PPAC

Analysis•Knowledge•Information

READY RECKONER

Oil Industry Information at a Glance

Petroleum Planning & Analysis Cell

(Ministry of Petroleum & Natural Gas)

June 2015

Suggestions & Feedback

Readers are invited to send their suggestions & feedback for improvement of the Ready Reckoner to :

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Disclaimer

While every care is taken to check the accuracy of data & information included in the Ready Reckoner, PPAC would not be held responsible for any loss, damage etc. due to action taken by any one based on information contained in this publication.

Preface

Availability of reliable data in a comprehensive manner is the primary requirement of policy makers and the petroleum inudstry, and over the years PPAC's Ready Reckoner has been able to fulfil this need by incorporating a vast spectrum of the country's oil and gas data. The current issue covers data for the financial year 2014-15.

As the nature, structure and requirement of data by the stakeholders constantly undergoes change, your suggestions for upgrading, enriching and augmenting the scope and coverage of this Ready Reckoner are welcome.

All the Divisions of PPAC have tirelessly worked to bring out this edition. For enabling timely publication of the Ready Reckoner, contribution of data/ information from the entire oil and gas industry is also appreciated.

Atreyee Das

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Director General
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New Delhi
June 23, 2015

Vision

To be the most authentic official source for data and policy analysis on the hydrocarbon sector in the country.

Mission

1. To strengthen the existing data system in PPAC by adopting the latest techniques and best practices.
2. To render effective assistance to the Ministry of Petroleum & Natural Gas in the discharge of its responsibilities, particularly pricing of petroleum products and administration of subsidy schemes.
3. To monitor and analyze developments in the domestic oil and gas sector.
4. To undertake analysis of domestic and international energy markets.
5. To develop a cooperative framework for exchange of information and conduct of studies with other countries and international organizations in the energy sector.

Objectives

1. To ensure effective administration of the subsidy schemes notified by the Government.
2. To monitor and analyze trends in prices of crude oil, petroleum products and natural gas and their impact on the oil companies and consumers, and prepare appropriate technical inputs for policy making.
3. To monitor developments in the domestic market and analyze options for policy changes in pricing, transportation and distribution of petroleum products.
4. To collect, compile and disseminate data on the domestic oil and gas sector in a continuous manner and maintain the data bank.
5. To ensure quality of data in terms of prescribed parameters such as accuracy, completeness and timeliness.
6. To prepare periodic reports on various aspects of oil and gas sector.

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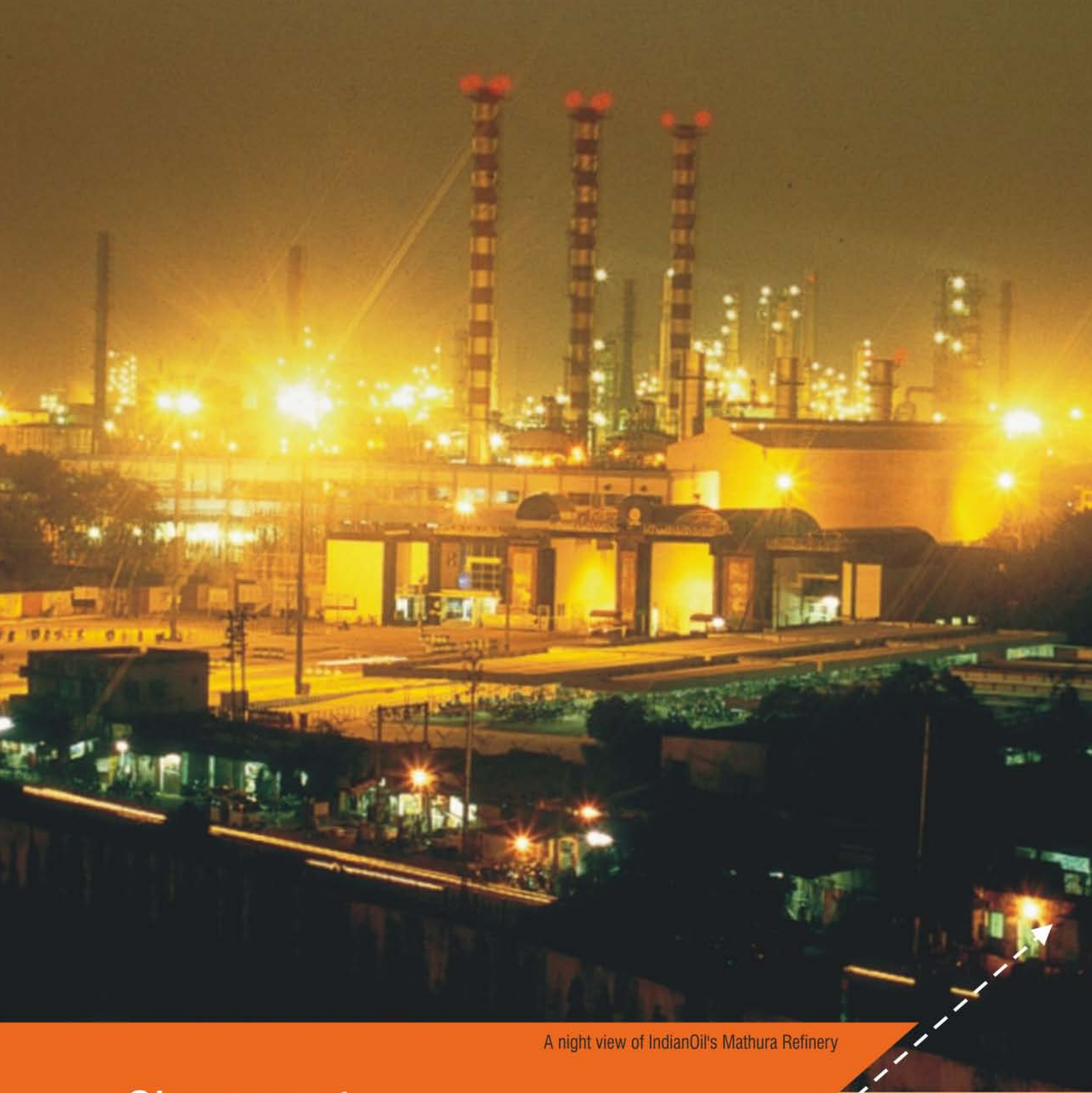


A night view of IndianOil's Mathura Refinery

Chapter - 1
General

Analysis•Knowledge•Information

Table 1.1 : Selected Indicators of the Indian Economy: 2010-11 to 2014-15

GENERAL

S.No.	Particulars	Source	UNIT/BASE	2010-11	2011-12	2012-13	2013-14	2014-15(P)
1	POPULATION (as on 1st March 2011)	Census of India	Billion	1.2	-	-	-	-
2	GDP AT FACTOR COST (Const. prices)	MOC&I	(GR.%)	8.9	6.7	5.1 (NS)	6.9 (NS)	7.3 (PE)
3	AGRICULTURAL PRODUCTION (FOODGRAINS)	MOA	Million tonne	244.5	259.29	257.13	265.04 Final	251.12 3nd AE
			(GR.%)	12.1	6.1	-0.8	3.1	-5.3
4	INDUSTRIAL PRODUCTION INDEX	CSO	(GR.%)	8.2	2.9	1.1	-0.1	2.8
5	IMPORTS	MOC&I	$ Billion	369.8	489.3	490.7	450.2	447.5
6	EXPORTS	MOC&I	$ Billion	249.8	306.0	300.4	314.4	310.5
7	TRADE BALANCE	MOC&I	$ Billion	-120.0	-183.4	-190.9	-135.8	-137.0
8	WHOLESALE PRICE INDEX (All Commodities) (Average)	MOC&I	2004-05 =100	143.3	156.1	167.6	177.6	181.2
9	ALL INDIA CONSUMER PRICE INDEX (Average):							
	i) INDUSTRIAL WORKERS	Labour Bureau, Govt. of India	2001=100	165.8	194.8	215.2	236.0	250.8
	ii) AGRICULTURAL LABOURERS		1986-87=100	516.9	610.7	671.9	749.8	799.5
	iii) RURAL LABOURERS		1986-87=100	516.5	611.0	673.3	750.5	607.2
10	FOREIGN EXCHANGE RESERVES-TOTAL (as of April 1, 2011, March 30,2012, March 29,2013, March 28, 2014 and March 27, 2015)	RBI	$ Billion	274.3	294.4	292.6	303.7	341.4
11	OUTSTANDING EXTERNAL LIABILITIES (as of end of financial year)	MOF	₹ Crore	1,56,347	1,67,950	1,72,302	182729	194286 (RE)
12	OUTSTANDING INTERNAL DEBT (as of end of financial year)	MOF	₹ Crore	27,03,844	43,00,464	48,66,829	5404420	6084268 (RE)
13	CENTRAL PLAN OUTLAY	MOF	₹ Crore	4,64,316 (Actual)	5,08,596 (Actual)	4,98,476 (Actual)	603573 (Actual)	426811 (RE)
14	GROSS FISCAL DEFICIT	MOF	%	-4.9	-5.7	-4.8	-4.6	-4.1 (RE)

PETROLEUM

S.No.	Particulars	Source	UNIT/BASE	2010-11	2011-12	2012-13	2013-14	2014-15(P)
1	CRUDE OIL PRODUCTION IN INDIA	OMCs /PPAC	MMT	37.7	38.1	37.9	37.8	37.5
2	CONSUMPTION OF PETROLEUM PRODUCTS IN INDIA	OMCs /PPAC	MMT	141.0	148.1	157.1	158.4	165.0
3	PETROLEUM PRODUCT PRODUCTION IN INDIA	OMCs /PPAC	MMT	195.8	204.0	217.8	220.3	220.7
4	IMPORTS & EXPORTS :							
	CRUDE OIL (IMPORTS)	OMCs /PPAC	$ Billion	100.1	139.7	144.3	143.0	112.7
	PETROLEUM PRODUCTS- (IMPORTS)	OMCs /PPAC	$ Billion	12.1	14.2	12.5	12.3	11.8
	PETROLEUM IMPORTS (CRUDE+POL PRODUCTS)	OMCs /PPAC	$ Billion	112.1	153.9	156.8	155.2	124.6
	PETROLEUM PRODUCT EXPORTS	OMCs /PPAC	$ Billion	43.3	59.3	58.8	60.7	47.3
5	GROSS PETROLEUM IMPORTS AS % OF INDIA'S GROSS IMPORTS IN VALUE TERMS		%	30.3	31.4	32.0	34.5	27.8
6	GROSS PETROLEUM EXPORTS AS % OF INDIA'S GROSS EXPORTS IN VALUE TERMS		%	17.3	19.4	19.6	19.3	15.2
7	IMPORT DEPENDENCY (Based on consumption)		%	75.0	75.9	77.1	77.6	78.4

Note : RBI: Reserve Bank of India POL: Petroleum Products; MOF : Ministry of Finance; MOC&I : Ministry of Commerce & Industry; CSO Central Statistics Organisation; MOA : Ministry of Agriculture; OMCs : Oil Marketing Companies; PPAC : Petroleum Planning & Analysis Cell; RE : Revised Estimate; PE : Provisional Estimates;NS : New Series; MMT: Million Metric Tonnes

Table 1.2: Global Energy Consumption 2014

S.No.	Country	Oil (Mtoe)	Natural Gas (Mtoe)	Coal (Mtoe)	Nuclear Energy (Mtoe)	Hydro Electricity (Mtoe)	Renewables (Mtoe)	Total Energy (Mtoe)
1	**World**	**4211.1**	**3065.5**	**3881.8**	**574.0**	**879.0**	**316.9**	**12928.4**
	% Share	32.6	23.7	30.1	4.4	6.7	2.2	100.0
	Per Capita Consumption(Toe)	0.59	0.43	0.54	0.08	0.12	0.04	1.81
2	**China**	**520.3**	**166.9**	**1962.4**	**28.6**	**240.8**	**53.1**	**2972.1**
	% Share	17.5	5.6	66.0	1.0	8.1	1.8	100.0
	Per Capita Consumption(Toe)	0.41	0.13	1.55	0.02	0.19	0.04	2.35
3	**USA**	**836.1**	**695.3**	**453.4**	**189.8**	**59.1**	**65.0**	**2298.7**
	% Share	36.4	30.2	19.7	8.3	2.6	2.8	100.0
	Per Capita Consumption(Toe)	2.96	2.46	1.61	0.67	0.21	0.23	8.15
4	**Russian Federation**	**148.1**	**368.3**	**85.2**	**40.9**	**39.3**	**0.1**	**681.9**
	% Share	21.7	54.0	12.5	6.0	5.8	0.0	100.0
	Per Capita Consumption(Toe)	1.01	2.51	0.58	0.28	0.27	0.0	4.65
5	**India**	**180.7**	**45.6**	**360.2**	**7.8**	**29.6**	**13.9**	**637.8**
	% Share	28.3	7.1	56.5	1.2	4.6	2.2	100.0
	Per Capita Consumption(Toe)	0.17	0.04	0.35	0.01	0.03	0.01	0.61
6	**Japan**	**196.8**	**101.2**	**126.5**	**0.0**	**19.8**	**11.6**	**456.1**
	% Share	43.2	22.2	27.7	0.0	4.3	2.6	100.0
	Per Capita Consumption(Toe)	1.55	0.80	1.00	0.0	0.16	0.09	3.60
7	**UK**	**69.3**	**60.0**	**29.5**	**14.4**	**1.3**	**13.2**	**187.9**
	% Share	36.9	31.9	15.7	7.7	0.7	7.0	100.0
	Per Capita Consumption(Toe)	1.18	1.02	0.50	0.24	0.02	0.22	3.19
8	**Poland**	**23.8**	**14.7**	**52.9**	**0.0**	**0.5**	**3.9**	**95.7**
	% Share	24.9	15.3	55.3	0.0	0.5	4.1	100.0
	Per Capita Consumption(Toe)	0.62	0.38	1.38	0.0	0.01	0.10	2.50
9	**Malaysia**	**35.2**	**36.9**	**15.9**	**0.0**	**2.7**	**0.3**	**91.0**
	% Share	38.7	40.6	17.5	0.0	2.9	0.3	100.0
	Per Capita Consumption(Toe)	1.50	1.58	0.68	0.0	0.11	0.01	3.89
10	**Brazil**	**142.5**	**35.7**	**15.3**	**3.5**	**83.6**	**15.4**	**296.0**
	% Share	48.2	12.1	5.2	1.2	28.2	5.2	100.0
	Per Capita Consumption(Toe)	0.82	0.20	0.09	0.02	0.48	0.09	1.70

For calculation of per capita consumption population figures have been taken from World Bank International Data Base for 2013

Mtoe: Million Tonnes Oil Equavalent, Toe: Tonne oil equivalent

Source : BP Statistical Review of World Energy June 2015

Offshore Rig

Chapter - 2

Exploration & Crude Oil Production

Table 2.1 : Oil: Proved Reserves

S.No.	Country	At the end 2014		
		Thousand million Tonnes	Thousand million barrels	Reserves / Production Ratio
1	Venezuela	46.6	298.3	*
2	Saudi Arabia	36.7	267.0	63.6
3	Canada	27.9	172.9	*
4	Iran	21.7	157.8	*
5	Iraq	20.2	150.0	*
6	Russian Federation	14.1	103.2	26.1
7	Kuwait	14.0	101.5	89.0
8	United Arab Emirates	13.0	97.8	72.2
9	Libya	6.3	48.4	*
10	US	5.9	48.5	11.4
11	Nigeria	5.0	37.1	43.0
12	Kazakhstan	3.9	30.0	48.3
13	Qatar	2.7	25.7	35.5
14	China	2.5	18.5	11.9
15	Brazil	2.3	16.2	18.9
16	Angola	1.7	12.7	20.3
17	Algeria	1.5	12.2	21.9
18	Mexico	1.5	11.1	10.9
19	Ecuador	1.2	8.0	39.4
20	Azerbaijan	1.0	7.0	22.6
21	Norway	0.8	6.5	9.5
22	**India**	**0.8**	**5.7**	**17.6**
23	Oman	0.7	5.2	15.0
24	Vietnam	0.6	4.4	33.0
25	Indonesia	0.5	3.7	11.9
26	Other Africa	0.5	3.7	40.0
27	Malaysia	0.5	3.8	15.4
28	Egypt	0.5	3.6	13.8
29	South Sudan	0.5	3.5	60.3
30	Australia	0.4	4.0	24.3
31	United Kingdom	0.4	3.0	9.8
32	Yemen	0.4	3.0	56.7
33	Colombia	0.4	2.4	6.8
34	Syria	0.3	2.5	*
35	Argentina	0.3	2.3	10.1
36	Other Europe & Eurasia	0.3	2.0	14.0
37	Gabon	0.3	2.0	23.2
38	Rep. of Congo (Brazzaville)	0.2	1.6	15.6
39	Chad	0.2	1.5	52.4
40	Sudan	0.2	1.5	37.7
41	Peru	0.2	1.6	40.2
42	Brunei	0.1	1.1	23.8
43	Equatorial Guinea	0.1	1.1	10.7
44	Other Asia Pacific	0.1	1.1	10.9
45	Trinidad & Tobago	0.1	0.8	20.3
46	Italy	0.1	0.6	14.5
47	Turkmenistan	0.1	0.6	6.9
48	Denmark	0.1	0.6	10.0
49	Uzbekistan	0.1	0.6	24.3
50	Romania	0.1	0.6	19.4
51	Other South & Central America	0.1	0.5	9.6
52	Thailand	0.1	0.5	2.8
53	Tunisia	0.1	0.4	22.1
54	Other Middle East	^	0.2	3.1
	Total World	**239.8**	**1700.1**	**52.5**
	of which: OECD	37.3	248.6	30.3
	Non-OECD	202.6	1451.5	60.1
	OPEC	170.5	1216.5	91.1
	Non-OPEC £	50.0	341.7	24.5
	European Union	0.8	5.8	11.2
	Former Soviet Union	19.3	141.9	28.2
	Canadian oil sands: Total	27.2	167.1	
	of which: Under active development	4.1	25.2	
	Venezuela: Orinoco Belt	35.4	220.5	

Source: BP Statistical Review of World Energy, June 2015 which includes data from ICIS ATEC.

Notes: Total proved reserves of oil - Generally taken to be those quantities that geological and engineering information indicates with reasonable certainty can be recovered in the future from known reservoirs under existing economic and operating conditions. The data series for total proved oil does not necessarily meet the definitions, guidelines and practices used for determining proved reserves at company level, for instance as published by the US Securities and Exchange Commission, nor does it necessarily represent BP's view of proved reserves by country. Reserves-to-production (R/P) ratio - If the reserves remaining at the end of any year are divided by the production in that year, the result is the length of time that those remaining reserves would last if production were to continue at that rate.

Sources of data - The estimates in this table have been compiled using a combination of primary official sources, third-party data from the OPEC Secretariat, World Oil, Oil &Gas Journal and an independent estimate of Russian reserves based on official data and Chinese reserves based on information in the public domain. Canadian oil sands 'under active development' are an official estimate. Venezuelan Orinoco Belt reserves are based on the OPEC Secretariat and government announcements. Reserves include gas condensate and natural gas liquids (NGLs) as well as crude oil. **Shares of total and R/P ratios are calculated using thousand million barrels figures.**

** More than 100 years.*
^ Less than 0.05.
£ Excludes Former Soviet Union.

Table 2.2 : Oil: Production & Consumption, 2014

Country	Production*		Consumption*	
	Million Tonnes	Thousand barrels/day	Million Tonnes	Thousand barrels/day
Saudi Arabia	543.4	11504.7	142.0	3185.0
Russian Federation	534.1	10837.6	148.1	3196.0
US	519.9	11644.1	836.1	19035.0
China	211.4	4246.0	520.3	11056.0
Canada	209.8	4292.3	103.0	2371.0
Iran	169.2	3614.3	93.2	2024.0
United Arab Emirates	167.3	3711.6	39.3	873.0
Iraq	160.3	3285.3	NA	NA
Kuwait	150.8	3122.9	22.2	505.0
Venezuela	139.5	2719.5	38.5	824.0
Mexico	137.1	2784.2	85.2	1941.0
Brazil	122.1	2346.3	142.5	3229.0
Nigeria	113.5	2360.6	NA	NA
Norway	85.6	1894.7	10.3	238.0
Qatar	83.5	1981.9	10.1	307.0
Angola	83.0	1712.4	NA	NA
Kazakhstan	80.8	1701.0	13.0	276.0
Algeria	66.0	1525.4	18.0	395.0
Colombia	52.2	990.2	14.5	310.0
Oman	46.2	943.5	NA	NA
Azerbaijan	42.0	848.3	4.6	101.0
India	**41.9**	**894.8**	**180.7**	**3846.0**
Indonesia	41.2	852.3	73.9	1641.0
United Kingdom	39.7	850.3	69.3	1501.0
Egypt	34.7	716.6	38.7	813.0
Malaysia	30.3	666.0	35.2	815.0
Ecuador	29.8	556.4	NA	NA
Argentina	29.5	629.1	30.9	662.0
Libya	23.3	498.3	NA	NA
Australia	19.4	448.1	45.5	998.0
	4007.8	84178.6	2715.1	60142.0
Others	212.8	4494.1	1496.0	31944.0
Total World	**4220.6**	**88672.6**	**4211.1**	**92086.2**
of which: OECD	1039.7	22489.0	2032.3	45057.4
Non-OECD	3180.9	66183.6	2178.9	47028.8
OPEC	1729.6	36593.1		
Non-OPEC £	1814.0	38277.8		
European Union	67.0	1410.9	592.5	12527.4
Former Soviet Union	677.0	13801.7	207.0	4443.0

Source: BP Statistical Review of World Energy, June 2015 which includes data from ICIS ATEC.

Notes for Production:

** Includes crude oil, tight oil, oil sands and NGLs (the liquid content of natural gas where this is recovered separately). Excludes liquid fuels from other sources such as biomass and derivatives of coal and natural gas.*

NA not available.

£ Excludes Former Soviet Union.

Notes for Consumption:

** Inland demand plus international aviation and marine bunkers and refinery fuel and loss. Consumption of biogasoline (such as ethanol), biodiesel and derivatives of coal and natural gas are also included..*

Note: Differences between these world consumption figures and world production statistics are accounted for by stock changes, consumption of non-petroleum additives and substitute fuels, and unavoidable disparities in the definition, measurement or conversion of oil supply and demand data.

Table 2.3 : Oil: Refinery Capacities*

(Million Barrels daily)

Country	2004	2014	Addition	% Change
US	17.12	17.79	0.67	3.9
Canada	1.92	1.97	0.05	2.6
Mexico	1.46	1.52	0.06	4.0
Argentina	0.62	0.62	0.01	0.8
Brazil	1.93	2.23	0.31	16.1
Netherlands Antilles	0.32	0.32	0.00	0.0
Venezuela	1.28	1.30	0.02	1.5
Other South & Central America	2.24	1.59	-0.65	-28.9
Belgium	0.75	0.78	0.03	3.3
France	1.98	1.37	-0.61	-30.6
Germany	2.32	2.06	-0.26	-11.2
Greece	0.41	0.50	0.09	20.9
Italy	2.50	1.98	-0.51	-20.5
Netherlands	1.28	1.27	-0.01	-0.7
Norway	0.32	0.32	0.00	0.0
Russian Federation	5.33	6.34	1.01	19.0
Spain	1.37	1.55	0.17	12.7
Sweden	0.44	0.44	0.00	0.0
Turkey	0.69	0.61	-0.08	-11.5
United Kingdom	1.85	1.37	-0.48	-26.0
Other Europe & Eurasia	5.53	5.14	-0.39	-7.0
Iran	1.64	1.99	0.34	20.9
Iraq	0.72	1.09	0.38	52.4
Kuwait	0.94	0.94	0.00	0.0
Saudi Arabia	2.08	2.82	0.74	35.7
United Arab Emirates	0.62	1.14	0.52	84.4
Other Middle East	1.25	1.45	0.20	16.0
Total Africa	**3.06**	**3.55**	**0.50**	**16.2**
Australia	0.76	0.54	-0.23	-29.7
China	6.60	14.10	7.49	113.5
India	**2.56**	**4.32**	**1.76**	**68.8**
Indonesia	1.06	1.10	0.04	3.6
Japan	4.53	3.75	-0.78	-17.3
Singapore	1.41	1.51	0.11	7.7
South Korea	2.60	2.89	0.29	11.1
Taiwan	1.16	1.20	0.04	3.3
Thailand	1.07	1.24	0.17	16.3
Other Asia Pacific	1.41	1.82	0.42	29.6
Total World	**85.10**	**96.51**	**11.41**	**13.4**
of which: OECD	45.05	43.58	-1.47	-3.3
Non-OECD	40.05	52.93	12.88	32.2
European Union	15.92	14.22	-1.70	-10.7
Former Soviet Union	7.69	8.42	0.73	9.5

Source: BP Statistical Review of World Energy, June 2015 which includes data from ICIS ATEC.
** Atmospheric distillation capacity on a calendar-day basis.*
Note : Annual changes and shares of total are calculated using million barrels daily figures.

Table 2.4 : Indigenous Crude Oil Production

(Million Metric Tonne)

	2010-11	2011-12	2012-13	2013-14	2014-15 (P)
PSU Cos.					
ONGC	21.4	20.8	19.5	19.2	18.6
OIL	3.6	3.8	3.7	3.5	3.4
PSU total	**25.0**	**24.7**	**23.2**	**22.7**	**22.1**
PSU Total (Crore Barrels)	**18.3**	**18.1**	**17.0**	**16.6**	**16.2**
Under PSC Contracts					
PSC Total	**9.5**	**10.4**	**11.6**	**12.0**	**11.7**
PSC Total (Crore Barrels)	**7.0**	**7.6**	**8.5**	**8.8**	**8.6**
Total Crude Oil	**34.5**	**35.1**	**34.7**	**34.7**	**33.8**
Condensate	3.2	3.0	3.2	3.1	3.7
Total (Crude Oil +Condensate)	**37.7**	**38.1**	**37.9**	**37.8**	**37.5**
Total (Crude Oil +Condensate)(Crore Barrels)	**27.6**	**27.9**	**27.8**	**27.7**	**27.5**

Source: Oil Companies and DGH

Table 2.5 : Self Sufficiency in Petroleum Products*

(Million Metric Tonne)

		2010-11	2011-12	2012-13	2013-14	2014-15 (P)
i)	**INDIGENOUS CRUDE OIL PROCESSING**	**33.3**	**33.7**	**34.2**	**33.9**	**34.2**
	a) PRODUCTS FROM INDIGENOUS CRUDE	31.1	31.5	31.9	31.6	32.0
	b) PRODUCTS FROM FRACTIONATORS (INCLUDING LPG AND GAS)	4.2	4.2	4.1	3.9	3.7
ii)	**TOTAL PRODUCTION FROM INDIGENOUS CRUDE, CONDENSATE & GAS (a+b)**	**35.3**	**35.7**	**36.0**	**35.5**	**35.6**
iii)	**TOTAL DOMESTIC CONSUMPTION**	**141.0**	**148.1**	**157.1**	**158.4**	**165.0**
	% SELF SUFFICIENCY (ii/iii)	**25.0**	**24.1**	**22.9**	**22.4**	**21.6**

Source: Oil Companies.

**1. Production of petroleum products from indigenous crude considered at 93.3% of indigenous crude oil processing.*

2. The balance demand of petroleum products is met through import of crude oil and POL products.

Table 2.6 : NELP Blocks awarded in India upto IX Round

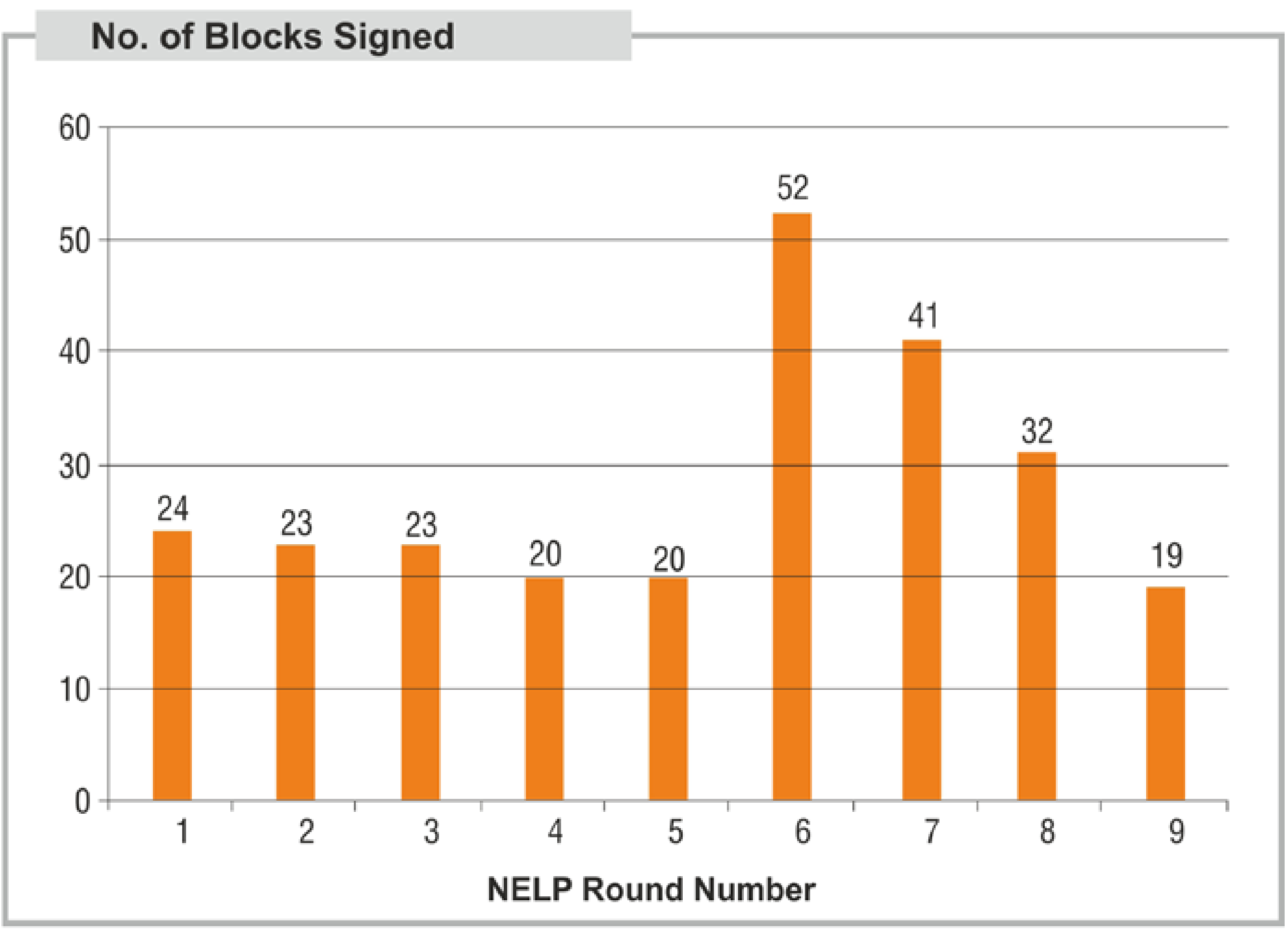
Parameter	I	II	III	IV	V	VI	VII	VIII	IX
No. of blocks offered	48	25	27	24	20	55	57	70	34
No. of blocks bid for	28	23	24	21	20	52	45	36	33
No. of bids received	45	44	52	44	69	165	181	76	74
No. of blocks awarded	25	23	23	21	20	52	44	34	19
No. of PSC signed	24	23	23	20	20	52	41	32	19
Area Awarded (Sq.Km)	2,28,472	2,63,050	2,04,588	1,92,810	1,13,687	3,06,331	1,12,988	52,603	26,428

Note: 1. a) upto IXth Round, 254 PSCs for exploration blocks have been signed

b) In IXth Round, bids for 33 exploration blocks are under evaluation and 19 PSC have been signed till 31st March, 2013.

2. a) Actual Investment till 2012-13 : US$ 21.3 billion (US$12.51 Billion on exploration and US$ 8.81 Billion on development)

3. In-place volume accretion is 745 MMT(O+OEG)



Source : Directorate General of Hydrocarbons (DGH) / MOP&NG

Table 2.7 : Hydrocarbon Reserves in India

Million metric tonne

Details of Reserves in India as of 31.03.2014	Initial In Place			Ultimate Reserves			Balance Recoverable Reserves		
	Oil	Gas	O+OEG	Oil	Gas	O+OEG	Oil	Gas	O+OEG
ONGC	5185	2325	7510	1462	1270	2732	567	764	1331
OIL	803	344	1147	247	190	437	86	109	195
Pvt./JV	972	1318	2290	215	716	931	109	554	663
Total	**6961**	**3987**	**10947**	**1924**	**2176**	**4100**	**763**	**1427**	**2190**
	Accretion of Initial In Place			**Accretion Ultimate Reserves**			**Accretion Balance Recoverable Reserves**		
ONGC	66	70	136	11	30	41	-3	44	41
OIL	7	2	9	6	2	8	2	2	4
Pvt./JV	142	26	168	18	36	54	5	27	32
Total	**215**	**98**	**313**	**35**	**68**	**103**	**4**	**73**	**77**

Annual Report of DGH 2013-14 & MOP&NG Statistics

Table 2.8 : Domestic Oil & Gas Production vis a vis Overseas Production

Year	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15(P)
Total Domestic (MMTOE)	66.5	66.4	81.0	89.9	85.7	78.5	73.2	71.1
Overseas production of OVL (MMTOE)	8.8	8.8	8.9	9.5	8.8	7.3	8.4	8.9
Overseas Prod as % of Domestic	13.2%	13.2%	11.0%	10.5%	10.3%	9.3%	11.5%	12.5%

Source : Ministry of Petroleum and Natural Gas / ONGC Videsh Ltd.

Table 2.9 : Coal Bed Methane (CBM) Gas development in India

Prognosticated CBM Resources	92	TCF
Established CBM resources	9.9	TCF
Total available Coal bearing area	26000	Sq.KM
Exploration Initiated	17200	Sq.KM
Blocks Awarded*	33	Nos.
Commercial production of CBM gas	0.63	MMSCMD

Source : DGH 2013-14 & MOP&NG March 15 report

**CBM blocks have been awarded in the state of Andhra Pradesh, Assam, Chhattisgarh, Gujarat, Jharkhand, Madhya Pradesh, Maharashtra, Odisha, Rajasthan, Tamil Nadu and West Bengal.*

Table 2.10 : Status of Shale Gas development in India

a)	Shale Gas Spread in the sedimentary basins	Cambay, Vindhya Basin, KG basin, Damodar valley, Gondwana, Krishna-Godavari onland and Cauvery.
b)	MoU signed on 06.10.2010 between Department of State, USA and Ministry of Petroleum & Natural Gas	For the assessment of Shale Gas Resources in India, imparting training to Indian Geo-Scientists and Engineers & assistance in formulation of Regulatory Frameworks.
c)	Shale Gas MoU signed by ONGC with M/s Conoco Philips(COP) in March, 2012	For Sedimentological and Geochemical studies from different wells of Cambay, Vindhya, KG basin, and Damodar valley basin.
d)	R&D pilot project , Damodar Valley by ONGC	Four wells were drilled in Raniganj and North Karanpura areas of Damodar Valley. Gas in place resources of Raniganj has been estimated at 48 TCF on integrated core and log evaluation. GIP at North Karanpura area is not considered prospective as only 1.5 TCF of shale gas is estimated.
e)	A multi organizational Team (MOT) of DGH, ONGC, OIL, GAIL has been formed by MOPNG to analyze the existing data set and suggest methodology for Shale Oil and Gas development in India.	Different agencies have reported Shale Oil and Gas Resources in India. EIA , USA, June 13 reported a GIP concentration of 1278 TCF , risked gas in place of the order of 584 TCF with 96 TCF as recoverable in 4 Indian Basins.
f)	Govt. of India has announced the Policy Guidelines for exploration and Exploration of Shale Oil and Gas by National Oil Companies under Nomination Regime in October'2013	Following the notification of the policy, ONGC has completed drilling of first pilot Shale Gas Well JM#55 (JMSGA) in Jambusar area in Cambay Basin. ONGC has identified a list of 50 nomination blocks to MOP&NG. Process of identification of nomination blocks for Shale Gas has been completed under Phase-1 and the work is in progress. OIL has also identified 5 nomination blocks in its nominated PEL/ML areas of exploration. The proposal has been submitted to MOP&NG.

Source: DGH 2013-14 report

Table 2.11 : Status of Underground Coal Gasification (UCG) development in India

a)	Agreement of Collaboration (AOC) signed on 25.11.2004 between ONGC and Skochinsky Institute of Mining Russia	For implementation of Underground Coal Gasification (UCG) project in India
b)	Pilot Project selected- Vastan Mining Block -mining lease awaited	a) Vastan Mine block belonging to GIPCL in Surat district, Gujarat has been selected for UCG Pilot project b) The issue of allocation of block for UCG was taken up during Inter-Ministerial Group (IMG) on 17.08.2012 for grant of permission for UCG pilot study to ONGC. **Permission is awaited from Ministry of Coal.**
c)	Status of other UGC sites	In parallel action, other sites have been taken up for studying their suitability for UGC. ONGC and Neyveli Lignite Corporation (NLC) have jointly identified Tadkeshwar in Gujrat and Hodu Sindhari & East Kurla in Rajasthan. One more site was also jointly identified by ONGC and GMDC, viz Surkha in Bhavnagar, Gujarat. The data of all fields have been analyzed for evaluating the suitability of these sites for UCG and all these sites have been found useful. **These projects will be taken up on the basis of learning curve from Vastan Projects.**

Source: DGH 2013-14 report

A view of LNG Carrier

Chapter - 3
Natural Gas

PPAC
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Table 3.1 : World Natural Gas Reserves and Consumption

Country	Proved Reserves		Consumption	
	End 2013	End 2014	2013	2014
	Trillion Cubic Metre		Trillion Cubic Metre	
Russian Federation	32.26	32.64	0.41	0.41
Iran	34.02	34.02	0.16	0.17
Qatar	24.68	24.53	0.04	0.04
Turkmenistan	17.48	17.48	0.02	0.03
Saudi Arabia	8.17	8.17	0.10	0.11
US	9.58	9.77	0.74	0.76
UAE	6.09	6.09	0.07	0.07
Venezuela	5.58	5.58	0.03	0.03
Nigeria	5.11	5.10	NA	NA
Algeria	4.50	4.50	0.03	0.04
Iraq	3.59	3.59	NA	NA
China	3.46	3.46	0.17	0.19
India	1.35	1.43	0.05	0.05
UK	0.24	0.24	0.07	0.07
Argentina	0.33	0.33	0.05	0.05
World	**186.49**	**187.07**	**3.38**	**3.39**
of which:				
OECD	19.44	19.49	1.61	1.58
Non OECD	167.05	167.59	1.77	1.81
European Union	1.50	1.49	0.44	0.39
Former Soviet Union	53.90	54.56	0.57	0.57

Source: BP Statistical Review of World Energy, June 2015

Table 3.2 : NATURAL GAS AT A GLANCE

(MMSCMD)

	2011-2012	2012-2013	2013-2014	2014-2015 (P)
Gross Production	130.26	111.46	96.96	92.23
Net Production (Excluding Flare Gas)	126.99	108.94	94.67	89.57
*LNG Import	41.88	39.24	38.74	41.69
Total Consumption (Net Production+Import)	168.87	148.18	133.41	131.26
Total Consumption (in BCM)	61.64	54.09	48.69	47.91

Notes :
Source : ONGC / OIL/ DGH / PLL/ HLPL/ GSPCL / GAIL
**LNG imports includes both term & spot cargo*
**RIL LNG import data is not included.*
LNG imports data in Million Metric Ton (MMT), converted to MMSCMD
1 MMT = 3.6 MMSCMD
1 BCM = 2.74 MMSCMD
MMSCMD : Million Standard Cubic Meter Per Day
MMT= Million Metric Ton

Table No: 3.3 : PNG Data as on 31.03.2015

State	City Covered	CGD Entities	Domestic Connections	Commercial Connections	Industrial Connections
Delhi/ NCR	NATIONAL CAPITAL TERRITORY OF DELHI INCLUDING NOIDA, GREATER NOIDA, GHAZIABAD.	IGL	560752	1560	726
MAHARASHTRA	MUMBAI, THANE, MIRA-BHAYANDAR, NAVI MUMBAI, PUNE, KALYAN, AMBERNATH, PANVEL, BHIWANDI	MGL, MNGL	817468	2654	154
GUJARAT	AHEMEDABAD, BARODA, SURAT, ANKLESHWAR	GSPC, SABARMATI GAS, GUJRAT GAS, HPCL, VGL, ADANI GAS, CGSML	1392657	16496	3869
UTTAR PRADESH	AGRA, KANPUR, BAREILLY, LUCKNOW	Green Gas Ltd. (Lucknow), CUGL(Kanpur), Siti Energy, Adani Gas, Sanwarian Gas, Gail Gas Ltd.	22559	187	464
TRIPURA	AGARTALA	TNGCL	17996	294	47
MADHYA PRADESH	DEWAS, INDORE, UJJAIN, GWALIOR	GAIL GAS, AGL	3278	34	75
RAJASTHAN	KOTA	GAIL GAS	189	1	18
ASSAM	TINSUKIA, DIBRUGARH, SIBSAGAR. JORHAT	ASSAM GAS CO. LTD	28050	991	377
ANDHRA PRADESH	KAKINADA,VIJAYAWADA	BGL	2339	41	0
TELANGANA	HYDERABAD	BGL	824	5	3
HARYANA	SONEPAT, GURGAON, FARIDABAD	GAIL GAS, ADANI GAS, HARYANA CITY GAS	23236	93	185
Total			**2869348**	**22356**	**5918**

Sources:CGD companies

Table 3.4 CNG activities in India as on 31.03.2015

CNG Sales (TMT)

Sales (TMT) (P)

State	Company Name	No. of Companies	2012-13	2013-14	2014-15 (P)
Gujarat	GAIL Gas/ Adani Energy/ Gujarat Gas, GSPC, GGCL, SGL, HPCL	7	441.80	463.50	475.90
Delhi	Indraprastha Gas (IGL) New Delhi	1	69 5.10	697.60	717.10
Rajasthan	GAIL Gas	1	0.80	1.60	2.60
Maharashtra	Mahanagar Gas Ltd.(MGL) Mumbai, MNGL Pune.	3	425.10	476.00	531.40
Andhra Pradesh	Bhagyanagar Gas Ltd.(BGL) Hyderabad.	1	24.70	24.60	25.80
Uttar Pradesh	Green Gas Ltd. (Lucknow), CUGL(Kanpur)	4	137.70	162.60	184.80
Tripura	Tripura Natural Gas Co. Ltd.(TNGCL) Agartala.	1	4.30	6.80	9.50
Madhya Pradesh	Avantika Gas (Indore) / GAIL Gas Ltd.	2	14.50	15.90	16.60
Haryana	Haryana City Gas Ltd., GAIL Gas Ltd., Adani Gas Ltd.	3	73.20	78.20	72.30
West Bengal	GEECL	1	0.60	1.15	1.24
Total		**19***	**1817.80**	**1927.95**	**2037.24**

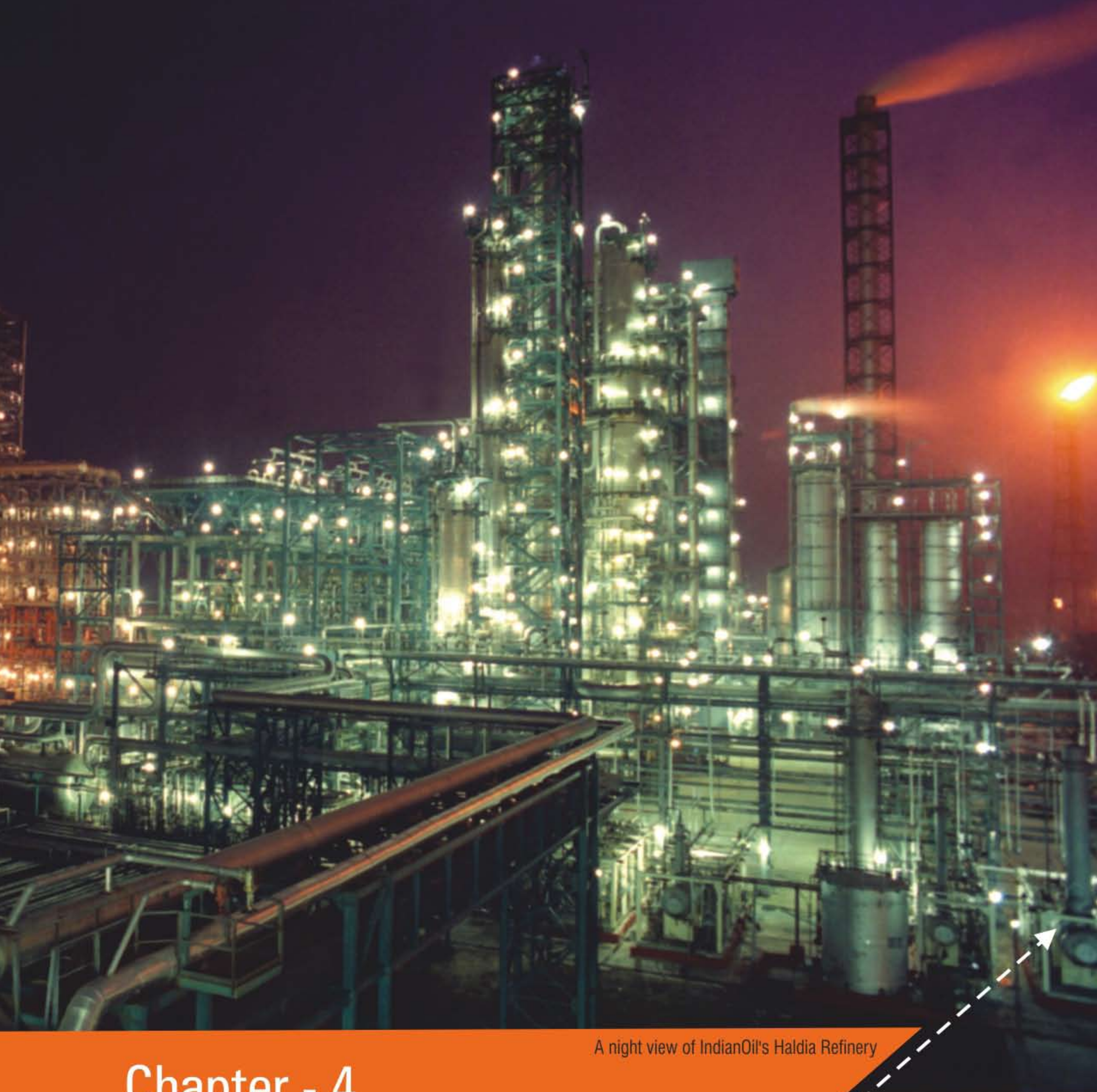
**GAIL Gas is operating in 5 States and Adani Gas in two States. Hence, their number is taken once only.*
Source : CGD Companies

Table 3.5 CNG Stations & Vehicles as on 31.03.2015

Sales (TMT) (P)

State	Company Name	No. of CNG Stations	No. of CNG Vehicles (in Lakhs)
Gujarat	GAIL Gas/ Adani Energy/ Gujarat Gas,GSPC, GGCL, SGL,HPCL	349	996280
Delhi / NCR	Indraprastha Gas (IGL) New Delhi	326	773210
Maharashtra	Mahanagar Gas Ltd.(MGL) Mumbai, MNGL Pune	211	500666
Andhra Pradesh	Bhagyanagar Gas Ltd.(BGL) Hyderabad	32	31692
Rajasthan	GAIL Gas	3	4000
Uttar Pradesh	Green Gas Ltd. (Lucknow), CUGL(Kanpur)	40	92592
Tripura	Tripura Natural Gas Co. Ltd.(TNGCL) Agartala	5	6936
Madhya Pradesh	Avantika Gas (Indore) / GAIL Gas Ltd.	20	20255
Haryana	Haryana City Gas Ltd, GAIL Gas Ltd., Adani Gas Ltd.	16	122070
West Bengal	GEECL	7	2275
All India		**1009**	**2549976**

**Vehicle figures of IGL -Noida, Greater Noida and Ghaziabad is not available.*
Source : CGD Companies



A night view of IndianOil's Haldia Refinery

Chapter - 4
Refining & Production

Analysis•Knowledge•Information

Map of Refineries in India

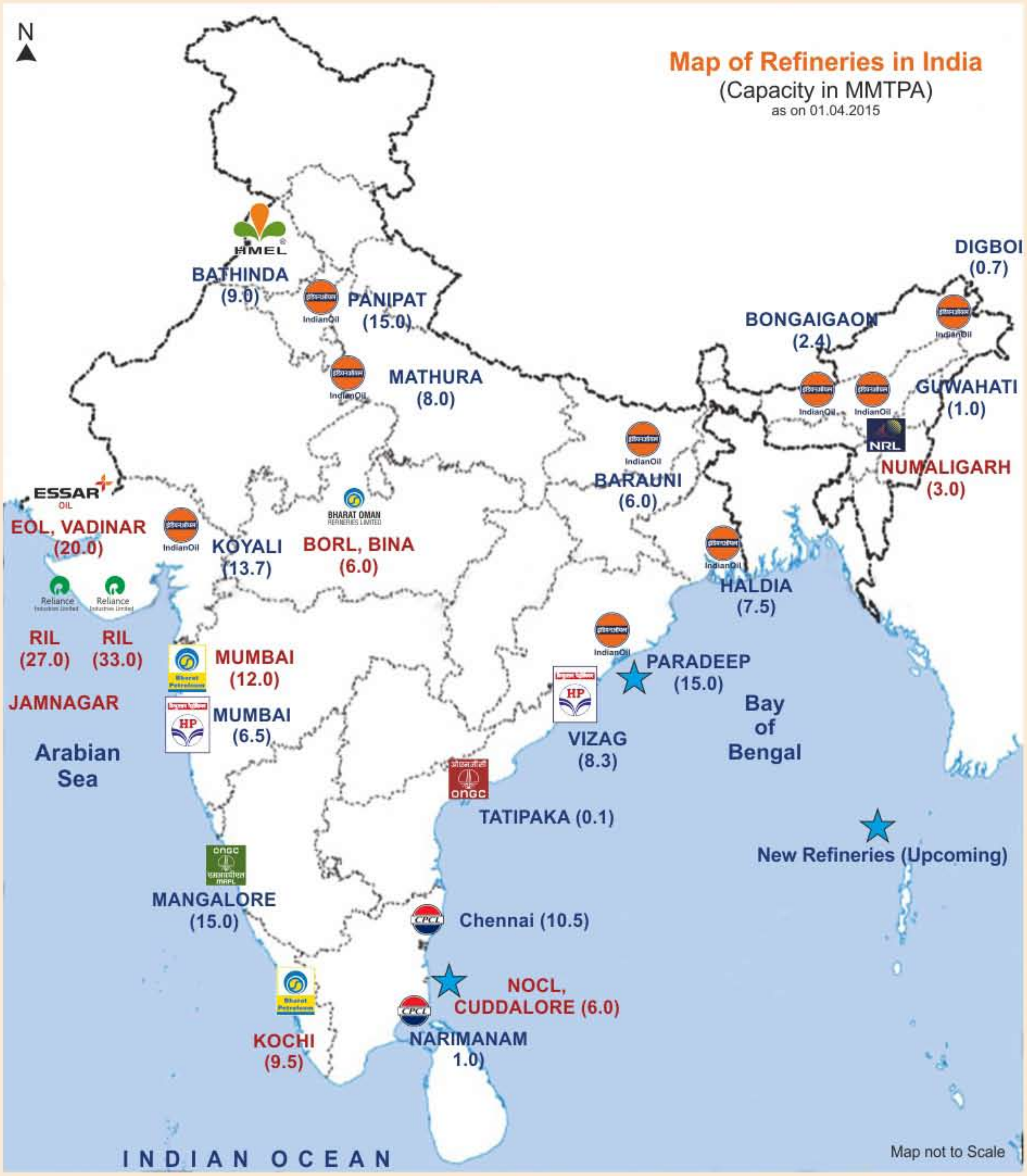


Table : 4.1 : Refineries: Installed Capacity and Crude Oil Processing

MMTPA/MMT

		Installed capacity							Crude Oil Processing				
Sr. No.	REFINERY	01.04.2009	01.04.2010	01.04.2011	01.04.2012	01.04.2013	01.04.2014	01.04.2015 (P)	2010-11	2011-12	2012-13	2013-14	2014-15(P)
1	BARAUNI	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.2	5.7	6.3	6.5	5.9
2	KOYALI	13.7	13.7	13.7	13.7	13.7	13.7	13.7	13.6	14.3	13.2	13.0	13.3
3	HALDIA	6.0	7.5	7.5	7.5	7.5	7.5	7.5	6.9	8.1	7.5	8.0	7.7
4	MATHURA	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.9	8.2	8.6	6.6	8.5
5	PANIPAT	12.0	12.0	15.0	15.0	15.0	15.0	15.0	13.7	15.5	15.1	15.1	14.2
6	GUWAHATI	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.1	1.1	1.0	1.0	1.0
7	DIGBOI	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.6	0.7	0.7	0.6
8	BONGAIGAON	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.0	2.2	2.4	2.3	2.4
	IOCL TOTAL	49.7	51.2	54.2	54.2	54.2	54.2	54.2	53.0	55.6	54.6	53.1	53.6
9	MUMBAI	5.5	6.5	6.5	6.5	6.5	6.5	6.5	6.6	7.5	7.7	7.7	7.4
10	VISAKHAPATNAM	7.5	8.3	8.3	8.3	8.3	8.3	8.3	8.2	8.7	8.0	7.8	8.8
11	HMEL-GGSR				9.0	9.0	9.0	9.0	-	-	4.9	9.3	7.3
	HPCL-TOTAL	13.0	14.8	14.8	23.8	23.8	23.8	23.8	14.7	16.2	20.7	24.8	23.5
12	MUMBAI	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.7	13.0	12.7	12.7	12.8
13	KOCHI	7.5	9.5	9.5	9.5	9.5	9.5	9.5	8.7	9.5	10.1	10.3	10.4
14	BINA	-	-	6.0	6.0	6.0	6.0	6.0	-	2.0	5.7	5.4	6.2
	BPCL-TOTAL	19.5	21.5	27.5	27.5	27.5	27.5	27.5	21.4	24.5	28.6	28.4	29.4
15	MANALI	9.5	9.5	10.5	10.5	10.5	10.5	10.5	10.4	10.0	9.1	10.1	10.2
16	CBR	1.0	1.0	1.0	1.0	1.0	1.0	1.0	0.7	0.6	0.6	0.6	0.5
	CPCL-TOTAL	10.5	10.5	11.5	11.5	11.5	11.5	11.5	11.1	10.6	9.7	10.6	10.8
17	NUMALIGARH	3.0	3.0	3.0	3.0	3.0	3.0	3.0	2.3	2.8	2.5	2.6	2.8
18	TATIPAKA	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.06	0.07	0.1
19	MRPL-MANGALORE	9.7	11.8	11.8	15.0	15.0	15.0	15.0	12.7	12.8	14.4	14.6	14.6
	ONGC TOTAL	9.8	11.9	11.9	15.1	15.1	15.1	15.1	12.7	12.9	14.5	14.7	14.7
20	RIL JAMNAGAR (DTA)	33.0	33.0	33.0	33.0	33.0	33.0	33.0	31.0	32.5	32.6	30.3	30.9
21	RIL JAMNAGAR (SEZ)	29.0	29.0	27.0	27.0	27.0	27.0	27.0	35.6	35.2	35.9	37.7	37.2
22	EOL VADINAR	10.5	10.5	10.5	18.0	20.0	20.0	20.0	14.8	13.5	19.8	20.2	20.5
	ALL INDIA	**178.0**	**185.4**	**193.4**	**213.1**	**215.1**	**215.1**	**215.1**	**196.5**	**203.8**	**218.8**	**222.5**	**223.3**

Source: Oil Companies

Table 4.2 : High Sulphur (HS) & Low Sulphur (LS) Crude Oil Processing

(Million Metric Tonne)

Sr. No.	Type of crude	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15 (P)
1	HS Crude	126.2	128.0	139.0	153.0	160.2	161.4
2	LS Crude	60.4	68.5	64.8	65.8	62.2	61.9
	Total Crude	186.6	196.5	203.8	218.8	222.5	223.3
	Share of HS Crude in total crude processing	67.6%	65.2%	68.2%	69.9%	72.0%	72.3%

Source: Oil Companies

Table 4.3 : Imported Crude & Indigenous Crude Processing

(Million Metric Tonne)

Sr. No.	Indigenous/ Imported crude	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15 (P)
1	Imported Crude	157.7	163.2	170.1	184.7	188.6	189.0
2	Indigenous Crude	28.9	33.3	33.7	34.2	33.9	34.2
	Total Crude	186.6	196.5	203.8	218.8	222.5	223.3
Share of Imported Crude in total crude processing		84.5%	83.0%	83.4%	84.4%	84.8%	84.7%

- Source: Oil Companies

Table 4.4 : Production of Petroleum Products

Million metric tonne

	2010-11	2011-12	2012-13	2013-14	2014-15 (P)
A) FROM CRUDE OIL/ REFINERIES					
LIGHT ENDS OF WHICH:	**55.8**	**59.0**	**63.0**	**62.6**	**64.6**
LPG	7.5	7.3	7.7	7.9	7.7
MS	25.8	27.2	30.1	30.3	32.2
NAPHTHA	17.7	17.0	17.2	17.0	16.2
OTHERS	4.9	7.4	8.0	7.4	8.5
MIDDLE DISTILLATE OF WHICH:	**100.1**	**105.2**	**112.5**	**117.3**	**117.5**
SKO	7.8	7.9	8.0	7.4	7.6
ATF	9.8	10.0	10.1	11.2	11.1
HSD	77.7	82.9	91.1	93.8	94.3
LDO	0.6	0.5	0.4	0.4	0.4
OTHERS	4.3	3.8	3.0	4.6	4.2
HEAVY ENDS OF WHICH:	**35.7**	**35.6**	**38.2**	**36.6**	**34.9**
FURNACE OIL	18.7	17.7	14.5	13.0	11.5
LSHS	2.0	1.7	1.3	0.5	0.7
LUBE OIL	0.9	1.0	0.9	0.9	0.9
BITUMEN	4.4	4.6	4.7	4.8	4.7
OTHERS	9.6	10.6	16.8	17.4	17.1
TOTAL PRODUCTION	**191.6**	**199.8**	**213.7**	**216.4**	**217.1**
B) FROM NATURAL GAS/ FRACTIONATORS					
TOTAL PRODUCTION OUT OF WHICH	**4.2**	**4.2**	**4.1**	**3.9**	**3.7**
LPG	2.2	2.2	2.1	2.1	2.2
NAPTHTHA	1.6	1.7	1.7	1.5	1.2
SKO	0.1	0.1	0.1	0.1	0.1
HSD	0.02	0.01	0.02	0.02	0.01
OTHERS	0.2	0.2	0.2	0.2	0.2
TOTAL INDIGENOUS PRODUCTION	**195.8**	**204.0**	**217.8**	**220.3**	**220.7**

Source: Oil Companies

Table 4.5 : Production of Petroleum Products : All Sources

Million metric tonne

Major Products	2010-11	2011-12	2012-13	2013-14	2014-15(P)
HSD	77.7	82.9	91.1	93.8	94.3
MS	25.8	27.2	30.1	30.3	32.2
Naphtha	19.3	18.7	18.9	18.5	17.5
FO	18.7	17.7	14.5	13.0	11.4
ATF	9.8	10.1	10.1	11.2	11.1
LPG	9.6	9.6	9.8	10.0	9.8
SKO	7.9	8.0	8.1	7.4	7.6
Bitumen	4.4	4.6	4.7	4.8	4.7
LSHS	2.0	1.7	1.3	0.5	0.7
Lubes	0.9	1.0	0.9	0.9	0.9
LDO	0.6	0.5	0.4	0.4	0.4
Others#	19.0	22.0	28.0	29.5	30.2
Total	**195.8**	**204.0**	**217.8**	**220.3**	**220.7**

- Source: Oil Companies.
#Others include products like Propylene, solvents (Hexane, Benzene, Toluene, Xylene and Specialty solvents), Reformate, Mineral Turpentine Oil, Carbon Black Feed Stock, Raw and Calcined Petroleum Coke, Waxes, Sulphur, etc.

Table 4.6 : Production vs Consumption of Petroleum Products

Million metric tonne

YEAR	CONSUMPTION $	PRODUCTION FROM REFINERIES & OTHER SOURCES*	SURPLUS (+) / DEFICIT(-)
	(A)	(B)	(B)-(A)
1997-98	84.3	64.7	-19.6
1998-99	90.6	68.4	-22.1
1999-00	97.1	82.9	-14.2
2000-01	100.1	99.6	-0.5
2001-02	100.4	104.3	3.9
2002-03	104.1	108.7	4.5
2003-04	107.8	117.6	9.9
2004-05	111.6	122.7	11.1
2005-06	113.2	124.1	10.9
2006-07	120.7	140.1	19.3
2007-08	128.9	149.9	20.9
2008-09	133.6	157.4	23.8
2009-10	137.8	185.0	47.2
2010-11	141.0	195.8	54.8
2011-12	148.1	204.0	56.0
2012-13	157.1	217.8	60.7
2013-14	158.4	220.3	61.9
2014-15(P)	165.0	220.7	55.7

$ includes direct imports by private parties
**Fractionators and Gas processing plants*

Table 4.7 : Fuel & Loss

Sr. No.	COMPANY	REFINERY	2011-12 Through put (Million tonne)	2011-12 Fuel & Loss Qty. (Million tonne)	2011-12 Fuel & Loss %	2012-13 Through put (Million tonne)	2012-13 Fuel & Loss Qty. (Million tonne)	2012-13 Fuel & Loss %	2013-14 Through put (Million tonne)	2013-14 Fuel & Loss Qty. (Million tonne)	2013-14 Fuel & Loss %	2014-15(P) Through put (Million tonne)	2014-15(P) Fuel & Loss Qty. (Million tonne)	2014-15(P) Fuel & Loss %
1	IOCL	BARAUNI	5.7	0.5	9.4	6.3	0.6	9.2	6.5	0.6	9.0	5.9	0.5	9.2
2		KOYALI	14.3	1.4	9.8	13.2	1.3	9.7	13.0	1.3	9.7	13.3	1.3	9.6
3		HALDIA	8.1	0.8	9.4	7.5	0.7	9.4	8.0	0.7	9.2	7.7	0.7	8.7
4		MATHURA	8.2	0.7	8.8	8.6	0.7	8.7	6.6	0.6	8.9	8.5	0.7	8.2
5		PANIPAT	15.5	1.6	10.6	15.1	1.6	10.5	15.1	1.5	10.0	14.2	1.4	10.2
6		GUWAHATI	1.1	0.1	12.2	1.0	0.1	12.2	1.0	0.1	11.6	1.0	0.1	12.1
7		DIGBOI	0.6	0.1	10.3	0.7	0.1	10.1	0.7	0.1	10.0	0.6	0.1	10.3
8		BONGAIGAON	2.2	0.2	9.6	2.4	0.2	10.5	2.3	0.2	9.5	2.4	0.2	9.1
		IOCL TOTAL	**55.6**	**5.5**	**9.8**	**54.6**	**5.3**	**9.7**	**53.1**	**5.1**	**9.6**	**53.6**	**5.0**	**9.4**
9	HPCL	MUMBAI	7.5	0.6	7.7	7.7	0.5	6.6	7.7	0.5	6.9	7.4	0.6	7.6
10		VISAKHAPATNAM	8.7	0.6	7.4	8.0	0.6	7.6	7.8	0.6	7.6	8.8	0.7	7.4
11	HMEL	GGSR	-	-	-	4.9	0.5	9.9	9.3	0.6	6.4	7.3	0.4	5.3
		HPCL-TOTAL	**16.2**	**1.2**	**7.5**	**20.7**	**1.6**	**7.8**	**24.8**	**1.7**	**6.9**	**23.5**	**1.6**	**6.8**
12	BPCL	MUMBAI	13.0	0.6	4.9	12.7	0.6	5.0	12.7	0.7	5.2	12.8	0.6	4.8
13		KOCHI	9.5	0.8	8.0	10.1	0.7	7.1	10.3	0.6	6.3	10.4	0.5	5.3
14		BORL-BINA	2.0	0.3	13.8	5.7	0.5	9.3	5.4	0.5	8.6	6.2	0.5	7.4
15		NRL	2.8	0.2	7.6	2.5	0.3	10.6	2.6	0.3	10.3	2.8	0.2	5.9
		BPCL-TOTAL	**27.3**	**1.9**	**7.0**	**31.1**	**2.2**	**7.0**	**31.0**	**2.0**	**6.6**	**32.2**	**1.8**	**5.5**
16	CPCL	MANALI	9.9	1.0	10.0	9.1	0.9	10.1	10.1	0.9	9.0	10.2	0.9	8.9
17		CBR	0.6	0.03	4.7	0.6	0.03	4.0	0.6	0.03	4.8	0.5	0.023	4.3
		CPCL-TOTAL	**10.6**	**1.0**	**9.6**	**9.7**	**0.9**	**9.7**	**10.6**	**0.9**	**8.8**	**10.8**	**0.9**	**8.7**
18	ONGC	TATIPAKA	0.1	0.0	1.4	0.1	0.0	1.2	0.1	0.0	1.3	0.1	0.0	0.0
19		MRPL-MANGALORE	12.8	0.9	6.8	14.4	1.0	7.0	14.6	1.1	7.9	14.6	1.5	10.1
		ONGC TOTAL	**12.9**	**0.9**	**6.7**	**14.5**	**1.0**	**7.0**	**14.7**	**1.1**	**7.8**	**14.7**	**1.5**	**10.1**
20	RIL	JAMNAGAR (DTA)	32.5	2.7	8.2	32.6	2.6	8.1	30.3	2.6	8.5	30.9	2.3	7.5
21		JAMNAGAR (SEZ)	35.2	3.2	9.2	35.9	3.4	9.5	37.7	3.3	8.8	37.2	3.2	8.7
22	EOL	VADINAR	13.5	0.9	6.3	19.8	1.2	5.9	20.2	1.0	5.1	20.5	1.0	4.8
		TOTAL	**203.8**	**17.20**	**8.4**	**218.8**	**18.3**	**8.4**	**222.5**	**17.9**	**8.0**	**223.3**	**17.4**	**7.8**

- Source: Oil Companies

Table 4.8 : Gross Refining Margins (GRM) of Refineries

$/bbl.

Company	Refinery	2010-11	2011-12	2012-13	2013-14	2014-15
PSU Refineries						
IOCL	Barauni	3.91	0.39	2.40	6.68	-1.20
	Koyali	6.42	5.07	4.61	4.52	4.79
	Haldia	4.03	2.38	0.85	2.84	-1.51
	Mathura	7.40	0.59	0.55	2.10	-2.19
	Panipat	5.68	4.39	3.34	3.62	-1.97
	Guwahati	10.04	11.94	9.52	6.38	8.68
	Digboi	16.98	14.85	20.81	15.41	13.73
	Bongaigaon	5.23	6.25	5.26	6.71	-0.26
	Average	**5.95**	**3.63**	**3.16**	**4.24**	**0.27**
BPCL	Kochi	4.83	3.20	5.36	4.80	3.17
	Mumbai	4.23	3.12	4.67	3.95	3.97
	Average	**4.47**	**3.16**	**4.97**	**4.33**	**3.62**
HPCL	Mumbai	4.65	1.74	2.08	5.38	4.88
	Visakhapatnam	5.81	2.95	2.08	1.50	1.12
	Average	**5.30**	**2.39**	**2.08**	**3.43**	**2.84**
CPCL	Chennai	5.02	4.16	0.99	4.08	1.97
MRPL	Mangalore	5.96	5.60	2.45	2.67	-0.64
NRL	Numaligarh	15.39	12.45	10.52	12.09	16.67
BORL	Bina	-	-	7.00	7.70	6.10
Private Refineries						
RIL	Jamnagar	8.40	8.60	9.20	8.10	8.60
Essar	Vadinar	4.53	4.23	7.96	7.98	8.37
Singapore		**5.20**	**8.27**	**7.74**	**5.62**	**5.80**

Source - Indian Refineries - Published results/ information provided by the Oil companies
Singapore - Reuters

Table 4.9 : GRM of North East Refineries excluding Excise Duty Benefit

$/bbl.

Company	Refinery	2010-11	2011-12	2012-13	2013-14	2014-15
PSU Refineries						
IOCL	Guwahati	-1.11	3.73	3.42	0.88	0.96
	Digboi	6.54	6.41	13.25	8.50	5.42
	Bongaigaon	-2.28	0.56	0.27	2.34	-6.51
NRL	Numaligarh	6.67	5.80	4.83	6.98	9.46

Source - Indian Refineries - Published results/ information provided by the Oil companies

Table 4.10 : Distillate yield of PSU Refineries

Distillate %

Company	Refinery	2011-12	2012-13	2013-14	2014-15(P)
IOCL	Barauni	85.2	86.1	87.9	87.2
	Koyali	77.8	78.0	78.4	80.1
	Haldia	69.7	69.3	68.5	69.8
	Mathura	73.8	73.3	68.9	71.9
	Panipat	82.0	82.7	82.0	82.4
	Guwahati	82.9	79.7	83.1	81.3
	Digboi	70.9	73.7	73.5	74.8
	Bongaigaon	81.8	82.3	85.9	84.0
CPCL	Manali	70.5	68.0	72.1	73.4
	CBR	86.7	87.5	85.1	71.6
HPCL	Mumbai	73.5	74.6	72.6	75.8
	Visakhapatnam	72.2	72.1	75.7	78.7
BPCL	Mumbai	79.6	80.5	81.0	81.8
	Kochi	78.7	78.9	81.9	84.7
NRL	Numaligarh	91.6	91.1	92.2	90.7
MRPL	Mangalore	73.3	76.5	74.6	72.7
	Industry	**76.9**	**77.3**	**77.7**	**75.8**

Source: Centre for High Technology

Table 4.11 : Specific Energy Consumption (MBN Number) of PSU Refineries

(Mbtu/Bbl/NRGF)

Company	Refinery	2010-11	2011-12	2012-13	2013-14	2014-15 (P)
IOCL	Barauni	59.0	58.4	58.3	60.6	61.5
	Koyali	63.0	58.3	57.4	58.1	55.7
	Haldia	59.0	55.0	54.3	52.5	51.5
	Mathura	58.0	59.2	58.8	60.5	56.2
	Panipat	54.0	52.4	51.0	50.0	48.7
	Guwahati	61.0	60.4	64.6	57.4	61.8
	Digboi	70.0	67.9	64.7	61.5	61.1
	Bongaigaon	84.0	82.0	74.7	67.4	67.5
CPCL	Manali	73.0	67.0	65.8	62.5	62.3
	CBR	119.0	108.7	103.8	121.4	118.5
HPCL	Mumbai	91.0	81.4	82.6	76.1	79.7
	Visakhapatnam	87.0	84.2	84.0	84.3	82.8
BPCL	Mumbai	67.0	67.2	65.5	66.5	69.2
	Kochi	91.0	84.5	79.1	76.6	76.9
NRL	Numaligarh	69.0	59.6	53.2	53.6	51.4
MRPL	Mangalore	58.0	57.9	61.0	60.9	67.4
	PSU Oil Cos. Average	**66.0**	**63.2**	**62.4**	**61.5**	**62.0**

Source: Centre for High Technology

Table 4.12 : Import/Export of Crude Oil and Petroleum Products

Import/ Exports	Crude Oil & Petroleum Products	2011-12			2012-13			2013-14			2014-15 (P)		
		QUANTITY	VALUE		QUANTITY	VALUE		QUANTITY	VALUE		QUANTITY	VALUE	
		Million tonne	US$ (Billion)	Rs. (Crores)	Million tonne	US$ (Billion)	Rs. (Crores)	Million tonne	US$ (Billion)	Rs. (Crores)	Million tonne	US$ (Billion)	Rs. (Crores)
IMPORT	**CRUDE OIL**	**171.7**	**139.7**	**672220**	**184.8**	**144.3**	**784652**	**189.2**	**143.0**	**864875**	**189.4**	**112.7**	**687350**
	PRODUCTS												
	LPG	5.8	5.6	27019	6.3	5.8	31696	6.6	6.2	37425	8.3	6.0	36652
	PETROL	0.7	0.7	3311	0.1	0.2	891	0.2	0.2	1481	0.4	0.4	2301
	NAPHTHA	2.1	2.0	9827	1.7	1.8	9791	1.0	1.0	6067	0.9	0.7	4102
	KEROSENE	0.6	0.6	2710	0.0	0.0	0	0.0	0.0	0	0.0	0.0	172
	DIESEL	1.1	1.1	5039	0.6	0.6	3219	0.1	0.1	503	0.1	0.1	679
	LUBES	1.4	1.7	8314	1.5	1.7	9259	1.7	1.7	10664	1.8	1.8	10951
	FUEL OIL	1.2	0.9	4392	1.1	0.8	4546	1.3	0.9	5537	0.9	0.6	3876
	BITUMEN	0.1	0.04	197	0.1	0.04	235	0.2	0.1	773	0.5	0.2	1507
	OTHERS	3.0	1.5	7282	4.4	1.6	8727	5.6	2.0	12156	7.5	2.0	12538
	Total Product Import	**15.8**	**14.2**	**68091**	**15.8**	**12.5**	**68363**	**16.7**	**12.3**	**74605**	**20.4**	**11.8**	**72778**
	Total Import (Crude Oil+Product)	**187.6**	**153.9**	**740311**	**200.6**	**156.8**	**853015**	**206.0**	**155.2**	**939480**	**209.9**	**124.67**	**760128**
	EXPORTS												
EXPORT	LPG	0.2	0.2	947	0.2	0.2	1294	0.2	0.3	1589	0.3	0.2	1455
	PETROL	14.5	15.5	73982	16.7	17.5	95346	15.2	15.4	92977	16.0	13.5	81971
	NAPHTHA	10.1	9.5	45620	8.6	8.0	43533	8.3	7.6	46059	7.0	5.2	31619
	AVIATION TURBINE FUEL	4.6	4.6	21857	4.7	4.6	25223	5.7	5.5	33246	5.5	4.2	25413
	KEROSENE	0.03	0.04	191	0.02	0.03	140	0.02	0.02	98	25.6	18.9	115149
	DIESEL	20.4	21.7	104572	22.5	21.3	115554	26.5	24.3	148138	0.02	0.01	81
	LDO	0.1	0.1	331	0.01	0.01	42	0.03	0.02	135	0.01	0.005	28
	LUBES	0.0	0.0	181	0.1	0.1	381	0.0	0.0	138	0.01	0.01	83
	FUEL OIL	7.9	5.3	25576	5.9	3.8	20415	6.2	3.7	22407	4.8	2.3	14251
	BITUMEN	0.01	0.01	27	0.1	0.1	281	0.1	0.1	321	0.1	0.1	245
	OTHERS	3.0	2.4	11360	4.7	3.3	17880	5.5	3.8	23169	4.7	3.0	18267
	Total Product Export	**60.8**	**59.3**	**284643**	**63.4**	**58.8**	**320090**	**67.9**	**60.7**	**368279**	**63.9**	**47.3**	**288563**
	Net Import	**126.7**	**94.6**	**455668**	**137.2**	**98.0**	**532926**	**138.1**	**94.6**	**571201**	**145.9**	**77.3**	**471565**
	Net Product Export	**45.0**	**45.1**	**216552**	**47.6**	**46.3**	**251727**	**51.1**	**48.4**	**293674**	**43.5**	**35.5**	**215785**

Note:
Source: Oil Companies & DGCIS P= Provisional
1. Others imports include Paraffin wax, Petroleum Jelly, LSWR, Aviation Gas, Pet coke etc.
2. Import does not include LNG imports

Table 4.13: Exchange Rates of Indian Rupee (₹)

Year	US Dollar ($)	British Pound (£)	European EURO (€)	Japanese YEN (¥)
	Indian Rupee (₹) / Foregin currency			
2000-01	45.70	67.54	41.48	0.41
2001-02	47.69	68.32	42.17	0.38
2002-03	48.41	74.84	48.07	0.40
2003-04	45.92	77.74	54.01	0.41
2004-05	44.95	82.95	56.55	0.42
2005-06	44.28	79.02	53.88	0.39
2006-07	45.29	85.72	58.11	0.39
2007-08	40.24	80.80	56.99	0.35
2008-09	45.91	78.45	65.14	0.46
2009-10	47.42	75.88	67.08	0.51
2010-11	45.58	70.88	60.21	0.53
2011-12	47.95	76.40	65.90	0.61
2012-13	54.45	86.02	70.06	0.66
2013-14	60.50	96.23	81.14	0.60
2014-15	61.15	98.56	77.47	0.56
2015-16 (Upto 31 May 2015)	63.29	96.43	69.55	0.53
2015 Onwards Month wise				
Jan-15	62.23	94.48	72.68	0.53
Feb-15	62.04	95.01	70.47	0.52
Mar-15	62.45	93.53	67.63	0.52
Apr-15	62.75	93.91	67.79	0.53
May-15	63.80	98.82	71.21	0.53

Source: Reserve Bank of India website
Note : All rates are average of daily buying and selling rates for the period.

Sub-Sea Pipeline

Chapter - 5
Major Pipelines in India

PPAC

Analysis•Knowledge•Information

Table 5.1 : Gas Pipeline Network as on 31.03.2015

NETWORK/REGION	Entity	Length (Kms)	Design Capacity (mmscmd)	Pipeline Size	Average Flow in 2014-15 (mmscmd)	% Capacity Utilisation as on 31.03.2015
HVJ GREP -DVPL & Spur (Hazira -Vijaipur- Jagdishpur) HVJ / VDPL	GAIL	4658	53.0	36”	38.8	73.13
DVPL-GREP Upgradation (DVPL-2 & VDPL)	GAIL	1119	54	48”	20.32	37.63
*CHHAINSA- JHAJJAR -HISSAR P/L (CJPL) (Including Spur lines) commisioned up to Sultanpur, Jhajjar- Hissar under hold (111 Km) Flow of 5 Million up to 2011-12	GAIL	265	5	36” /16”	0.79	15.8
DAHEJ-URAN-PANVEL(DUPL/ DPPL) including Spur Lines	GAIL	875	19.9	30”/18”	8.52	42.81
*DADRI BAWANA NANGAL P/L (DBPL), Dadri- Bawana:106Km, Bawana - Nangal: 501 KM, Spur Line of BNPL : 196 Km.	GAIL	834.8	31	36”/30”/24”/18”	4.08	13.2
DABHOL-BENGALURU-PIPELINE (Including spur)	GAIL	1004	16	36”-4”	0.87	5.44
KOCHI-Koottanad-Bengaluru-Mangalore (Phase-1)	GAIL	41	6	16”-4”	0.39	6.50
ASSAM (Lakwa)	GAIL	8	2.5	24”	0.52	20.8
TRIPURA (Agartala)	GAIL	61	2.3	12”	1.45	64.2
AHMEDABAD	GAIL	133	2.9	12”	0.32	11.0
RAJASTHAN (Focus Energy)	GAIL	152	2.35	12”	1.31	55.74
BHARUCH, VADODARA (UNDERA) included RLNG+ RIL	GAIL	538	15.4	24” ,16”	1.46	9.5
MUMBAI	GAIL	129	7.0	26”	9.0	128.1
KG BASIN (included RLNG+ RIL)	GAIL	881	16.0	18”	3.5	21.6
CAUVERY BASIN	GAIL	278	8.7	18”	3.25	37.52
EAST- WEST PIPE LINE (RGTIL)	Reliance	1469	80.0	48”	21.0	26
GSPCL Network including Spur Lines	GSPCL	2197.7	43.0	Assorted	23.00	53.488
ASSAM Regional Network	AGCL , DNPL	1000	6.0	16”	4.50	75
DADRI -PANIPAT	IOCL	140.4	9.5	30”/10”	3.71	39.0
URAN-TROMBAY	ONGC	24	6.0	20”	5.11	85
Total		**15808**	**387**		**152**	

Source: Pipeline operating Companies
**CJPL & DBPL Pipelines are the extension of DVPL-2 / VDPL.*

Table 5.2 : Gas Pipeline under Execution / Construction

NETWORK/REGION	Entity	Length (Kms)	Design Capacity (mmscmd)	Pipeline Size	Status of Pipeline laid (Km) as on 31.03.2015
Kochi - Kottanad - Bengaluru - Mangalore	GAIL	1063	16	24"/18"/12"	0
Dabhol - Bengaluru (DBPL)	GAIL	410	16	36"/30"/24"/18"	0
Surat - Paradip*	GAIL	2112	75	36"/24"/18"	0
Jagdishpur- Haldia	GAIL	1860	32		0
Mallavaram - Bhilwada*	GITL	2042	76.25		0
Mehsana - Bhatinda *	GIGL	2052	77.11		0
Bhatinda -Srinagar*	GIGL	725	42		0
Kakinada - Srikakulam *	APGDC	391	90		0
Shadol-Phulpur *	RGPL	312	3.5		0
Ennore- Nellore*	KEI-RSOS PEPL	430	36		0
Sub Total		**11397**			**0**

Source : PNGRB
Remarks:
**Competitive Bidding.*

Map of Pipeline Network in India

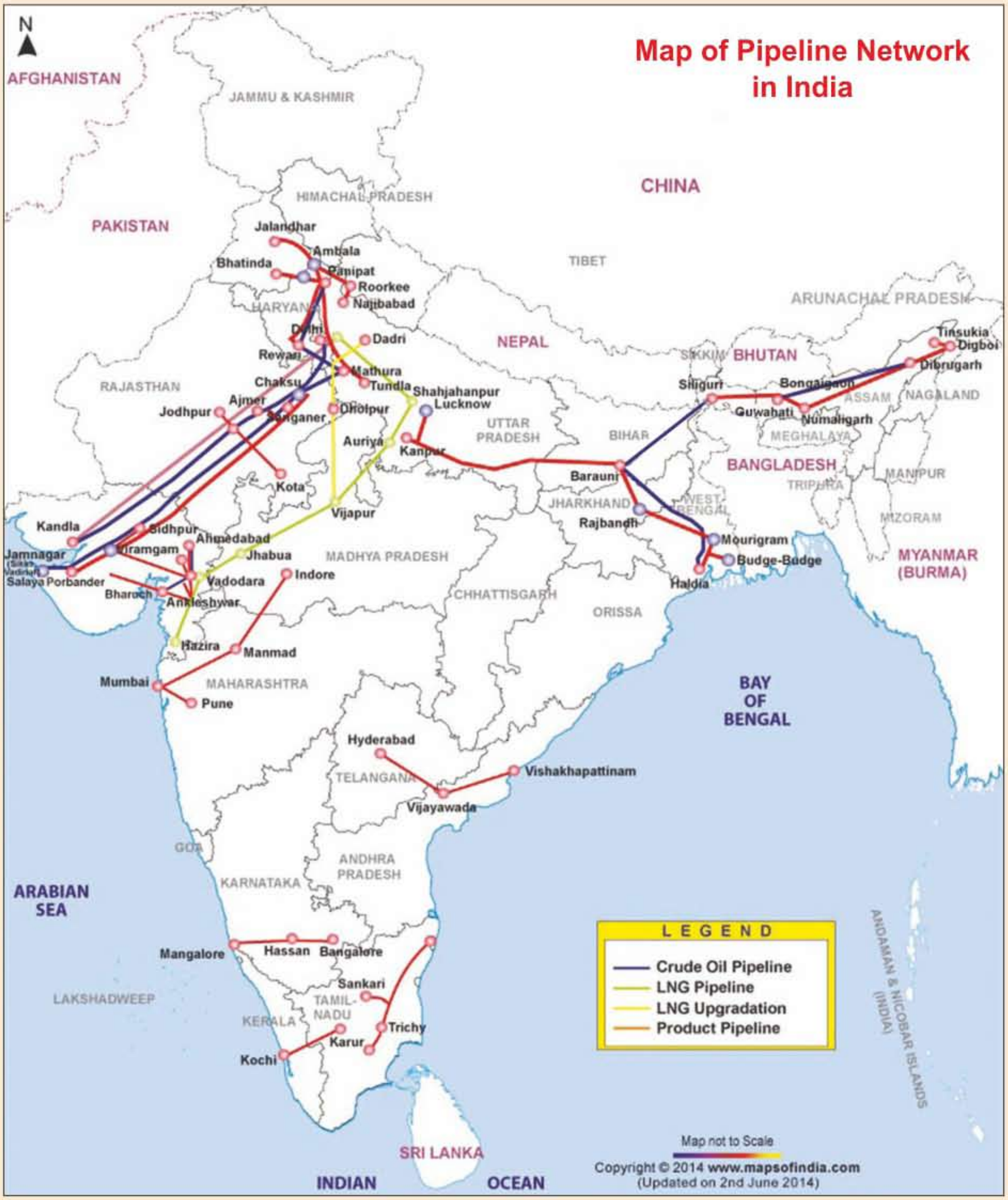


Table 5.3: Major Crude Oil Pipelines in India

Onshore / Offshore oil Pipelines

Existing Pipelines	Oil Co.	Length in Kms. as on 01.04.2015	Annual Capacity	2014-15			Remarks
				Capacity	Act. Qty.	Utilisation %	
			(MMT)	(MMT)	(MMT)		
CTF Kalol to CTF Nawagam-Old (Old line kept as standby since Aug'2010)	ONGC	50.9	3.14	3.14	0	0.0	Kalol-Nawagam (Old) trunk line is isolated and kept on standby
CTF Kalol to CTF Nawagam - New (New line commissioned in Aug'2010)		62.5	3.14	3.14	0.992	31.6	
Nawagam-Koyali (18" line)		78.4	5.40	5.40	2.314	42.9	
Nawagam-Koyali (14" line)		78.4	3.30	3.30	1.414	42.8	78 km X 14" Nawagam-Koyali line was given on lease to IOC in 2000 and was handed back to ONGC on 1st Apr.'10. The line was restored and re-commissioned in Oct.'12.
MHN-NGM Trunk Line - Old		77.0	2.26	0.00	0	0.0	Out of Service since July'12
MHN-NGM Trunk Line - New (New crude oil Trunk line commissioned. Under operation since Dec'2010)		77.0	2.27	2.27	2.225	98.2	
CTF, Ank to Koyali Oil Pipeline (AKCL)		94.8	2.20	2.20	0.882	40.1	
CTF, Ank to CPF, Gandhar		44.3	0.39	0.39	0	0.0	After damage / rupture of 8" CTF to CPF line in river portion near Dhanturia on 25.08.13 due to high floods in Narmada river on 25.08.2013, this line is not in use.
CPF, Gandhar to Saraswani 'T' point		56.7	1.81	1.81	0.586	32.5	Length and capacity includes and length capacity of branch lines from GNAQ and Dabka meeting at Magnad 'T' point and Mobha 'T' point respectively.
Akholjuni-Koyali oil Pipeline (Commissioned in July 2010). Akholjuni to Laxmipura 'T' point		65.1	0.48	0.48	0.134	27.9	
Lakwa-Moran Oil Line		17.5	1.50	1.50	0.343	22.9	
Geleki-Jorhat Oil Line		48.5	1.50	1.50	0.572	38.1	
Borholla- Jorhat		42.8	0.60	0.60	0.167	27.8	
NRM to CPCL		5.3	0.74	0.74	0.237	32.2	
KSP-WGGS to TPK Refinery		13.5	0.08	0.08	0	0.0	Line is being used for gas transfer as the GAIL line has burst
GMAA EPT to S.Yamam Unloading Terminal (1st line - 4", 3.5 Km long)		3.5	0.09	0.09	0	0.0	Not in use due to multiple leakages. Required repair due to ROU issues.
GMAA EPT to S. Yamam Unloading Terminal (3.5 Km long and 4"). New line commissioned on 28.07.10		3.5	0.09	0.09	0.101	112.2	
Mumbai High-Uran-Trunk Pipeline 30'' MUT (Oil)		204.0	15.63	15.63	8.24	52.7	
Heera-Uran-Trunk Pipeline 24'' HUT (Oil)		81.0	11.50	11.50	5.075	44.1	Derated MAOP (Max. allowable operating pressure) to 35 kg/cm2 as per FFP (fit for purpose) certification report of 2014-15
30'' BUT (Oil)		203.0	18 Derated MAOP to 15 kg/cm2 as per FFP certification of 2013-14	0	0	0.0	
Salaya-Mathura-Panipat (Incl. Looplines)	IOC	1870.0	21.00	21.00	23.834	113.5	
Paradip-Haldia-Barauni		1384.0	11.00	11.00	16.175	147.0	
Mundra Panipat		1194.0	8.40	8.40	7.770	92.5	
Duliajan-Digboi-Bongaigaon-Barauni	OIL	1193.0	8.40	8.40	6.900	82.1	
Mangla-Bhogat Pipeline	CAIRN	670.0	8.71	8.71	8.840	101.5	
Mundra- Bathinda Pipeline	HMPL	1017.0	9.00	9.00	7.310	81.2	
Vadinar – Bina Pipeline	BPCL/BORL	937.0	6.00	6.00	6.130	102.2	

Source : Oil Companies

Note: ONGC: 1) CTF Ankleshwar to Makan 'T' point section i.e. HOEC Junction (about 47.51 km) of CTF Ankleshwar – Koyali Refinery Trunk pipeline was not in use up to 31.08.2013. After damage / rupture of 8'' CTF to CPF line on 25.08.2013, CTF to Koyali Trunk pipeline is use from 31.08.2013 for dispatch of Ankleshwar Crude oil including PSC & JV. CTF, Ankleshwar to Koyali Oil Pipeline (AKCL) actual quantity includes Ankleshwar, PSC, JV and Cambay crude oil also.

CTF- Central Tank Farm, MHN-NGM- Mehsana Nawagam, AKCL- Ankleshwar Koyali Crude Line, CPF- Central Processing Facility, NRM- Narimanam, CPCL- Chennai Petroleum Corporation Limited, KSP-WGGS- Kesnapalli West Group Gathering Station, TPK- Tatipaka, GMAA EPT- Gopavaram Early Production Terminal, MUT- Mumbai Uran Trunkline, HUT- Heera Uran Trunkline, BUT- Bombay Uran Trunkline

Table 5.4 : Major Petroleum Products Pipelines in India

PIPELINE	Oil Co.	Length in KMs	Annual Capacity (MMT)	Capacity for the year as on 31.03.2015	Act. Qty. (MMT)	Utilisation %
				2014-15		
BARAUNI- PATNA- KANPUR (Including Gawaria-Lucknow Branch line)	IOCL	745	3.50	3.50	2.263	64.7
GUWAHATI -SILIGURI		435	1.40	1.40	1.787	127.6
HALDIA-BARAUNI (2)		526	1.25	1.25	1.205	96.4
HALDIA-MOURIGRAM-RAJBANDH		277	1.35	1.35	1.763	130.6
KOYALI-AHMEDABAD		116	1.10	1.10	0.745	67.7
KOYALI-VIRAMGAM-SIDHPUR-SANGANER		1287	4.60	4.60	3.451	75.0
KOYALI-RATLAM		265	2.00	2.00	0.148	7.4
KOYALI-DAHEJ		197	2.60	2.60	1.317	50.7
MATHURA-TUNDLA		56	1.20	1.20	0.326	79.8
MATHURA - BHARATPUR		21			0.632	
MATHURA-DELHI INCLUDING BIJAWASAN-PANIPAT PIPELINE		258	3.70	3.70	2.614	70.6
PANIPAT-AMBALA-JALANDHAR (Including Kurukshetra-Roorkee-Najibabad Branchline)		434	3.50	3.50	2.336	66.7
PANIPAT-DELHI (Including Sonepat-Meerut Branchline) (1)		189	3.00	3.00	1.228	40.9
PANIPAT-BHATINDA		219	1.50	1.50	1.345	89.7
PANIPAT-REWARI		155	2.10	2.10	1.514	72.1
CHENNAI-TRICHY-MADURAI		683	2.30	2.30	2.438	106.0
CHENNAI MEENAMBAKKAM ATF		95	0.18	0.18	0.183	101.7
CHENNAI-BENGALURU		290	2.45	2.45	1.430	58.4
DIGBOI TINSUKIA		75	1.00	1.00	0.482	48.2
DEVANGONTHI DEVANHALLI		36	0.66	0.66	0.221	33.5
MUMBAI-MANMAD-BIJWASAN	BPCL	1389	6.00	6.00	6.23	103.8
BINA-KOTA		259	4.40	4.40	2.35	53.4
ATF P/L MR-SANTACRUZ		15	1.44	1.44	0.68	46.9
ATF P/L KR-KOCHI AIRPORT		34	0.60	0.60	0.12	20.2
KOTA JOBNER		210	1.70	1.70	0.00	0.0
COCHIN-COIMBATORE-KARUR	PCCK	293	3.30	3.30	2.46	74.5
MUMBAI-PUNE-SOLAPUR	HPCL	508	4.30	4.30	3.57	82.9
VIZAG-VIJAYAWADA-SECUNDERABAD		572	5.38	5.38	4.35	80.9
MUNDRA-DELHI		1054	5.00	5.00	3.42	68.5
RAMANMANDI-BAHADURGARH		243	4.71	4.71	2.90	61.6
RAMANMANDI-BHATHINDA		30	1.13	1.13	0.64	56.5
AWA-SALAWAS (1)		93	2.30	2.30	0.02	0.9
BAHADURGARH-TIKRIKALAN (2)		14	0.75	0.75	0.01	1.1
MANGALORE-HASSAN-BENGALURU	PHMB	362	2.14	2.14	3.14	146.6
NUMALIGARH-SILIGURI	OIL	654	1.72	1.72	1.81	105.2
LPG PIPELINES						
PANIPAT-JALANDHAR	IOCL	274	0.70	0.70	0.477	68.1
MUMBAI URAN	BPCL	28	0.8	0.8	0.06	6.9
JAMNAGAR-LONI	GAIL	1414	2.5	2.5	2.33	93.0
VIZAG-SECUNDERABAD		618	1.33	1.33	1.11	83.5

Note:

IOC

1) PDPL capacity been taken as 3.00 MMTPA after commissioning of prime mover at Panipat.

2) Jasidih terminal commissioned in 2014 in Haldia-Barauni pipeline with addition of 0.55 km of mainline.

BPC

1) Kota Jobner Pipeline is commissioned on 31.03.2015

2) Mumbai Uran LPG Pipeline was commissioned on 31.10.2014

HPC

1) Awa-Salawas Pipeline Commissioned on 30.1.2015

2) Bahadurgarh Tikrikalan Pipeline Commissioned on 24.02.2015

Source : Oil Companies

Chapter - 6
SALES

PPAC
Analysis•Knowledge•Information

Table 6.1 : Consumption of Petroleum Products

Million metric tonnes

PRODUCTS	XI Plan						XII Plan	
	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15(P)
LPG	10.8	12.0	12.2	13.1	14.3	15.3	15.6	16.3	18.0
MS	9.3	10.3	11.3	12.8	14.2	15.0	15.7	17.1	19.1
NAPHTHA/NGL	13.9	13.3	13.9	10.1	10.7	11.2	12.3	11.3	10.9
ATF	4.0	4.5	4.4	4.6	5.1	5.5	5.3	5.5	5.6
SKO	9.5	9.4	9.3	9.3	8.9	8.2	7.5	7.2	7.1
HSD	42.9	47.7	51.7	56.2	60.1	64.8	69.1	68.4	69.4
LDO	0.7	0.7	0.6	0.5	0.5	0.4	0.4	0.4	0.4
LUBES	1.9	2.3	2.0	2.5	2.4	2.6	3.2	3.3	3.0
FO/LSHS	12.6	12.7	12.6	11.6	10.8	9.3	7.7	6.2	6.0
BITUMEN	3.8	4.5	4.7	4.9	4.5	4.6	4.7	5.0	5.0
OTHERS	11.3	11.6	10.9	12.0	9.6	11.1	15.6	17.7	20.6
ALL INDIA	**120.7**	**128.9**	**133.6**	**137.8**	**141.0**	**148.1**	**157.1**	**158.4**	**165.0**
Growth (%)		**6.8**	**3.6**	**3.2**	**2.3**	**5.0**	**6.0**	**0.9**	**4.2**

Source: Oil Companies and DGCIS
(Oil Company sales + private imports = Consumption)

Table 6.2 : Petroleum Products Demand & Gross Domestic Product (GDP) during Plan periods

PLAN PERIOD	VII PLAN (1985-90)	VIII PLAN (1992-97)	IX PLAN (1997-02)	X PLAN (2002-07)	XI PLAN (2007-12
POL Demand CAGR (%)	6.9	6.8	4.9	3.8	4.2
GDP Growth CAGR (%)	6.0	6.8	5.5	7.7	7.9

End-use Analysis of HSD Sale

S.No.	End-use Sectors	% of Total Sales *
(I)	(II)	(III)
1	**Transport, of which**	**70.00**
	a Commercial Vehicles	8.94
	b Private Vehicles	13.15
	c 3 - Wheelers	6.39
	d Truck	28.25
	e Buses/STU	9.55
	f Railways	3.24
	g Others (Shipping & Aviation)	0.48
2	**Agriculture**	**13.00**
3	**Industrial Application**	**4.96**
4	**Power Generation**	**4.06**
5	**Mobile Towers**	**1.54**
6	**Others (Including private imports)**	**6.45**
	Total	**100.0**

** Figures include consumption through Retail & direct imports. End Use Sector wise break up as per PPAC Survey and direct sales as reported by Oil Companies.*

Diesel Consumption by Sector (%)

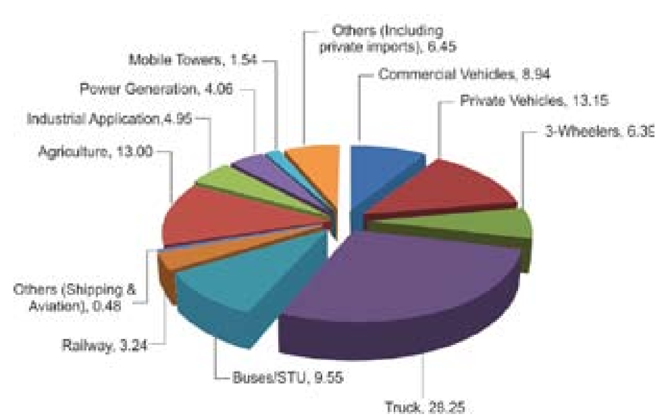


Table 6.3: State-Wise Sales of Selected Petroleum Products : April 2014 - March 2015 (P)

Figs in TMT

STATE /UT	LPG		MS		SKO		HSD		TOTAL (All products)*	
	Total	Per Capita sales in kg	Total	Per Capita sales in kg	Total	Per Capita sales in kg	Total	Per Capita sales in kg	Total	Per Capita sales in kg
ANDHRA PRADESH	871.6	17.7	795.0	16.1	227.6	4.6	3649.5	73.9	6264.7	126.9
ANDAMAN & NICOBAR	7.9	20.7	12.4	32.6	4.5	11.8	119.8	315.2	171.7	451.8
ARUNACHAL PRADESH	15.6	11.3	27.9	20.2	15.4	11.1	109.0	78.8	177.7	128.5
ASSAM	267.1	8.6	219.5	7.0	256.8	8.2	777.2	24.9	1905.4	61.1
BIHAR	665.9	6.4	432.3	4.2	626.1	6.0	1980.6	19.1	4107.5	39.6
CHANDIGARH	42.3	40.1	85.2	80.7	2.0	1.9	82.6	78.3	405.4	384.4
CHHATTISGARH	177.3	6.9	357.4	14.0	130.6	5.1	1301.9	51.0	2553.3	100.0
DADRA & NAGAR HAVELI	13.2	38.5	14.5	42.3	1.6	4.6	118.0	344.1	376.4	1097.9
DAMAN & DIU	8.7	35.9	16.5	67.7	0.8	3.1	85.3	351.3	157.2	647.2
DELHI	732.4	43.7	831.3	49.6	0.7	0.0	1268.8	75.7	4517.0	269.6
GOA	56.0	38.4	141.1	96.8	4.1	2.8	283.0	194.1	686.3	470.8
GUJARAT	819.9	13.6	1339.1	22.2	525.5	8.7	4591.5	76.0	17644.3	292.2
HARYANA	585.9	23.1	723.6	28.5	70.6	2.8	5028.6	198.3	10586.1	417.5
HIMACHAL PRADESH	120.5	17.6	137.4	20.0	22.7	3.3	520.8	76.0	1246.9	181.9
JAMMU & KASHMIR	163.0	13.0	170.8	13.6	143.6	11.4	563.0	44.9	1201.3	95.7
JHARKHAND	195.7	5.9	302.6	9.2	208.1	6.3	1554.5	47.2	2627.1	79.7
KARNATAKA	1238.7	20.3	1430.5	23.4	395.2	6.5	5056.4	82.7	9577.1	156.7
KERALA	712.8	21.3	1009.4	30.2	93.9	2.8	2498.2	74.8	5390.2	161.4
LAKSHADWEEP	0.3	3.9	0.0	0.0	0.8	12.3	13.6	211.4	14.8	228.9
MADHYA PRADESH	708.9	9.8	897.7	12.4	458.3	6.3	2965.7	40.9	6433.5	88.6
MAHARASHTRA	2284.9	20.3	2483.2	22.1	551.3	4.9	7301.5	65.0	16916.5	150.5
MANIPUR	22.3	8.2	41.4	15.2	19.6	7.2	83.4	30.7	173.3	63.7
MEGHALAYA	16.1	5.4	59.2	20.0	20.4	6.9	301.7	101.8	422.4	142.5
MIZORAM	21.1	19.3	22.6	20.7	5.8	5.3	53.8	49.3	107.4	98.5
NAGALAND	17.2	8.7	24.8	12.5	13.5	6.8	56.6	28.6	120.3	60.7
ODISHA	324.5	7.7	472.1	11.3	308.3	7.3	1942.5	46.3	3926.5	93.6
PUDUCHERRY	35.0	28.1	100.9	81.1	3.3	2.7	283.9	228.1	459.2	369.0
PUNJAB	732.1	26.4	662.7	23.9	71.0	2.6	3216.3	116.1	5713.5	206.2
RAJASTHAN	916.6	13.4	1024.8	14.9	388.7	5.7	5038.5	73.4	10879.4	158.5
SIKKIM	11.3	18.6	14.7	24.1	11.3	18.7	53.6	88.2	92.9	152.9
TAMIL NADU	1680.3	23.3	1848.9	25.6	308.7	4.3	5962.0	82.6	12210.3	169.3
TELANGANA	670.1	19.0	757.0	21.5	141.1	4.0	2668.3	75.6	4821.8	136.6
TRIPURA	31.6	8.6	32.6	8.9	30.5	8.3	82.0	22.3	190.3	51.8
UTTAR PRADESH	2132.0	10.7	1815.7	9.1	1237.7	6.2	6420.1	32.2	13346.9	66.9
UTTARAKHAND	213.6	21.1	215.9	21.3	31.3	3.1	660.5	65.3	1303.2	128.8
WEST BENGAL	1058.6	11.6	554.5	6.1	755.7	8.3	2640.1	28.9	6447.9	70.6
ALL INDIA	**17570.9**	**14.5**	**19074.9**	**15.8**	**7086.8**	**5.9**	**69332.6**	**57.3**	**153175.5**	**126.6**

** Total all product sales include other Petroleum products such as Naphtha, FO, ATF, Lubricants, Bitumen, etc.*
Per capita sales figures are based on sales figures for the period April 2014 - March 2015 (P)
Population figures have been taken from Census of India, 2011
Source : Oil Companies

Table 6.4 : PDS SKO Allocation / LPG Coverage & Per Capita PDS SKO Availability by State

State/UT	PDS Allocation (TMT) April 2014 - March 2015	Per Capita Allocation (Liters per annum per person)	Per Capita SKO Allocation (ltr) without LPG
ANDHRA PRADESH	249.5	6.5	64.9
ANDAMAN & NICOBAR	5.0	16.9	168.7
ARUNACHAL PRADESH	8.9	8.3	82.7
ASSAM	255.2	10.5	26.9
BIHAR	632.7	7.8	12.5
CHANDIGARH	2.6	3.2	31.5
CHHATTISGARH	136.8	6.9	11.5
DADRA & NAGAR HAVELI	1.6	6.0	59.5
DAMAN & DIU	0.7	3.6	36.1
DELHI	0.0	0.0	0.0
GOA	4.1	3.6	36.0
GUJARAT	522.0	11.1	37.2
HARYANA	70.2	3.6	35.6
HIMACHAL PRADESH	19.2	3.6	35.9
JAMMU & KASHMIR	70.2	7.2	71.9
JHARKHAND	208.5	8.1	12.5
KARNATAKA	406.8	8.6	85.5
KERALA	93.5	3.6	36.0
LAKSHADWEEP	0.8	15.6	27.2
MADHYA PRADESH	486.8	8.6	21.0
MAHARASHTRA	541.5	6.2	61.9
MANIPUR	19.4	9.2	53.3
MEGHALAYA	20.2	8.8	13.5
MIZORAM	5.8	6.8	68.0
NAGALAND	13.3	8.6	30.1
ODISHA	309.7	9.5	14.7
PUDUCHERRY	3.4	3.5	34.9
PUNJAB	69.8	3.2	32.4
RAJASTHAN	393.2	7.4	33.3
SIKKIM	4.9	10.4	104.5
TAMIL NADU	271.4	4.8	48.3
TELANGANA	113.2	4.1	41.2
TRIPURA	30.5	10.7	26.1
UTTAR PRADESH	1236.9	8.0	26.0
UTTARAKHAND	28.0	3.6	35.5
WEST BENGAL	749.1	10.5	25.0
ALL INDIA	**6985.1**	**7.4**	**25.2**

Note:

(1) In case LPG coverage of population is more than 100%, it is presumed that at least 10% of the population is consuming Kerosene & excess coverage by LPG is due to multiple connections.

(2) Population data is as per 2011 Census

(3) The SKO PDS allocation is taken for the period April 2014 - March 2015

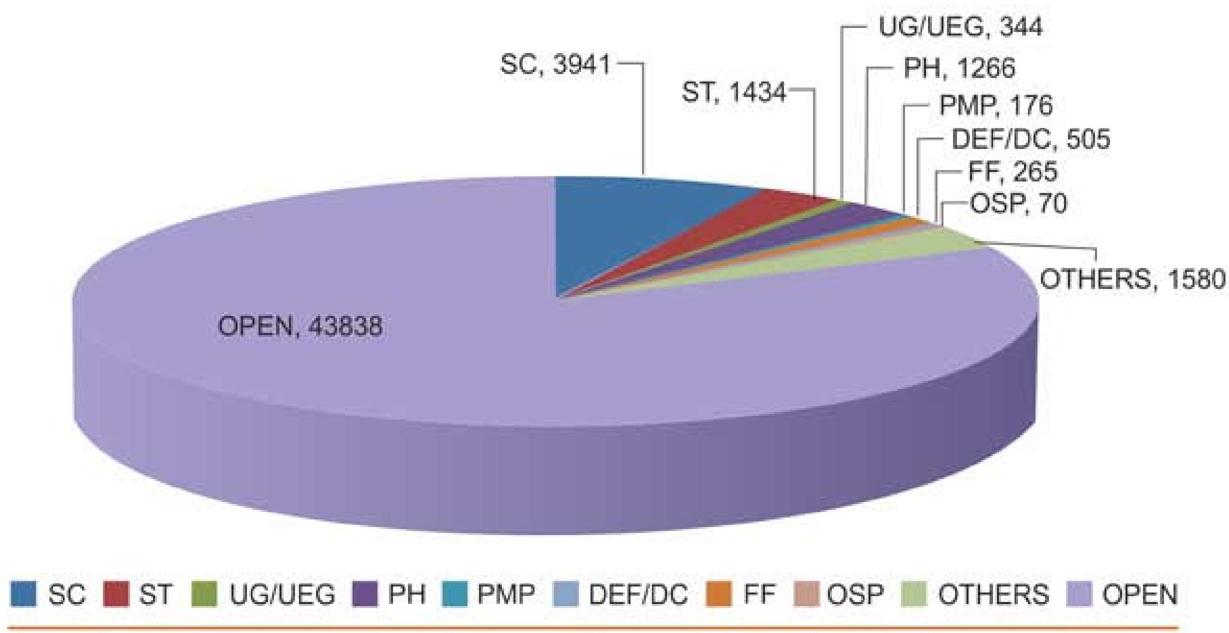
(4) The domestic LPG customer data taken is as on 31.03.2015

Table 6.5 :Oil Industry Retail Outlets & SKO/LDO Dealers as on 01.04.2015

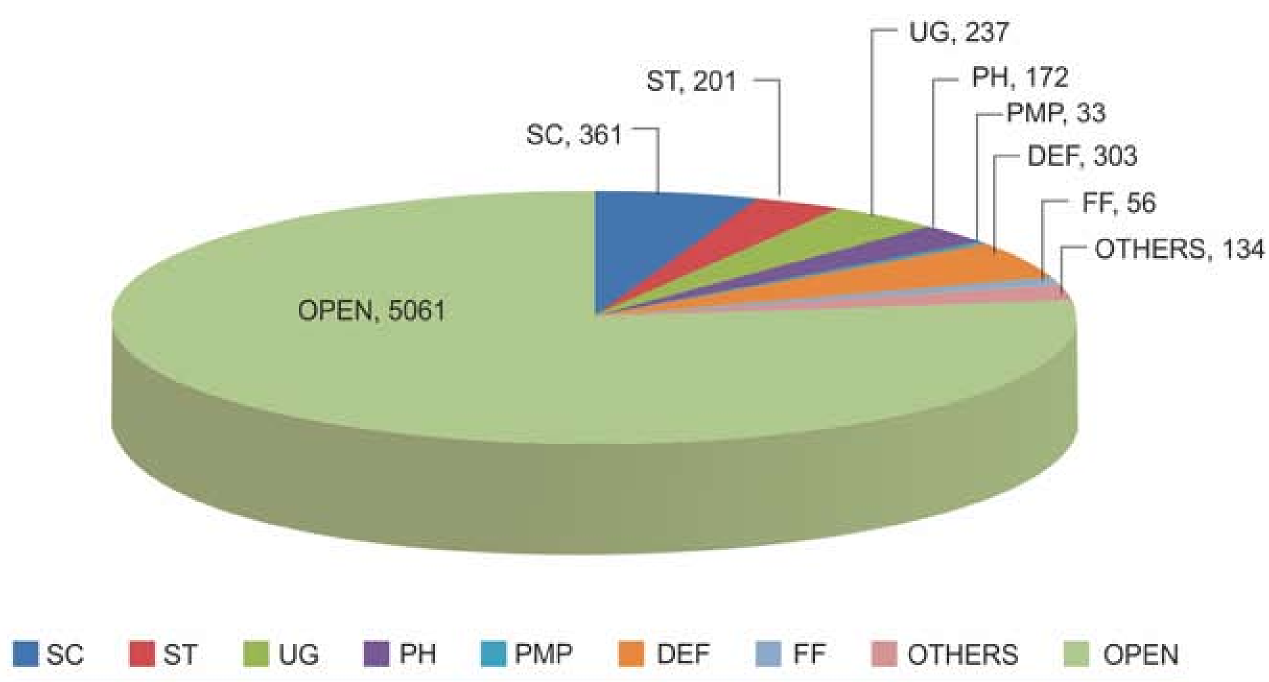
STATE/UT	No of Retail Outlets					SKO/LDO Dealers				
	As on 01.04.2011	As on 01.04.2012	As on 01.04.2013	As on 01.04.2014	As on 01.04.2015	As on 01.04.2011	As on 01.04.2012	As on 01.04.2013	As on 01.04.2014	As on 01.04.2015
ANDHRA PRADESH	3586	4002	4502	4710	2815	603	603	603	603	394
ANDAMAN & NICOBAR	9	9	9	9	9	1	1	1	1	1
ARUNACHAL PRADESH	66	67	70	71	71	33	33	33	33	33
ASSAM	654	684	720	753	760	361	361	359	359	359
BIHAR	1724	1942	2167	2316	2385	374	373	373	372	372
CHANDIGARH	41	41	41	41	41	12	12	12	12	12
CHHATTISGARH	654	752	886	998	1041	109	109	109	109	108
DADRA & NAGAR HAVELI	24	21	21	27	31	2	2	2	2	2
DAMAN & DIU	25	24	25	31	31	5	5	5	5	5
DELHI	409	408	408	403	394	116	116	116	116	117
GOA	100	105	104	109	111	21	21	21	21	22
GUJARAT	2392	2524	2770	2910	3050	496	495	493	493	480
HARYANA	1826	1989	2151	2333	2419	148	148	143	142	141
HIMACHAL PRADESH	327	358	359	361	382	26	26	26	26	26
JAMMU & KASHMIR	404	422	453	469	475	47	47	47	47	47
JHARKHAND	832	918	1027	1062	1082	86	86	86	86	87
KARNATAKA	2761	3068	3306	3621	3737	325	325	325	322	325
KERALA	1791	1844	1880	1900	1932	242	242	242	242	237
LAKSHADWEEP	0	0	0	0	0	0	0	0	0	0
MADHYA PRADESH	2131	2349	2630	2873	3005	281	279	279	279	285
MAHARASHTRA	3896	4160	4644	5025	5207	776	776	775	774	769
MANIPUR	66	67	73	80	83	36	36	36	36	36
MEGHALAYA	160	162	170	175	179	35	35	35	35	35
MIZORAM	26	27	30	32	33	19	19	19	19	19
NAGALAND	64	67	68	68	68	19	19	19	19	19
ODISHA	1130	1230	1369	1438	1463	179	179	177	177	177
PUDUCHERRY	134	139	144	150	150	8	8	8	8	8
PUNJAB	2937	3058	3193	3229	3248	244	244	242	241	241
RAJASTHAN	2785	2932	3135	3327	3465	253	253	251	250	252
SIKKIM	32	35	43	44	46	12	12	12	12	12
TAMIL NADU	3597	3889	4340	4541	4617	465	465	465	465	468
TELANGANA	0	0	0	0	2086					202
TRIPURA	47	49	56	63	64	40	40	40	40	40
UTTAR PRADESH	4997	5302	5680	6013	6248	697	695	695	695	696
UTTARAKHAND	435	461	483	505	513	72	72	72	72	73
WEST BENGAL	1885	1999	2120	2183	2178	469	469	469	469	458
ALL INDIA	**41947**	**45104**	**49077**	**51870**	**53419**	**6612**	**6606**	**6590**	**6582**	**6558**

Source: Oil Companies (Includes dealers of Private Oil Companies)

Category-wise Retail Outlets as on 01.04.2015 : Total Nos. 53419



Category-wise SKO/LDO Dealers as on 01.04.2015 : Total Nos. 6558



Source: Oil Companies

(1) SC:Scheduled Caste; ST:Scheduled Tribe; UG:Unemployed Graduate; UEG:Unempoyed Engg. Grad; PH:Phys.Handicapped; DEF:Defence Category; FF:Freedom Fighter;OSP: Outstanding Sports Persons,PMP : Para Military/Police/Govt. Personnel , OTHERS: Includes Social Worker Category, dealerships given on Compassionate grounds/ under Discretionary quota, 2/3 wheeler outlets and Company Owned and Operated outlets,Operation Vijay

(2) Open Category includes Pvt. Retail Outlets for which Category-wise breakup is not available

IndianOil's LPG domestic cylinder filling plant

Chapter - 7
LPG

Table 7.1 : LPG Marketing at a Glance

					Thousand metric tonne
Particulars	**2010-11**	**2011-12**	**2012-13**	**2013-14**	**2014-15(P)**
LPG Production	**9624**	**9554**	**9829**	**10031**	**9840**
LPG Consumption	**14331**	**15350**	**15601**	**16294**	**18019**
PSU Sales	13901	14929	15202	15925	17569
Domestic	12369	13296	13569	14412	16040
Non-Domestic	985	1069	1166	1074	1051
Bulk	325	342	253	246	316
Auto LPG	223	223	214	194	164
Imports					
PSU Imports	4559	5369	5902	6199	7884
Private Imports	430	421	398	369	448
					Lakh
	2010-11	**2011-12**	**2012-13**	**2013-14**	**2014-15(P)**
Enrolment (Domestic)	**104.2**	**122.7**	**131.6**	**159.1**	**163.4**
As on 1st of April	2011	2012	2013	2014	2015(P)
LPG Customers	**1268.9**	**1387.3**	**1522.8**	**1682.6**	**1840.0**
of which					
DOMESTIC CUSTOMERS	1253.9	1371.2	1503.9	1662.6	1819.0
NON-DOMESTIC CUSTOMERS	15.0	16.2	18.9	20.1	21.1
DBC Customers	**624.3**	**688.8**	**748.7**	**827.4**	**917.0**
					Nos.
LPG Distributors	**10541**	**11489**	**12610**	**13896**	**15930**
of which					
Urban	7019	7041	7095	7172	7334
Urban/Rural	1579	1665	1731	1885	2263
Rural	1547	1612	1729	1803	1891
RGGLVY*	396	1171	2055	3036	4442
Auto LPG Dispensing Stations (ALDS)	**604**	**652**	**667**	**678**	**682**
LPG Markets	**4866**	**4990**	**5105**	**5245**	**5485**
					Thousand metric tonne per annum
Bottling Capacity	**-**	**-**	**-**	**13515**	**14044**
					Thousand metric tonne
Gross Tankage	**687**	**711**	**771**	**777**	**781**

**RGGLVY : Distributors commissioned under "Rajiv Gandhi Gramin LPG Vitran Yojana"*
Source : Oil Marketing Companies, DGCIS

Table 7.2 : Number of LPG Distributors of the PSUs as on 01.04.2015 (P)

Nos.

STATE/UT	URBAN	URBAN/ RURAL	RURAL	RGGLVY*	TOTAL
Chandigarh	27	0	0	0	27
Delhi	317	0	0	0	317
Haryana	218	63	24	79	384
Himachal Pradesh	70	5	53	26	154
Jammu & Kashmir	128	17	23	38	206
Punjab	365	72	75	130	642
Rajasthan	355	121	79	354	909
Uttar Pradesh	877	448	211	853	2389
Uttarakhand	140	38	20	15	213
Sub Total North	**2497**	**764**	**485**	**1495**	**5241**
Andaman & Nicobar	0	2	3	0	5
Arunachal Pradesh	4	5	24	16	49
Assam	128	93	84	69	374
Bihar	230	141	106	456	933
Jharkhand	155	35	14	169	373
Manipur	13	16	14	20	63
Meghalaya	24	4	9	6	43
Mizoram	11	7	11	25	54
Nagaland	9	18	10	10	47
Odisha	157	71	32	205	465
Sikkim	8	0	2	3	13
Tripura	14	13	11	14	52
West Bengal	381	89	85	229	784
Sub Total East	**1134**	**494**	**405**	**1222**	**3255**
Chhattisgarh	103	58	21	139	321
Dadra & Nagar Haveli	2	0	0	0	2
Daman & Diu	2	0	0	0	2
Goa	46	1	4	0	51
Gujarat	420	64	97	81	662
Madhya Pradesh	436	200	42	396	1074
Maharashtra	898	110	168	373	1549
Sub Total West	**1907**	**433**	**332**	**989**	**3661**
Andhra Pradesh	310	121	199	123	753
Karnataka	421	106	76	213	816
Kerala	263	77	142	44	526
Lakshadweep	1	0	0	0	1
Puducherry	16	3	2	1	22
Tamil Nadu	531	204	118	230	1083
Telangana	254	61	132	125	572
Sub Total South	**1796**	**572**	**669**	**736**	**3773**
All India	**7334**	**2263**	**1891**	**4442**	**15930**

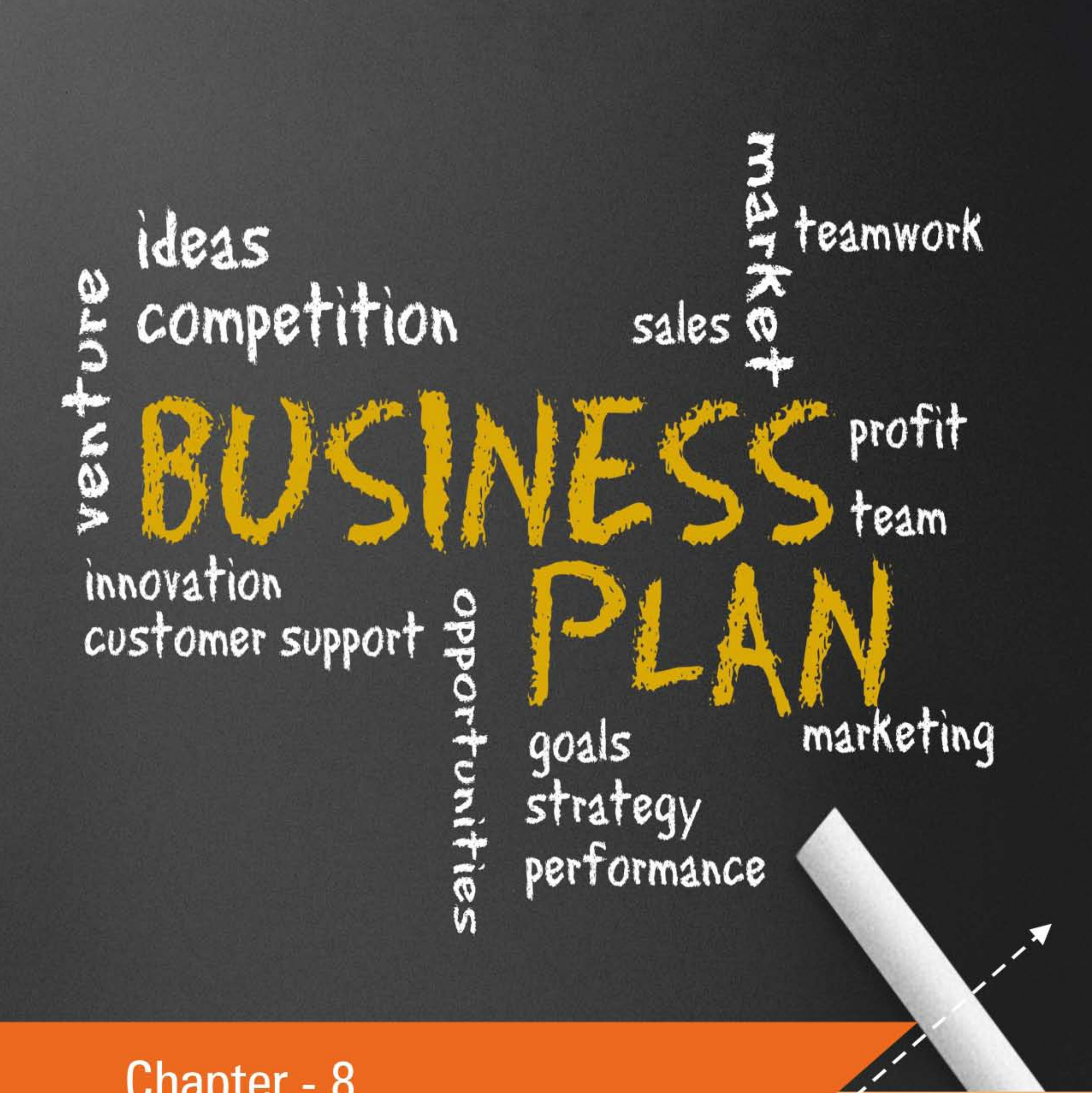
**RGGLVY : Distributors commissioned under "Rajiv Gandhi Gramin LPG Vitran Yojana"*
Source:Oil Marketing Companies

Table 7.3 : Domestic LPG Customer Population of the PSUs as on 01.04.2015 (P)

Lakhs

STATE/UT	TOTAL	DBC
Chandigarh	4.08	2.58
Delhi	61.46	38.95
Haryana	53.11	31.73
Himachal Pradesh	19.16	10.08
Jammu & Kashmir	21.75	13.67
Punjab	75.49	41.09
Rajasthan	88.13	53.66
Uttar Pradesh	214.48	91.84
Uttarakhand	24.33	10.67
Sub Total North	**561.99**	**294.26**
Andaman & Nicobar	0.86	0.77
Arunachal Pradesh	2.44	1.74
Assam	34.98	14.41
Bihar	63.80	28.04
Jharkhand	20.47	11.45
Manipur	3.90	2.41
Meghalaya	1.89	1.09
Mizoram	2.93	1.89
Nagaland	2.33	1.83
Odisha	31.17	14.58
Sikkim	1.58	0.76
Tripura	4.50	2.02
West Bengal	104.54	46.16
Sub Total East	**275.40**	**127.15**
Chhattisgarh	20.08	12.43
Dadra & Nagar Haveli	0.72	0.47
Daman & Diu	0.69	0.37
Goa	5.59	4.19
Gujarat	81.01	55.92
Madhya Pradesh	77.34	38.74
Maharashtra	217.93	108.26
Sub Total West	**403.36**	**220.38**
Andhra Pradesh	118.15	39.41
Karnataka	108.29	63.04
Kerala	84.87	55.74
Lakshadweep	0.05	0.04
Puducherry	3.74	1.93
Tamil Nadu	170.44	83.65
Telangana	92.72	31.37
Sub Total South	**578.26**	**275.18**
All India	**1819.02**	**916.97**

DBC: Double bottle connection
Source: Oil Marketing Companies



Chapter - 8

Projections for XII & XIII Plan

Table : 8.1 : Projected Crude Oil Production for 12th Five Year Plan

Million metric tonne

	2011-12 (11th Plan)*	2012-13	2013-14	2014-15	2015-16	2016-17
Onshore	**17.5**	**20.1**	**20.2**	**19.7**	**19.2**	**18.6**
Gujarat	5.8	5.6	5.6	5.5	5.4	5.3
Assam +Arunachal Pradesh	5.0	5.2	5.4	5.5	5.7	5.8
Tamilnadu	0.2	0.2	0.2	0.2	0.2	0.2
Andhra Pradesh	0.3	0.3	0.3	0.2	0.1	0.1
Tripura	0.0	0.0	0.0	0.0	0.0	0.0
Rajasthan	6.2	8.8	8.8	8.2	7.8	7.3
Offshore	**19.2**	**19.7**	**22.8**	**22.4**	**20.4**	**19.8**
DGH Offshore	4.1	4.3	4.3	4.2	4.1	4.0
ONGC Off Shore	15.1	15.4	18.5	18.2	16.3	15.8
Total (Onshore +Offshore)	**36.7**	**39.8**	**42.9**	**42.1**	**39.7**	**38.4**
Condensate (ONGC)	2.1	2.5	2.6	2.6	2.8	2.7
Total (Crude Oil + Condensate) (Onshore + Offshore)	**38.8**	**42.3**	**45.5**	**44.7**	**42.5**	**41.1**

11th Plan projections by Oil Companies
Source : Report of the Working Group on Petroleum & Natural Gas Sector for 12th Five Year Plan (2012-17)

Table 8.2 : Projected Refining Capacity in 12th Five year Plan

Million metric tonne per annum

	2011-12 (11th PLAN)	12th Five Year Plan				
		2012-13	2013-14	2014-15	2015-16	2016-17
PUBLIC SECTOR (PSU)						
IOC	69.2	69.2	69.2	69.2	69.7	74.0
BPC (Mumbai)	12.0	12.0	12.0	12.0	13.5	13.5
Kochi	9.5	9.5	9.5	9.5	15.5	15.5
BORL - Bina	6.0	6.0	6.0	6.0	7.5	9.0
HPC (MR +VR)	14.8	16.5	18.2	18.5	18.5	23.5
Maharashtra Refinery	0.0	0.0	0.0	0.0	0.0	9.0
HMEL (GGSRL)	9.0	9.0	9.0	9.0	9.0	9.0
MRPL	11.8	14.5	15.5	16.0	16.5	18.0
ONGC (Tatipaka)	0.1	0.1	0.1	0.1	0.1	0.1
CPCL	11.5	11.5	12.1	12.1	12.1	18.3
NRL	3.0	3.0	3.0	3.0	3.0	8.0
Sub Total PSU	**146.9**	**151.3**	**154.6**	**155.4**	**165.4**	**197.9**
PRIVATE SECTOR						
RIL-DTA & SEZ, Jamnagar	60.0	60.0	60.0	60.0	60.0	60.0
EOL, Jamnagar	19.0	19.0	20.0	20.0	30.8	38.0
NOCL, Cuddalore	0	2.0	6.0	6.0	6.1	15.0
Sub Total Private	**79.0**	**81.0**	**86.0**	**86.0**	**96.9**	**113.0**
TOTAL	**225.9**	**232.3**	**240.6**	**241.4**	**262.3**	**310.9**

Source : Report of the Working Group on Petroleum & Natural Gas Sector for 12th Five Year Plan (2012-17)

Table 8.3 : Projected Refining Capacity in 13th Five Year Plan

Million metric tonne per annum

	13th Five Year Plan				
	2017-18	2018-19	2019-20	2020-21	2021-22
PUBLIC SECTOR (PSU)					
IOC	77.0	80.0	85.0	105.0	105.0
BPC (Mumbai)	13.5	13.5	13.5	13.5	13.5
Kochi	15.5	15.5	15.5	15.5	15.5
BORL - Bina	9.0	9.0	9.0	9.0	9.0
HPC (MR +VR)	23.5	23.5	23.5	23.5	23.5
Maharashtra Refinery	9.0	9.0	9.0	9.0	9.0
HMEL (GGSRL)	9.0	9.0	9.0	9.0	9.0
MRPL	18.0	18.0	18.0	21.8	26.8
ONGC(Tatipaka)	0.1	0.1	0.1	0.1	0.1
CPCL	18.3	18.3	33.3	33.3	33.3
NRL	8.0	8.0	8.0	8.0	8.0
Sub Total PSU	**200.9**	**203.9**	**223.9**	**247.6**	**252.6**
PRIVATE SECTOR					
RIL-DTA & SEZ, Jamnagar	60.0	60.0	60.0	60.0	60.0
EOL, Jamnagar	38.0	38.0	38.0	38.0	38.0
NOCL, Cuddalore	15.0	15.0	15.0	15.0	15.0
Sub Total Private	**113.0**	**113.0**	**113.0**	**113.0**	**113.0**
TOTAL	**313.9**	**316.9**	**336.9**	**360.6**	**365.6**

Source : Report of the Working Group on Petroleum & Natural Gas Sector for 12th Five Year Plan (2012-17)

Table 8.4 : Demand Projections of Petroleum Products for 12th Five Year Plan

Million metric tonne

Product	2012-13	2013-14	2014-15	2015-16	2016-17	CAGR (%)
LPG	17.0	18.4	19.7	20.9	21.8	6.9
MS	16.1	17.5	19.1	20.8	22.6	8.5
NAPHTHA	12.4	11.4	11.4	11.0	11.0	-0.2
ATF	6.0	6.6	7.2	7.8	8.5	9.6
SKO	7.9	7.6	7.3	7.0	6.8	-4
HSDO	65.0	68.7	72.6	76.9	81.6	5.2
LDO	0.4	0.4	0.4	0.4	0.4	-0.2
LUBES	2.7	2.8	2.9	2.9	3.0	3.7
FO/LSHS	8.0	7.9	7.9	7.9	7.9	-3.5
BITUMEN	5.3	5.5	5.7	6.0	6.1	5.1
PET COKE	6.8	7.5	8.3	9.3	10.3	11.7
OTHERS	5.4	6.1	6.1	6.1	6.2	2.4
Total POL	**152.9**	**160.4**	**168.6**	**177.0**	**186.2**	**4.8**

Table 8.5 : Demand Projections of Petroleum Products for 13th Five Year Plan

Million metric tonne

Product	2017-18	2018-19	2019-20	2020-21	2021-22	CAGR (%)
LPG	22.6	23.3	23.9	24.3	24.8	2.6
MS	24.5	26.6	28.8	31.1	33.7	8.3
NAPHTHA	12.5	14.2	14.9	15.4	15.4	6.9
ATF	9.3	10.0	10.8	11.7	12.5	7.9
SKO	6.5	6.4	6.2	6.0	5.8	-3
HSDO	86.8	92.1	97.9	104.1	110.8	6.3
LDO	0.4	0.4	0.4	0.4	0.4	0
LUBES	3.1	3.2	3.3	3.4	3.5	2.8
FO/LSHS	7.8	7.8	7.8	7.8	7.8	-0.1
BITUMEN	6.3	6.5	6.7	6.9	7.2	3.2
PET COKE	11.4	12.7	14.0	15.5	17.1	10.7
OTHERS	6.1	6.1	6.1	6.1	6.1	-0.3
Total POL	**197.4**	**209.2**	**220.7**	**232.6**	**245.0**	**5.6**

Source : Report of Sub-Group on Demand Estimates for Petroleum Products -12th & 13th Plan

Table 8.6 : Demand of Natural Gas during 12th Plan

12th Five year Plan (Figures in MMSCMD)					
	2012-13	**2013-14**	**2014-15**	**2015-16**	**2016-17**
Power	135	153	171	189	207
Fertilizer	62	110	113	113	113
City Gas	15	19	24	39	46
Industrial	20	20	22	25	27
Petrochemicals / Refineries / Internal Consumption	54	61	67	72	72
Sponge Iron / Steel	7	8	8	8	8
Grand Total Demand	**293**	**371**	**405**	**446**	**473**

Total Projected Natural Gas availability during 12th Five Year Plan

(Figures in MMSCMD)					
	2012-13	**2013-14**	**2014-15**	**2015-16**	**2016-17**
Domestic Availability	192	198	203	239	247
Imports - LNG	52	81	99	117	126
Total Availability	**244**	**279**	**302**	**356**	**373**

Demand of Natural Gas during 13th Plan

13th Five year Plan (Figures in MMSCMD)					
	2017-18	**2018-19**	**2019-20**	**2020-21**	**2021-22**
Power	225	243	261	289	307
Fertilizer	113	113	113	113	113
City Gas	47	50	53	55	57
Industrial	28	32	35	37	37
Petrochemicals / Refineries / Internal Consumption	72	76	80	82	82
Sponge Iron / Steel	9	9	10	10	10
Grand Total Demand	**494**	**523**	**552**	**586**	**606**

Total Projected Natural Gas availability during 13th Five Year Plan

(Figures in MMSCMD)					
	2017-18	**2018-19**	**2019-20**	**2020-21**	**2021-22**
Domestic Availability	255	262	270	278	287
Imports	137	161	186	204	218
Total Availability	**392**	**423**	**456**	**482**	**505**

Source: Report of the Working Group on Petroleum & Natural Gas Sector for the 12th Five Year Plan (2012-17)

Table 8.7 LNG Terminals (existing and upcoming)

Name of Terminal	Promotors	Capacity (MMTPA)	Expected Timelines	Capacity Utilization in % in 2014-15
Dahej	PLL	Existing 10 to be increased to 15 by 2016-17	Existing	100.8
Hazira	Shell	5	Existing	60
Dabhol	RGPPL (JV of GAIL - NTPC)	1.25 in phase -1 with out break water to be increased to 5.0	Existing	50
Kochi	PLL	5	Existing	2
Kakinada East Godavari (FSRU)	JV (GAIL + AP Govt+Shell+GDFSuez)	3.5	2017-18	-
Mundra	Adani + GSPC	5	2016-17	-
Ennore	IOCL	5 in Phase - 1 to be increased to 10	2017-18	-
Gangavaram (AP)	PLL	5	2018-19	-
Mangalore	ONGC + BPCL	2.5	2018-19	-
Jaigarh, Maharashtra	H-Energy Gateway Private Limited	8	2018-19	-

Source: LNG Operating Companies

Chapter - 9
Prices and Taxes

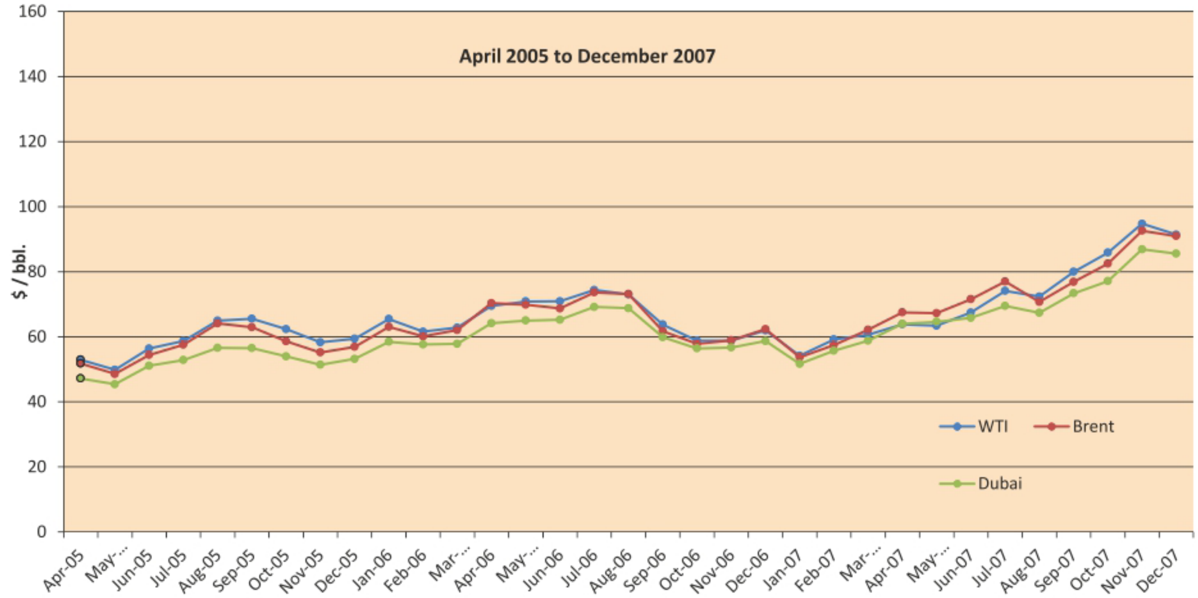
PPAC
Analysis•Knowledge•Information

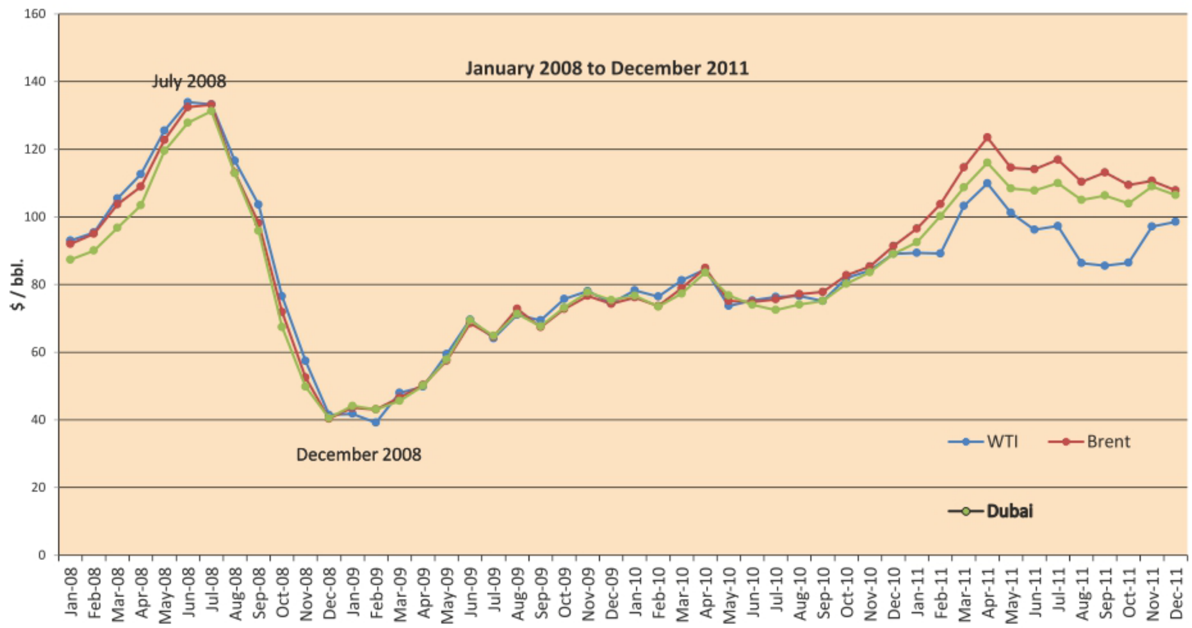
Table 9.1 : Price of Crude Oil in India

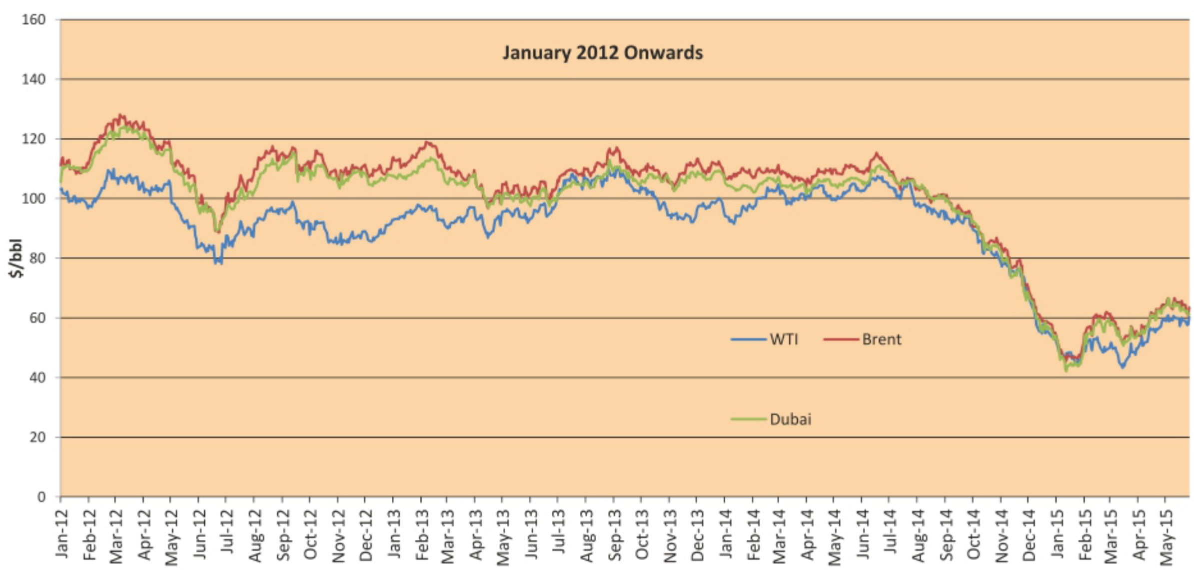
Year	Indian Basket Crude Oil *($/bbl.)*
2002-03	26.65
2003-04	27.97
2004-05	39.21
2005-06	55.72
2006-07	62.46
2007-08	79.25
2008-09	83.57
2009-10	69.76
2010-11	85.09
2011-12	111.89
2012-13	107.97
2013-14	105.52
2014-15	84.16
2015-16 (up to 31.05.2015)	61.32
2015 Onwards Month wise	
Jan-15	46.59
Feb-15	56.43
Mar-15	55.18
Apr-15	59.07
May-15	63.82

1. The Indian basket of Crude Oil represents a derived basket comprising of Sour grade (Oman & Dubai average) and Sweet grade (Brent Dated) of Crude oil processed in Indian refineries in the ratio of 72.04:27.96 during 2013-14.

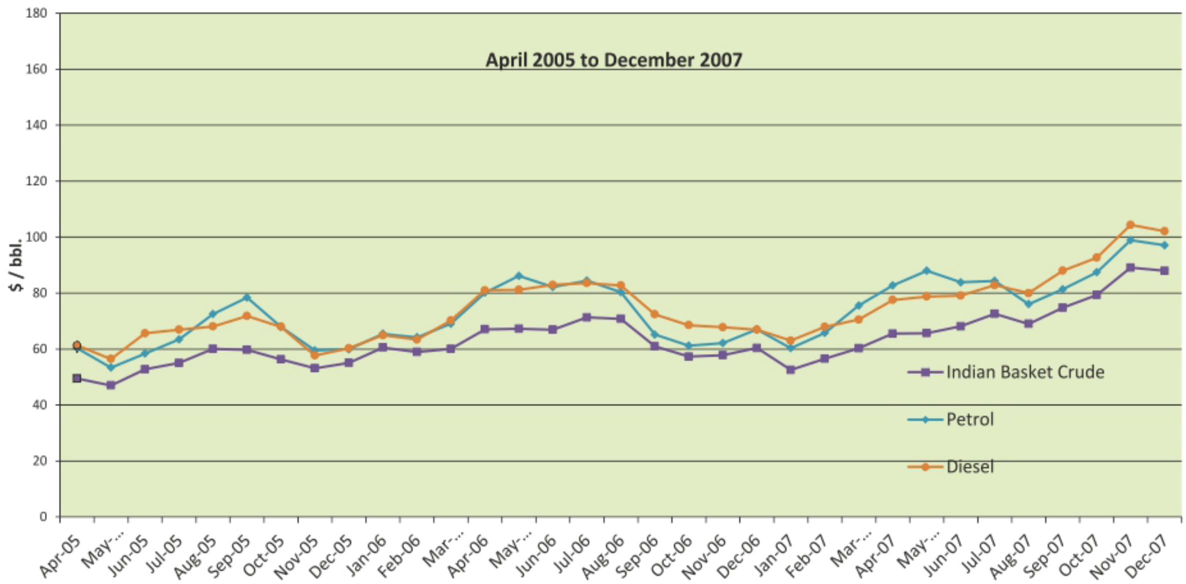
Price of Crude Oil in International Market

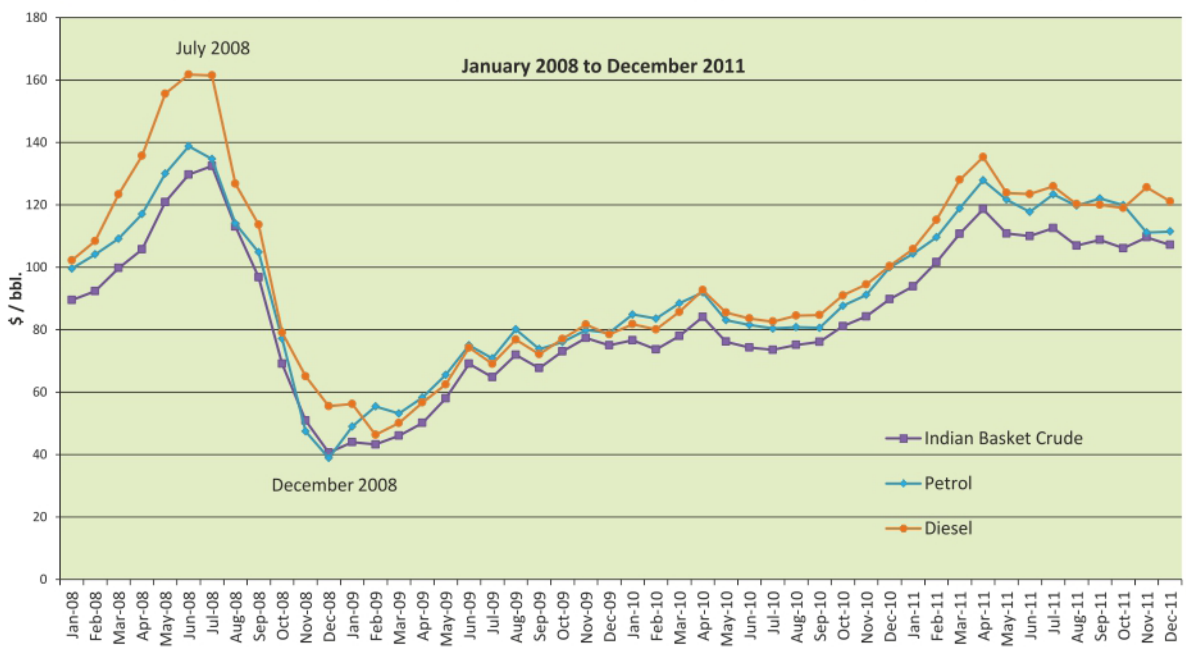






Price of Crude Oil & Petroleum Products in International Market





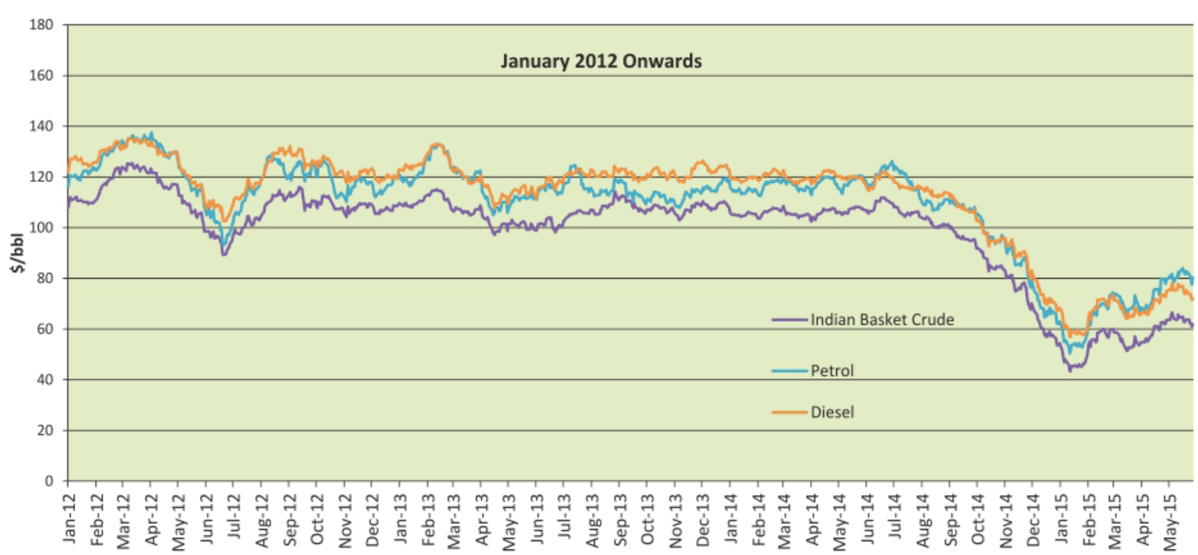


Table 9.2: Price Build-up of PDS Kerosene at Mumbai

Sr. No.	Elements		Unit	Effective 1st June'15
1*	FOB Price at Arab Gulf of Jet / Kero (Kerosene)		$/bbl	76.94
2*	Add: Ocean Freight from AG to Indian Ports		$/bbl	2.10
3	C&F (Cost & Freight) Price		$/bbl	79.04
		OR	Rs./Liter	31.26
4*	Import Charges (Insurance/Ocean Loss/ LC Charge/Port Dues)		Rs./Liter	0.24
5*	Customs Duty		Rs./Liter	NIL
6*	**Import Parity Price (at 29.5º C)**	**(Sum of 3 to 5)**	**Rs./Liter**	**31.51**
7*	**Refinery Transfer Price (RTP) for PDS Kerosene**** **(Price Paid by the Oil Marketing Companies to Refineries)**		Rs./Liter	**31.51**
8*	Add : Inland Freight and Delivery Charges		Rs./Liter	0.78
9	Add : State Specific Costs		Rs./Liter	0.73
10*	Add : Marketing Cost of OMCs		Rs./Liter	0.38
11*	Add : Marketing Margin of OMCs		Rs./Liter	0.26
12	**Total Cost Price** **-Before Excise Duty, VAT and Wholesaler & Retailer Commission**	**(Sum of 7 to 11)**	**Rs./Liter**	**33.65**
13*	Less : Subsidy by Central Government		Rs./Liter	0.00
14*	Less: Under-recovery to Oil Marketing Companies		Rs./Liter	20.10
15	**Price Charged to Dealers (Depot Price)** **- Excluding Excise Duty & VAT**	**(12-13)**	**Rs./Liter**	**13.55**
16*	Add : Excise Duty		Rs./Liter	0.00
17*	Add : Wholesaler & Retailer Commission and Other charges fixed by State Government		Rs./Liter	1.24
18*	Add : VAT (including VAT on Wholesaler & Retailer Commission) applicable for Mumbai		Rs./Liter	0.44
19	**Retail Selling Price at Mumbai**	**(Sum of 15 to 18)**	**Rs./Liter**	**15.24**

** The explanatory notes are given in the Table 9.3.*
***Monthly RTP is weighted average of all Indian Pricing Ports.*

Table 9.3 : Element wise explanation of Price Build up of PDS Kerosene

Sr. No.	Elements	Description
1	FOB Price	FOB (Free on Borad) daily quotes of Jet/Kerosene at Arab Gulf including premium / discount published by Platts and Argus publications are averaged for previous month.
2	Ocean Freight	Ocean freight from Arab Gulf to destination Indian ports as per world scale freight rates adjusted for AFRA.
4	Import Charges	Import charges comprises of Insurance, Ocean Loss, LC Charges & Port dues applicable on import of product.
5	Customs Duty	Customs duty on PDS kerosene is Nil.
6	Import Parity Price (IPP)	IPP represents the price that importers would pay in case of actual import of kerosene at the respective Indian ports. Import Parity Principle is as per the 'PDS Kerosene and LPG (Domestic) Subsidy Scheme, 2002'.
7	Refinery Transfer Price (RTP)	RTP based on Import Parity Price, the price paid by OMCs to refineries.
8	Inland Freight & Delivery charges	It comprises of average freight from ports to inland locations and delivery charges.
10	Marketing Cost	Marketing Cost & Margin are as fixed in the 'PDS Kerosene and LPG (Domestic) Subsidy Scheme, 2002'.
11	Marketing Margin	
13	Subsidy by Central Government	Average subsidy of Rs.0.82/Liter is provided from Government Budget as per the 'PDS Kerosene and LPG domestic subsidy scheme 2002'.
14	Under recovery to OMCs	Difference between desired price (based on Import Parity) and actual selling price (excluding Excise Duty, VAT, wholesale & retail dealer commission and other charges), represents under-recoveries to OMCs and also includes the erstwhile Fiscal Subsidy amount of Rs.0.82/liter.
16	Excise Duty	Excise duty on PDS kerosene is Nil.
17	Wholesaler & Retail Dealer Commission and Other charges fixed by State Government	Commission fixed for Wholesale & Retail Dealer and other charges like delivery charges by District authorities / State Government.
18	VAT (Sales Tax)	VAT at applicable rate in respective State. It varies from state to state. Currently in Mumbai, VAT on PDS kerosene is 3.00%.

Table 9.4 : Price Build-up of Subsidized Domestic LPG at Delhi

Sr. No.	Elements		Unit	Effective 1st June'15
1*	FOB Price at Arab Gulf of LPG		$/MT	467.20
2*	Add: Ocean Freight from AG to Jamnagar		$/MT	31.83
3	C&F (Cost & Freight) Price		$/MT	**499.03**
	OR		Rs./Cylinder	451.77
4*	Import Charges (Insurance/Ocean Loss/ LC Charge/Port Dues)		Rs./Cylinder	4.62
5*	Customs Duty		Rs./Cylinder	NIL
6*	**Import Parity Price**	**(Sum of 3 to 5)**	**Rs./Cylinder**	**456.39**
7*	**Refinery Transfer Price (RTP) for Domestic LPG** **(Price Paid by the Oil Marketing Companies to Refineries)**		**Rs./Cylinder**	**456.39**
8*	Add: Storage / Distribution Cost & Return on Investment		Rs./Cylinder	9.96
9*	Add: Bottling Charges		Rs./Cylinder	20.58
10*	Add: Charges for Cylinder Cost		Rs./Cylinder	18.11
11*	Add: Inland Freight		Rs./Cylinder	34.54
12	**Bottling Plant Cost before Stock loss and Working Capital**	**(Sum of 7 to 11)**	**Rs./Cylinder**	**539.58**
13*	Add: Cost of Working Capital		Rs./Cylinder	2.62
14	**Cost Price at LPG Bottling Plant**	**(Sum of 12 to 13)**	**Rs./Cylinder**	**542.20**
15*	Add: Delivery Charges		Rs./Cylinder	10.00
16*	Add: State Specific Costs		Rs./Cylinder	Nil
17*	Add : Uncompensated Costs (Import Costs, recovery for Non-revision, rounding-off & delivery charges)		Rs./Cylinder	29.44
18	**Market Determined Price**	**(Sum of 14 to 17)**	**Rs./Cylinder**	**581.64**
19*	Add : VAT(including VAT on Distributor Commission) applicable for Delhi		Rs./Cylinder	0.00
20*	Add : Distributor Commission		Rs./Cylinder	44.88
21	**Retail Selling Price**	**(Sum of 18 to 20)**	**Rs./Cylinder**	**626.52**
22	**Retail Selling Price at Delhi (Rounded)**		**Rs./Cylinder**	**626.50**
23*	**Less: Cash Compensation to Consumer under DBTL** **(including impact of uncompensated cost to OMCs)**		**Rs./Cylinder**	**208.68**
24	**Effective Cost to Consumer after Subsidy**	**(22-23)**	**Rs./Cylinder**	**417.82**

** The explanatory notes are given in the Table 9.5*
***Monthly RTP is weighted average of all Indian Pricing Ports.*

Table 9.5 : Element wise explanation of Price Build up of Domestic LPG

Sr. No.	Elements	Description
1	FOB Price	FOB (Free on Board) of LPG is weighted average of Saudi Aramco contract price (CP) for Butane (60%) & Propane (40%) for previous month and also includes daily quotes of premium / discount (published by Platts Gaswire) averaged for previous month.
2	Ocean Freight	Ocean freight from Arab Gulf to destination Indian port (i.e. Jamnagar) based on charter hire rates obtained from Clarkson Shipping Intelligence weekly.
4	Import Charges	Import charges comprises of Insurance, Ocean Loss, LC Charges & Port dues applicable on import of LPG.
5	Customs Duty	Custom duty on domestic LPG is Nil.
6	Import Parity Price (IPP)	IPP represents the price that importers would pay in case of actual import of product at the respective Indian ports. Import Parity Principle is as envisaged in the 'PAHAL (DBTL) Scheme, 2014'.
7	Refinery Transfer Price (RTP)	RTP is based on Import Parity Price. This is the price paid by the Oil Marketing Companies to domestic refineries for purchase of finished petroleum products at refinery gate.
8	Storage/distribution cost & return on Investment	Storage/distribution cost & return on Investment as fixed under notified 'PAHAL (DBTL) Scheme, 2014'.
9 10	Bottling Charges Charges for Cylinder Cost	The cost incurred towards filling LPG in 14.2 Kg. cylinders as per notified 'PAHAL (DBTL) Scheme, 2014'.
11	Inland Freight	It comprises of freight from port to inland locations i.e. Bottling Plant.
13	Cost of Working Capital	Interest on working capital for 18 days stock holding at SBI prime lending rate (PLR) as fixed under notified 'PAHAL (DBTL) Scheme, 2014'.
15	Delivery Charges	It comprises of freight from Bottling Plant to Distributor.
16	State Specific Costs (SSC)	In order to neutralise the under-recoveries to the Oil Companies caused by various irrecoverable/non-recoverable Taxes and Levies of State/ Union Territories/Municipal Corporations, a State Specific Surcharge/Cost is considered in the Selling Prices of petroleum products. In case of Delhi it is Nil.
17	Uncompensated Costs (Import Costs, recovery for Non-revision, rounding-off & delivery charges)	In the price buildup Oil Marketing Companies are charging consumers on account of Import Costs, Recovery for Non-revision in prices, Rounding-off & differential delivery charges of Rs.6/cyl. All these costs are not compensated to OMCs as per the PAHAL (DBTL) scheme.
19	VAT (Sales Tax)	VAT at applicable rate in respective States. It varies from state to state (up to a maximum of 5% as Domestic LPG is 'Declared Goods' under CST Act). Currently VAT at Delhi is Nil.
20	Distributor Commission	LPG distributor commission Rs.44.88/Cylinder (effective 23-Oct-2014) is as approved by MoP&NG.
23	Cash Compensation to Consumer under DBTL (including impact of uncompensated cost to OMCs)	Under DBTL Scheme, the difference between the price of Dom. Subsidized & Non-Subsidized LPG is being transferred to bank account of Consumers by OMCs. This also includes the uncompensated amount which is borne by the OMCs.

Table 9.6 : Summarised Buildup of Retail Selling Price of Petrol at Delhi

w.e.f. 1st June 2015

Particulars	₹/Liter*
Refinery Transfer Price (RTP) on landed cost basis for BS IV Petrol (Price Paid by the Oil Marketing Companies to Refineries)	**33.86**
Price Charged to Dealers (excluding Excise Duty and VAT)	35.71
Add : Specific Excise Duty @ Rs.17.46/Ltr	17.46
Add : Dealer Commission	2.07
Add : VAT (including VAT on Dealer Commission) applicable for Delhi @ 20%	11.05
Retail Selling Price at Delhi- Rounded off	**66.29**

**as per IOCL.*

Table 9.7: Summarised Buildup of Retail Selling Price of Diesel at Delhi

w.e.f. 1st June 2015

Particulars	₹/Liter*
Refinery Transfer Price (RTP) on landed cost basis for BS IV Diesel (Price Paid by the Oil Marketing Companies to Refineries)	32.11
Price Charged to Dealers (excluding Excise Duty and VAT)	**34.70**
Add : Specific Excise Duty @ Rs.10.26/Ltr	10.26
Add : Dealer Commission	1.26
Add : VAT (including VAT on Dealer Commission) applicable for Delhi @ 12.5% & Air ambience charges Rs.250/KL	6.06
Retail Selling Price at Delhi- Rounded off	**52.28**

**as per IOCL.*

Table 9.8 : Summarised Buildup of Retail Selling Price of PDS Kerosene at Mumbai

w.e.f. 1st June 2015

Particulars	₹/Liter
Refinery Transfer Price (RTP) for PDS Kerosene	31.51
Total Desired Price -Before VAT and Dealers Commission	33.66
Less: Under-recovery to Oil Marketing Companies	20.10
Price Charged to Dealers (Depot Price) - Excluding VAT and Dealer commission	13.56
Add : Wholesaler & Retailer Commission and Other charges fixed by State Government	1.24
Add : VAT (including VAT on Wholesaler & Retailer Commission) applicable for Mumbai	0.44
Retail Selling Price at Mumbai	**15.24**

Table 9.9 : Summarised Buildup of Retail Selling Price of Subsidized Domestic LPG at Delhi

w.e.f. 1st June 2015

Particulars	₹/Cylinder
Refinery Transfer Price (RTP) for Domestic LPG	456.39
Price Charged to Distributor (Bottling Plant Price)	581.64
Add : Distributor Commission	44.88
Add : VAT (including VAT on distributor Commission) applicable for Delhi	Nil
Retail Selling Price at Delhi (Rounded)	**626.50**
Less: Cash Compensation to Consumer under DBTL (including impact of uncompensated cost to OMCs)	208.68
Effective Cost to Consumer after Subsidy	**417.82**

Share of taxes in Retail Selling Price of Petroleum Products

Table 9.10 : Share of taxes in Petrol RSP effective 1.6.2015

	₹/Liter	Share in RSP
Price component realized	35.04	52.90%
Customs duty	0.68	
Excise Duty	17.46	
Total Central Taxes	**18.14**	**27.30%**
Price Charged to customer - Depot Price	53.17	
VAT (Including VAT on dealer commission)	11.05	
Total State Taxes	**11.05**	**16.70%**
Total Taxes	**29.19**	**44.00%**
Dealer Commission	2.07	3.10%
RSP per Liter (Rounded Up)	**66.29**	**100.00%**

Table 9.11 : Share of taxes in Diesel RSP effective 1.6.2015

	₹/Liter	Share in RSP
Price Component Realized	34.05	65.10%
Customs duty	0.65	
Excise Duty	10.26	
Total Central Taxes	**10.91**	**20.90%**
Price Charged to customer - Depot Price	44.96	
VAT (Including VAT on dealer commission)	6.06	
Total State Taxes	**6.06**	**11.60%**
Total Taxes	**16.97**	**32.50%**
Dealer Commission	1.26	2.40%
RSP per liter (Rounded Up)	**52.28**	**100.00%**

Table 9.12 : Break up of Current Excise duty on Petrol & Diesel eff. 1.3.2015

₹/Liter

Product	Petrol	Diesel
Basic Duty	5.46	4.26
Additional Excise Duty (Road Cess)	6.00	6.00
Special Additional Excise duty	6.00	Nil
Total duty	**17.46**	**10.26**

Notes:
1. Petrol & Diesel prices are deregulated. The price break up is as per IOCL at Delhi.
2. Customs duty on petrol and diesel as per June 2015, 1st Fortnight RGP.

Table : 9.13 Share of taxes in PDS Kerosene RSP effective 1.6.2015 (at Mumbai)

	₹/Liter	Share in RSP
Total Price before Government Levies	30.69	
Less : Under Recovery absorbed by OMCs	17.13	
Price Component Realized	13.56	89.0%
Customs duty	0.00	
Excise Duty	0.00	
Total Central Taxes	**0.00**	
Total	13.56	
VAT (Including VAT on Wholesaler and retailer commission)	0.44	
Total State Taxes	**0.44**	**3.0%**
Total Taxes	**0.44**	**3.0%**
Price Charged to customer - Depot Price	14.00	
Wholesaler and Retailer Commission	1.24	8.0%
RSP per liter (Rounded Up)	**15.24**	**100.00%**

Table 9.14 : Share of taxes in Domestic LPG (Subsidized) RSP effective 1.6.2015 (at Delhi)

	₹/Cylinder	Share in RSP
Total Price before Government Levies	581.64	
Less : Under Recovery incurred by OMCs	0	
Price Component Realized	581.64	90%
Customs duty	0	
Excise Duty	0	
Total Central Taxes	**0**	**0%**
Total	581.64	
VAT (Incl. VAT on Wholesaler &retailer commission)	0	
Total State Taxes	**0**	**0%**
Total Taxes	**0**	**0%**
Distributor Commission	44.88	10%
RSP per liter/cylinder (Rounded)	**626.50**	**100%**
Less: Cash Compensation under DBTL Scheme by Govt.	208.68	
Effective price to Consumer after DBTL Subsidy	**417.82**	

Table 9.15 :Weightage of Petroleum Products in Wholesale Price Index (WPI)

Product	Weight in %
High Speed Diesel	4.67
Petrol	1.09
LPG	0.91
Naphtha	0.79
Kerosene	0.74
Furnace Oil	0.47
Aviation Turbine Fuel	0.26
Lubricants	0.17
Bitumen	0.16
Light Diesel Oil	0.12
Total	**9.36**

Source: Ministry of Commerce & Industry

Table 9.16 : Impact of Increase in Retail Selling Price of Major Petroleum Products on Inflation

Product	Increase in RSP	Increase in Inflation (WPI Index)
Petrol	Rs. 1/ Liter	0.02%
Diesel	Rs. 1/ Liter	0.09%
PDS Kerosene	Rs. 1/ Liter	0.04%
Subsidized Domestic LPG	Rs. 10/ Cylinder	0.02%

Note-based on Jan 2015 WPI Index.

Important Terms in Pricing of Petroleum Products

1. **Import Parity Price (IPP)** – IPP represents the price that importers would pay in case of actual import of product at the respective Indian ports. This includes the following elements :
   i. FOB Price
   ii. Ocean freight
   iii. Insurance
   iv. Customs duty
   v. Port dues etc.
2. **Export Parity Price (EPP)** – EPP represents the price which oil companies would realize on import of petroleum products. This includes the following elements :
   i. FOB Price
   ii. Advance license benefit (for duty free import of crude oil pursuant to import of refined products.
3. **Trade Parity Price (TPP)** – TPP is weighted average price of IPP and EPP with the weights of 80 and 20 respectively.
4. **Refinery Gate Price / refinery Transfer price (RGP/RTP)** – This is the price paid by the Oil Marketing Companies to domestic refineries for purchase of finished petroleum products at refinery gate.
5. **Retail Selling Price (RSP)** – This is the final price, inclusive of all duties and taxes, charged to the consumers.

Dealer's/ Distributor's Commission on Petroleum Products

Table 9.17 : Dealer's Commission on Petrol & Diesel

₹/KL

Effective date	Petrol	Diesel
As on 1-Apr-04	707.00	425.00
21-Jun-05	778.00	467.00
01-Aug-05	848.00	509.00
01-Mar-07	894.00	529.00
16-May-07	1,024.00	600.00
23-May-08	1,052.00	631.00
27-Oct-09	1,125.00	673.00
07-Sep-10	1,218.00	757.00
01-Jul-11	1,499.00	912.00
27-Oct-12	1,794.00	1,089.00
21-Dec-13	Rs. 1390.15/KL + 0.883% of Product Billable Price	1,186.00
23-Oct-14	Rs. 1499.37/KL + 0.887% of Product Billable Price*	Rs. 1116.09/KL + 0.29% of Product Billable Price*

**The current dealer commission on Petrol is Rs. 2069.40/ KL and on Diesel is Rs. 1264.09/KL effective 16.5.2015 at Delhi (as per HPCL). Dealer commission of Petrol and Diesel currently being decided by the OMCs.*

Table 9.18: Distributor's Commission on Domestic LPG

₹/Cylinder

Effective date	14.2 Kg. Cyl.	5 Kg. Cyl.
As on 01-April-04	16.71	8.60
01-Mar-07	19.05	9.81
04-Jun-08	20.54	10.58
30-Jun-09	21.94	11.30
01-Jul-11	25.83	13.30
07-Oct-12	37.25	18.63
11-Dec-13	40.71	20.36
23-Oct-14	44.06	22.03

Table 9.19 : Wholesale Dealer's Commission on PDS Kerosene

₹/KL

Effective date	With Form XV	Other than Form XV
As on 01-April-04	204.00	161.00
01-Mar-07	243.00	200.00
24-May-08	255.00	212.00
07-Jul-09	263.00	220.00
07-Sep-10	275.00	232.00
28-Dec-12	438.24	377.73
21-Oct-14	536.09	475.58

Source : MoP&NG circulars/ OMCs

Table 9.20 : Revisions in Retail Selling Price (RSP) of Petroleum Products at Delhi since 1.4.2006

Date	Petrol	Diesel	PDS Kerosene	Domestic LPG	Reasons
	(₹/liter)			(₹/14.2 Kg Cyl.)	
01.04.2006	43.51	30.47	9.08	294.75	RSP as on 1.4.2006
25.05.2006			9.09		Increase in Siding & shunting charges/ Dealer commission
06.06.2006	47.51	32.47			Increase in prices
21.06.2006	46.85	32.25			Tax rebate on VAT in Delhi
30.11.2006	44.85	31.25			Reduction in prices
16.02.2007	42.85	30.25			Reduction in prices
06.06.2007	43.52	30.48			Tax rebate on VAT in Delhi withdrawn
27.09.2007			9.16		Increase in Siding & shunting charges/ Dealer commission
08.02.2008		30.76			Pollution cess in Delhi implemented
15.02.2008	45.52	31.76			Increase in prices
24.05.2008	45.56	31.80			Revision in Dealers commission
05.06.2008	50.56	34.80		346.30	Increase in prices
09.06.2008				304.70	Subsidy by Delhi Govt. on LPG
18.07.2008	50.62	34.86			Increase in Siding & shunting charges
12.09.2008			9.22		Increase in Siding & shunting charges/ Dealer commission
06.12.2008	45.62	32.86			Reduction in prices
29.01.2009	40.62	30.86		279.70	Reduction in prices
02.07.2009	44.63	32.87		281.20	Increase in prices (Petrol & Diesel)/ Increase in LPG Distribution commission
08.09.2009			9.23		Revision in Dealers commission
27.10.2009	44.72	32.92			Revision in Dealers commission
13.01.2010			9.32		Increase in Siding & shunting charges
27.02.2010	47.43	35.47			Change in Custom/ Excise duty
01.04.2010	47.93	38.10		310.35	Introduction of Euro IV fuels/ Subsidy removal in Dom. LPG in Delhi
26.06.2010	51.43	40.10	12.32	345.35	Increase in prices
01.07.2010	51.45	40.12			Increase in Siding & shunting charges
20.07.2010		37.62			VAT reduction in Delhi
08.09.2010	51.56	37.71			Revision in Dealers commission
21.09.2010	51.83				Increase in price
17.10.2010	52.55				Increase in price
02.11.2010	52.59	37.75			Increase in Siding & shunting charges
09.11.2010	52.91				Increase in price
16.12.2010	55.87				Increase in price
15.01.2011	58.37				Increase in price
18.01.2011			12.73		Increase in Transportation charges
15.05.2011	63.37				Increase in price
25.06.2011		41.12	14.83	395.35	Increase in prices
01.07.2011	63.70	41.29		399.00	Increase in Siding & shunting charges/ Dealer commission
16.09.2011	66.84				Increase in price
01.10.2011		40.91			Rebate of ₹ 0.38 per Liter in VAT on diesel in Delhi.
04.11.2011	68.64				Increase in price
16.11.2011	66.42				Reduction in price
01.12.2011	65.64				Reduction in price
24.05.2012	73.18				Increase in price
03.06.2012	71.16				Reduction in price
18.06.2012	70.24	41.29			Rebate(Petrol) / Removal of rebate (Diesel) in VAT at Delhi
29.06.2012	67.78				Reduction in price
24.07.2012	68.48				Increase in price
01.08.2012	68.46	41.32			Revision in Siding/ shunting charges
14.09.2012		46.95			Increase in Excise Duty & price

Contd. ....

Table 9.20 Contd. ...

Date	Petrol	Diesel	PDS Kerosene	Domestic LPG		Reasons
				Subsidized	Non-Subsized	
	(₹/Liter)			(₹/14.2 Kg Cyl.)		
18.09.2012					756.50	Price notified for non-subsidized domestic LPG
01.10.2012					883.50	Increase in price
03.10.2012			14.79			Revision in siding charges
07.10.2012				410.50	895.50	Increase in LPG distributor commission
09.10.2012	67.90					Reduction in price
27.10.2012	68.19	47.15				Increase in dealer commission
01.11.2012					922.50	Increase in price
02.11.2012					895.50	Reduction in price
16.11.2012	67.24					Reduction in price
16.01.2013	67.56					Removal of rebate on VAT in Delhi
18.01.2013	67.26	47.65			942.00	Increase (Diesel & Non subsidized domestic LPG)/ Reduction (Petrol) in prices
28.01.2013			14.96			Increase in dealer commission
16.02.2013	69.06	48.16				Increase in price
01.03.2013					904.50	Reduction in price
02.03.2013	70.74					Increase in price
16.03.2013	68.34					Reduction in price
23.03.2013		48.67				Increase in price
01.04.2013	68.31	48.63			901.50	Revision in siding charges / Reduction in price of non -subsidized domestic LPG
02.04.2013	67.29					Reduction in price
16.04.2013	66.09	48.67				Reduction in Petrol price/ Increase in delivery charges of Diesel
01.05.2013	63.09				847.00	Reduction in price
11.05.2013		49.69				Increase in price
01.06.2013	63.99	50.25			802.00	Increase (petrol and diesel) / reduction (non-sub. Dom LPG) in prices
16.06.2013	66.39					Increase in price
29.06.2013	68.58					Increase in price& delivery charges of Petrol
01.07.2013		50.26			832.00	Increase in Delivery charges of HSD / Increase in Price of Non Sub. Domestic LPG
02.07.2013		50.84				Increase in price
15.07.2013	70.44					Increase in price
01.08.2013	71.28	51.4			875.00	Increase in price
01.09.2013	74.1	51.97			932.50	Increase in price
14.09.2013	76.06					Increase in price
01.10.2013	72.40	52.54			1,004.00	Increase (Diesel & Non Sub. Domestic LPG)/ Reduction (petrol) in Price
01.11.2013	71.02	53.10			954.50	Increase (Diesel) / Reduction (petrol & Non Sub. Domestic LPG) in Price
01.12.2013		53.67			1,017.50	Increase in prices
11.12.2013				414.00	1,021.00	Increase in distributor commission of LPG
21.12.2013	71.52				53.78	Increase in price of Petrol & Increase in Dealer commission on petrol and Diesel

Table 9.20 Contd. ...

Date	Petrol	Diesel	PDS Kerosene	Domestic LPG Subsidized	Domestic LPG Non-Subsized	Reasons
	(₹/Liter)			(₹/14.2 Kg Cyl.)		
01.01.2014					1,241.00	Increase in prices
05.01.2014	72.43	54.34				Increase in prices
01.02.2014	54.91	1,134.00				Increase (Diesel)/ Reduction (Non Sub. Domestic LPG) in price
01.03.2014	73.16	55.48			1080.50	Increase (Petrol & Diesel)/ Reduction (Non Sub. Domestic LPG) in price
01.04.2014	72.26	55.49			980.50	Reduction in prices (Petrol & Non Sub. Domestic LPG)/ Increase in delivery chg. of Diesel
16.04.2014	71.41					Reduction in price
01.05.2014					928.50	Reduction in prices
13.05.2014		56.71				Increase in price
01.06.2014		57.28			905.00	Increase (Diesel)/ Reduction (Non Sub. Dom. LPG) in price
07.06.2014	71.51					Increase in price
25.06.2014	71.56					Increase in rail freight
01.07.2014	73.60	57.84			922.50	Increase in prices
01.08.2014	72.51	58.40			920.00	Increase (Diesel)/ Reduction (petrol & Non Sub. Dom. LPG) in price
16.08.2014	70.33					Reduction in price
31.08.2014	68.51	58.97				Increase (Diesel)/ Reduction (Petrol) in price
01.09.2014					901.00	Reduction in price
01.10.2014	67.86				880.00	Reduction in price
15.10.2014	66.65					Reduction in price
19.10.2014		55.60				Reduction in price
23.10.2014				417.00	883.50	Increase in Distributor Commission
01.11.2014	64.24	53.35	15.14*		865.00	Reduction in price/ price of PDS Kerosene as per Mumbai
01.12.2014	63.33	52.51			752.00	Reduction in prices
16.12.2014	61.33	50.51				Reduction in prices
01.01.2015	61.33	50.51			708.50	Reduction in prices
17.01.2015	58.91	48.26				Reduction in prices
01.02.2015					605.00	Reduction in price
04.02.2015	56.49	46.01				Reduction in prices
16.02.2015	57.31	46.62				Increase in prices
01.03.2015	60.49	49.71			610.00	Increase in prices

Note - Price of Petrol (26.6.2010 onwards), Non-Subsidized Domestic LPG (18.9.2012 onwards) and Diesel (19.10.2014 onwards) as per IOCL.

Contd. ....

Table 9.20 Contd. ...

Date	Petrol	Diesel	PDS Kerosene	Domestic LPG		Reasons
				RSP	Effective Price after DBTL Subsidy#	
	(₹/Liter)			(₹/14.2 Kg Cyl.)		
01.04.2015	60.00	48.50		621.00	417.82	Increase (Non-Subsidized Domestic LPG)/ Reduction (MS & HSD) in prices
16.04.2015	59.20	47.20				Reduction in prices
1.05.2015	63.16	49.57	15.24	616.00		Increase (MS, HSD & PDS SKO) / Reduction (Domestic LPG) in prices
16.05.2015	66.29	52.28				Increase in prices
01.06.2015				626.50		Increase in prices
	66.29	**52.28**	**15.24***	**626.50**	**417.82**	**RSP as on 1.6.2015**

*Note - Price of Petrol (26.6.2010 onwards) and Diesel (19.10.2014 onwards) as per IOCL. * Since quota of PDS Kerosene is NIL at Delhi, price of PDS Kerosene 1.11.2014 onwards is at Mumbai.*

 # effective 1st April 2015, Modified DBTL scheme has been implemented in entire country. The effective price to consumers is after DBTL Subsidy paid by the Govt.

Table 9.21 : Selling Price of Diesel for Bulk Consumers in Metros

(₹/Liter)

Date	Delhi	Kolkata	Mumbai	Chennai	Date	Delhi	Kolkata	Mumbai	Chennai
18.01.2013	56.88	61.30	64.11	60.85	01.04.2014	60.89	65.93	70.08	65.25
01.02.2013	56.95	61.37	64.19	60.92	16.04.2014	60.41	65.44	69.56	64.73
16.02.2013	58.57	63.06	65.98	62.68	01.05.2014	61.83	66.91	71.12	66.26
01.03.2013	59.73	64.27	67.25	63.93	16.05.2014	60.38	65.41	69.52	64.70
16.03.2013	56.79	61.20	64.01	60.75	01.06.2014	59.18	64.16	68.20	63.40
01.04.2013	54.84	59.51	61.95	58.69	16.06.2014	57.87	62.80	66.76	61.99
16.04.2013	54.77	59.46	61.88	58.62	01.07.2014	60.41	65.52	69.10	64.70
01.05.2013	51.81	56.37	58.61	55.42	16.07.2014	59.32	64.39	67.90	63.53
11.05.2013	51.81	56.37	58.61	55.42	01.08.2014	58.60	63.64	67.10	62.75
16.05.2013	52.76	57.36	59.66	56.44	16.08.2014	59.12	64.18	67.68	63.31
23.05.2013	52.76	57.36	60.79	56.44	31.08.2014	59.12	64.18	67.68	63.31
01.06.2013	54.61	59.28	62.83	58.44	01.09.2014	57.80	62.81	66.23	61.89
16.06.2013	56.17	60.91	64.55	60.12	16.09.2014	57.37	62.36	65.75	61.42
01.07.2013	58.78	63.63	66.62	62.95	01.10.2014	57.37	62.36	65.75	61.42
02.07.2013	58.79	63.62	66.61	62.94	19.10.2014	54.00	58.85	62.03	57.78
16.07.2013	60.40	65.30	68.39	64.68	01.11.2014	51.94	56.70	59.74	55.56
01.08.2013	60.72	65.63	68.75	65.03	16.11.2014	51.94	56.70	59.74	55.56
16.08.2013	61.74	66.69	69.86	66.13	01.12.2014	51.10	55.83	58.83	54.66
01.09.2013	64.45	69.50	72.85	69.05	16.12.2014	49.13	53.78	56.65	52.53
16.09.2013	67.45	72.63	76.17	72.30	01.01.2015	49.13	53.78	56.65	52.53
01.10.2013	63.50	68.50	71.78	68.05	16.01.2015	49.13	53.78	56.65	52.53
16.10.2013	63.25	68.24	71.50	67.78	17.01.2015	46.88	51.77	54.17	50.10
01.11.2013	62.97	67.95	71.19	67.48	01.02.2015	46.88	51.77	54.17	50.10
16.11.2013	63.06	68.04	71.29	67.57	04.02.2015	44.64	49.77	51.69	47.68
01.12.2013	63.86	68.88	72.18	68.44	16.02.2015	45.25	50.32	52.37	48.34
16.12.2013	64.36	69.39	72.72	68.98	01.03.2015	48.31	53.03	55.73	51.63
01.01.2014	63.51	68.51	71.79	68.06	16.03.2015	48.31	53.03	55.73	51.63
04.01.2014	63.51	68.51	71.79	68.06	01.04.2015	48.31	53.03	55.73	51.63
05.01.2014	63.51	68.66	72.97	68.07	02.04.2015	47.13	52.01	54.44	50.36
16.01.2014	62.61	67.72	71.97	67.10	16.04.2015	45.83	50.86	53.01	48.97
01.02.2014	61.95	67.03	71.25	66.39	01.05.2015	48.20	52.94	55.61	51.52
16.02.2014	62.97	68.09	72.37	67.49	16.05.2015	50.90	55.62	58.59	54.43
01.03.2014	63.63	68.78	73.10	68.20	01.06.2015	50.90	55.62	58.59	54.43
16.03.2014	62.33	67.43	71.67	66.80					

Source - HPCL

Table 9.22 : Retail Selling Price of Major Petroleum Products in Neighbouring Countries

Indian Rupees (₹)/ Liter/ Cyl.

Country	Petrol	Diesel	PDS Kerosene	Domestic LPG
India	66.29	52.28	15.24	417.82*
Pakistan	44.55	51.15	37.43	1,000.95
Bangladesh	76.97	54.27	54.27	637.77
Sri Lanka	54.75	44.29	30.57	850.36
Nepal	68.13	54.27	54.27	921.23

**Effective price after DBTL subsidy*

Table 9.23: Retail Selling Price & % of Taxes in Retail Selling Price

Indian Rupees (₹)/ Liter/ Cyl.

Country	PETROL				DIESEL			
	RSP	Ex-Tax Price	Taxes	% of Taxes	RSP	Ex-Tax Price	Taxes	% of Taxes
India	66.29	37.10	29.19	44%	52.28	35.31	16.97	32%
Pakistan	44.05	33.70	10.35	23%	51.15	39.37	11.78	23%
Bangladesh	76.97	NA	NA	NA	54.27	NA	NA	NA
Sri Lanka	54.75	43.00	11.75	21%	44.29	40.51	3.78	9%
Nepal	68.13	47.96	20.17	30%	54.27	44.68	9.59	18%

Note –

1. *Prices for India as of 1.6.2015. Petrol & Diesel price as per IOCL. SKO price at Mumbai, other product at Delhi.*
2. *Prices for neighboring countries as on 2.4.2015 from M/s Indian Oil IT Statement for April 2015. % of tax in Nepal as per information given on NOC website for 1 May 2015.% of taxes in Pakistan as per breakup given in Shell Pakistan website for 22.1.2013 (MS) and Pakistan State oil for 1.12.2014 (HSD). % of tax in Sri Lanka as per calculation given by IOC as on 30.10.2011.*

NA - Not available.

Table 9.24 : Price and Tax in Indian Rupees (₹)/ Liter

Retail Selling Price & % of Taxes in Retail Selling Price in Developed countries vis-à-vis India

Country	PETROL				DIESEL			
	RSP	Ex - Tax Price	Taxes	% of Taxes	RSP	Ex - Tax Price	Taxes	% of Taxes
India	66.29	37.10	29.19	44%	52.28	35.31	16.97	32%
France	95.41	36.71	58.70	62%	68.06	35.42	32.64	48%
Germany	98.60	38.41	60.19	61%	70.10	38.21	31.89	45%
Italy	107.56	38.75	68.81	64%	80.82	38.95	41.87	52%
Spain	86.93	40.51	46.42	53%	65.76	40.78	24.97	38%
UK	105.88	33.79	72.09	68%	93.30	38.86	54.44	58%
Japan	73.44	38.42	35.01	48%	62.41	40.84	21.57	35%
Canada	55.52	35.75	19.78	36%	56.49	40.98	15.51	27%
USA	40.91	33.38	7.53	18%	46.12	37.46	8.66	19%

Table 9.25 : Price and Tax in US ($) / Liter

Country	PETROL				DIESEL			
	RSP	Ex - Tax Price	Taxes	% of Taxes	RSP	Ex - Tax Price	Taxes	% of Taxes
India	1.04	0.58	0.46	44%	0.82	0.55	0.27	32%
France	1.52	0.59	0.94	62%	1.08	0.56	0.52	48%
Germany	1.57	0.61	0.96	61%	1.12	0.61	0.51	45%
Italy	1.71	0.62	1.10	64%	1.29	0.62	0.67	52%
Spain	1.39	0.65	0.74	53%	1.05	0.65	0.40	38%
UK	1.69	0.54	1.15	68%	1.49	0.62	0.87	58%
Japan	1.17	0.61	0.56	48%	0.99	0.65	0.34	35%
Canada	0.88	0.57	0.32	36%	0.90	0.65	0.25	27%
USA	0.65	0.53	0.12	18%	0.74	0.60	0.14	19%

Note –

1. *Prices of France, Germany, Italy, Spain, UK, japan, Canada & USA: IEA report for April 2015 and average exchange rate of April 2015 considered for conversion: Rs. 62.75/USD.*
2. *Prices of India as of 1.6.2015 as per IOCL. Average exchange rate of May 2015 Rs. 63.80/$ considered for conversion.*

N.A.- Not available.

Table 9.26 : Retail Selling Price of Petroleum Products at State/UT Capitals

Retail Selling Price of Petrol, Diesel and Domestic LPG as on 1.6.2015				
State/Union Territory	City	Petrol	Diesel	Domestic LPG
		(₹/Liter)		(₹/14.2 KG Cyl.)
Andhra Pradesh	Hyderabad	74.73	59.10	697.00
Arunachal Pradesh	Itanagar	65.78	51.93	721.50
Assam	Guwahati	69.18	54.84	689.00
Bihar	Patna	73.53	57.90	740.50
Chhattisgarh	Raipur	68.33	57.84	699.50
New Delhi	Delhi	66.29	52.28	626.50
Goa	Panjim	63.21	56.67	638.00
Gujarat	Gandhinagar	69.87	58.19	636.00
Haryana	Ambala	70.22	52.17	650.00
Himachal Pradesh	Shimla	71.32	52.63	691.50
Jammu & Kashmir	Srinagar	72.54	55.68	737.00
Jharkhand	Ranchi	67.96	57.63	704.50
Karnataka	Bengaluru	72.94	57.23	639.00
Kerala	Thiruvananthapuram	74.40	59.33	648.50
Madhya Pradesh	Bhopal	73.13	59.83	686.00
Maharashtra	Mumbai	74.12	59.86	637.50
Manipur	Imphal	65.46	52.26	785.50
Meghalaya	Shillong	67.14	53.79	694.00
Mizoram	Aizwal	65.37	51.61	761.00
Nagaland	Kohima	68.23	52.76	689.00
Odisha	Bhubaneshwar	68.12	57.61	663.00
Punjab	Jalandhar	73.85	52.13	683.00
Rajasthan	Jaipur	72.14	57.55	616.00
Sikkim	Gangtok	72.20	56.75	820.50
Tamil Nadu	Chennai	69.45	55.74	620.00
Tripura	Agartala	65.27	52.13	755.50
Uttarakhand	Dehradun	70.05	57.44	674.00
Uttar Pradesh	Lucknow	73.40	57.39	683.50
West Bengal	Kolkata	73.76	56.85	661.50
Andaman & Nicobar	Port Blair	59.13	49.99	718.00
Chandigarh	Chandigarh	67.71	51.89	648.50
Daman & Diu	Daman	*68.34	*54.97	641.50
Dadra & Nagar Haveli	Silvasa	*68.39	*55.01	649.50
Puducherry	Puducherry	65.63	54.67	641.50

Source - IOCL *as per HPCL

Highest Lowest

Table 9.27 : Retail Selling Price of PDS SKO at Metropolitan Cities as on 1.6.2015

State	City	(₹/Liter)
Maharashtra	Mumbai	15.24
Tamil Nadu	Chennai	13.70
West Bengal	Kolkata	15.26

Note - The allocation of PDS Kerosene in Delhi is NIL presently.
Source - IOCL

Table 9.28 : Customs and Excise Duty Rates effective 1st March 2015

Particulars		CUSTOMS			CENTRAL EXCISE		
		Basic Customs Duty	Additional Customs Duty (CVD)	Additional Customs Duty	Basic Excise Duty	Special Additional Excise Duty	Additional Excise Duty
Crude oil		NIL + Rs. 50/MT as NCCD			Nil+Rs. 4500/MT as Cess+ Rs.50/ MT as NCCD"		
Petrol		2.5%	Rs.5.46/ltr.+ Rs.6.00/ltr SAD	Rs.6.00/ltr.	Rs.5.46/ltr	Rs.6/ltr	Rs.6.00/ltr
Petrol (branded)		-	-	-	Rs.6.64/ltr	Rs.6/ltr	Rs.6.00/ltr.
High Speed Diesel		2.5%	Rs.4.26/ltr.	Rs.6.00/ltr.	Rs.4.26/ltr.	Nil	Rs.6.00/ltr.
High Speed Diesel (branded)		-	-	-	Rs.6.62/Ltr	Nil	Rs.6.00/ltr.
LPG	Domestic	Nil	Nil	Nil	Nil	Nil	Nil
	Non - Domestic	5.0%	8.0%	Nil	8.0%	Nil	Nil
Kerosene	PDS	Nil	Nil	Nil	Nil	Nil	Nil
	Non PDS	5.0%	14.0%	Nil	14.0%	Nil	Nil
Aviation Turbine Fuel		Nil	8%	Nil	8%	Nil	Nil
Naphtha	Non- Fertilizer	5.0%	14.0%	Nil	14.0%	Nil	Nil
	Fertilizer	Nil	Nil	Nil	Nil	Nil	Nil
Bitumen & Asphalt		5.0%	14.0%	Nil	14.0%	Nil	Nil
Furnace Oil	Fertilizer	Nil	Nil	Nil	Nil	Nil	Nil
	Non- Fertilizer	5.0%	14.0%	Nil	14.0%	Nil	Nil
Light Diesel Oil		5.0%	14% + Rs. 2.50/ Ltr	Nil	14% + Rs.2.50/ Ltr	Nil	Nil
Liquified Natural Gas		5.0%	Nil	Nil	Nil	Nil	Nil
Low Sulphur Heavy	Fertilizer	5.0%	Nil	Nil	Nil	Nil	Nil
Stock/ HPS & other Res.	Non- Fertilizer	5.0%	14.0%	Nil	14.0%	Nil	Nil
Lube oil/greases		5.0%	14.0%	Nil	14.0%	Nil	Nil
Natural Gas[Gasious state]		5.0%	Nil	Nil	Nil	Nil	Nil
Petroleum Coke		2.5%	14.0%	Nil	14.0%	Nil	Nil
Petroleum Jelly		5.0%	14.0%	Nil	14.0%	Nil	Nil
Waxes all types		5.0%	14.0%	Nil	14.0%	Nil	Nil

NOTE:

- *Additional Duty of Customs @4% would be levied in lieu of sales tax / VAT except petrol, diesel, SKO(PDS), LPG(Dom), coal, coke and petroleum gases and fuels of Chapter 27 on direct imports for consumption.*
- *In addition to above, Education Cess @2% on aggregate duties wll be charged w.e.f. 9.7.2004 and additional 1% will be charged w.e.f. 1.3.2007.*
- *Education cess has been removed on Excise duty effective 1st March 2015.*
- *Source : IOCL Tariff Statement*

Table 9.29 : Effective rates of Sales tax/VAT levied by various States/UTs As on 1st May 2015

State	Petrol	Diesel	SKO (PDS)	Domestic LPG
	% of Town Rate before VAT			
Andhra Pradesh	38.90	31.66	5.00	5.00
Arunachal Pradesh	20.00	12.50	4.00	4.00
Assam	27.50	16.50	2.00	1.75
Bihar	24.50	18.00	5.00	1.00
Chhattisgarh	25.00	25.00	4.00	NIL
Delhi	20.00	13.16	5.00	NIL
Goa	15.00	22.00	5.00	0.50
Gujarat	25.46	24.63	NIL	5.00
Haryana	26.25	12.07	NIL	NIL
Himachal Pradesh	27.00	11.50	NIL	4.00
Jammu & Kashmir	25.59	14.20	5.00	NIL
Jharkhand	24.42	24.85	2.00	5.00
Karnataka	32.30	22.48	5.50	1.00
Kerala	34.08	27.10	5.00	3.33
Madhya Pradesh	32.30	28.26	5.00	Basic VAT - 5.00 Entry tax - 2.00 } 7.10
Maharashtra – Mumbai, Thane & Navi Mumbai	27.86	24.00	3.00	3.00
Maharashtra (Rest of State)	26.83	21.00	3.00	3.00
Manipur	20.00	13.50	NIL	5.00
Meghalaya	19.32	13.77	NIL	NIL
Mizoram	20.00	12.00	NIL	4.00
Nagaland	24.68	14.18	5.25	5.00
Odisha	24.23	24.23	1.00	1.00
Punjab	33.38	12.37	6.05	4.40
Rajasthan	31.98	24.33	NIL	NIL
Sikkim	30.98	20.88	4.50	4.50
Tamil Nadu	27.00	21.43	5.00	NIL
Telangana	35.20	27.00	5.00	5.00
Tripura	20.00	13.50	NIL	1.50
Uttarakhand	25.00	21.00	NIL	5.00
Uttar Pradesh	26.80	17.48	4.04	NIL
West Bengal	26.86	18.90	NIL	NIL
Andaman & Nicobar	NIL	NIL	NIL	NIL
Chandigarh	20.02	9.70	5.00	NIL
Dadra & Nagar Haveli	20.00	15.00	4.00	4.00
Daman & Diu	20.00	15.00	4.00	4.00
Lakshadweep	NIL	NIL	NIL	NIL
Puducherry	15.00	14.00	NIL	0.50

(As per details provided by HPCL/IOCL)

NOTE:

1. *Effective rate Includes VAT, Cess, entry tax, Additional tax & Surcharge recoverable in price.*
2. *In Dadra & Nagar Haweli, Daman & Diu, Chandigarh and Puducherry, there is no depot/plant of OMCs and products are brought in from other states, hence CST @ 2% is also applicable (except for LPG in Puducherry as IOC has a bottling plant in Puducherry.)*
3. *For Petrol & Diesel, VAT at applicable rates is also levied on Dealer's commission in Delhi, Gujarat, Haryana, Madhya Pradesh, Punjab, Dadra & Nagar Haweli, Daman & Diu, Chandigarh and Puducherry and on Petrol in Meghalaya.*
4. *For Domestic LPG, VAT at applicable rates is also levied on distributor commission by all States and UTs except Assam.*
5. *As per Himachal Pradesh govt. notification dated 30.12.2013, "The amount of subsidy borne by the Central Government towards sale price of the domestic LPG Cylinder(s) under the Direct Benefit transfer for LPG (DBTL) scheme".*
6. *As per Kerala State Govt. notification dated 20.1.2014, "For the sale of Domestic LPG by Indian Oil Corporation Limited, Hindustan Petroleum Corporation Limited, Bharat Petroleum Corporation Limited and their agencies, no tax shall be levied on the amount of subsidy granted by the Central Government to such Corporations and passed on to the consumers during the sale of the same by the said Corporations and their agencies".*
7. *In Jharkhand, VAT rate of DOM LPG remains same but for charging VAT, sale price of subsidized DOM LPG under DBTL scheme will be same as sale price of subsidized Dom LPG which does not come under DBTL scheme.*

Table 9.30 : Actual Rate of Sales Tax/ VAT and other taxes levied by State/UT Governments on Major Petroleum Products as on 1.5.2015

Sr.No	State	Petrol	Diesel	PDS Kerosene	Domestic LPG
1	Andhra Pradesh	31% + Additional tax Rs. 4000/KL	22.25% + Additional tax Rs. 4000/KL	5%	5%
2	Arunachal Pradesh	20%	12.50%	4%	4%
3	Assam	27.50%	16.50%	2%	4% VAT - Rs.14/ Cylinder (VAT Rebate)
4	Bihar	24.50%	18%	5%	1%
5	Chhattisgarh	25%	25%	4%	NIL
6	NCT of Delhi	20%	Rs. 250/KL (Air Ambience Charges)+12.5% VAT	5%	NIL
7	Gujarat	23% VAT+2% Cess on Town Rate +VAT	21% VAT + 3 % Cess on Town Rate+VAT	NIL	5%
8	Goa	15%	22%	5%	NIL
9	Himachal Pradesh	27%	11.00%	NIL	4%
10	Haryana	25% VAT+5% Additional Tax on VAT	11.50% VAT+5% Additional Tax on VAT	NIL	NIL
11	Jharkhand	22% + Cess Rs. 1000/KL	18% + Cess Rs. 1000/KL	2%	5%
12	Jammu & Kashmir	20% MST+ Rs.3000/KL (Employment Cess)	12% MST+ Rs.1000/KL (Employment Cess)	5%	0%
13	Kerala	31.80% sales tax+ Additional sales tax Rs. 1/Liter	24.52% sales tax+ Additional sales tax Rs. 1/Liter	5%	5%
14	Karnataka	5% Entry tax+ 26% Sales tax	5% Entry Tax + 16.65% Sale tax	5.50%	1%
15	Madhya Pradesh	1% Entry Tax + 31 % VAT	1% Entry Tax + 27% VAT	5%	2% Entry tax+5 % VAT
16	Maharashtra	25% VAT+ Rs 1/Ltr	21%	3%	3%
17	Manipur	20%	13.50%	0%	5%
18	Meghalya	20% + 2% Surcharge-rebate of Rs. 560/KL	13.5% +2% Surcharge - rebate of Rs. 500/KL	0%	0%
19	Mizoram	20%	12%	NIL	4%
20	Nagaland	23.5%+5% Surcharge	13.5%+ 5% surcharge	5%+5% surcharge	4.75%+5% surcharge
21	Odisha	1% Entry Tax + 23% VAT	1% Entry Tax+ 23% VAT	1% Entry Tax	1% Entry Tax
22	Punjab	Rs.1000/KL(Cess)+ 28% VAT+10% Additional Tax on VAT	11.25% VAT+10% additional tax on VAT	5.5% VAT+10% additional tax on VAT	4% VAT+10% additional tax on VAT
23	Rajasthan	30% VAT+Rs 1000/KL (Cess)	22% VAT+ Rs1000/KL (Cess)	NIL	NIL
24	Sikkim	25%+Cess Rs3000/KL +Rs 100/KL for Sikkim Cons welfare Fund	15%+Cess Rs2500/KL + Rs 100/KL for Sikkim Cons Welfare Fund	4.50%	4.50%
25	Tamil Nadu	27%	21.43%	5%	NIL
26	Telangana	35.20%	27.00%	5%	5%
27	Tripura	20%	13.50%	0%	1.50%
28	West Bengal	25% Sales Tax or Rs.13.12/ Liter whoever is higher+ Rs. 1000/KL (Cess)	17% Sales tax or Rs.7.70/Liter whichever is higher+ Rs 1000/KL (Cess)-Rs 290/KL (Sale tax rebate)	NIL	NIL
29	Uttar Pradesh	26.80%	17.48%	4% VAT +1% Additional Tax on VAT	NIL
30	Uttarakhand	25% VAT	21% VAT	NIL	5%
31	Andaman & Nicobar	NIL	NIL	NIL	NIL
32	Chandigarh	Rs. 10/KL(Cess)+20% VAT	Rs. 10/KL(Cess)+9.68% VAT	5%	NIL
33	Dadar & Nagar Haveli	20%	20%	4%	4%
34	Daman & Diu	20%	20%	4%	4%
35	Lakshadweep	NIL	NIL	NIL	NIL
36	Puducherry	15%	14%	NIL	0.5% for DBTL / 1 % for Non-DBTL

Sources - OMCs

Table 9.31 : Contribution of Petroleum Sector to Exchequer

(₹ Crore)

	Particulars		2011-12	2012-13	2013-14	9M, 2014-15
1.	**Contribution to Central Exchequer**					
	A. Tax/ Duties on Crude oil & Petroleum products					
	Cess on Crude Oil		9046	16285	16183	11615
	Royalty on Crude Oil / Gas		4319	4366	4551	3432
	Customs Duty		10808	4540	5042	3629
	Excise Duty		68911	73310	77982	56242
	Service Tax		1080	1591	2092	1425
	Others		225	247	241	199
	Sub Total	**(A)**	**94390**	**100339**	**106090**	**76542**
	B. Dividend to Government/ Income tax etc.					
	Corporate/ Income Tax**		24634	21385	23326	17900
	Dividend Income to Central Govt.		10055	9266	9164	5853
	Dividend Distribution Tax		2703	2269	2951	2306
	Profit Petroleum on Exploration of Oil/ Gas*		7384	9367	11369	5619
	Sub Total	**(B)**	**44776**	**42287**	**46810**	**31678**
Total Contribution to Central Exchequer		**(A+B)**	**139165**	**142626**	**152900**	**108220**
2.	**Contribution to State Exchequer**					
	A. Tax/ Duties on Crude Oil & Petroleum products					
	Royalty on Crude Oil / Gas		10990	13306	14493	9976
	Sales Tax/ VAT on POL Products		100415	115036	129045	101625
	Octroi, Duties Incl. Electricity Duty		2986	3391	4156	2894
	Entry Tax / Others		5567	4288	4748	4098
	Sub Total	**(C)**	**119957**	**136021**	**152442**	**118593**
	B. Dividend to Government/ Direct tax etc.					
	Dividend Income to State Govt.		20	14	18	28
	Sub Total	**(D)**	**20**	**14**	**18**	**28**
	Total Contribution to State Exchequer	**(C+D)**	**119977**	**136035**	**152460**	**118621**
Total Contribution of Petroleum Sector to Exchequer		**(1+2)**	**259143**	**278660**	**305360**	**226841**

Notes : As per details provided by oil companies.
** Profit petroleum on exploration of Oil/ Gas as per MOPNG data.*

Table 9.32 : Contribution of Taxes and Duties on Petroleum Products to Central Exchequer vis-à-vis payout by Government to Oil Cos.

(₹ Crore)

Particulars		2011-12	2012-13	2013-14	9M, 2014-15
Tax/ Duties on Petroleum Products to Central Exchequer (a)		**94390**	**100339**	**106090**	**76542**
Payout by Government to OMCs					
Cash assistance by Govt. towards OMCs' under recoveries		83500	100000	70772	22085
Subsidy on PDS SKO and Dom. LPG		3000	2730	2580	0*
Freight Subsidy on PDS SKO and Dom. LPG		23	23	21	0*
Gas subsidy for North East		458	627	625	454
DBTL Subsidy to OMCs		0	0	1420	2500
Total Payout to OMCs	**(b)**	**86981**	**103380**	**75418**	**25039**
Net Contribution to Central Exchequer	**(a-b)**	**7409**	**-3041**	**30672**	**51503**

** Extension of Subsidy schemes beyond 2013-14 approved by Govt. However, no payment has been made till December 2014.*
Note - Cash payout under the subsidy schemes is on payment basis.

Table 9.33 : State wise Collection of Sales Tax/ VAT on POL products

(₹ Crore)

S.No.	State/UT	2011-12	2012-13	2013-14	9M, 2014-15 (provisional)
	States				
1	Andhra Pradesh	10201	11282	12604	7016
2	Arunachal Pradesh	42	39	54	40
3	Assam	1871	1948	2160	1691
4	Bihar	2468	2790	2931	1884
5	Chhattisgarh	1707	1987	2397	1811
6	Goa	573	379	388	350
7	Gujarat	11896	13572	14610	11945
8	Haryana	3489	3964	4591	3874
9	Himachal Pradesh	163	182	204	183
10	Jammu & Kashmir	742	844	941	747
11	Jharkhand	1240	1478	1825	1237
12	Karnataka	6205	7215	7800	6652
13	Kerala	4110	4515	5173	3768
14	Madhya Pradesh	4545	5417	6232	4765
15	Maharashtra	15092	17359	19141	15073
16	Manipur	76	82	102	81
17	Meghalaya	4	2	3	2
18	Mizoram	44	60	44	44
19	Nagaland	55	60	64	55
20	Odisha	1888	2098	2520	1961
21	Punjab	2705	3386	3853	3196
22	Rajasthan	5268	6045	7396	6352
23	Sikkim	43	48	66	55
24	Tamil Nadu	9312	11379	12297	9483
25	Telangana	0	0	NA	3035
26	Tripura	137	159	160	113
27	Uttar Pradesh	8979	10344	11607	9215
28	Uttarakhand	733	825	1049	894
29	West Bengal	4253	4818	5510	3770
	Union Territories				
30	Andaman & Nicobar	0	0	0	0
31	Chandigarh	69	71	74	66
32/ 33	Dadra & Nagar Haveli / Daman & Diu	64	84	115	111
34	Delhi	2420	2575	3108	2133
35	Lakshadweep	0	0	0	0
36	Puducherry	19	27	29	20
	TOTAL	**100415**	**115036**	**129045**	**101625**

Source - oil companies

Table 9.34 : Profit after Tax (PAT) of Oil Companies

(₹ Crore)

Companies	2010-11	2011-12	2012-13	2013-14	2014-15
Public Sector Oil Producing Companies					
ONGC	18924	25123	20926	22095	17733
OIL	2888	3447	3589	2981	2510
GAIL	3561	3654	4022	4375	3039
Total	25373	32224	28537	29451	23282
Public Sector Downstream Integrated Oil Companies					
IOC	7445	3954	5005	7019	5273
HPC	1539	911	905	1734	2733
BPC	1547	1311	2643	4061	5085
Total	10531	6176	8553	12814	13091
Public Sector Stand Alone Refineries					
MRPL	1177	909	-757	601	-1712
CPCL	512	62	-1767	-304	-39
NRL	279	184	144	371	718
Total	1967	1154	-2380	668	-1033
Public Sector Consultancy Companies					
E I L	523	636	629	480	308
Total	523	636	629	480	308
Private Sector Companies					
RIL	20286	20040	21003	21984	23566
Essar Oil	654	-1285	-1180	126	1521
Total	**20940**	**18755**	**19823**	**22110**	**25087**

Source :- Published results of oil companies.

Table 9.35 : Financial Details of Oil Companies

2013-14 *₹ Crore.*

	IOCL	HPCL	BPCL	ONGC	OIL	GAIL	MRPL	CPCL	NRL
Net Sales / Income from Operation	472177	223037	259933	83156	9127	57245	71810	49312	9250
PBIT	15010	3952	7308	32432	4479	6769	731	218	605
Interest	5084	1336	1359	0	69	366	321	549	42
PBT	9926	2616	5949	32432	4410	6402	410	-331	563
Tax	2906	882	1888	10337	1429	2027	-191	-27	192
PAT	7019	1734	4061	22095	2981	4375	601	-304	371
Net Worth	65992	15012	19459	135631	20708	26858	7069	1722	2991
Borrowings (Loan Fund)	86263	32165	20322	0	9783	10268	8854	5600	725
Ratios									
PAT as% of Turnover	1.5%	0.8%	1.6%	26.6%	32.7%	7.6%	0.8%	-0.6%	4.0%
Debt (Loan fund) to Equity Ratio	1.31	2.14	1.04	0.00	0.47	0.00	1.25	3.25	0.24
EPS	28.91	51.20	56.16	25.83	49.59	34.49	3.43	-20.41	7.33

2014-15 *₹ Crore.*

	IOCL	HPCL	BPCL	ONGC	OIL	GAIL	MRPL	CPCL	NRL
Net Sales / Income from Operation	436390	206380	237905	82126	9247	56569	57457	41847	9858
PBIT	11431	4861	7999	26558	4069	4646	-1749	-339	1171
Interest	3435	707	583	3	341	361	407	404	36
PBT	7995	4154	7416	26555	3729	4284	-2156	-742	1134
Tax	2722	1421	2331	8822	1219	1245	-444	-703	416
PAT	5273	2733	5085	17733	2510	3039	-1712	-39	718
Net Worth	67970	16022	22467	143623	21498	28888	5305	1655	3355
Borrowings (Loan Fund)	55248	20335	13098	1393	8341	9556	7865	5399	693
Ratios									
PAT as% of Turnover	1.2%	1.3%	2.1%	21.6%	27.1%	5.4%	-3.0%	-0.1%	7.3%
Debt (Loan fund) to Equity Ratio	0.81	1.27	0.58	0.00	0.39	0.00	1.48	3.26	0.21
EPS	28.91	80.72	70.32	20.73	41.76	23.96	-9.78	-2.62	9.76

Source - Published results/ Information obtained from oil companies

Table 9.36 : Under Recoveries and Burden Sharing

₹ *Crore.*

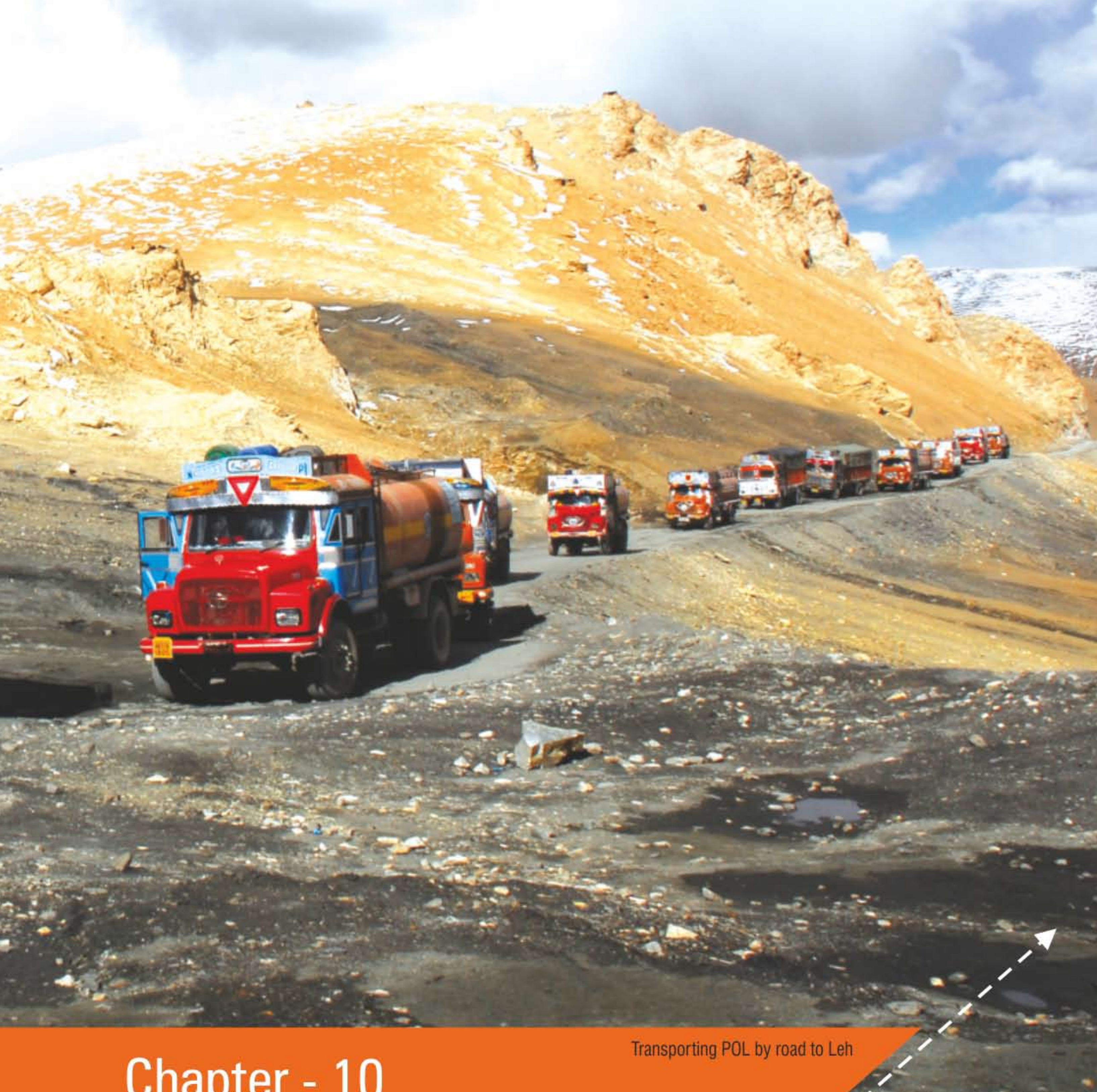
Sr. No.	Particulars	2010-11	2011-12	2012-13	2013-14	2014-15
A.	**Under Recovery - Product wise**	**78190**	**138541**	**161029**	**139869**	**72314**
	MS	2227	0	0	0	0
	HSD	34706	81192	92061	62837	10935
	Domestic LPG (Subsidized)	21772	29997	39558	46458	36580
	PDS Kerosene	19484	27352	29410	30574	24799
B.	**Under Recovery - Company wise**	**78190**	**138541**	**161029**	**139869**	**72314**
	IOC	43109	75469	85793	72938	39758
	HPC	17118	30434	36246	32468	16416
	BPC	17962	32638	38990	34463	16141
C.	**Government - Issue of Oil Bonds / Cash Assisstance**	**41000**	**83500**	**100000**	**70772**	**27308**
	(% of Under Recovery)	52%	60%	62%	51%	38%
	IOC	22605	45486	53278	37182	14960
	HPC	8976	18343	24825	15215	5058
	BPC	9419	19671	21897	18374	7290
	Total	**41000**	**83500**	**100000**	**70772**	**27308**
D.	**Upstream Oil Companies - Discount on Crude & Products**	**30297**	**55000**	**60000**	**67021**	**42822**
	(% of Under Recovery)	39%	39.7%	37%	48%	59%
	ONGC	(24892)	(44466)	(49421)	(56384)	(36300)
	OIL	(3293)	(7352)	(7892)	(8737)	(5523)
	GAIL	(2111)	(3183)	(2687)	(1900)	(1000)
	Total - Discount given	**(30297)**	**(55000)**	**(60000)**	**(67021)**	**(42822)**
	IOC	16704	29961	31967	34674	23597
	HPC	6633	12082	11189	16771	10862
	BPC	6960	12957	16844	15577	8363
	Total - Discount received	**30297**	**55000**	**60000**	**67021**	**42822**
E.	**Borne by OMCs**	**6893**	**41**	**1029**	**2076**	**2184**
	(% of Under Recovery)	9%	0.03%	1%	1%	3%
	IOC	3800	22	548	1083	1201
	HPC	1509	9	232	482	496
	BPC	1584	10	249	512	487

Table 9.37 : Fiscal Subsidy Provided Under 'PDS Kerosene and Domestic LPG Subsidy Scheme, 2002' & 'Freight Subsidy (For Far-Flung Areas) Scheme, 2002'

₹ *Crore.*

Product	2010-11	2011-12	2012-13	2013-14	2014-15*
PDS Kerosene	936	868	746	681	5
Domestic LPG (Subsidized)	1991	2155	2007	1920	18
Total	**2927**	**3023**	**2753**	**2601**	**23**

**Extension of Subsidy schemes for 2014-15 approved by Govt. However, payment was released only for freight subsidy and no payment has been made in 2014-15 for Main subsidy scheme.*



Transporting POL by road to Leh

Chapter - 10
Miscellaneous

Analysis•Knowledge•Information

Table 10.1 : Average International Calorific Values of different fuels

A.	**OIL PRODUCTS**	**M Cals/Tonne or K Cal/Kg**
	NGL	12135
	KEROSENE	10638
	MOTOR GASOLINE	11135
	FUEL OIL	10440
B.	**NATURAL GAS - PRODUCTION (AVERAGE)- INDIA**	**8000-9480 K cal/SCM**
C.	**INDIA**	**M Cals/Tonne or K Cal/Kg**
	CHARCOAL	6900
	HARD COAL	5000
	FIREWOOD	4750
	LIGNITE-BROWN COAL	2310

Source : Indian Petroleum & Natural Gas Statistics, MOP&NG
Conversion Factor :1 K Cal = 4.19 K Joules

Conversion Factors

Table 10.2 : Weight to Volume Conversion

Product	Weight (MT)	Volume (KL)	BBL	To Convert Volume at 29.5° C to Volume at 15° C multiply by
Petrol	1	1.4110	8.50	0.9832
Diesel	1	1.2100	7.45	0.9879
Kerosene	1	1.2850	7.90	0.9864
ATF	1	1.2880	8.10	0.9862
Light Diesel Oil	1	1.1720	7.37	0.9877
Furnace Oil	1	1.0710	6.74	0.9899
Crude Oil	1	1.1700	7.33	

Source: Petrol & Diesel are as per BS IV norms/Indian Petroleum & Natural Gas Statistics

Table 10.3 : Volume Conversion

1 US Bbl	159 Liters
1 US Gallon	3.78 Liters
1 Kilo Liter (KL)	6.29 Bbl.
1 US Bbl	42 Gallons
1 MBD (million barrels per day)	50 MMTPA

Table 10.4 : Contents

Natural Gas	Contains 60-95 % Methane
LPG	Contains Propane (40%) & Butane (60%)

Table 10.5 : Natural Gas Conversions

1 SCM (Standard Cubic Meter)	= 1 cubic metre @ 1 atmosphere pressure and 15.56^{0} C	
1 Cubic Metre	= 35.31 Cubic feet	
1 BCM(Billion Cubic Metre) / Year of gas (consumption or production)	= 2.74 MMSCMD	365 Days a Year
1 TCF (Trillion Cubic Feet) of Gas Reserve	= 3.88 MMSCMD	100% Recoverable for 20 years @ 365 days / Annum
1 MMTPA of LNG	=3.60 MMSCMD	Mol.Weight of 18 @ 365 days/Annum
1 MT of LNG	=1314 SCM	Mol. Weight of 18
Gross Calorific Value (GCV)	10000 Kcal/ SCM	
Net Calorific Value (NCV)	90% of GCV	
1 Million BTU (MMBTU)	= 25.2 SCM	@10000 Kcal/SCM; 1 MMBTU= 252,000 Kcal
Specific Gravity of Gas	0.62	Molecular Weight of Dry Air=28.964 gm/mole
Density of Gas	=0.76 Kg/SCM	Mol.Weight of Gas 18 gm/mol
Gas required for 1 MW of Power generation	=4128 SCM per Day	@50% efficiency of Combined Cycle Operation; at a station heat rate of 860 Kcal/ Kwh~ 1720 Kcal/Kwh @50% Thermal Efficiency
Power Generation from 1 MMSCMD Gas	=242 MW	@50% efficiency of Combined Cycle Operation; at a station heat rate of 860 Kcal/ Kwh~ 1720 Kcal/Kwh @50% Thermal Efficiency

Source: GAIL

Table 10.6 : Major end-use of Petroleum Products

PRODUCT	MAJOR END USE
LPG	Domestic and Auto fuel. Also for Industrial application where technically essential.
NAPHTHA	Feedstock/ fuel for fertiliser units, feedstock for petrochemical sector and fuel for power plants.
MS	Fuel for passenger cars, taxies, two & three wheelers.
ATF	Fuel for aircrafts.
SKO	Fuel for cooking & lighting.
HSD	Fuel for transport sector (railways/ road), agriculture (tractors, pumpsets, threshers,etc.) and captive power generation.
LDO	Fuel for agricultural pumpsets ,small industrial units, start up fuel for power generation.
FO/LSHS	Secondary fuel for thermal power plants, fuel/ feedstock for fertiliser plants, industrial units.
BITUMEN	Surfacing of roads.
LUBES	Lubrication for automotive and industrial applications.
OTHER PRODUCTS (BENZENE, TOLUENE, MTO, LABFS, CBFS, PARAFFIN WAX, ETC.)	Feedstock for value added products.

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