Ready Reckoner

Snapshot of India's Oil & Gas data

January, 2015

Analysis • Knowledge • Information

Petroleum Planning & Analysis Cell

(Ministry of Petroleum & Natural Gas)

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Highlights

•	**<u>Indigenous Crude Oil Production</u>** **Fields in South Gujarat contributed maximum in loss of production. The field is recording consistently lower crude production due to natural decline in brown field and increasing water cut.**
•	**Production in Assam field was affected due to natural decline in brown field and power failure.**
•	**Crude Oil production in PSC regime was affected by underperformance of Bhagyam field wells.**
•	**<u>Refinery Production:</u>** **At IOC Panipat Refinery, unit DHDT is under planned shutdown w.e.f. 27.1.2015 to 10.2.2015**
•	**Share of high sulphur crude oil to total crude oil processing was 71.9% during April-January, 2015 as compared to 74.0% during the same period last year.**
•	**<u>Petroleum Product Consumption:</u>** **Consumption of all petroleum products registered a growth of 2.7% in January, 2015 as compared to that in January, 2014. Except for SKO, Naphtha, Lubes, Bitumen & ATF, all other products have recorded positive growth during January, 2015 and a cumulative growth of 3.8% during April-January, 2015.**
•	**LPG consumption for the seventeenth month in a row recorded a growth of 9.0% during January, 2015 and a cumulative growth of 11.3% during the period April-January, 2015.**
•	**Based on high sales of 2 and 4-wheelers and shift of consumers preference for petrol driven vehicles, MS consumption registered a growth of 17.7% during January, 2015 and cumulative growth of 10.5% during April-January, 2015**

1. Selected Indicators of the Indian Economy

	Economic Indicators	Unit/Base	2011-12	2012-13	2013-14 (P)	2014-15 (P)
1	Population (as on 1st March 2011)	Billion	1.2	-	-	-
2	GDP at Factor Cost (Constant prices)	Growth %	6.7	4.5 RE	5.0 H2	5.5 H2
3	Agricultural Production (Food grains)	MMT	259.3	257.1	264.8 4th AE	120.3 Ist AE
		Growth %	6.1	-0.8	3.0	-7.0
4	Gross Fiscal Deficit	%	-5.7	-4.8	-4.6 (RE)	-4.1 (BE)

	Economic Indicators	Unit/Base	2013-14	January		April-January	
				2014	2015	2014	2015
5	Index of Industrial Production@	Growth %	2.8	0.1	1.7	0.1	2.1
6	Imports	$ Billion	450.9	36.3	32.2	375.3	383.4
7	Exports	$ Billion	312.4	26.9	23.9	258.7	265.0
8	Trade Balance	$ Billion	-138.6	-9.5	-8.3	-116.5	-118.4
9	Foreign Exchange Reserves	$ Billion	303.7	291.1	327.9	-	-

@ IIP is for the month of December & cumulative April-December

2. Import Dependency

	Petroleum & Natural Gas Sector	Unit/Base	2013-14 (P)	January 2014	January 2015 (P)	April-January 2014	April-January 2015 (P)
1	Crude Oil Production In India	MMT	37.8	3.3	3.2	31.7	31.1
2	Consumption of Petroleum Products	MMT	158.4	13.5	13.9	131.3	136.3
3	Production of Petroleum Products	MMT	220.2	18.4	19	183.2	184.1
4	Imports & Exports:						
	Crude Oil Imports	$ Billion	142.9	11.8	6.0	119.6	101.8
	Petroleum Products (POL) Imports	$ Billion	12.3	1.3	0.8	10.1	10.5
	Gross Petroleum Imports (Crude + POL)	$ Billion	155.2	13.1	6.8	129.7	112.3
	Petroleum Products Exports	$ Billion	60.7	3.8	2.5	50.4	42.0
5	Petroleum Imports as % of India's Gross Imports	%	34.4	36.1	21.1	34.6	29.3
6	Petroleum Exports as % of India's Gross Exports	%	19.4	14.1	10.5	19.5	15.8
7	Import Dependency (Based on Consumption)	%	77.6%	76.45%	77.59%	77.24%	78.11%

3. Estimated Value of Crude oil imports during 2014-15

Petroleum & Natural Gas Sector	Quantity (MMT)	$ Million	Rs. Crore
Crude Oil Imports	191.84	113,600	692,273

(Actual for Apri'14-Ja'15, Feb-Mar 2015 estimated considering Indian Crude basket at $50/bbl and average exchange rate of Rs. 62/$)

Impact of variation in Crude oil price & Exchange rate on Crude oil imports during Q4 of 2014-15:

- If Crude prices increases by One $/bbl - Net Import bill increases by Rs. 1,462 crores ($ 0.24 bn)
- If Exchange rate of $ increases by Rs. 1/$ - Net Import bill increases by Rs. 1,179 crores ($ 0.19 bn)

4. Indigenous Crude Oil Production (Million Metric Tonne)					
Details	**2013-14 (P)**	**January**		**April-January**	
		2014	**2015 (P)**	**2014**	**2015 (P)**
ONGC	19.2	1.6	1.6	16.1	15.6
OIL	3.5	0.3	0.3	3.0	2.9
Private / JVs	12.0	1.1	1.0	10.1	9.9
Total Crude Oil	**34.7**	**3.0**	**2.9**	**29.1**	**28.3**
Condensate	3.1	0.3	0.3	2.6	3.04
Total (Crude Oil + Condensate) (MMT)	**37.8**	**3.3**	**3.2**	**31.7**	**31.4**
Total (Crude Oil + Condensate) (Million Barrels)	277.04	23.9	23.4	232.3	229.9

5. Domestic Oil & Gas Production vis a vis Overseas Production					
Year	**2013-14 (P)**	**January**		**April-January**	
		2014	**2015 (P)**	**2014**	**2015 (P)**
Total Domestic (MMTOE)	73.2	6.4	6.1	61.5	59.6
Overseas production of OVL (MMTOE)	8.4	0.713	0.809	6.906	7.368
Overseas Production as % of Domestic	11.5%	11.2%	13.3%	11.2%	12.4%

6. 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	**0.67**	**MMSCMD**

7. Refineries: Installed Capacity and Crude Oil Processing (MMTPA / MMT)								
	Company	**Refinery**	**Installed Capacity** (1.4.2014)	**Crude Oil Processing**				
				2013-14 (P)	**January**		**April-January**	
					2014	**2015** (P)	**2014**	**2015** (P)
1	IOCL	Barauni	6.0	6.5	0.6	0.5	5.4	5.0
2		Koyali	13.7	13.0	1.2	1.2	10.9	11.2
3		Haldia	7.5	8.0	0.7	0.6	6.6	6.4
4		Mathura	8.0	6.6	0.6	0.7	5.3	7.0
5		Panipat	15.0	15.1	1.3	1.3	12.7	11.7
6		Guwahati	1.0	1.0	0.1	0.1	0.9	0.8
7		Digboi	0.7	0.7	0.1	0.1	0.6	0.5
8		Bongaigaon	2.4	2.3	0.2	0.2	1.9	2.0
		IOCL TOTAL	**54.2**	**53.1**	**4.7**	**4.6**	**44.3**	**44.7**
9	HPCL	Mumbai	6.5	7.7	0.6	0.7	6.4	6.1
10		Visakhapatnam	8.3	7.8	0.8	0.8	6.2	7.2
11	HMEL	HMEL-Bhatinda	9.0	9.3	0.9	0.7	7.6	5.9
		HPCL-TOTAL	**23.8**	**24.8**	**2.3**	**2.3**	**20.2**	**19.2**
12	BPCL	Mumbai	12.0	12.7	0.9	1.2	10.5	10.6
13		Kochi	9.5	10.3	0.9	0.9	8.5	8.6
14	BORL	Bina	6.0	5.4	0.3	0.6	4.6	5.2
		BPCL-TOTAL	**27.5**	**28.4**	**2.2**	**2.7**	**23.6**	**24.4**

	Company	Refinery	Installed Capacity (1.4.2014)	Crude Oil Processing				
				2013-14 (P)	January		April-January	
					2014	2015 (P)	2014	2015 (P)
15	CPCL	Manali	10.5	10.1	0.8	0.9	8.3	8.6
16		CBR	1.0	0.6	0.1	0.0	0.4	0.5
		CPCL-TOTAL	**11.5**	**10.7**	**0.9**	**0.9**	**8.7**	**9.0**
17	NRL	Numaligarh	3.0	2.6	0.2	0.2	2.2	2.4
18	ONGC	Tatipaka	0.1	0.1	0.01	0.003	0.06	0.04
19		MRPL-Mangalore	15.0	14.6	1.2	1.4	12.0	12.0
		ONGC TOTAL	**15.1**	**17.3**	**1.5**	**1.6**	**14.2**	**14.4**
20	RIL	Jamnagar (DTA)	33.0	30.3	2.2	2.8	25.6	26.4
21		Jamnagar (SEZ)	27.0	37.7	3.2	3.0	31.5	31.2
22	EOL	Vadinar	20.0	20.2	1.7	1.8	16.9	17.1
	All India		**215.1**	**222.4**	**18.8**	**19.7**	**185.1**	**186.4**

8. High Sulphur (HS) & Low Sulphur (LS) Crude Oil Processing (MMT)

	Type of crude	2013-14 (P)	January		April-January	
			2014	2015 (P)	2014	2015 (P)
1	HS Crude	160.2	13.0	14.6	133.1	134.8
2	LS Crude	62.2	5.8	5.1	52.1	51.6
Total Crude		**222.5**	**222.5**	**18.8**	**19.7**	**185.2**
Share of HS Crude of total crude processing		**72.04%**	**72.04%**	**69.14%**	**74.03%**	**71.87%**

9. Gross Refining Margins (GRM) of Refineries ($/bbl)						
Company	**Refinery**	**2011-12**	**2012-13**	**2013-14**	**Apr-Dec'13**	**Apr-Dec'14**
IOCL	Barauni	0.39	2.40	6.68	8.60	-7.00
	Koyali	5.07	4.61	4.52	4.62	3.35
	Haldia	2.38	0.85	2.84	4.46	-5.63
	Mathura	0.59	0.55	2.10	4.07	-2.99
	Panipat	4.39	3.34	3.62	3.69	-4.76
	Guwahati	11.94	9.52	6.38	3.77	1.63
	Digboi	14.85	20.81	15.41	12.91	8.65
	Bongaigaon	6.25	5.26	6.71	7.68	-7.57
	Average	**3.63**	**3.16**	**4.24**	**4.97**	**-2.66**
BPCL	Kochi	3.09	5.36	4.80	4.09	1.08
	Mumbai	1.73	4.67	3.95	3.04	2.89
	Average	**2.29**	**4.97**	**4.33**	**3.50**	**2.08**
HPCL	Mumbai	1.74	2.08	5.38	4.65	2.77
	Visakhapatnam	2.95	2.08	1.50	1.13	-0.43
	Average	**2.39**	**2.08**	**3.43**	**2.94**	**1.04**
CPCL	Chennai	4.16	0.99	4.06	4.86	0.63
MRPL	Mangalore	5.60	2.45	2.67	2.42	-3.58
NRL	Numaligarh	12.45	10.52	12.09	13.06	11.58
BORL	Bina	-	7.00	7.70	8.20	2.50
RIL	Jamnagar	8.60	9.20	8.10	7.80	8.10
Essar	Vadinar	4.23	7.96	7.98	7.27	7.69

10. GRM of North East Refineries excluding Excise Duty Benefit						
						$/bbl
Company	**Refinery**	**2011-12**	**2012-13**	**2013-14**	**Apr-Dec'13**	**Apr-Dec'14**
IOCL	Guwahati	3.73	3.43	0.88	-1.49	-4.58
	Digboi	6.41	13.25	8.50	5.77	1.56
	Bongaigaon	0.56	0.25	2.34	3.33	-12.12
NRL	Numaligarh	5.80	4.83	6.98	7.87	5.93

11. Natural Gas at a Glance					
					(MMSCM)
	2013-14 (P)	**January**		**April-January**	
		2014	**2015 (P)**	**2014**	**2015 (P)**
Gross Production	35390.9	3072.9	2871.7	29755.0	28211.0
Net Production (Excluding Flair Gas)	34554.6	3004.2	2787.7	29047.2	27422.8
LNG Import	**14257.0**	**1095.8**	**1246.8**	**11873.3**	**13254.0**
Total Consumption (Net Production + Import)	**48811.6**	**4100.0**	**4034.5**	**40920.5**	**40676.8**
Total Consumption (in BCM)	**48.8**	**4.1**	**4.0**	**40.9**	**40.7**

Reliance import figure is not included)

12. Consumption of Petroleum Products (Million Metric Tonnes)

Products	January 2014		January 2015 (P)		Apr-Jan. 2014		Apr-Jan. 2015 (P)	
	Production	Consumption	Production	Consumption	Production	Consumption	Production	Consumption
LPG	1.1	1.5	1.0	1.6	8.3	13.4	8.1	14.9
MS	2.5	1.4	2.8	1.6	25.2	14.3	27.0	15.8
NAPHTHA	1.6	1.0	1.4	0.8	15.4	9.4	14.6	8.9
ATF	0.9	0.5	1.0	0.5	9.3	4.6	9.1	4.6
SKO	0.7	0.6	0.6	0.6	6.2	6.0	6.4	5.9
HSD	7.9	5.6	8.2	5.8	77.8	56.9	79.0	57.7
LDO	0.0	0.03	0.0	0.04	0.4	0.3	0.3	0.3
LUBES	0.1	0.4	0.1	0.3	0.8	2.7	0.7	2.4
FO/LSHS	1.0	0.5	1.0	0.5	10.8	5.2	9.7	5.0
BITUMEN	0.4	0.5	0.4	0.4	3.8	3.8	3.7	3.8
OTHERS	2.3	1.6	2.5	1.8	25.2	14.7	25.4	16.9
ALL INDIA	**18.4**	**13.5**	**19.0**	**13.9**	**183.2**	**131.3**	**184.1**	**136.3**
Growth (%)	1.0	0.5	1.0	0.5	10.8	5.2	9.7	5.0

13. Self Sufficiency in Petroleum Products (Million Metric Tonnes)

Details	2013-14 (P)	January		April-January	
		2014	2015 (P)	2014	2015 (P)
1. Indigenous Crude Oil Processing :	33.9	3.1	3.0	28.5	28.7
a) Products from Indigenous Crude *(93.3% of crude oil processed)*	31.6	2.9	2.8	26.6	26.7
b) Products from Fractionators (Including LPG and Gas)	3.8	0.3	0.3	3.3	3.1
2. Total Production from Indigenous Crude & Condensate **(a + b)**	35.5	3.2	3.1	29.9	29.8
3. Total Domestic Consumption	158.4	13.5	13.9	131.3	136.3
% Self Sufficiency (2 / 3)	**22.4%**	**23.6%**	**22.4%**	**22.8%**	**21.9%**

14. Industry Marketing Infrastructure (as on 31.3.2014) (Provisional)								
Particulars	**IOCL**	**BPCL**	**HPCL**	**RIL**	**ESSAR**	**SHELL**	**Others**	**Total**
Terminal/ Depots **(Nos.)**	135	82	95	5	2		1	**320**
Aviation Fuel Stations **(Nos.)**	98	36	33	27	3	5	2	**204**
Retail Outlets (total) **(Nos.)**	23993	12123	12869	1400	1382	100	3	**51870**
LPG Distributors (total) **(Nos.)**	7035	3355	3506					**13896**
SKO/LDO Dealers **(Nos.)**	3930	1014	1638					**6582**
LPG Bottling **(TMTPA)**	7170	3075	2960					**13205**
Rural ROs **(Nos.)**	6002							**6002**
RGGLVY **(Nos.)**	1421	817	798					**3036**
LPG Consumers **(Nos. Crores)**	8.18	4.12	4.33					**16.63**

15. Major Pipeline network (as on 1.4.2014)									
Nature of Pipeline		**GAIL**	**Reliance**	**GSPCL**	**AGC**	**IOCL**	**ONGC**		**Total**
Natural Gas	Length (KM)	10841	1469	1874	1000	132	24		**15340**
	Cap (MMSCMD)	243.5	80.0	50.0	6.0	9.5	6.0		**395.0**

		ONGC	**OIL**	**Cairn**	**HMEL**	**IOCL**	**BPCL**	**HPCL**	**Other**	**Total**
Crude Oil	Length (KM)	1195	1193	670	1017	4448	937	-	-	**9460**
	Cap (MMTPA)	56.9	8.4	8.7	9.0	40.4	6.0	-	-	**129.4**
Products	Length (KM)	-	654	-	-	6632	1697	2407	2693	**14083**
	Cap (MMTPA)	-	1.7	-	-	36.6	10.8	20.5	8.7	**78.3**

***Others** include GAIL and Petronet India*

16. Information on Prices, Taxes and Under-recoveries

Sales & profit of Petroleum Sector (Rs. Crores)

Apr-Dec 2014	Turnover	PAT
Upstream Companies	109831	18285
Downstream Cos.	691330	1790
Standalone Refineries	86320	-2902
Private/JVs	385051	18161

Customs & Excise Duty rates

	Customs duty	Excise duty
Crude oil	Nil+Rs.50/MT as NCCD	NIL+Rs.4500/ MT Cess + Rs. 50/ MT NCCD
Petrol	2.50%	Rs.17.46/Ltr
Diesel	2.50%	Rs.10.26/Ltr
PDS SKO	Nil	NIL
Non PDS SKO	5%	14%
Sub. Dom LPG	Nil	Nil
Non Domestic LPG	5%	8%
Furnace Oil	5%	14%
Naphtha	5%	14%
ATF	NIL	8%

Price buildup of Petroleum products (Rs./litre/Cy.)

	Petrol	Diesel
Price before taxes and dealer comm.	27.82	29.14
Central taxes	17.96	10.80
State taxes	9.55	5.43
Dealer comm.	1.99	1.25
Retail Selling Price	57.31	46.62
	PDS SKO*	**Sub. Dom LPG**
Price before taxes and dealer comm.	13.55	373.41
Central taxes	0	0
State taxes	0.44	0
Dealer comm.	1.15	44.06
Retail Selling Price	15.14	417.00

*At Mumbai, other products at Delhi

Change in Ex. Rate/ Crude price : Impact on Under-recoveries

(Rs. Crores)	Rs.1/$ Ex. Rate	$1/bbl Crude
Impact on Under-recovery	1070	1390

16. Information on Prices, Taxes and Under-recoveries

Under-recoveries & Burden Sharing

	2013-14	Apr-Dec`13	Apr-Dec`14
Per unit under-recovery (Rs./litre/Cyl.)			
Diesel	8.39	8.49	2.70*
PDS SKO	33.98	33.12	31.69
Sub. Dom LPG	499.52	440.39	428.31
Total Under-recoveries (Rs. Crores)			
Diesel	62837	47655	10935*
PDS SKO	30575	22373	21216
Sub. Dom LPG	46458	30604	34941
Total	139869	100632	67091
Burden Sharing (Rs. Crores)			
Government	70772	35772	22085
Upstream	67021	47971	42822
OMCs	2076	16889	2184
Fiscal Subsidy under Govt. Schemes (Rs. Crores			
Fiscal Subsidy under Govt. Schemes (Rs. Crores)			
PDS SKO	681	601	**
Sub. Dom LPG	1920	1707	**

* Deregulated w.e.f. 19th October 2014

**Scheme was extended till 31.3.2014. Further extension yet to be approved.

International Prices/ Exchange rates ($/bbl)

	2012-13	2013-14	Apr-Dec14
Crude (Indian Basket)	107.97	105.52	94.56
Petrol	118.98	114.31	105.61
Diesel	121.97	119.41	106.77
Kerosene	123.11	118.80	106.94
LPG ($/MT)	885.20	880.49	754.39
FO ($/MT)	632.52	595.79	527.94
Naphtha ($/MT)	888.49	881.30	801.82
Exchange (Rs./$)	54.45	60.50	60.77

Borrowings of OMCs (Rs. Crores)

	2012-13	2013-14	Apr-Dec`14
IOCL	80894	86263	58511
BPCL	23839	20322	14012
HPCL	33789	32164	21962

Petroleum Sector Contribution to Central/State Govt.

	2012-13	2013-14	Apr-Sep`14
Central Government	142626	152900	70137
State Government	136034	152460	80957
Total (Rs. Crores)	278660	305360	151094

Subsidy as a % of GDP

	2011-12	2012-13	2013-14
Petroleum Subsidy	1.70	1.75	1.37

17. Conversion Factors and Volume Conversion

Weight to Volume Conversion

Product	Weight (MT)	Volume (KL)	Barrel (bbl)
LPG	1	1.844	11.60
Petrol (MS)	1	1.4110	8.50
Diesel (HSD)	1	1.2100	7.45
Kerosene (SKO)	1	1.2850	7.90
ATF	1	1.2880	7.90
Light Diesel Oil (LDO)	1	1.0720	6.75
Furnace Oil (FO)	1	1.0424	6.55
Crude Oil	1	1.1700	7.33

Volume Conversion

From	To
1 bbl (British Barrel)	159 litres
1 bbl (British Barrel)	42 US Gallons
1 US Gallon	3.78 litres
1 Kilo litre (KL)	6.29 bbl
1 million barrels per day	49.8 MMTPA
Energy Conversion	
1 Kilocalorie (kcal)	4.187 kJ
1 Kilocalorie (kcal)	3.968 Btu
1 Kilowatt-hour (kWh)	860 kcal
1 Kilowatt-hour (kWh)	3412 Btu

Exclusive Economic Zone

200 Nautical Miles	370.4 Kilometers

Natural Gas Conversions

1 Standard Cubic Metre	35.31 Cubic Feet	1 MMBTU	25.2 SCM @10000 kcal/SCM
1 BCM/year of Gas	2.74 MMSCMD	GCV (Gross Calorific Value	10000 kcal/SCM
1 TCF of Gas Reserve	3.88 MMSCMD	NCV (Net Calorific Value)	90% of GCV
1 MMTPA of LNG	3.60 MMSCMD	Gas required for 1 MW power generation	4128 SCM/day
1 MT of LNG	1314 SCM	Power generation from 1 MMSCMD of gas	242 MW