has been conducted. This has resulted in having a much skewed demography for the ROs in the state towards the south of the state, which again face their own problems which we would be discussing them as follows.

- **Service Levels –** As per the study the satisfaction levels in terms of service is abysmally low as compared to another industry where differentiation is very difficult based on the product., hence, the service is the differentiator which in this case fails. This is majorly due to the fact that the PSU companies had a monopoly over the industry and the sufferer is the franchisee and the end customers.

  There is growing resentment due to the service which comes out from the study. This is one of the opportunities for the new entrants to exploit. Service deficiency has been in terms of complaints for quantity or quality, supply times etc.

- **Indentation –** In the oil industry, there are loads of tankers which supply the fuel to the RO. These tankers come in various capacities like 8 KL, 14 KL etc; therefore, the RO has to order in these multiples only. The procedure is that the RO owner or manager

indents (orders) fuel as per requirement and then he has to deposit a DD with the company to pay for the fuel and the company supplies accordingly but this rarely happens as the company always falls back on its commitment and this results in the RO running dry and hence, it cannot make any loss. This causes heavy losses.

This results in black marketing where fuel is hoarded and sold at a premium. Even the ROs which stock up the fuel for any eventuality, thus, have to incur the higher inventory cost. This is a major problem which is faced by the current ROs which is prevalent throughout the country but the problem is more acute on the highways. It is a common sight to find ROs telling you that they are out of fuel and to try another pump. This creates bad goodwill and hurts the image of the RO in the long run.

- **Adulteration –** Today's buzzwords for high quality fuel in 91 octane, 93 Octane, Extra-premium, Turbo etc, all portraying high quality fuel for better performance and engine maintenance but the truth is far from this. The sale of branded fuel is a very low percentage of the total sales and the remaining is the normal unbranded fuel used by more than 95% of the consumers.

A major problem plaguing them is the issue of adulterated fuel. What is adulterated fuel? Adulteration is referred to the mixing of fuel with a cheap substitute like naphtha and sold at normal prices. This result in poor mileage and damage to the engine which is fatal in the long run. Adulteration can be done at various levels rite from the depot or the transporter or the RO owner himself.

The problem is so acute that there are companies which advertise engine oils which clean the engine of any impurity, the consumer has taken as a part of the fuel all this because he has no options to exercise.

It's sad that the consumer has to compromise and accept it and not do anything about. This is where the new entrants can enter and make a difference but to address this problem the PSU oil company have also taken steps to bring this problem under control through various programs like Q&Q, Pure for Sure etc. Thus, the new entrants have their task cut out.

- **Business model –** As seen in the earliest sections, the various models which the oil companies follow. They are of three types – CODO, COCO and CODO. The most popular of the three is that of CODO – company owned, Dealer operated where the company takes the land in lease and builds the superstructure and the dealer operates, earning commission on the HSD or MS sold.

  As seen in the study this is the most prevalent of all the models according to the study. This was followed as all the PSU oil companies were cash rich giants which had the money to invest at a very large scale.

  Unlike the above the new entrants like Reliance and Essar have different business models. Reliance started with setting up only COCO pumps but realized the high costs involved in investing large sums in a project which had a long gestation period while Essar's model is that the dealer invests all the capital.

The problem is lies in the acceptability of these models as compared to that of the PSUs where part of the investment is made by the company.

Thus education of the consumers is very important to make them understand the higher returns in the model.

- **Loss in transit –** All the terminals and the depots which service the entire eastern region are based in the southern part of the state in Budge Budge and Haldia, due to their proximity to the sea coast. The biggest market for the fuel is Kolkata which is around 250 odd kilometers from Haldia, which translates into at least a 4 hr journey for the tankers.

  This huge distance results in a loss in weight due to loss in transit and normal loss. The franchisee has to pay for the entire load even if he receives less than what he indented for in the first place. There is also a loss due to evaporation due to poor storage and transportation facilities.

  Oil companies have a provision for evaporation losses which is meant to cover the loss due to evaporation during transportation but in reality, the franchisee rarely gets the money from the company. This in the short run is a very small cost but in the long run it adds up to be a very substantial figure which cannot be overlooked.

  It is brought out very clearly in the study that the franchisees are unhappy with the arrangement and would like to be compensated for the loss which they occur due to the companies fault.

- **Mindset –** In India, the idea of having non PSU oil companies is still at a very nascent stage unlike in the United States of America where all the giants of the world are present who are competing in an environment where there is no regulatory restrictions as compared to India. Internationally franchisees can select their supplier on the basis of the daily rates. This is unheard of in India. Indian dealers have been with the same company for a lot of years, in some cases more than 50 years.

  In a situation like this the new entrants have to target an audience which is not prepared to accept the new concept. Post 2007, when the poaching clause ceases to exist, the new entrants would be targeting the old ROs with a proposition that could provide more value in terms of service and quality.

  This would be difficult as the consumer's mindset is not ready to accept the new concepts. This was clearly brought out in the study which says that more than 80% of the respondents did not warm up to the idea that they could shift loyalties even though of the various problems.

  The task is cut out for the new entrants who first have to educate the consumers even before of targeting them so as to sell them the idea.

- **Sale lost due to pilferage from Bangladesh** – Bangladesh is India's neighbor in the east and is surrounded by India from three sides but even the being so close to each other, the countries share hostile relations based on security, trade etc. Bangladesh has huge Natural Gas reserves which it doesn't want to share with India.

Even with the hostility, there is a huge trade of oil between the countries but the only difference is that is it is illegal. This fuel which comes from Bangladesh is of very low cost around Rs. 19/litre as compared to Rs. 29/lite in the ROs. This fuel is of very poor quality as it is highly adulterated but it is briskly sold due to its price. The targets for this product are the small industrial usage and the agricultural sector, who are usually small businessmen or poor farmers who use the poor quality fuel even though it is cheap.

This is one aspect which the oil companies cannot compete with them as they are not organized and their prices are low as they are smuggled across the border, hence no taxes or any duties.

- **Low economic growth** - The eastern region has more than 90% of India's mineral resources as well as has ports in Kolkata and Paradip. It also has a high level of literacy as compared to the rest of the country. Even though of all this aspects the eastern region has always been the last of all the regions in terms of industrial development. The reasons could be due to acute poverty, labour unrest and lack of proper infrastructure.

  Low economic growth means that there is less purchasing power and due to lack of any industries in the country, there is also a lack of any commercial requirement. This also affects the sale of ATF as biggest airport in the east, Kolkata, handles the least flights amongst all the other bigger airports. This does not auger well for the future as the projections for the entire region are high which translates into higher requirement for energy as they are directly proportional but in the case of the eastern region it isn't so. Thus, the focus on this area is the least for all the other companies.

Economic growth is required to have growth in the industry as well as the situation where there is competition so that the consumers can get the benefits but there have been steps taken to redeem the situation which will be discussed in detail in the following section.

- **Bulk Sales –** Till around six months back, the PSU oil companies were making profits even though the cost of marketing was so high. This was due to the fact that all these companies had their own refineries and the refinery margin was very high as compared to the marketing margin. Hence, whatever loss they made during marketing was covered by the refinery margins.

  In today's scenario, the international crude rates are touching $64/barrel (10th August, 2005) and thus, the profits have all dried up. The s companies which were huge Navratna companies and also on the Fortune 500 list made cumulative cash loss of Rs. 1510 crores for the month of July only. In this situation, bulk sales have become the only way to make profits till the government raises prices again. Even in the long run, bulk sales bring in the maximum profits for oil companies; hence, they concentrate on this sector and depend on it for a large portion of their profits. The consumers are big industries and manufacturing units.

  In the state of West Bengal, the opportunity for the sales in bulk is very low due to the low industrial penetration in the state as discussed above. Thus the companies do not have any avenue to make higher profits which could offset the losses made during retail which makes it difficult for oil companies to invest to set up infrastructure in the region.

Another aspect of the problems which are specific to Kolkata only. The above were the problems which affect the entire state including Kolkata. Kolkata as discussed earlier is the biggest market, hence, the focus on his area for the oil companies would be higher for the oil companies.

The problems are given as follow –

- **Space -** The city of Kolkata as compared to New Delhi or Mumbai is the smallest in terms of size and suburbs but the population in the city is comparable to the other metros. This is due to the fact that the city has not spread as much it should have as the growth of population. Mumbai has spread all the way up to Virar in North while New Delhi has Faridabad and there are plans to increase the NCR region all the way up to Meerut but Kolkata has not really spread as much.

  The space in the city is less and is at a premium. The city has grown in population but not in size, therefore, getting space for an RO is very difficult. Even if some body gets the space its would be very expensive to develop it as an RO as it will not be viable enough and even if the money is raised, the legal procedures and permissions would be the most difficult to derive. This is one problem which the companies face while setting up the RO in the city as it would be too expensive as well as difficult in terms of legal formalities.

- **Higher benchmarks –** We have discussed earlier the problem of space which is plaguing the oil companies in Kolkata but there are 190 odd ROs already present in the city for decades now. Now since there are no new avenues to set up new ROs the companies are concentrating on the existing ones by investing more into them to raise

the capacity and provide more facilities to make the most of the existing ones. Thus the customer is spoilt to the most by the existing pumps as they are getting the best of the facilities and service but this is a problem for the new entrants.

The problem faced by the new entrants is that of higher customer expectations which are based on the existing ROs i.e. the benchmarks set by them. As customer expectation are high, the cost of setting up of a new RO is really high as it has to fulfill these expectations which come at a higher cost making them unviable as most of the prime locations have already been taken and the space is at a premium.

- **Erratic planning –** Newly developed cities are well planned and demark areas for all the amenities which are to be provided like hospitals, movie halls, chemists and Petrol pumps like Chandigarh, New Delhi etc but la city like Kolkata which is more than 300 years old has no planning for the future. Thus setting up an RO is difficult because the city has grown erratically and the planners never envisaged the need for higher energy requirements which has made the growth of the oil companies very difficult.

The city planners need to plan the growth in such a way that the are avenues where ROs can be set up because we should realize that this would be benefiting the inhabitants as well in the future as the energy requirements can only go up.

Opportunities

- **<u>The Golden Quadrilateral and East-West Corridor</u> –** The NDA government, when in power initiated an ambitious plan of linking all the corners of the country with each other with expressway. The Golden Quadrilateral is meant to connect all the four metros with each other while the East-West Corridor would connect the western part of India with the Eastern and North East region.

  West Bengal will have 406 km of the entire length of 5651 kms of the Golden Quadrilateral.

Route (Expressways)	Length (km)
Mumbai-Indore-Jabalpur-Ranchi-Kolkata	1500
Delhi-Kanpur-Varanasi-Dhanbad-Kolkata	1452
Kolkata-Visakhapatnam-Cochin	880

State/UT	Total Road Length (km)	Area (sq.km)	Population (million)	Road Length (km)	
				(per 100 sq.km)	(per 1 million of population)
Arunachal Pradesh	10240	83743	1	12	9394
Assam	68079	78438	25	87	2693
Bihar	85565	173877	95	49	898
Manipur	10760	22327	2	48	4678
Meghalaya	8391	22429	2	37	3780
Mizoram	6910	21081	1	33	7943
Nagaland	13732	16579	2	83	8975
Orissa	210238	155707	35	135	6015
Sikkim	1834	7096	1	26	3596
Tripura	14726	10486	4	140	4256
West Bengal	**77579**	**88752**	**76**	**87**	**1019**

The East-West corridor will be feeding the traffic from the west into this region.

The above data shows the number of roads which would be feeding into region as well as the total number of roads for this region. This shows the huge potential for this region for high inflow of traffic which would be ending as well as passing through. This has high potential, which the new entrants should aggressively pursue.

Figure 11: The Golden Quadrilateral & East West Corridor

- **High vehicles growth –** West Bengal has high level of literacy and the main cities are seeing a boom like Kolkata, Siliguri, Kharagpur, Maldah and Durgapur**.** With the increase of the purchasing power of the middle class which itself has been growing at a rapid rate due to the I.T boom, better jobs etc.

  These social developments have brought out many new aspects with the people buying more products and are getting more mobile. So they would be increasing the demand for fuel as well drive the need for more vehicles on the road. This is one opportunity which would be driven by the huge number of vehicles on the road.

  It would indirectly fuel the need for commercial fuel in the form of ATF and HSD too.

- **Low concentration of RO/Person** – In Kolkata alone there are close to eight and a half lakh vehicles which is serviced by around 190 RO in the city as compared to 350 plus ROs in New Delhi alone. This makes a ratio of 4400 vehicles per RO in Kolkata, which is a very huge number.

  Thus there is huge gap in the entire station which is big enough for everyone a lot of new RO which will fuel the present demand as well as support the future demand which will be due to the addition of newer vehicles.

  There will also be a demand for better quality fuel due to the new government emission norms which would come in force this year.

- **Future economic growth** – West Bengal is considered a backward state in terms of industrial development as compared to the rest of the country because there were a lot of labour unrest and the investments in the state were at the lowest because of that. It also failed to latch on to the IT boom when it first started.

  Today under the present chief minister, Mr. Buddhadeb Bhattacharya, things are looking so much better in the future. The IT industry has taken off in a big way in the state from Wipro to Convergsys etc all have a huge presence on the state today.
  A refinery is coming up at Haldia and a power plant in Mejia by Damodar Valley Corporation while the state is also the biggest beneficiary of Japanese investment in the country today.

  This type of economic growth opens up new avenues for growth as growth is beneficial for the entire state and creating more opportunities as the investments flow in.

- **Bulk Sales –** With the huge number of investments and projects which are underway in the state. The list of the investments taking in place are given as follows –

District	Projects	Rs. Crore
Bankura	6	3,434
Bardhaman	41	11,404

Birbhum	7	2,751
Cooch Behar	4	8
Darjeeling	21	2,248
Hooghly	16	2,757
Howrah	29	1,293
Jalpaiguri	6	104
Kolkata	111	8,862
Malda	6	132
Midnapore	54	16,621
Murshidabad	6	2,418
Nadia	9	786
North 24 Parganas	23	1,347
North Dinajpur	2	22
Purulia	7	5,857
South 24 Parganas	24	4,000
South Dinajpur	3	17
Multi Dist	61	16,596
Unallocated	1	0
Total	**438**	**80,658**

The top investments in the stae

Project	Company	Industry
Haldia Refinery	Soros Fund Management	Petroleum Products [Refinery]
Kolkata-Siliguri Expressway Road Project	ICICI-West Bengal Infrastructure Devp. Corpn.	Roadways
Maithon Left Bank Power Project	Maithon Power Ltd.	Coal/Lignite Based Power
Purulia Pumped Storage (Hydel) Power Project	West Bengal State Electricity Board	Hydel Based Power
Kolkata Metro Project Phase II	Metro Railway, Kolkata	Railways

(Tollygunge-Gariahat Railway Line)		
Turga Pumped Storage (Hydel) Power Project	West Bengal State Electricity Board	Hydel Based Power
Kalyani-Kakdwip-Frazergunj Road Project	Transport Infrastructure Devp. Corpn.	Roadways
Sagardighi Power Project Phase I	West Bengal Power Devp. Corpn. Ltd.	Gas Based Power
Mejia Power Project - Units 5 & 6	Damodar Valley Corpn.	Coal/Lignite Based Power
DSP Power Project	Damodar Valley Corpn.	Coal/Lignite Based Power

The above is a small list of the huge number of projects in the state and many more coming up. This would be requiring high fuel requirements creating a major opportunity for bulk sales in the state.

- **Opening of trade between Bangladesh and China –** West Bengal is surrounded by Bangladesh on the east and is very close to China as the only way to Sikkim is through West Bengal. There are efforts to open up trade in an organized between India and China & Bangladesh through the organized and regulated way.

There is a train route connecting the two borders of Bangladesh and India. The Traditional Silk Route between India and China has also been opened for trade. These are initial steps. Trade always brings prosperity between the two parties.

Thus, trade requires a lot of fuel which can also be exported or imported. Bangladesh has huge Gas reserves which India can exploit (as of now Bangladesh is not very keen). This could also help in curtailing the smuggling of fuel across the border.

- **Development of Haldia and the North East –** Haldia and Budge Budge in the southern part of the state are being developed so that they can be centers of trade. Haldia with its Petrochemicals, Oil and port facilities while Budge Budge has huge storage facilities have become the back bone of trade in the city.

  North eastern states which till now were still cut off from the country in terms of trade and commerce. Thus, there lies huge potential for trade, which would be beneficial for the state as it is the hub for the entire region. With Assam being the hub for refineries, even transportation cost would also be very low .

The above were the various opportunities which the oil companies can look to take advantage of and make profits.

Solutions

We have gone through the problems which the oil companies are facing and will face in the future. This section would give the solutions to the problems so that the opportunities can be advantageous to the companies. These are certain personal observation which have been made which I feel would be the best suited to the situation.

The various solutions are explained as follows -

- **Supply and Distribution –** As per the problems found from the study we can assume that one of the major problems is that of regular supply by the existing oil companies, which affects the sales at the ROs. This is one area which the new entrants can exploit by providing better supply.

  It would only possible through strategic investments at the right time and at the right avenues. There should also be investment in storage facilities and an efficient logistic system so that supply is never affected. There should be proper inventory control so that supplies are not affected.

- **Provisions for losses –** One of the major issues which cropped up is that of the abnormal losses made by the ROs. The losses are through leakage, evaporation, transportation etc. There is loss **of up to 10 litres in a load of 14 KL**. This might be less as compared to the entire load but at the end of the year it ends up to be quite a tidy figure and even though the RO has a provision to claim but very rarely does he get it.

Companies should look towards minimizing these losses and set up proper guidelines so that the RO owner does not suffer any kind of loss, Shell, an international oil giant, has just started its operations in India and it would bring its international experience to India. For transportation, they have completely pressurized tankers which are loss proof. This would completely change the industry. These are the kind of steps which would give them the edge.

- **Service –** Service is a big issue today. There around 27000 ROs in the country and with the projections of the smaller companies and the figure would each 40000 in 2 years time. This would create a pool of very competitive and demanding customer pool for the companies.

  There are many creases in the customer service management, which needs to be ironed out. Earlier the company was taken the customer for granted but today the customer has a lot of choice, hence, the companies have to pull up their socks and actually set up an efficient customer service to cater to the needs of the customers. There should also be norms for fast customer redressal and it should have regular auditing.

- **Quality –** Quality has been the bane of all problems between the actual user and the petrol pumps. This has been due to adulteration which is rampant in the country in the past. The situation has been redeemed but the problem is still there in the interiors. This adulteration always happens after the fuel has left the company and done by the supplier, distributors or the RO owners.

This is a serious issue which the companies have taken note of and measures have been taken but there are not adequate enough. A lot has still to be done as the companies are responsible for the quality of fuel they supply.
Proper quality measures have to be present and constant monitoring even in the rural areas.

- **Mindset** – As the oil companies are looking forward to highly competitive environment where companies would be looking forward to poach each others franchisees. According to the study, the mindset of the franchisee to this kind of arrangement is not very acceptable. This is primarily because they are not aware of the benefits which they would be deriving for themselves.

  One of the major concern areas is how to change the mindset to make them more acceptable towards changes?
  This can only be possible through education as well as awareness programs which have to be discreet but have to get the message across to the customers.

  The government regulations are supposed to be gone from the year 2007 but industry sources, reveal that it would take more time to actually happen but the companies have to be ready when it actually happens.

- **Political environment –** The companies should pitch for a better competitive environment where there is fair completion between the PSU oil companies and the private players. The odds are heavily stacked against them to compete. With

the PSU oil companies having created a kind of cartel it is very difficult for the smaller players to compete with them.

All regulations need to be done away so that there in congenial environment for everyone to prosper.

Another major issue which affects the sales of HSD in the state for transit vehicle from other state is the sales tax charged on them which is more than the one charged by the states surrounding West Bengal like Jharkhand and Assam. Therefore, steps should be taken so that the taxes could at least be brought to the same levels if not lower to increase the sales.

- **Aggressive for new slots –** The West Bengal after years of unplanned growth has realized the need for systematic and planned manner of growth for the future. The plans include provisions for everything right from petrol pumps, shopping complex and hospitals.

  Therefore, there are slots for Petrol pumps which keep on coming up which are up for grabs for the oil companies. The new entrants need to be very aggressive in getting these slots so that they are not lost to existing PSU oil companies as they are the perfect opportunity to create a foothold in the state.

- **Smaller ROs to target rural** – The state is under serviced by the number of ROs in the state in terms of the length of the roads. A state like Haryana which has half the roads as compared to West Bengal has double the number of ROs

there. Thus, there is huge potential in the rural areas but the cost of setting up of full size RO would be prohibit ably expensive as it would not be viable.

Till now these areas were serviced by barrel sales which are of poor quality and also more expensive. Companies can target these areas by setting up of small scale RO with just one dispenser. The volumes will be low per RO but so will be the setting up cost.

This is un-chartered territory which has still to be tapped which till no is being serviced by middlemen who make huge profits on low quality oil. There are a lot of small scale industries and agriculture which the oil companies can target to set up these small outlets.

- **Aggressive bulk sales** – Bulk sales which earn the most profits for the oil company. Most of the new entrants are very strong players like ONGC having its own source of crude, Reliance with the biggest refinery in the country and Essar would be a fully integrated oil company.

  Hence, the above companies can be very competitive and provide the best rates for bulk customers. These companies should target this segment very aggressively. Bulk sales would also help in creating foot prints in the industry and it is also more profitable as compared to retailing.

- **Policing for the borders** – The major problem of smuggled fuel from Bangladesh which is affecting the sales of HSD in the border area which is

affecting the sales of HSD in this region. Another factor is that of the dumping of poor quality fuel which is very adulterated which also spoilt the machinery which in turn brings up cost of the unsuspecting farmers who to save a bit of money end up paying much more to repair their machinery.

There should be steps taken so that this smuggling can be stopped which would benefit the entire society. This would require policing on the borders which would not be possible if there is no understanding between the two countries.

- **Concentrate on new areas coming up in the development areas** – In West Bengal there has been a lot of development which is happening in terms of townships and trading zones. This has been done to aid the growth in the state.

  These areas are like Rajarhat, Falta etc where the area has been recently developed; hence, there are enough opportunities for the oil companies to create a presence in this region. These are the areas of trade and commerce for the future.

  Even if the initial costs are high the potential for growth is enormous to neglect these areas.

The above were the different solution which would help the oil companies to grow in the state and create a presence for themselves.

Conclusion

As we reach the end of our study, I would like to bring out the main aspects which constitute the scope of the study i.e. growth opportunities. After the detailed study and the analysis, we brought out the problem areas for the existing companies and also tried to analyze the various strategies for the new entrants and the existing companies to improve.

"PSU Oil companies are passé"

The existing players namely the PSU companies were complacent till the early 2000's as they had no competition. Nobody bothered to improve their service or try to provide better quality and variety but with the entry of the new dynamic private players the older players have had to pull up their socks to compete with them. Some of the problem areas are as follow –

- Quality
- Service
- Supply
- Selection and allocation process
- Red tapism

The companies have realized their shortcomings and have prepared themselves for the future by improving but there is more space for improvement.

“The next generation oil companies”

The new entrants are companies which have diversified interests and very deep pockets, and have proven their abilities in diverse industries. As given above there are various avenues where the new entrants can create a space for themselves by providing the customer that little bit extra. As of now the starting is slow but the have dented the PSU oil companies due to their simple selection process as well as innovative business practices like :-

- The Franchisee model of Essar Oil Ltd, where the dealer invests all the money to get higher returns, this also helps in low capital investment for the companies
- Pressurized tankers by Shell to transport fuel
- Reliance having the biggest refinery in Asia and aiming to be the biggest in the world.

These are some of the practices which would help the new entrants to carve their place. Also improving on areas where the PSU companies fall short, would provide leverage to the aspirations of the oil companies.

“The Customer is the King”

As we have gone through the study, we have to examine the effect of all this on the end customer. As the companies are vying for the customer’s attention, going out of their way to attract their attention, the customer is being treated as a king.

He is getting the best of services and has now options to exercise in terms of ROs and even, in the grade of MS or HSD that he wants to use. In the past, the companies have taken the customer for granted but today the customer is the king as he is spoilt for choice and the future looks better.

“There is space for everyone”

A lot would speculate that how would so many companies survive in the market? It has created a lot of competition but there is space for everyone in the industry. Each would be targeting a certain segment with their wide range of products and world class service.

With the huge population growth, high purchasing power and industrial development, the energy requirements are high and hence, growth opportunities are huge.

“Crude oil per barrel is $65”

2005 is the year, in which it is the first time that the PSU oil companies made a loss after years of bumper profits. The market capitalization of the companies went down drastically and in some cases it is as high as 30% (IBP). If the current scenario prevails for a longer time then it won’t be long when these companies gave to go in for a CDR (capital debt re-structuring). For a small company like Indo Burma Petroleum (IBP), it would have to go for CDR by October.

This paints a very sorry state of the entire industry and the growth looks bleak?

So where is the opportunity for growth and why are they occurring losses suddenly at such an alarming rate?

This phenomenon is an artificial one and has been created by the regulations. To understand it we need to understand the background. In India till the early 1990's only the government was allowed to deal in petroleum products and HSD was sold at a subsidy to aid development and MS was sold at a premium to make up the deficient on HSD. Post 90's, the market was opened but the price regulations stayed.

Recently, oil barrel rates have hit $65 / barrel and the oil companies were expected to absorb the increase in price as the government didn't want to pass on the burden to the customers. This practice has resulted in huge losses for the companies.

It's a matter of time when there is rise in prices and things would be back in place.

"**Only change is consistent"**

As tomorrow comes, the need for alternative fuel comes into being. The requirement is for an energy source which is less polluting and will not be used up for a very long time. There have been various researches which are going on various sources like hydrogen, biofuel, electricity etc but this is a part of another study.

****

Bibliography

Books and reports

- The West Bengal Petroleum association report for the year 2004-05
- Meeting India's Petroleum Requirement Demand Projections 2001-02 and 2006-07

Web-Sites

- www.nhai.org - The national highway association of India site
- www.projectstoday.com - Site showing all the industrial projects in India
-
- www.ncaer.org - Indian Govt. Economic Research Site
- www.petrloeumbazaar.com - A commercial Petroleum trading site
- www.indiainfoline.com - An Industrial research site
- www.shell.com - International Petroleum giant
- www.essar.com - Indian Oil company
- www.ril.com - Biggest private player amongst the new entrants
- www.petroleum.nic.in - The ministry of petroleum products web-site
- www.bharatpetroleum.com - The second biggest PSU oil company
- www.hindustanpetroleum.com – Indian PSU oil company
- www.iocl.com - The biggest PSU oil company
- www.mapsofindia.com - Web-site with downloadable maps
- www.westbengal.nic.in - The government of West Bengal Web-site
- www.mospi.nic.in - Indian Govt. Statistical site
- www.opec.org - The Official OPEC web-site

Part 3: Annexure

Table of Contents

MARKET SHARE OF OIL COMPANIES DURING 2003-04

(QTY IN MT)

Product	IOC		BPC		HPC		IBP		AOD		INDUSTRY	
	Qty/No.	% Age	Qty/No	% Age	Qty/No	% Age	Qty/No	% Age	Qty/No	% Age	Qty/No	% Age
LPG	318592	67.95	54033	11.52	91598	19.54	2819	0.60	1797	0.38	**468839**	100
Naptha	355598	80.49	86217	19.51	0	0.00	0	0.00	0	0.00	**441815**	100
Ms	85751	36.42	72276	30.70	60345	25.63	16676	7.08	376	0.16	**235424**	100
ASD	949147	48.31	414119	21.08	419124	21.33	178885	9.11	3339	0.17	**1964614**	100
Sko	515903	65.19	78698	9.95	135038	17.06	61685	7.80	0	0.00	**791324**	100
LDO	102448	82.70	1161	0.94	19701	15.90	0	0.00	564	0.46	**123874**	100
Fo/LSHS	273206	73.96	21506	5.82	564	15.28	67	0.02	18153	4.91	**369377**	100
Bitumen	150848	98.63	180	0.12	1918	1.25	0	0.00	0	0.00	**152946**	100
Lube	36486	58.39	6815	10.19	14590	23.35	4597	7.36	1	0.00	**62489**	100
ATF	105886	83.19	15816	12.43	5576	4.38	0	0.00	0	0.00	**127278**	100
All Products	**2893865**	**61.08**	**750821**	**15.85**	**804335**	**16.98**	**26472 9**	**5.59**	**24230**	**0.51**	**4737980**	**100**
No. of Retail outlet	451	35.88	318	25.30	311	24.74	175	13.92	2	0.16	1257	100

Dealer												
No. of SKOLDO Dealer	246	56.42	56	12.84	87	19.95	47	10.78	0	0.00	436	100
No. of LPG Distributor	252	58.88	69	16.12	94	21.96	8	1.87	5	1.17	428	100

DEMOGRAPHY OF THE STATE

Capital	KOLKATA
Date of formation of state	15.08.1947
Area	88752 sq.km.
Total cultivated area	134 Lacks Acre
Total Irrigated area(Minor)	47.6 Lacs Acre
Temperature	Min: 11° Cen. Max 38° Deg.cen. in Kolkata
Major crops	PADDY,WHEAT, JUTE,POTATO,CASHEW,COCONUT,ORASGES,TOBACCO,OIL SEEDS,PINEAPPLES.
Total population	68077965(1991 census)
Rural population	72.50%
Urban population	27.50%
Male population	35510633(1991 census)
Femal population	32567332(1991census)
Sex ratio	F/M =917:1000
Language	BENGALI , HINDI , ENGLISH, URDU, &. NEPALI
Literacy rate	57.7
Per capita income	5901 (Rs.at current price in 92-93)
Number of divisions	4
Number of districts	19
Number of tehisils	345
Number of Blocks / Mandals	339
Total villages	40889
Number of Mun.Corporations	6
Power (Installed capacity)	4725.1 MW
Villages Electrified	31367
Number of Polling Stations	61522
Length of Roads	NH:1863 SH:3445 MDR:24557 VR:32780
Vehicular population	1870551(MAR2001)
Mode of Transport	RAIL, ROAD, RIVERWAYS, AIR
Airport locations	KOLKATA, BAGDOGRA,HASIMARA(AF) PANAGARH
Seaport locations	KOLKATA, HALDIA
Public representatives	MP(LOKSABHA):42 MP(RAJYA SABHA):16 MLAs:294 MLCs:NIL
Major Festivals celebrated	DURGAPUJA, DIWALI, HOLI. ID, CHDISTMAS, MUHARAM.
Major Minerals	COAL,IRON, LIMESTONE, STONECHIPS
Major Industries	STEEL,HEAVYENG.,AUTOMOBILE,TEA,TEXTILE,PETRO-CHEMICAL, POWER PLANT JUTE,PERTILISERS
Tourist locations	DARJEELJNG, GAUR , MURSHIDABAD, KALIGHAT, BAKKHALIJDIGHA
Major pilgrim locations	GANGASAGAR, TARAPITH. KALIGHAT^ DAKHINESHWAR
Disaster prone areas	COASTAL MEDINIPUR & 24PGS (S)

IMPORTANT STATE FUNCTIONARIES

NAME	DESIGNATION	TELEPHON	FAX NO.
		OFF	
Asok Gupta,IAS	Chief Secretary	22145858	22144328
A.K.Bhattacharya, IAS	Principal Secretary to Chief Minister	22145533	22215480
T K Basu, IAS	Principal Secretary (F & CS)	22522800	22523492
A.K.Deb, IAS	Principal Secretary, Home	22145656	22143001
A M Chakrabarty, IAS	Principal Secretary, Labour	22144645	2214516
Sabyasachi Sen, IAS	Principal Secretary, Commerce & Industry	22145487	22144371
P Bhattacharya, IAS	Principal Secretary, Consumer Affairs	22520624	22520053
R K Tripathi, IAS	Principal Secretary, Tourism	22145999	22144695
S Chowdhury, IAS	Principal Secretary, Transport	22145455	22144700
Samar Ghosh, IAS	Principal Secretary, Finance	22143695	22144016
S.K.Deb, IAS	Director, Consumer Goods	22529253	22529253
S K Datta, IPS	Director Genera! of Police	22145400	22144498
Sujoy Chakraborty,IPS	Commissioner of Police	22145060	22145424

Member Of Parliament-Lok Sabha

AS OF 01-04-2004

SLNO	NAME	CONSTITUENCY
1	Sri Amar Roy Pradhan	Coochbehar
2	Sri Joachim Baxla	Alipurduars
3	Smt Minati Sen	Jalpaiguri
4	Sri Priyaranjan Dasmunsi	Raiganj
5	Sri S.P. Lepcha	Darjeeung
6	Sri Ranen Barman	Balurghat
7	Sri A.B.A.Ghani Khan Chowdhury	Malda
8	Sri Abul Hasnat Khan	Jangipur
9	Sri Moinul Hassan Ahamed	Murshidabad
10	Sri Adhir Chowdhury	Berhampore
11	Sri Satyabrata Mukherjee	Krishnanagar
12	Sri Alakesh Das	Nabadwip
13	Sri Ajay Chakbraborty	Basirhat
14	Dr Ranjit Kumar Panja	Barasat
15	Sri San At Kumar Mandal	Joynagar
16	Sri Radhika Ranjan Pramanik	Mathurapur
17	Sri Samik Lahiri	Diamond Habbour
18	Smt Krishna Bose	Jadavpur
19	Sri Tarit Baran Topdar	Barackpore
20	Sri Tapan Sikdar	Dumdum
21	Sri Sudip Bandyopadhyay	Kolkata -North West
22	Sri Ajit Kumar Panja	Kolkata North East
23	Smt Mamata Banerjee	Kolkata Squth
24	Sri Swadesh Chakrabortty	Howrah
25	Sri Hannan Mollah	Uluberia
26	Sri Akbor Ali Khandoker	Serampore
27	Sri Rupchand Pal	Hoogly
28	Sri Anilbasu	Arambagh
29	Dr Bikram Sarkar	Panskura
30	Sri Lakshman Chandra Seth	Tamluk
31	Sri Nitish Sengupta	Contai
32	Sri Prabodh Panda	Midnapore
33	Sri Rupchand Murmu	Jhargram
34	Sri Birsing Mahato	Purulia
35	Sri Basudeb Acharia	Bankura
36	Smt Sandhya Bauri	Bishnupur
37	Sri Sunil Khan	Durgapur
38	Sri Bikash Chowdhury	Asansol
39	Sri Nikhilananda Sar	Burdwan
40	Sri Mehboob Zahedi	Katwa
41	Sri Somnath Cha7terjee	Bolpur
42	Dr Ram Chandra Dome	Birbhum

Member Of Parliament-Lok Sabha

AS OF 01-06-2004

SLNO	NAME	CONSTITUENCY
1	Sri Hiten Barman	Coochbehar (Sc)
2	Sri Joachim Baxla	Aupurduars (St)
3	Smt Minati Sen	Jalpaiguri
4	Sri Priyaranjan Dasmunsi	Raiganj
5	Sri Dawa Narbula	Darjeeling
6	Sri Ranen Barman	Balurghat (Sc)
7	Sri A.B.A.Ghani Khan Chowdhury	Malda
8	Sri Pranab Mukherjee	Jangipufc
9	Sri Abdul Mannan Hossain	Murshidabad
10	Sri Adhir Ranjan Chowdhury	Berhampore
11	Ms. JOYTIRMOYEE SIKDAR	KRISHNANAGAR
12	Sri Alakesh Das	Nabadwip (Sc)
13	Sri Ajay Chakbraborty	Basirhat
14	Sri Subrata Bose	Barasat
15	Sri Sanat Kumar Mandal	Joynagar (Sc)
16	Sri Basudeb Barman	Mathurapur (Sc)
17	Sri Samik Lahiri	Diamond Habbour
18	Sri Sujan Chakraborty	Jadavpur
19	Sri Tarit Baran Topdar	Barackpore
20	Sri Amitava Nandy	Dumdum
21	Sri Sudhangshu Seal	Kolkata North West
22	Sri Mohammead Saum	Kolkata North East
23	Kum. MAMATA BANERJEE	KOLKATA SOUTH
24	Sri Swadesh Chakrabortty	Howrah
25	Sri Hannan Mollah	Uluberia
26	Sri Santasri Chatterjee	Serampore
27	Sri Rupchand Pal	Hoogly
28	Sri Anilbasu	Arambagh
29	Sri Gurudas Dasgupta	Panskura
30	Sri Lakshman Chandra Seth	Tamluk
31	Sri Prasanta Pradhan	Contai
32	Sri Prabodh Panda	Midnarore
33	Sri Rupchand Murmu	Jhargram; (St)
34	Sri Bir Sing Mahato	Purulia
35	Sri Basudeb Acharia	Bankura
36	Ms. Susmita Bauri	Vishnupur (Sc)
37	Sri Sunil Khan	Durgapur (Sc)
38	Sri Bikash Chowdhury	Asansol
39	Sri Nikhilananda Sar	Burdwan
40	Sri Mehboob Zahedi	Katwa
41	Sri Somnath Chatterjee	Bolpur
42	Dr Ram Chandra Dome	Birbhum (Sc)

Member Of Rajya Sabha

Sl no	Name
1	Sri Sk. Khabir Uddin Ahmed
2	Sri Nilotpal Basu
3	Sri Jayanta Bhattacharya
4	Sri Manoj Bhattacharya
5	Sri Debabrata Biswas
6	Sri Prasanta Chattepjee
7	Dr Biplab Dasgupta
8	Smt Sarla Maheshwari
9	Sri Dipankar Mukherjee
10	Sri Pranab Mukherjee
11	Smt Chandra Kala Pandey
12	Sri Abani Roy
13	Sri Jibon Roy
14	Sri Tarini Kanta Roy
Is	Sri Shankar Roy Chowdhury
16	Sri Dinesh Trivedi

DISTRIBUTION NETWORK

SLNO	PARTICULARS	IOC	HPC	BPC	IBP	AOD	TOTAL
1	Reflneries	1	0	0	0	0	1
2	Terminals	5	2	4	1	0	12
3	Bulk depots	3	1	2	1	0	7
4	LPG Botting Plants	6	2	3	0	0	11
5	Retail Outlets	451	311	318	175	2	1257
6	SKO/LDO Dealerships	246	87	56	47	0	436
7	LPG Distributorships	252	94	69	8	5	428

DETAILS OF SUPPLY LOCATIONS

LOCATION	OIL COMPANY	DISTRICT	TERMINAL/ DEPOT	TANKAGE (KL)		
				MS	HSD	SKO
BUDGEBUDGE	IOC	24 Pgs(S)	Terminal	1747	15227	4000
HALDIA	IOC	Midnapur	Terminal	8996	46063	75744
RAJBANDH	IOC	Burdwan	Terminal	11350	34174	27661
MOURIGRAM	IOC	Howrah	Terminal	20907	59190	44770
SIUGURI	IOC	Jalpaiguri	Terminal	20001	27890	15780
MALDA	IOC	Malda	Depot	1351	11492	6026
CHITRAGUNGE	IOC	24 Pgs(S)	Depot	10200	15000	13000
HASIMARA	IOC	Jalpaiguri	Depot	1335	3943	3603
BUDGEBUDGE	BPC	24 Pgs(S)	Terminal	7922	24800	5200
HALDIA	BPC	Midnapur	Terminal	2484	27396	5800
RAJBANDH	BPC	Burdwan	Terminal	1860	10100	3900
SIUGURI	BPC	Jalpaiguri	Terminal	2900	12000	1900
MALDA	BPC	Malda	Depot	600	3600	0
DALGAON	BPC	Jalpaiguri	Depot	800	3500	1500
BUDGEBUDGE	HPC	24 Pgs(S)	Terminal	12000	18000	11500
HALDIA	HPC	Midnapur	Terminal	0	22500	9500
RAJBANDH	HPC	Burdwan	Terminal	2070	8000	2200
BUDGEBUDGE	IBP	24 Pgs(S)	Terminal	5024	13715	2600
HALDIA	IBP	Midnapur	Terminal	60	10545	7020

DETAILS OF BOTTLING PLANTS

LOCATION	OIL CO	DISTRICT	BOTTLING CAPACITY (TMTPA)	STORAGE CAPACITY (MT)	SUPPLY AREA
Kalyani	IOC	Nadia	44	2800	West Bengal
Ourgapur	IOC	Bard wan	66	3900	West Bengal
Haldia	IOC	Midnapur (E)	20	900	Wept Bengal
Budge Budge	IOC	24 Pgs(S)	64	1850	West Bengal
Ranlnagar	IOC	Jalpalguri	11	1850	West Bengal
Malda	IOC	Malda	1|1	1050	West Bengal
Uluberia	BPC	Howrah	44	900	West Bengal
Raiganj	BPC	U.Dinajpur	22	450	West Bengal
Rajbandh	BPC	Bardwan	22	450	West Bengal
Paharpur	HPC	Kolkata	44	580	West Bengal
Falakata	HPC	Jalpaiguri	2,.4	0	West Bengal
		TOTAL	**350.4**	**14730**	

LIST OF DISTRICTS. SUB - DIVISIONS AND TALUKS / MANDALS

S.NO	DISTRICT	SUB-DIVISION/TALUKS/MANDALS
1	Bankura	Sadar
		Bishnupur
		Khatra
2	Bard wan	Sadar (N)
		Sadar (S)
		Durgapur
		Asansol
		Katwa
		Katna
3	Birbhum	Sadar
		Rampurhat
		Bolpur
4	CoochBehar	Sadar
		Tufancjunj
		Dinhata
		Mathabharpur
		Makhigunj
5	Dakhin Dinajpur	Sadar
		Gangarampur
6	Darjeeling	Sadar
		Siliguri
		Kalimgpomg
		kurseong
7	Hooghly	Sadar
		chandanpur
8	Howrah	Sadar
		Ulubaria
9	Jalpaiguri	Sadar
		Alipur Duar
		Malbazar
10	Malda	Sadar
		North
11	Midnapur(W)	Midnapur
		Kharajpur
		Ghatal
		Jhargram

LIST OF DISTRICTS, SUB - DIVISIONS AND TALUKS / MANDALS

S.NO	DISTRICT	SUB-DIVISION/TALUKS/MANDALS
12	Midnapur (E)	Tamluk
		Haldia
		Contai
13	Murshidabad	Sadar
		Lalbag
		Jagipur
		Kandhi
14	Nadia	Sadar
		Tehatta
		Ranaghat
15	North24(pgs)	Barasat
		Bashirhat
		Bongaon
16	South 24(pgs)	Alipur
		Canning
		Baruipur
		Kakdwip
		Dia mound Harbour
17	Purulia	sadar(E)
		sadar(W)
		Raghunathpur
18	Uttar Dinajpur	Raigunj
		Islampur

DISTRICT - WISE HILLY AREAS

S.NO.	DISTRICT	HILLY AREAS / TALUKS/ MANDALS
1	Darjeeling	a) Darjeeling
		b) Kalimpong
		c) Kurseong

DISTRICT WISE DATA

SL NO	DISTRICT	NO. OF VEHICLES	NO. OF RETAIL OUTLET	NO. OF SKO/LDO DEALER	NO. OF LPG DISTRIBUTORS	DEPOTS/ TERMINALS	LPG BOTTLING PLANT
1	Bankura	30508	31	15	6		
2	Bardwan	311077	148	41	46	3	2
3	Birbhum	32565	46	15	8		
4	CoochBehar	19727	14	9	10		
5	Dakhin Dinajpur	7496	14	4	3		
6	Darjeeling	55460	52	15	24		
7	Hooghly	107978	112	29	34		
8	Howrah	82867	87	28	28	1	
9	Jalpaiguri	46615	63	20	22	4	2
10	Kolkata	839216	190	60	85		1
11	Malda	31198	35	10	4	2	1
12	Midnapur (E&W)		125	49	27		1
13	Murshidabad	40575	50	22	13		
14	Nadia	51032	58	21	24		1
15	North24(pgs)	120069	107	42	57		
16	Purulia	34880	21	12	6		
17	South 24(pgs)	77531	65	35	24	9	2
18	Uttar Dinajpur	11515	39	9	7		1
	Total		**1257**	**436**	**428**	**19**	**11**

DISTRICT-WISE / OIL COMPANY-WISE
NUMBER OF RETAIL OUTLETS

S.NO	DISTRICT	IOC	BPC	HPC	IBP	AOD	INDUSTR
1	Bankura	11	7	11	2		31
2	Bardwan	48	40	44	16		148
3	Birbhum	15	9	10	12		46
4	CoochBehar	6	5	2	1		14
5	Dakhin Dinajpur	7	5	1	1		14
6	Darjeeling	26	18	5	2	1	52
7	Hooghly	29	25	41	17		112
8	How rah	31	21	16	19		87
9	Jalpaiguri	32	19	4	8		63
10	Kolkata	41	65	64	20		190
11	Malda	25	5	3	2		35
12	Midnapur (E&W)	50	24	30	20	1	125
13	Murshidabad	21	6	11	12		50
14	Nadia	21	12	10	15		58
15	North24(pgs)	39	29	31	8		107
16	Purulia	8	5	6	2		21
17	South 24(pgs)	15	16	21	13		65
18	Uttar Dinajpur	26	7	1	5		39
	Total	**451**	**318**	**311**	**175**	**2**	**1257**

OIL INDUSTRY OFFICIALS. WEST BENGAL

Oil Company	Name	Designation	Address	Office	Residence	Fax
IOC	Sri M L Jain	General Manager (Regional Services), ER Cum Regional Level Coordinator.	INDIAN OIL BHAVAN, 2, Gariahgt Road (S), Kolkataj-	24145959	24667440	24145202
IOC	Sri G Datta	General Manager, West Bengal State Office Cum State Level Coordinator,	indian oil BHAVAN, 2. Gariahat Road (S).	24145564	24804109	24145898
HPC	Sri S Biswas	Dy General Manager	6, Church Lane, Kolkata-700001	22483629 22485471	24791118	22829885
BPC	Sri Vinod Giri	General Manager(Retail East)	Hongkpng House, 31, BBDBag, Kolkata-700001	22107166 22482301	24796785	22487586 2220140
IBP	Sri Ashok Dutta	General Manager, Eastern Region	Shantinekatan Building, 12th Floor, 8, Camac Street, Kolkata-700017	22825765 22820386 9830034012	22403430	22827974
Essar Oil	Sri. Avrajit Kar	Divisional manager				

Part 4: Photographs

Photo 1: Quality Test at IOCL

Photo 2: Reliance RO in West Bengal

Photo 3: Loose MS being sold in beer bottles in Kharagpur, Midnapore

Photo 4: A two wheeler being refueled

Photo 5: An Essar RO coming up in 24 Parganas (S) district

Photo 6: BPCL RO near the airport, New Delhi

Contact Details:

Akash Dasgupta

Flat 2C, Tower 1
City-High
85, Prince Anwar Shah Road
Kolkata 700 029
West Bengal

Ph - +91 33 3097 4499
Mobile - +91 98991 25274

Akash_dasgupta@rediffmail.com

Contact Details of Guides:

- Mr. Avrojit Kar
  Essar Oil Limited
  Kolkata

  Ph - +91 98300 41189

  akar@essar.com

- Mr. Sumanta Sharma
  Indian Institute of Planning & Management,
  New Delhi

  Ph - +91 98995 65494

  Sumanta.sharma@iipm.edu