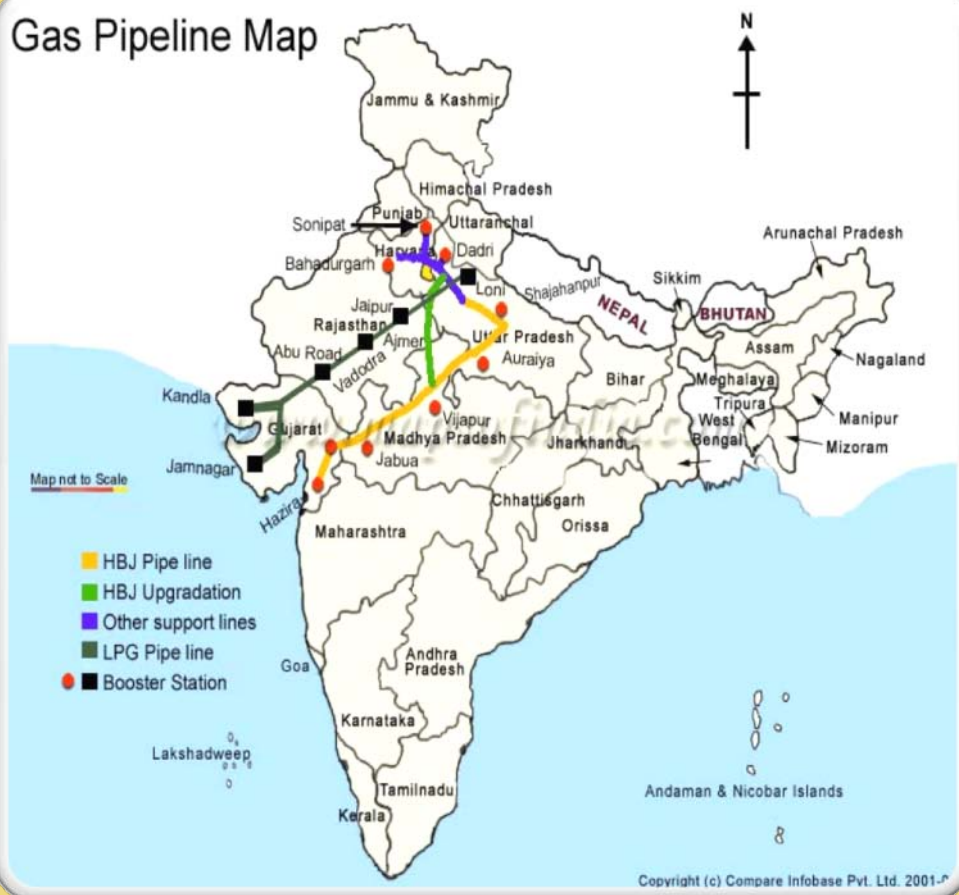


7. Petroleum and Natural Gas Extraction



7. PETROLEUM AND NATURAL GAS

Concepts and Definitions

Crude Oil (Crude petroleum)- Crude oil is a mineral oil consisting of a mixture of hydrocarbons of natural origin and associated impurities, such as sulphur. It exists in the liquid phase under normal surface temperature and pressure and its physical characteristics (density, viscosity, etc.) are highly variable.

Oil Refinery- converts crude oil into high-octane motor fuel (gasoline/petrol), diesel oil, liquefied petroleum gases (LPG), jet aircraft fuel, kerosene, heating fuel oils, lubricating oils, asphalt and petroleum coke etc.

Flared Gas- at oil production rigs and in refineries is gas burnt at the site. Its primary purpose is to act as a safety device to protect vessels or pipes from over-pressuring or due to insufficient capacity in the domestic market to absorb such gas, and there are few opportunities for its safe re-injection into reservoirs.

Petroleum Products- are any oil based products which can be obtained by distillation and are normally used outside the refining industry. The exceptions to this are those finished products which are classified as refinery feedstocks.

Refinery feedstock- is product or a combination of products derived from crude oil and destined for further processing other than blending in the refining industry. It is transformed into one or more components and/or finished products.

% Gas flared- Gas flared as percentage of total output of gas, excluding re-injected gas.

Offshore landfall point - Landfall point in 'Oil and Gas' lingo means the point at which the offshore oil/gas touches the onshore terminal. It is basically entry to the onshore.

7. PETROLEUM AND NATURAL GAS EXTRACTION

7.1 The chief data source for this sector is M/o Petroleum and Natural Gas. Unless otherwise stated analytical highlights given below are based on Table No. 7.0 on Trends in Important Indicators of Petroleum and Natural Gas Extraction Infrastructure.

Capacity

Reserve Capacity

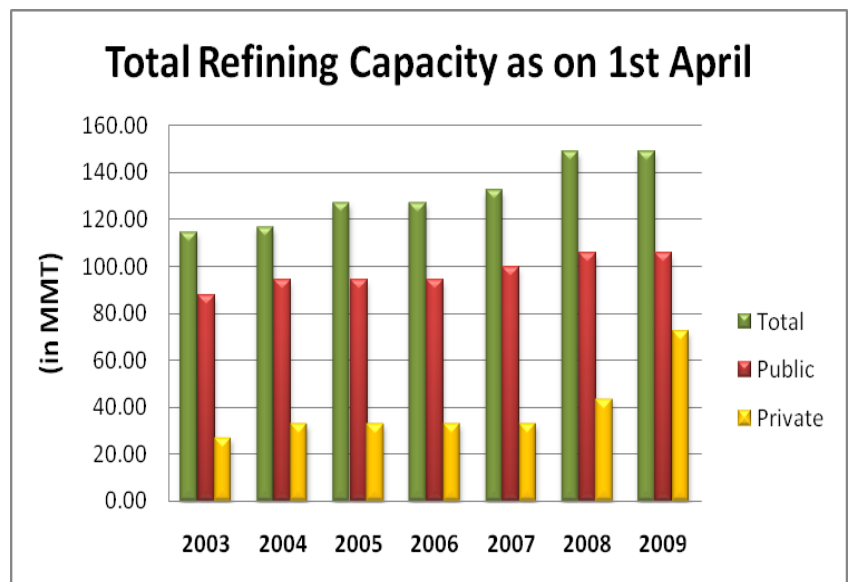
7.2 The reserve capacity for crude oil extraction increased from 741 million tones in 2003 to 770 million tones in 2009 showing a CAGR of 0.64% per annum. The reserve capacity for natural gas extraction increased from 751 billion cubic metre(BCM) in 2003 to 1090 BCM in 2009 showing a CAGR of 6.41% per annum. Future scope of natural gas as fuel seems to be bright at present.

Oil and gas wells

7.3 Number of oil wells increased from 5842 in 2003 to 5863 in 2009. number of gas wells increased from 691 in 2003 to 884 in 2009.

Refinery Capacity

7.4 During 2003-2009 refining capacity in private sector has shown an impressive increase as compared to public sector. The total refinery capacity increased from 115 MMT in 2003 to 178 MMT in 2009.



Marketing and distribution capacity

7.5 Number of retail outlets has shown a significant increase at a CAGR of 10.43%, during 2003 to 2009. Oil tanker fleet increased from 203 in 2003 to 272 in 2009. Length of onshore pipelines of crude, gas, product pipelines increased at a CAGR of 4.12%, 6.6% and 8.03% respectively during the period 2003 to 2009. Length of offshore pipelines of crude, gas, product pipelines increased at a CAGR of 3.82%, 4.56% and 2.21% respectively during the same period.

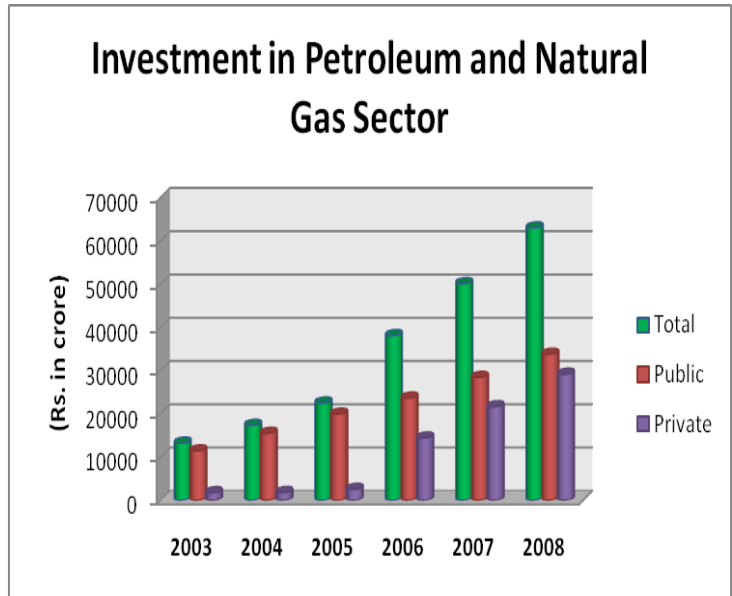
Quality

7.6 Number of persons employed in exploration and production decreased from 48 thousand to 33.6 thousand during 2003 to 2009 which may be due to change in technology. However number of persons employed in refining , marketing and pipelines is showing a positive trend.

7.7 Gas flared during extraction is also going down over the years which may be due to improvement in gas pipelines and refinery capacity.

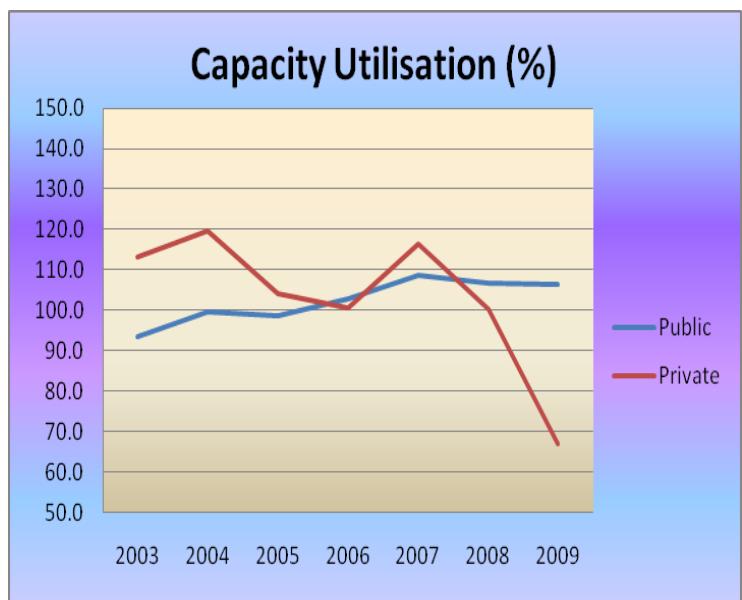
Fiscal Cost

7.8 Both public and private investments in the sector have shown steady increase over the years. Participation of private investments in the sector increased from 13.7% in 2003 to 46.3% in 2009. Plan outlay of public sector undertakings increased from ₹21099 crore to ₹46540 during 2003 to 2009 at a CAGR of 14%. But expenditure of the public sector undertakings has grown at a much higher CAGR of 23%.



Capacity Utilisation

7.9 The present crude oil production level is at 4% of the reserve capacity. At the present extraction rate present crude oil reserves would last for 25 years. The present natural gas production level is at 3% of the reserve capacity (Table8.0). As growth of natural gas reserves is much higher than present extraction rate, natural gas as source of energy has bright future prospects.



7.10 Capacity utilization of public sector refineries increased from 93.6% to 106.4% during 2003 to 2009, private sector refineries are also functioning at near full capacity, indicating a need for further augmentation of new refinery capacity.

Affordability

7.11 Weighted average of crude oil price (basic price) increased from ₹10607/MT to ₹29796/MT during 2005 to 2009. Similarly consumer price of Natural Gas increased from ₹2850 per thousand cubic metre to ₹3200 per thousand cubic metre during the same period.

Table 7.0 : Trends in Important Indicators of Petroleum and Natural Gas Extraction Infrastructure (2002-03 to 2008-09)

Sl. No.	Description	2003	2004	2005	2006	2007	2008	2009	CAGR %
		(Reference Date / Period - As on 31st March for Stock Variables - Financial Year ending on 31st March for Flow Variables)							
A ACCESS / CAPACITY									
1	Crude Oil Reserves (Million Tonne)	741	761	739	786	756	725	770	0.64
2	Natural Gas Reserves (BCM)	751	854	923	1101	1075	1055	1090	6.41
3	Total Refining Capacity as on 1st April (MMT)	114.67	116.97	127.37	127.37	132.47	148.97	177.97	7.60
	In PSUs	87.62	94.37	94.37	94.40	99.42	105.47	105.47	3.14
	In Private	27.05	33.00	33.00	32.97	33.05	43.50	72.50	17.86
4	Oil Wells(in numbers)#	5842	5105	5245	5394	5523	5672	5863	0.06
5	Gas Wells(in numbers)#	691	718	774	803	840	860	884	4.19
6	Total Retail Outlets (in numbers)	19337	22090	25307	28908	32140	34101	35066	10.43
7	Oil Tanker Fleet (in numbers)	203	223	234	244	254	265	272	5.00
I Length of Pipelines (in km)									
8	Crude Pipelines								
	On Shore	13946	14376	14535	14909	16441	16816	17766	4.12
	Off Shore	2314	2341	2385	2679	2794	2813	2898	3.82
9	Gas Pipelines								
	On Shore	7961	8718	9197	9551.9	10354.9	11352	11683	6.60
	Off Shore	2627	2635	2640	2915	3000	3122	3433	4.56
10	Product Pipelines								
	On Shore	9280	10156	10679	12007	13484	13694	14747	8.03
	Off Shore	671	671	681	700	733	755	765	2.21
B QUALITY									
II Persons Employed in Petroleum Industry(PSU's)(number)									
		129927	126702	133371	138311	135315	139956	138973	1.13
11	Exploration & Production	48237	44943	41415	39694	38948	33935	33612	-5.84
12	Refining	26451	25640	26859	30262	28151	30128	32745	3.62
13	Marketing	40561	40232	40628	42217	42970	44995	42183	0.66
14	Pipelines	4092	3829	7318	7816	7510	8933	4598	1.96
15	R& D	2330	2278	2096	2071	2029	1964	2076	-1.91
16	Other	8256	9780	15055	15151	15707	20001	23759	19.26
17	Gas Flared (BCM)	1.426	1.056	0.988	0.877	0.956	0.924	1.099	-4.25
18	% Gas Flared	4.54	3.30	3.11	2.72	3.01	2.89	3.29	-5.24
C FISCAL COST									
19	Plan Outlay (Rs. in crore)	21099.08	24393.22	24615.12	31322.85	36863.70	35724.55	46540.00	14.09
20	Expenditure(Rs. in crore)	16279.5	17590.96	22969.16	27095.53	31105.14	32759.44	56463.23	23.03
21	Utilisation %	77.2	72.1	93.3	86.5	84.4	91.7	121.3	7.84
III Investment in Petroleum and Natural Gas Sector (Rs. in crore)									
22	Total Investment	13280.6	17393.73	22542.43	38141.7	50150.41	63025.46	-	36.54
23	Public Investment	11466.7	15537.09	19964.07	23692.92	28467.59	33819.25	-	24.15
	% Share of Public Investment to Total Investment	86.3	89.3	88.6	62.1	56.8	53.7	-	-9.07

Based on data supplied by OIL and ONGC.

Table 7.0 (contd.) : Trends in Important Indicators of Petroleum and Natural Gas Extraction Infrastructure (2002-03 to 2008-09)

Sl. No.	Description	2003	2004	2005	2006	2007	2008	2009	CAGR %
		(Reference Date / Period - As on 31st March for Stock Variables - Financial Year ending on 31st March for Flow Variables)							
C		FISCAL COST							
24	Private Investment	1813.84	1856.64	2578.36	14448.8	21682.82	29206.2	-	74.33
	% Share of Private Investment to Total Investment	13.7	10.7	11.4	37.9	43.2	46.3	-	27.68
D		UTILISATION							
IV Crude Oil Production(MMT)									
25	Total Production	33.04	33.37	33.98	32.19	33.99	34.12	34.12	0.54
26	Offshore-								
	In PSUs	17.56	17.677	18.16	16.31	15.99	18.01	17.8	0.23
	In Private	4.013	4.24	4.23	4.45	4.67	4.89	4.43	1.66
	Total	21.57	21.917	22.39	20.76	20.66	22.9	22.23	0.50
27	Onshore-								
	In PSUs	11.40	11.38	11.52	11.33	11.17	11.02	11.03	-0.55
	In Private	0.075	0.074	0.074	0.101	0.161	0.192	0.243	21.64
	Total	11.47	11.46	11.59	11.43	11.33	11.21	11.27	-0.29
28	Crude Oil Processed(MMT)								
	In PSUs	82.02	89.50	93.11	96.95	108.17	112.54	112.22	5.37
	In Private	30.54	32.35	34.31	33.16	38.38	43.56	48.55	8.03
29	Capacity Utilisation(%)								
	In PSUs	93.6	99.5	98.7	102.7	108.8	106.7	106.40	2.16
	In Private	113.1	119.8	104	100.5	116.3	100.1	66.96	-8.36
V Natural Gas Production(BCM)									
30	Total Production	31.39	31.96	31.76	32.20	31.75	32.42	32.85	0.76
31	Offshore-								
	In PSUs	18.367	17.805	17.313	16.823	16.567	16.457	16.742	-1.53
	In Private	4.296	5.184	5.356	5.801	5.908	6.861	7.348	9.36
	Total	22.66	22.99	22.67	22.62	22.48	23.32	24.09	1.02
32	Onshore-								
	In PSUs	7.62	7.67	7.67	8.02	8.14	8.22	8.02	0.86
	In Private	1.11	1.31	1.43	1.56	1.13	0.88	0.74	-6.51
	Total	8.73	8.97	9.09	9.58	9.27	9.10	8.76	0.06
E		AFFORDABILITY							
VI Consumer Prices of Natural Gas (in Rs. Per thousand Cubic Metre)									
33	Off-shore (Landfall Point and On-shore)	2850	2850	2850	3200	3200	3200	3200	1.95
34	For North-Eastern States	1700	1700	1700	1920	1920	1920	1920	2.05
VII Weighted Average of Crude oil Price (Basic Prices) (Rs./MT)									
35	On Shore and Off Shore Crude	-	-	10607	10174	16725	25913	29796	29.46

Source: 1. Material supplied by M/o Petroleum & Natural Gas
2. Annual Report published by M/o Petroleum & Natural Gas

Table 7A.1 : Statewise Reserves of Crude Oil and Natural Gas in India as on 31st March

States	2008		2009		% Change	
	Crude Oil (In Million Tonnes)	Natural Gas (In Billion Cubic Metres)	Crude Oil (In Million Tonnes)	Natural Gas (In Billion Cubic Metres)	Crude Oil (In Million Tonnes)	Natural Gas (In Billion Cubic Metres)
Andhra Pradesh	4.37	40.33	4.21	39.59	-3.7	-1.8
Arunachal Pradesh	-	-	3.646	1.12	-	-
Assam	173.12	112.34	167.324	97.71	-3.3	-13.0
CBM	-	-	0	39.81	-	-
Eastern Offshore	24.66	442.83	22.497	425.42	-8.8	-3.9
Gujarat	135.37	73.75	134.965	77.22	-0.3	4.7
Nagaland	-	-	2.69	0.12	-	-
Rajasthan	-	-	84.68	12.71	-	-
Tamil Nadu	7.98	27.77	7.97	26.95	-0.1	-3.0
Tripura	-	-	0.08	32.50	-	-
Western Offshore	424.62	392.95	345.275	362.14	-18.7	-7.8
Total	770.12	1089.97	773.34	1115.26	0.4	2.3

Table 7A.2 : Statewise Developed Oil & Gas Wells and Estimated Production Capacity as on 31.3.08

States	Crude Oil		Natural Gas	
	No. of Wells	Production Capacity(In Million Tonnes)	No. of Wells	Production Capacity(In Billion Cubic Metres)
Gujarat	3118	6.177	188	2.929
Assam	1072	4.61	443	2.619
Arunachal Pradesh	34	0.1	5	0.025
Andhra Pradesh	28	0.258	144	1.55
Rajasthan	0	0	41	0.28
Tamil Nadu	126	0.299	76	1.17
Tripura	0	0	64	0.53
Western Offshore	1034	20.389	134	22.438
Eastern Offshore	25	2.545	5	0.902
Total	5437	34.38	1100	32.44

Source: Material supplied by M/o Petroleum & Natural Gas

Table 7A.3 : Installed Capacity of Refineries of Crude Oil As on 1st April

Sl. No.	Refinery	('000 Tonnes per annum)		
		2007	2008	2009
A	Public Sector Refineries	100767	105468	105468
I	IOC Refineries	44999	49700	49700
	IOC, Digboi	650	650	650
	IOC, Guwahati	1000	1000	1000
	IOC, Barauni	6000	6000	6000
	IOC, Koyali	13700	13700	13700
	IOC, Haldia	6000	6000	6000
	IOC, Mathura	8000	8000	8000
	IOC, Panipat	7299	12000	12000
	IOC, Bongaigaon	2350	2350	2350
II	HPCL Refineries	13000	13000	13000
	HPCL, Mumbai	5500	5500	5500
	HPCL, Visakh	7500	7500	7500
III	BPCL Refineries	19500	19500	19500
	BPCL, Mumbai	12000	12000	12000
	BPCL, Kochi	7500	7500	7500
IV	CPCL Refineries	10500	10500	10500
	CPCL, Manali	9500	9500	9500
	CPCL, Narimanam	1000	1000	1000
V	NRL, Numaligarh	3000	3000	3000
VI	MRPL, Mangalore	9690	9690	9690
VII	ONGC, Tatipaka	78	78	78
B	Private Refinery	36481	43500	72500
I	RPL, Jamnagar	33000	33000	33000
II	RPL(SEZ),Jamnagar ,Gujrat	-	-	29000
III	Essar Oil Ltd.(EOL), Vadinar***	3481	10500	10500
	Total (A+B)	137248	148968	177968

***: Production of Essar Oil Ltd. started from December 2006.

Source: 1. Material supplied by M/o Petroleum & Natural Gas

2. Annual Report published by M/o Petroleum & Natural Gas

Table 7A.4 : Trends in Length of Crude Oil, Natural Gas & Product Pipelines in India as on 1st April

		(in km)						
Sl.No.	Type of Pipelines/Owner	2003	2004	2005	2006	2007	2008	2009
A	Crude Pipelines (On Shore)							
1	ONGC	9593	10022	10297	10671	11029	11378	11949
2	OIL	1538	1538	1418	1418	1418	1418	1418
3	IOC	2788	2788	2788	2788	3962	3962	4341
4	HPCL	11	11	13	13	11	11	11
5	Pvt. / JVC	16	17	19	19	21	47	47
	Sub-total	13946	14376	14535	14909	16441	16816	17766
B	Crude Pipelines (Off Shore)							
1	ONGC	2115	2137	2181	2475	2569	2588	2673
2	IOC	25	25	25	25	25	25	25
3	Pvt. / JVC	174	179	179	179	200	200	200
	Sub-total	2314	2341	2385	2679	2794	2813	2898
C	Gas Pipelines (On Shore)							
1	ONGC	3369	3519	3689	3892	4098	4284	4461
2	GAIL	4571	5167	5471	5599	6196	7001	7179
3	BPCL	2	2	2	26	26	26	2
4	Pvt./JVC	19	30	35	35	35	41	41
	Sub-total	7961	8718	9197	9552	10355	11352	11683
D	Gas Pipelines (Off Shore)							
1	ONGC	2512	2512	2517	2783	2863	2863	3022
2	Pvt./JVC	115	123	123	132	137	259	411
	Sub-total	2627	2635	2640	2915	3000	3122	3433
E	Product Pipelines (On Shore)							
1	IOC(AOD)	75	75	75	75	75	75	75
2	IOC	4687	4842	4842	6063	5211	5211	5349
3	BPCL	613	971	971	971	1745	1745	1745
4	HPCL	732	732	732	732	2130	2130	2130
5	ONGC	1940	2041	2132	2239	2396	2606	2731
6	GAIL	1233	1495	1927	1927	1927	1927	1964
7	Petronet India Limited	753	753	753	753	753	753	753
	Sub-total	9280	10156	10679	12007	13484	13694	14747
F	Product Pipelines (Off Shore)							
1	BPCL	3	3	3	3	3	3	3
2	ONGC	668	668	678	697	730	752	762
	Sub-total	671	671	681	700	733	755	765
GRAND TOTAL (A+B+C+D+E+F)		36799	38897	40117	42762	46807	48552	51292

Source: Material supplied by M/o Petroleum & Natural Gas

Table 7A.5 : Companywise Oil and Gas Terminals*, Number and Capacity as on 31.3.08

Sl. No.	Company	Oil Distribution Terminals		Gas Distribution Terminals	
		Number	Capacity(In Million Tonnes)	Number	Capacity(In Billion Cubic Metres)
1	HPCL	153	2.71	Nil	Nil
2	OIL	0	0.00	Nil	Nil
3	ONGC	50	0.00	Nil	Nil
4	BPCL	160	2.79	Nil	Nil
5	GAIL	Nil	N.A.	623	N.A.
6	RIL	11	5.25	Nil	Nil
7	IOC	166	6.50	Nil	Nil
8	EOL	2	0.60	Nil	Nil
9	DGH	7	0.61	Nil	Nil

N.A.: Not applicable.

* The terminals are for distribution / supply of natural gas to consumers and do not have any storage of gas.

Source: Material supplied by M/o Petroleum & Natural Gas

Table 7A.6 : Tonnage of Indian Tankers Fleet as on 31st March

Sl.No.	Oil Tankers	2001**	2002	2003	2004	2005	2006	2007	2008	2009
A		Coastal Trade								
1	Product Carriers									
	NO. of Tankers	10	12	12	12	11	9	10	12	14
	DWT ('000' tonnes)	83.2	90.1	61	61	54.9	40.5	42.6	44.7	66.7
2	Crude Oil Carriers									
	NO. of Tankers	2	2	2	2	2	2	2	2	2
	DWT ('000' tonnes)	82.2	82.2	82.2	82.2	82.2	82.2	82.2	82.2	82.2
3	Offshore Supply Vessels									
	NO. of Tankers	69	70	73	76	80	83	89	96	100
	DWT ('000' tonnes)	85.4	85.6	95.8	9901	99.7	100.2	105.8	118.4	122.6
4	Specialised vessels for offshore									
	NO. of Tankers	27	28	31	32	32	35	35	36	36
	DWT ('000' tonnes)	59.2	59.2	53.2	54.1	54.1	47.4	47.4	47.4	49.3
Total Coastal Trade										
	NO. of Tankers	108	112	118	122	125	129	136	146	152
	DWT ('000' tonnes)	310	317.1	292.2	10098	290.9	270.3	278	292.7	320.8
B		Overseas Trade								
5	Ore Oil bulk Carriers									
	NO. of Tankers	4	3	2	2	2	2	2	2	2
	DWT ('000' tonnes)	355.1	231.6	169.3	169.3	169.3	169.3	169.3	169.3	169.3
6	Crude Oil Carriers									
	NO. of Tankers	34	34	36	46	49	47	54	53	54
	DWT ('000' tonnes)	3455.7	3474.3	3592.1	4744.4	5735.4	5379.9	5730.9	5273.8	5264.1
7	Product Carriers									
	NO. of Tankers	45	45	40	45	47	52	47	48	50
	DWT ('000' tonnes)	1656.5	1642.3	1493	1998	2471.9	2985.5	2684.8	2940.3	3302.9
8	L.P.G Carriers									
	NO. of Tankers	6	6	7	8	11	14	15	16	14
	DWT ('000' tonnes)	138.1	138.1	162.6	183.2	250.7	341.9	385.5	442.3	395.8
Total Overseas										
	NO. of Tankers	89	88	85	101	109	115	118	119	120
	DWT ('000' tonnes)	5605.4	5486.3	5417	7094.9	8627.3	8876.6	8970.5	8825.7	9132
Total Oil Tankers (A+B)										
	NO. of Tankers	197	200	203	223	234	244	254	265	272
	DWT ('000' tonnes)	5915.4	5803.4	5709.2	17193	8918.2	9146.9	9248.5	9118.4	9453

** As on 30th June

DWT : Dead Weight Tonnage

Source: Indian Petroleum & Natural Gas Statistics published by M/o Petroleum & Natural Gas

Table 7A.7 : Total Retail Outlets in India

(in numbers)

Year	Retail Outlets*	B Shell/ BPCL	ESSO/HPCL	IOC	AOC/ AOD	IBP	Total
2001	Nos.	4555	4536	7134	315	1475	18015
	%	25.3	25.2	39.6	1.7	8.2	100
2002	Nos.	4610	4642	7433	318	1551	18554
	%	24.8	25	40.1	1.7	8.4	100
2003	Nos.	4772	4799	7635	323	1808	19337
	%	24.7	24.8	39.5	1.7	9.3	100
2004	Nos.	5274	5204	8762	326	2524	22090
	%	23.9	23.6	39.7	1.5	11.4	100.1
2005	Nos.	6016	6295	9882	#	3114	25307
	%	23.8	24.9	39	-	12.3	100
2006	Nos.	7321	7026	11149	#	3412	28908
	%	25.3	24.3	38.6	-	11.8	100
2007	Nos.	7800	7909	12841	#	3590	32140
	%	24.3	24.6	40	-	11.2	100.1
2008	Nos.	8238	8329	17534	#	#	34101
	%	24.2	24.4	51.4	-	-	100
2009	Nos.	8387	8539	18140	#	#	35066
	%	23.9	24.4	51.7	-	-	100

: Included in IOC

* : As on 1st January upto 2006 & 1st April from 2007 & onwards

Source: Indian Petroleum & Natural Gas Statistics published by M/o Petroleum & Natural Gas

Table 7A.8 : Statewise Number of Retail Outlets, LDO/SKO Dealers and LPG Distributors as on 1st April

States / UTs	2008			2009		
	Retail Outlets	LDO/SKO Dealers	LPG Distributors	Retail Outlets	LDO/SKO Dealers	LPG Distributors
Andhra Pradesh	2850	605	877	2921	603	880
Arunachal Pradesh	47	33	30	47	33	30
Assam	523	361	251	530	361	251
Bihar	1401	373	309	1466	373	310
Chhattisgarh	498	109	153	507	109	152
Goa	91	21	53	92	21	53
Gujarat	1751	497	542	1778	497	545
Haryana	1459	148	277	1531	148	280
Himachal Pradesh	273	26	119	283	26	121
Jammu & Kashmir	364	47	152	378	47	151
Jharkhand	649	86	142	666	86	142
Karnataka	2156	325	488	2260	325	484
Kerala	1608	244	374	1638	243	373
Madhya Pradesh	1595	281	568	1643	281	564
Maharashtra	3091	775	996	3178	775	1000
Manipur	55	36	31	56	36	31
Meghalaya	116	35	32	122	35	32
Mizoram	21	19	25	22	19	25
Nagaland	46	19	27	47	19	27
Orissa	911	179	185	929	179	189
Punjab	2613	244	420	2652	244	425
Rajasthan	2286	253	429	2343	253	430
Sikkim	28	12	8	29	12	8
Tamil Nadu	2904	465	660	2969	465	656
Tripura	38	40	29	41	40	29
Uttar Pradesh	4178	699	1177	4262	699	1166
Uttarakhand	362	72	168	366	72	169
West Bengal	1700	476	473	1724	469	475
State Total	33614	6480	8995	34480	6470	8998
Union Territories						
A & N Island	6	1	4	7	1	4
Chandigarh	43	12	28	43	12	28
Delhi	402	116	316	401	116	314
D & N Haveli	11	2	1	12	2	1
Daman & Diu	15	5	2	18	5	2
Lakshadweep	0	0	1	0	0	1
Puducherry	103	8	18	105	8	18
UT Total	580	144	370	586	144	368
India Total	34194	6624	9365	35066	6614	9366

Source: Indian Petroleum & Natural Gas Statistics published by M/o Petroleum & Natural Gas

Table 7A.9 : Statewise and Companywise LPG Domestic Consumers as on 1st April

States / UTs	2008				2009			
	IOCL /AOD	HPCL	BPCL	Total	IOCL /AOD	HPCL	BPCL	Total
Andhra Pradesh	4090	4631	2290	11011	4304	4733	2419	11456
Arunachal Pradesh	123	0	0	123	129	0	0	129
Assam	1834	28	61	1923	1895	30	69	1994
Bihar	1688	350	370	2408	1800	378	396	2574
Chhattisgarh	558	347	169	1074	583	355	175	1113
Goa	9	256	146	411	10	265	151	426
Gujarat	2980	1126	1217	5323	3145	1202	1303	5650
Haryana	1621	616	1053	3290	1679	656	1090	3425
Himachal Pradesh	1039	148	71	1258	1069	164	76	1309
Jammu & Kashmir	390	867	143	1400	404	878	145	1427
Jharkhand	812	177	129	1118	842	197	134	1173
Karnataka	2375	1894	1361	5630	2575	1996	1480	6051
Kerala	3021	784	1584	5389	3156	840	1692	5688
Madhya Pradesh	2194	1152	840	4186	2247	1219	894	4360
Maharashtra	1519	5644	6008	13171	1636	5960	6295	13891
Manipur	218	0	0	218	221	0	0	221
Meghalaya	109	0	0	109	113	0	0	113
Mizoram	188	0	0	188	192	0	0	192
Nagaland	140	0	0	140	144	0	0	144
Orissa	558	644	276	1478	586	659	290	1535
Punjab	2663	922	1097	4682	2931	958	1132	5021
Rajasthan	1791	1090	1250	4131	1931	1165	1309	4405
Sikkim	114	0	0	114	120	0	0	120
Tamil Nadu	6183	1218	2595	9996	6452	1378	2783	10613
Tripura	256	0	0	256	261	0	0	261
Uttar Pradesh	6202	1437	2687	10326	6017	1526	2781	10324
Uttarakhand	1247	82	183	1512	1273	93	189	1555
West Bengal	3447	1045	704	5196	3555	1152	746	5453
State Total	47369	24458	24234	96061	49270	25804	25549	100623
Union Territories								
A & N Island	53	0	0	53	66	0	0	66
Chandigarh	206	68	46	320	219	71	47	337
Delhi	2656	574	908	4138	2722	596	934	4252
D & N Haveli	0	34	0	34	0	39	0	39
Daman & Diu	0	28	16	44	0	29	16	45
Lakshadweep	3	0	0	3	3	0	0	3
Puducherry	115	90	47	252	120	93	54	267
UT Total	3033	794	1017	4844	3130	828	1051	5009
India Total	50402	25252	25251	100905	52400	26632	26600	105632

Source: Indian Petroleum & Natural Gas Statistics published by M/o Petroleum & Natural Gas

Table 7B.1 : Category-wise Manpower Employed in Various Sectors of Petroleum Industry in India as on 31st March

(in numbers)										
Sl. No.	Category	2001	2002	2003	2004	2005	2006	2007	2008	2009
Exploration and Production										
1	Executive/Managerial	18560	19461	19605	19270	18571	18432	19459	17693	18391
2	Supervisory	5087	6601	6349	6055	4523	4778	3510	2825	2822
3	Clerical	3971	3278	3068	2351	2176	1984	8013	6256	5486
4	Workman	22431	20200	19215	17240	16138	14486	7940	7142	6908
	Total	50049	49540	48237	44916	41408	39680	38922	33916	33607
5	Expatriates/Foreign Experts/On Contract	0	0	0	27	7	14	26	19	5
	Grand Total	50049	49540	48237	44943	41415	39694	38948	33935	33612
Petroleum Refining										
1	Executive /Managerial	5534	5556	5977	5899	6200	6296	5659	5975	8054
2	Supervisory	2740	2589	2586	2616	2716	2809	3961	3988	4249
3	Clerical	2748	2587	2521	2371	2293	2268	2216	1929	1959
4	Workman	13017	12338	12266	11847	11445	11345	11208	11334	10926
	Total	24039	23070	23350	22733	22654	22718	23044	23226	25188
5	Expatriates/Foreign Experts/On Contract	3139	2252	3101	2907	4205	7544	5107	6902	7557
	Grand Total	27178	25322	26451	25640	26859	30262	28151	30128	32745
Marketing										
1	Executive /Managerial	11619	11649	11598	11747	11799	11365	10429	10841	11006
2	Supervisory	2188	2274	2320	2334	2419	2422	3845	4015	4378
3	Clerical	5726	5434	5245	5133	4831	4400	4413	4350	3973
4	Workman	18010	17956	17152	16725	15658	15148	14621	14046	13487
	Total	37543	37313	36315	35939	34707	33335	33308	33252	32844
5	Expatriates/Foreign Experts/On Contract	3309	4552	4246	4293	5921	9982	9662	11743	9339
	Grand Total	40852	41865	40561	40232	40628	43317	42970	44995	42183

Source: Indian Petroleum & Natural Gas Statistics published by M/o Petroleum & Natural Gas

Table 7B.2 : Categorywise Manpower Employed in the Petroleum Industry in India as on 31st March

		(in numbers)								
Sl. No.	Category	2001	2002	2003	2004	2005	2006	2007	2008	2009
1	Executive / Managerial	44804	45385	45301	45109	45319	45727	44447	46387	49742
2	Supervisory	11807	13138	12610	12348	10780	11232	13147	12964	13490
3	Clerical	14127	13014	12263	11559	11249	10807	16820	15247	13879
4	Workman	57693	54860	52200	50013	48197	45810	38210	37266	35759
	Total	128431	126397	122374	119029	115545	113576	112624	111864	112870
5	Expatriates/Foreign Experts/On Contract	6557	7213	7553	7673	17826	24735	22691	28092	26103
	Grand Total	134988	133610	129927	126702	133371	138311	135315	139956	138973

Source: Indian Petroleum & Natural Gas Statistics published by M/o Petroleum & Natural Gas

Table 7C.1 : Public and Private Investments in Petroleum and Natural Gas Sector

		(Rs. in crore)					
Sl. No.	Undertaking	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08
Public Investments							
1	GAIL (INDIA) Ltd.	510.8	2441.3	434.21	1029.19	1647.61	1317.84
2	Indian Oil Corp. Ltd.	2197.12	3060.02	4915.03	4025.06	3732.42	4889.44
3	Hindustan Petroleum Corp. Ltd.	139.64	162.41	383.6	1465.12	2846.5	1724.69
4	Bharat Petroleum Corp. Ltd.	1249	1653	1509	2009	1808	2039
5	Oil & Natural Gas Corp. Ltd.	6063.39	6851.98	10681.29	11421.03	13305.03	17651.04
6	Oil India Ltd.	606.89	577.85	872.71	993.96	1620.95	1210.33
7	Directorate General of Hydrocarbons	699.87	790.53	1168.23	2749.56	3507.08	4986.91
Total		11466.71	15537.09	19964.07	23692.92	28467.59	33819.25
Private Investments							
1	Essar Oil Ltd.	Nil	Nil	Nil	11499	13839	16868
2	Directorate General of Hydrocarbons	1813.84	1856.64	2578.36	2949.78	7843.82	12338.21
Total		1813.84	1856.64	2578.36	14448.78	21682.82	29206.21
Grand Total		13280.55	17393.73	22542.43	38141.7	50150.41	63025.46
% Share of Public Investment to Total Investment		86.3	89.3	88.6	62.1	56.8	53.7
% Share of Private Investment to Total Investment		13.7	10.7	11.4	37.9	43.2	46.3

Source: Material supplied by M/o Petroleum & Natural Gas

Table 7C.2 : Plan Outlay of Public Sector Undertakings

(Rs. in crore)

Sl. No.	Undertaking	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09 (BE)
A.	Exploration & Production	16593.37	19177.47	18132.52	23854.40	28015.09	27966.19	32387.82
1	ONGC	7142.31	10624.70	10849.89	12735.61	16518.84	18346.12	19338
2	OIL	775.00	940.00	1059.56	1205.70	2166.55	1519.68	2230.67
3	GAIL(India) Ltd	1174.00	3741.56	1264.90	1378.87	2305.64	2235.45	3226.01
4	ONGC Videsh Ltd	7502.06	3871.21	4958.17	8534.22	6919.06	4758.94	6825.14
5	IOC	0	0	0	0	0	282.00	256.00
6	HPCL	0	0	0	0	50.00	84.00	200.00
7	BPCL	0	0	0	0	55.00	740.00	312.00
B	Refining & Marketing	3946.12	4395.89	4866.71	5600.85	6767.01	5207.58	10036.83
1	IOC	1886.17	2220.54	2987.27	2896.24	2260.60	2145.00	4483.00
2	HPCL	336.07	240.00	530	857	2583.82	1522.00	1926.50
3	BPCL	544.90	724.90	472.6	807.6	1165.55	685.45	1660.00
4	CPCL	1000.00	850.00	219.3	106.5	90.00	210.24	519.94
5	KRL	12.00	64.00	190	157	*	*	*
6	BRPL	12.98	2.45	17.87	28.11	88.71	457.89	557.39
7	IBP Co. Ltd.	147.00	125.00	240	200	200.00	**	**
8	Numaligarh Refinery Ltd.	7.00	24.00	95	123.4	113.00	100.00	80.00
9	MRPL	0	145.00	114.67	425	265.33	87.00	810.00
C	Petrochemicals	546.59	806.86	1602.89	1851.60	2062.80	2525.78	4007.35
1	BRPL	2.66	2.05	9.53	5.85	8.13	13.30	0.00
2	MRPL	0	0	9.40	25.00	19.67	28.00	15.00
3	IOC	491.01	690.27	1440.68	1679.76	1703.40	2200.90	3761.00
4	CPCL	0	0	0.70	3.50	0	0.76	8.00
5	GAIL	52.82	114.44	142.48	137.39	326.50	146.82	187.35
6	HPCL	0	0	0	0	5.10	127.00	15.00
7	NRL	0	0	0	0	0	9.00	21.00
8	BPCL	0.10	0.10	0.10	0.10	0	0	-
D	Engineering Unit	13.00	13.00	13.00	16.00	18.75	25.00	108.00
1	IBP Co. Ltd	-	-	-	-	-	-	-
2	Balmer Lawrie & Co. Ltd.	10.00	10.00	8	8	13.75	25.00	100.00
3	Biecco Lawrie Limited	3.00	3.00	5.00	8.00	5.00	0	8
Total (A+B+C+D)		21099.08	24393.22	24615.12	31322.85	36863.65	35724.55	46540.00

*KRL is included in BPCL

**IBP Co. Ltd. Is included in IOC.

Source: Material supplied by M/o Petroleum & Natural Gas

Table 7D.1 : Capacity Utilization of Refineries of Crude Oil during 2006-07 to 2008-09

Sl. No	Refinery	(000 Tonnes per annum)					
		2006-07		2007-08		2008-09	
		Crude Oil Processed	Capacity Utilisation (%)	Crude Oil Processed	Capacity Utilisation (%)	Crude Oil Processed	Capacity Utilisation (%)
A	Public Sector Refineries	108172	107.3	112541	106.7	112223	106.4
I	IOC Refineries	46068	103.2	49421	100.1	51367	108.5
	IOC, Digboi	586	90.2	564	86.8	623	95.8
	IOC, Guwahati	839	83.9	920	92.0	1076	107.6
	IOC, Barauni	5469	91.2	5634	93.9	5940	99.0
	IOC, Koyali	12953	94.5	13714	100.1	13852	101.1
	IOC, Haldia	5836	97.3	5715	95.3	6042	100.7
	IOC, Mathura	8883	111.0	8033	100.4	8601	107.5
	IOC, Panipat	9435	129.3	12821	106.8	13070	108.9
	IOC, Bongaigaon	2067	88.0	2020	86.0	2163	92.0
II	HPCL Refineries	16796	129.2	16818	129.4	15807	121.6
	HPCL, Mumbai	7419	134.9	7409	134.7	6652	120.9
	HPCL, Visakh	9377	125.0	9409	125.5	9155	122.1
III	BPCL Refineries	19772	101.4	20880	107.1	20001	102.6
	BPCL, Mumbai	12030	100.3	12746	106.2	12262	102.2
	BPCL, Kochi	7742	103.2	8134	108.5	7739	103.2
IV	CPCL Refineries	10402	99.1	10266	97.8	10136	96.5
	CPCL, Manali	9784	103.0	9802	103.2	9718	102.3
	CPCL, Narimanam	618	61.8	464	46.4	418	41.8
V	NRL, Numaligarh	2504	83.5	2568	85.6	2251	75.0
VI	MRPL, Mangalore	12536	129.4	12525	129.3	12577	129.8
VII	ONGC, Tatipaka	94	120.5	63	80.8	84	107.7
B	Private Refinery	38379	105.2	43562	100.1	48549	67.0
I	RPL, Jamnagar	36616	111.0	36931	111.9	35636	108.0
II	RPL(SEZ),Jamnagar, Gujrat	-	-	-	-	Not reported	-
III	Essar Oil Ltd.(EOL), Vadinar*	1763	50.6	6631	63.2	12913	123.0
	Total (A+B)	146551	106.8	156103	104.8	160772.0	90.3

* Production of Essar Oil Ltd. started from December 2006.

Source: 1. Material supplied by M/o Petroleum & Natural Gas

2. Annual Report published by M/o Petroleum & Natural Gas

Table 7E.1 : Weighted Average of Crude Oil Prices

		(in Rs./MT)			
Year		Basic Price	Royalty	Cess	Sales Tax
2004-05	Offshore Crude	11515	1182	1877	558
	Onshore Crude	8925	1942	1877	500
	Offshore and Onshore Crude	10607	1448	1877	538
2005-06	Offshore Crude	11811	1259	1945	563
	Onshore Crude	7372	2818	1954	490
	Offshore and Onshore Crude	10174	1834	1948	536
2006-07	Offshore Crude	17856	1814	2601	824
	Onshore Crude	14504	3110	2601	812
	Offshore and Onshore Crude	16725	2251	2601	820
2007-08	Offshore Crude	26668	2224	2500	869
	Onshore Crude	24433	3707	2500	940
	Offshore and Onshore Crude	25913	2714	2500	893
2008-09	Offshore Crude	30507	2568	2500	878
	Onshore Crude	28354	4335	2500	1091
	Offshore and Onshore Crude	29796	3152	2500	948

Note : The Weighted average of Crude Oil prices before 2004-05 were not maintained in the Format.

Source: Indian Petroleum & Natural Gas Statistics published by M/o Petroleum & Natural Gas

**Table 7E.2 : Consumer and Producer
Prices of Natural Gas**

(Rs.per thousand Cubic Metre)

Effective Date	Consumer Prices		Producer Prices		
	Off-shore (Landfall Point and On-shore)	For North-Eastern States	ONGC	ONGC (NE States)	OIL (NE States)
01.04.02	2850	1700	2116	1700	1900
01.04.03	2850	1700	2206	1700	1900
01.04.04	2850	1700	2137	1700	1900
01.04.05	2850	1700	2384	1700	1900
01.04.06	3200	1920	3200	1920	3200
01.04.07	3200	1920	3200	1920	3200
01.04.08	3200	1920	3200	1920	3200
01.04.09	3200	1920	3200	1920	3200

Source: Indian Petroleum & Natural Gas Statistics published by M/o Petroleum & Natural Gas

**Table 7E.3 : Trends in Retail Selling Prices
of Selected Petroleum Products in
Metropolitan Towns in India**

Price as on	Mumbai	Kolkata	Delhi	Chennai
Motor Spirit (Rs./Litre)				
01.04.01	31.73	29.03	28.75	30.88
01.04.02	30.78	26.99	26.54	28.49
01.04.03	38.59	35	33.49	36.56
01.04.04	38.83	36.61	33.71	36.79
01.04.05	43.23	40.89	37.99	41.25
01.04.06	49.16	46.9	43.49	47.49
01.04.07	48.41	46.9	42.85	47.48
01.04.08	50.51	48.95	45.52	49.61
01.04.09	44.55	44.05	40.62	44.24
High Speed Diesel (Rs./Litre)				
01.04.01	20.07	16.92	17.06	18.01
01.04.02	21.1	16.97	16.6	18.1
01.04.03	27.88	23.51	22.11	24.65
01.04.04	27.43	23.99	21.73	24.23
01.04.05	32.83	28.72	28.22	29.3
01.04.06	37.57	32.87	30.45	33.72
01.04.07	34.96	32.88	30.25	33.31
01.04.08	36.08	33.92	31.76	34.4
01.04.09	34.45	32.92	30.86	32.82
Superior Kerosene Oil (Rs./Litre)				
01.04.01	7.57	7.76	7.35	7
01.04.02	9.01	9.27	8.98	8.4
01.04.03	9.26	9.3	9.01	8.4
01.04.04	9.26	9.3	9.01	8.4
01.04.05	9.28	9.26	9.02	8.39
01.04.06	9.05	9.3	9.05	8.39
01.04.07	9.05	9.29	9.09	8.39
01.04.08	9.1	9.3	9.09	8.39
01.04.09	9.1	9.75	9.22	8.39
Liquefied Petroleum Gas(Rs./14.2 Kg Cylinder)				
01.04.01	225.2	245.65	222.25	228.65
01.04.02	244.95	265.55	240.45	247.4
01.04.03	250.61	266.3	241.21	248.17
01.04.04	251	266.7	241.6	248.55
01.04.05	297.95	300.5	294.75	288.15
01.04.06	297.95	300.5	294.75	288.15
01.04.07	298	300.5	294.75	288.1
01.04.08	298	300.5	294.75	288.1
01.04.09	312.05	327.25	279.7	314.55

Source: Indian Petroleum & Natural Gas Statistics published by M/o Petroleum & Natural Gas