

# Ready Reckoner

Snapshot of India's Oil & Gas data

October, 2014



Analysis • Knowledge • Information

**Petroleum Planning & Analysis Cell**

(Ministry of Petroleum & Natural Gas)

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# Highlights

- Visakhapatnam refinery was safely shutdown on 12<sup>th</sup> October, 2014 as a precautionary measure for cyclone Hudhud. The refinery resumed production on 22<sup>nd</sup> October, 2014 and units were stabilized by 26<sup>th</sup> October, 2014.
- There was a minor fire incident in CCR unit at HPCL's Mumbai Refinery which adversely affected availability of MS in that region.
- The consumption of all petroleum products registered a decline in growth of -1.0% in October, 2014 as compared to that in October, 2013 mainly due to -3.0% growth in HSD, -3.8% in Naphtha, -18.0% in FO/LSHS and -15.7% growth in Bitumen consumption during the month.
- Consumption of MS registered a growth of 10.5% mainly due to increased vehicular movement during the festive season, while LPG consumption growth was at 7.1% during October, 2014 mainly on account of release of new connections & DBCs and low base of previous year.
- PSU refineries registered low GRMs during the second quarter of the current financial year, due to inventory losses arising out of falling crude oil prices in the last couple of months.
- Import dependency (based on consumption) has gone up to 78.0% during April-October, 2014 from a level of 77.2% during the same period last year, due to lower domestic crude oil production and increase in consumption during the current year.

### 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 1 <sup>st</sup> March 2011)	Billion	1.2	-	-	-
2	GDP at Factor Cost (Constant prices)	Growth %	6.7 2 <sup>nd</sup> RE	4.5 1 <sup>st</sup> RE	4.7 PE	5.7 Q1
3	Agricultural Production (Food grains)	MMT	259.29	257.1	264.8 4 <sup>th</sup> AE	120.3 1 <sup>st</sup> 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	October		April-October	
				2013	2014	2013	2014
5	Index of Industrial Production@	Growth %	2.8	2.7	2.5	0.5	2.8
6	Imports	\$ Billion	450.9	38.1	39.5	268.6	273.6
7	Exports	\$ Billion	312.4	27.5	26.1	181.2	189.8
8	Trade Balance	\$ Billion	-138.6	-10.6	-13.4	-87.3	-83.8
9	Foreign Exchange Reserves	\$ Billion	303.7	281.3	315.9	-	-

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

2. Import Dependency							
Petroleum & Natural Gas Sector		Unit/Base	2013-14 (P)	October		April-October	
				2013	2014 (P)	2013	2014 (P)
1	Crude Oil Production In India	MMT	37.8	3.18	3.22	22.03	21.83
2	Consumption of Petroleum Products	MMT	158.2	13.2	12.5	90.9	93.8
3	Production of Petroleum Products	MMT	220.2	18.37		128.48	
4	Imports & Exports:						
	Crude Oil Imports	\$ Billion	142.9	11.89	10.17	84.25	80.13
	Petroleum Products (POL) Imports	\$ Billion	12.3	1.13	1.08	6.7	7.92
	Gross Petroleum Imports (Crude + POL)	\$ Billion	155.2	13.02	11.25	90.95	88.05
	Petroleum Products Exports	\$ Billion	60.7	5.38	5.03	36.27	32.59
5	Petroleum Imports as % of India's Gross Imports	%	34.4	34.2	28.5	33.9	32.2
6	Petroleum Exports as % of India's Gross Exports	%	19.4	19.6	19.3	20.0	17.2
7	Import Dependency (Based on Consumption)	%	77.6%	76.54%	77.92%	77.24%	78.04%

3. Estimated Balance of Trade during 2014-15				
Petroleum & Natural Gas Sector		Quantity (MMT)	\$ Million	Rs. Crore
Net Imports (Crude, POL & LNG)		142.57	103,366	625,363

(Considering Indian Crude basket at 105.52/bbl and average exchange rate of Rs. 60.50/\$)

- If Crude prices increases by One \$/bbl - Net Import bill increases by Rs. 8,345 crores (\$ 1.38 bn)
- If Exchange rate of \$ increases by Rs. 1/\$ - Net Import bill increases by Rs. 10,337 crores (\$ 1.71 bn)

<b>4. Indigenous Crude Oil Production (Million Metric Tonne)</b>					
Details	2013-14 (P)	October		April-October	
		2013	2014 <sup>(P)</sup>	2013	2014 <sup>(P)</sup>
ONGC	19.2	1.61	1.58	11.25	10.95
OIL	3.5	0.3	0.3	2.11	2.01
Pvt / JVs	12.0	1.0	1.02	6.87	6.83
<b>Total Crude Oil</b>	<b>34.7</b>	<b>2.92</b>	<b>2.90</b>	<b>20.23</b>	<b>19.79</b>
Condensate	3.1	0.26	0.32	1.79	2.05
<b>Total (Crude Oil +Condensate) (MMT)</b>	<b>37.8</b>	<b>3.18</b>	<b>3.22</b>	<b>22.03</b>	<b>21.83</b>
Total (Crude Oil +Condensate) (Million Barrels)	277.04	23.31	23.60	161.48	160.01
<b>5. Domestic Oil &amp; Gas Production vis a vis Overseas Production</b>					
Year	2013-14 (P)	October		April-October	
		2013	2014 <sup>(P)</sup>	2013	2014 <sup>(P)</sup>
Total Domestic (MMTOE)	73.2	6.1	6.1	42.8	41.5
Overseas production of OVL (MMTOE)	8.4	0.650	0.726	4.764	5.023
Overseas Production as % of Domestic	11.5%	10.6%	12.0%	11.1%	12.1%
<b>6. Coal Bed Methane (CBM) Gas development in India</b>					
Prognosticated CBM Resources			92		TCF
Established CBM resources			8.92		TCF
Total available Coal bearing area			26000		Sq. KM
Exploration Initiated			17000		Sq. KM
Blocks Awarded			33		Nos.
<b>Commercial production of CBM gas</b>			<b>0.23</b>		<b>MMSCMD</b>

7. Refineries: Installed Capacity and Crude Oil Processing (MMTPA / MMT)								
	Company	Refinery	Installed Capacity (1.4.2014)	Crude Oil Processing				
				2013-14 ( <sup>P</sup> )	October		April-October	
					2013	2014 ( <sup>P</sup> )	2013	2014 ( <sup>P</sup> )
1	IOCL	Barauni	6.0	6.5	0.57	0.53	3.70	3.65
2		Koyali	13.7	13.0	1.18	1.16	7.26	7.78
3		Haldia	7.5	8.0	0.62	0.61	4.59	4.50
4		Mathura	8.0	6.6	0.00	0.68	4.00	4.93
5		Panipat	15.0	15.1	1.37	1.32	8.71	7.85
6		Guwahati	1.0	1.0	0.09	0.08	0.60	0.58
7		Digboi	0.7	0.7	0.06	0.05	0.38	0.36
8		Bongaigaon	2.4	2.3	0.22	0.21	1.34	1.32
		<b>IOCL TOTAL</b>	<b>54.2</b>	<b>53.1</b>	<b>4.12</b>	<b>4.66</b>	<b>30.59</b>	<b>30.93</b>
9	HPCL	Mumbai	6.5	7.7	0.69	0.60	4.45	4.04
10		Visakhapatnam	8.3	7.8	0.58	0.50	4.16	4.78
11	HMEL	HMEL-Bhatinda	9.0	9.3	0.72	0.90	5.16	3.40
		<b>HPCL-TOTAL</b>	<b>23.8</b>	<b>24.8</b>	<b>1.99</b>	<b>2.00</b>	<b>13.77</b>	<b>12.22</b>
12	BPCL	Mumbai	12.0	12.7	1.18	1.00	7.38	7.15
13		Kochi	9.5	10.3	0.92	0.60	6.29	6.17
14	BORL	Bina	6.0	5.4	0.28	0.90	3.19	3.46
		<b>BPCL-TOTAL</b>	<b>27.5</b>	<b>28.4</b>	<b>2.38</b>	<b>2.50</b>	<b>16.86</b>	<b>16.78</b>

	Company	Refinery	Installed Capacity (1.4.2014)	Crude Oil Processing				
				2013-14 ( <sup>P</sup> )	October		April-October	
					2013	2014 ( <sup>P</sup> )	2013	2014 ( <sup>P</sup> )
15	CPCL	Manali	10.5	10.1	0.62	0.81	6.01	5.89
16		CBR	1.0	0.6	0.05	0.04	0.28	0.32
		<b>CPCL-TOTAL</b>	<b>11.5</b>	<b>10.7</b>	<b>0.67</b>	<b>0.85</b>	<b>6.29</b>	<b>6.21</b>
17	NRL	Numaligarh	3.0	2.6	0.25	0.25	1.46	1.70
18	ONGC	Tatipaka	0.1	0.1	0.01	0.01	0.04	0.03
19		MRPL-Mangalore	15.0	14.6	1.31	1.20	8.30	7.91
		<b>ONGC TOTAL</b>	<b>15.1</b>	<b>17.3</b>	<b>1.57</b>	<b>1.50</b>	<b>9.80</b>	<b>9.64</b>
20	RIL	Jamnagar (DTA)	33.0	30.3	2.66	2.97	18.63	18.08
21		Jamnagar (SEZ)	27.0	37.7	3.21	3.19	22.00	21.98
22	EOL	Vadinar	20.0	20.2	1.75	1.74	12.07	11.91
		<b>All India</b>	<b>215.1</b>	<b>222.4</b>	<b>18.34</b>	<b>19.11</b>	<b>130.00</b>	<b>127.78</b>

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

	Type of crude	2013-14 ( <sup>P</sup> )	October		April-October	
			2013	2014 ( <sup>P</sup> )	2013	2014 ( <sup>P</sup> )
		1	HS Crude	158.3	12.91	14.23
2	LS Crude	64.1	5.26	4.88	35.66	35.80
	<b>Total Crude</b>	<b>222.4</b>	<b>18.17</b>	<b>19.11</b>	<b>130.0</b>	<b>127.78</b>
	<b>Share of HS Crude of total crude processing</b>	<b>72.04%</b>	<b>70.36%</b>	<b>74.45%</b>	<b>72.57%</b>	<b>71.98%</b>



9. Gross Refining Margins (GRM) of Refineries (\$/bbl)						
Company	Refinery	2011-12	2012-13	2013-14	Apr-Sept'13	Apr-Sept'14
IOCL	Barauni	0.39	2.40	6.68	9.93	0.81
	Koyali	5.07	4.61	4.52	3.30	3.76
	Haldia	2.38	0.85	2.84	4.49	-1.12
	Mathura	0.59	0.55	2.10	5.47	-3.14
	Panipat	4.39	3.34	3.62	5.20	-0.64
	Guwahati	11.94	9.52	6.38	0.35	-6.09
	Digboi	14.85	20.81	15.41	11.10	4.37
	Bongaigaon	6.25	5.26	6.71	4.02	-1.34
	<b>Average</b>	<b>3.63</b>	<b>3.16</b>	<b>4.24</b>	<b>5.19</b>	<b>0.09</b>
BPCL	Kochi	3.20	5.36	4.80	5.11	1.74
	Mumbai	3.12	4.67	3.95	3.76	2.89
	<b>Average</b>	<b>3.16</b>	<b>4.97</b>	<b>4.33</b>	<b>4.38</b>	<b>2.36</b>
HPCL	Mumbai	1.74	2.08	5.38	4.37	3.89
	Visakhapatnam	2.95	2.08	1.50	2.12	0.67
	<b>Average</b>	<b>2.39</b>	<b>2.08</b>	<b>3.43</b>	<b>3.27</b>	<b>2.09</b>
CPCL	Chennai	4.16	0.99	4.06	5.76	2.11
MRPL	Mangalore	5.60	2.45	2.67	3.98	-1.79
NRL	Numaligarh	12.45	10.52	12.09	5.48	9.79
BORL	Bina	-	7.00	7.70	9.20	5.70
RIL	Jamnagar	8.60	9.20	8.10	8.00	8.50
Essar	Vadinar	4.23	7.96	7.98	6.97	8.05

### 10. GRM of North East Refineries excluding Excise Duty Benefit

							\$/bbl
Company	Refinery	2011-12	2012-13	2013-14	Apr-Sept'13	Apr-Sept'14	
IOCL	Guwahati	3.73	3.43	0.88	-4.79	-11.44	
	Digboi	6.41	13.25	8.50	3.97	-2.50	
	Bongaigaon	0.56	0.25	2.34	-0.22	-5.42	
NRL	Numaligarh	5.80	4.83	6.98	0.39	4.80	

### 11. Natural Gas at a Glance

						<i>(MMSCM)</i>
	2013-14 (P)	October		April-October		
		2013	2014 (P)	2013	2014 (P)	
Gross Production	35390.91	2960.95	2838.27	20787.16	19632.16	
Net Production (Excluding Flair Gas)	34554.64	2876.96	2751.71	20292.07	19097.33	
<b>LNG Import</b>	<b>14257.0</b>	<b>1343.55</b>	<b>1514.47</b>	<b>8384.6</b>	<b>9453.87</b>	
<b>Total Consumption (Net Production + Import)</b>	<b>48811.6</b>	<b>4220.51</b>	<b>4266.18</b>	<b>28676.67</b>	<b>28551.2</b>	
<b>Total Consumption (in BCM)</b>	<b>48.81</b>	<b>4.22</b>	<b>4.26</b>	<b>28.67</b>	<b>28.55</b>	

*(Reliance import figure is not included)*

12. Consumption of Petroleum Products (Million Metric Tonnes)								
Products	October 2013		October 2014 <sup>(P)</sup>		Apr-Oct. 2013		Apr-Oct. 2014 <sup>(P)</sup>	
	Production	Consumption	Production	Consumption	Production	Consumption	Production	Consumption
LPG	0.64	1.4	0.85	1.5	4.25	9.1	5.36	10.1
MS	2.47	1.5	2.82	1.6	17.76	10.0	18.51	11.0
NAPHTHA	1.36	0.9	1.47	0.9	10.01	6.5	10.32	6.5
ATF	0.97	0.5	1.06	0.5	6.45	3.1	6.09	3.2
SKO	0.57	0.6	0.68	0.6	4.29	4.2	4.55	4.1
HSD	7.66	5.6	7.96	5.4	54.55	39.5	54.1	39.7
LDO	0.04	0.03	0.03	0.02	0.26	0.2	0.02	0.2
LUBES	0.08	0.3	0.07	0.2	0.55	1.8	0.05	1.7
FO/LSHS	1.28	0.6	1.00	0.5	8.24	3.8	6.87	3.5
BITUMEN	0.32	0.3	0.28	0.3	2.51	2.4	2.52	2.6
OTHERS	1.11	1.6	2.74	1.6	7.12	10.4	10.74	11.2
<b>ALL INDIA</b>	<b>18.37</b>	<b>13.2</b>	<b>18.96</b>	<b>13.1</b>	<b>128.48</b>	<b>90.9</b>	<b>126.72</b>	<b>93.8</b>
<b>Growth (%)</b>			<b>3.2%</b>	<b>-1.0%</b>			<b>-1.4%</b>	<b>3.2%</b>

13. Self Sufficiency in Petroleum Products (Million Metric Tonnes)					
Details	2013-14 <sup>(P)</sup>	October		April-October	
		2013	2014 <sup>(P)</sup>	2013	2014 <sup>(P)</sup>
1. Indigenous Crude Oil Processing :	33.9	2.98	2.76	19.71	19.78
<b>a)</b> Products from Indigenous Crude (93.3% of crude oil processed)	31.6	2.78	2.57	18.39	18.40
<b>b)</b> Products from Fractionators (Including LPG and Gas)	3.8	0.32	0.32	2.3	2.16
2. Total Production from Indigenous Crude & Condensate ( <b>a + b</b> )	35.5	3.1	2.89	20.69	20.56
3. Total Domestic Consumption	158.2	13.2	12.5	90.9	93.8
<b>% Self Sufficiency (2 / 3)</b>	<b>22.40%</b>	<b>23.45%</b>	<b>22.08%</b>	<b>22.76%</b>	<b>21.91%</b>

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
	Cap (MMTPA)	-	1.7	-	-	36.6	10.8	20.5	8.7

*Others include GAIL and Petronet India*

## 16. Information on Prices, Taxes and Under-recoveries

Sales & profit of Petroleum Sector (Rs. Crores)		
Apr-Sept 2014	Turnover	PAT
Upstream Companies	74124	13611
Downstream Cos.	475484	4201
Standalone Refineries	60000	-533
Private/JVs	268483	12839

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.11.02/Ltr
Diesel	2.50%	Rs.5.11/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.	40.46	40.80
Central taxes	11.02	5.11
State taxes	10.71	6.18
Dealer comm.	2.05	1.27
Retail Selling Price	64.24	53.35
	PDS SKO*	Sub. Dom LPG
Price before taxes and dealer comm.	13.66	373.41
Central taxes	0	0
State taxes	0.44	0
Dealer comm.	1.15	44.06
Retail Selling Price	15.25	417

\*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	1800	1200

## 16. Information on Prices, Taxes and Under-recoveries

Under-recoveries & Burden Sharing			
	2013-14	Apr-Jun`13	Apr-Jun`14
<b>Per unit under-recovery (Rs./litre/Cyl.)</b>			
Diesel	8.39	7.64	3.13
PDS SKO	33.98	31.24	33.42
Sub. Dom LPG	499.52	400.16	461.7
<b>Total Under-recoveries (Rs. Crores)</b>			
Diesel	62837	28266	11656
PDS SKO	30575	14057	14857
Sub. Dom LPG	46458	18585	24597
Total	139869	60907	51110
<b>Burden Sharing (Rs. Crores)</b>			
Government	70772	25772	17000
Upstream	67021	32034	31926
OMCs	2076	3101	2184
<b>Fiscal Subsidy under Govt. Schemes (Rs. Crores)</b>			
<b>Fiscal Subsidy under Govt. Schemes (Rs. Crores)</b>			
PDS SKO	681	423	*
Sub. Dom LPG	1920	1201	*

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

International Prices/ Exchange rates (\$/bbl)			
	2012-13	2013-14	Apr-Sept14
Crude (Indian Basket)	107.97	105.52	101.71
Petrol	118.98	114.31	112.60
Diesel	121.97	119.41	113.03
Kerosene	123.11	118.80	113.26
LPG (\$/MT)	885.20	880.49	797.75
FO (\$/MT)	632.52	595.79	573.02
Naphtha (\$/MT)	888.49	881.30	876.12
Exchange (Rs./\$ )	54.45	60.50	60.59
<b>Borrowings of OMCs (Rs. Crores)</b>			
IOCL	80894	86263	65663
BPCL	23839	20322	14061
HPCL	33789	32164	23863
<b>Petroleum Sector Contribution to Central/State Govt.</b>			
	2012-13	2013-14	Apr-Jun14
Central Government	142626	152900	30221
State Government	136034	152460	40270
Total (Rs. Crores)	278660	305360	70491
<b>Subsidy as a % of GDP</b>			
	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