

# Ready Reckoner

Snapshot of India's Oil & Gas data

June, 2014



Analysis • Knowledge • Information

**Petroleum Planning & Analysis Cell**

(Ministry of Petroleum & Natural Gas)

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# Highlights

- H MEL refinery was shut down due to fire incident on 20<sup>th</sup> June 2014 in VGO unit. 9 MMT Refinery has taken planned shutdown till beginning of September 2014.
- Planned Shutdown of various secondary units of IOCL refineries (FCCU, CCRU, DHD T, DHDS, HGU- Panipat Refinery, DCU-1&2 and CRU units of Bongaigoan Refinery) during April-June 2014.
- Additionally, IOCL-Koyali's DCU, AU-3 and HGU-2 were shut down during June 2014.
- The consumption of all petroleum products has registered a growth of 5.3% in June, 2014 as compared to that in June, 2013. This is the highest growth since January 2013.
- HSD consumption for the second consecutive month recorded growth of 3.4% in the month of June, 2014. This is the highest growth in HSD consumption since April 2013.

## 1. Selected Indicators of the Indian Economy

Economic Indicators		Unit/Base	2011-12	2012-13	2013-14 (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
3	Agricultural Production (Food grains)	MMT	259.3	257.1 FE	264.4 3 <sup>rd</sup> AE
		Growth %	6.1	-0.8	2.8
4	Gross Fiscal Deficit	%	-5.75	-4.9	-4.5 (RE)

Economic Indicators	Unit/Base	2013-14	June		April-June		
			2013	2014	2013	2014	
5	Index of Industrial Production@	Growth %	2.8	-2.5	4.7	-0.6	4.1
6	Imports	\$ Billion	450.9	35.3	38.2	121.6	113.2
7	Exports	\$ Billion	312.4	24.0	26.5	73.3	80.1
8	Trade Balance	\$ Billion	-138.6	-11.3	-11.8	-48.3	-33.1
9	Foreign Exchange Reserves	\$ Billion	303.7	284.6	315.8	-	-

@Index on Industrial Production data is for April-May 2014

2. Import Dependency							
Petroleum & Natural Gas Sector		Unit/Base	2013-14 (P)	June		April-June	
				2013	2014 <sup>(P)</sup>	2013	2014 <sup>(P)</sup>
1	Crude Oil Production In India	MMT	37.8	3.13	3.13	9.41	9.40
2	Consumption of Petroleum Products	MMT	158.2	13.0	13.7	40.4	41.7
3	Production of Petroleum Products	MMT	220.2	17.9	18.1	54.0	53.5
4	Imports & Exports:						
	Crude Oil Imports	\$ Billion	142.9	10.4	12.3	35.0	36.4
	Petroleum Products (POL) Imports	\$ Billion	12.3	0.79	1.0	2.6	3.3
	Gross Petroleum Imports (Crude + POL)	\$ Billion	155.2	11.2	13.3	37.6	39.7
	Petroleum Products Exports	\$ Billion	60.7	4.7	4.5	13.6	13.2
5	Petroleum Imports as % of India's Gross Imports	%	34.4	31.7	34.8	30.9	35.1
6	Petroleum Exports as % of India's Gross Exports	%	19.4	19.6	17.0	18.6	16.5
7	Import Dependency (Based on Consumption)	%	77.6	78.8	78.5	78.4	79.4

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

<b>4. Indigenous Crude Oil Production (Million Metric Tonne)</b>					
Details	2013-14 (P)	June		April-June	
		2013	2014 <sup>(P)</sup>	2013	2014 <sup>(P)</sup>
ONGC	19.2	1.59	1.56	4.83	4.69
OIL	3.5	0.30	0.28	0.90	0.84
Pvt / JVs	12.0	0.99	0.99	2.91	3.04
<b>Total Crude Oil</b>	<b>34.7</b>	<b>2.88</b>	<b>2.83</b>	<b>8.64</b>	<b>8.57</b>
Condensate	3.1	0.25	0.30	0.77	0.82
<b>Total (Crude Oil +Condensate) (MMT)</b>	<b>37.8</b>	<b>3.13</b>	<b>3.13</b>	<b>9.41</b>	<b>9.40</b>
Total (Crude Oil +Condensate) (Million Barrels)	277.04	22.92	22.91	68.94	68.93
<b>5. Domestic Oil &amp; Gas Production vis a vis Overseas Production</b>					
Year	2013-14 (P)	June		April-June	
		2013	2014 <sup>(P)</sup>	2013	2014 <sup>(P)</sup>
Total Domestic (MMTOE)	73.2	6.1	6.0	18.4	18.0
Overseas production of OVL (MMTOE)	8.4	0.7	0.8	2.1	2.3
Overseas Production as % of Domestic	11.5%	11.5%	13.3%	11.4%	12.8%
<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 (P)	June		April-June	
					2013	2014 (P)	2013	2014 (P)
1	IOCL	Barauni	6.0	6.5	0.55	0.55	1.46	1.65
2		Koyali	13.7	13.0	1.2	1.03	3.28	3.32
3		Haldia	7.5	8.0	0.55	0.67	1.88	1.95
4		Mathura	8.0	6.6	0.67	0.69	2.1	2.19
5		Panipat	15.0	15.1	0.98	0.77	3.5	2.84
6		Guwahati	1.0	1.0	0.09	0.08	0.26	0.24
7		Digboi	0.7	0.7	0.05	0.05	0.15	0.15
8		Bongaigaon	2.4	2.3	0.12	0.17	0.5	0.52
		<b>IOCL TOTAL</b>	<b>54.2</b>	<b>53.1</b>	<b>4.22</b>	<b>4.01</b>	<b>13.13</b>	<b>12.87</b>
9	HPCL	Mumbai	6.5	7.7	0.67	0.52	1.73	1.4
10		Visakhapatnam	8.3	7.8	0.49	0.67	1.72	1.9
11	HMEL	HMEL-Bhatinda	9.0	9.3	0.79	0.86	2.19	2.57
		<b>HPCL-TOTAL</b>	<b>23.8</b>	<b>24.8</b>	<b>1.95</b>	<b>2.05</b>	<b>5.64</b>	<b>5.87</b>
12	BPCL	Mumbai	12.0	12.7	1.11	1.08	2.94	2.89
13		Kochi	9.5	10.3	0.88	0.92	2.68	2.48
14	BORL	Bina	6.0	5.4	0.54	0.56	1.45	1.49
		<b>BPCL-TOTAL</b>	<b>27.5</b>	<b>28.4</b>	<b>2.53</b>	<b>2.56</b>	<b>7.07</b>	<b>6.85</b>

	Company	Refinery	Installed Capacity (1.4.2014)	Crude Oil Processing				
				2013-14 (P)	June		April-June	
					2013	2014 (P)	2013	2014 (P)
15	CPCL	Manali	10.5	10.1	0.87	0.88	2.66	2.66
16		CBR	1.0	0.6	0.04	0.03	0.16	0.16
		<b>CPCL-TOTAL</b>	<b>11.5</b>	<b>10.6</b>	<b>0.91</b>	<b>0.91</b>	<b>2.82</b>	<b>2.82</b>
17	NRL	Numaligarh	3.0	<b>2.6</b>	0.0	0.25	0.72	0.72
18	ONGC	Tatipaka	0.1	0.1	0.004	0.005	0.01	0.01
19		MRPL-Mangalore	15.0	14.6	1.12	1.12	3.24	3.24
		<b>ONGC TOTAL</b>	<b>15.1</b>	<b>14.7</b>	<b>1.13</b>	<b>1.12</b>	<b>3.25</b>	<b>3.25</b>
20	RIL	Jamnagar (DTA)	33.0	30.3	2.67	2.6	7.23	7.23
21		Jamnagar (SEZ)	27.0	37.7	3.05	3.07	9.3	9.3
22	EOL	Vadinar	20.0	20.2	1.69	1.71	5.14	5.14
		<b>All India</b>	<b>215.1</b>	<b>222.4</b>	<b>18.14</b>	<b>18.29</b>	<b>54.72</b>	<b>54.05</b>

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

	Type of crude	2013-14 (P)	June		April-June	
			2013	2014 (P)	2013	2014 (P)
2	LS Crude	64.1	4.87	5.52	14.88	15.25
	<b>Total Crude</b>	<b>222.4</b>	<b>18.14</b>	<b>18.29</b>	<b>54.72</b>	<b>54.05</b>
	<b>Share of HS Crude of total crude processing</b>	<b>72.0%</b>	<b>73.2%</b>	<b>69.8%</b>	<b>72.8%</b>	<b>71.8%</b>



9. Gross Refining Margins (GRM) of Refineries (\$/bbl)				
Company	Refinery	2011-12	2012-13	2013-14
IOCL	Barauni	0.39	2.40	6.68
	Koyali	5.07	4.61	4.52
	Haldia	2.38	0.85	2.84
	Mathura	0.59	0.55	2.10
	Panipat	4.39	3.34	3.62
	Guwahati	11.94	9.52	6.38
	Digboi	14.85	20.81	15.41
	Bongaigaon	6.25	5.26	6.71
	<b>Average</b>	<b>3.63</b>	<b>3.16</b>	<b>4.24</b>
BPCL	Kochi	3.20	5.36	4.80
	Mumbai	3.12	4.67	3.95
	<b>Average</b>	<b>3.16</b>	<b>4.97</b>	<b>4.33</b>
HPCL	Mumbai	1.74	2.08	5.38
	Visakhapatnam	2.95	2.08	1.50
	<b>Average</b>	<b>2.39</b>	<b>2.08</b>	<b>3.43</b>
CPCL	Chennai	4.16	0.99	4.06
MRPL	Mangalore	5.60	2.45	2.67
NRL	Numaligarh	12.45	10.52	12.09
BORL	Bina	-	7.00	7.70
RIL	Jamnagar	8.60	9.20	8.10
Essar	Vadinar	4.23	7.96	7.98

<b>10. GRM of North East Refineries</b> excluding Excise Duty Benefit				
				\$/bbl
<b>Company</b>	<b>Refinery</b>	<b>2011-12</b>	<b>2012-13</b>	<b>2013-14</b>
<b>IOCL</b>	Guwahati	3.73	3.43	0.88
	Digboi	6.41	13.25	8.50
	Bongaigaon	0.56	0.25	2.34
<b>NRL</b>	Numaligarh	5.80	4.83	6.98

<b>11. Natural Gas at a Glance</b>					
<i>(MMSCM)</i>					
	<b>2013-14</b> <sup>(P)</sup>	<b>June</b>		<b>April-June</b>	
		<b>2013</b>	<b>2014</b> <sup>(P)</sup>	<b>2013</b>	<b>2014</b> <sup>(P)</sup>
Gross Production	35390.91	2944.35	2895.92	8954.78	8609.31
Net Production (Excluding Flair Gas)	34554.64	2874.39	2828.32	8761.17	8402.56
<b>LNG Import</b>	<b>14257.0</b>	<b>1219.0</b>	<b>1370.05</b>	<b>3895.5</b>	<b>4042.57</b>
<b>Total Consumption (Net Production + Import)</b>	<b>48811.64</b>	<b>4093.39</b>	<b>4198.37</b>	<b>12656.67</b>	<b>12445.13</b>
<b>Total Consumption (in BCM)</b>	<b>48.81</b>	<b>4.09</b>	<b>4.19</b>	<b>12.65</b>	<b>12.44</b>

*(Reliance import figure is not included)*

12. Consumption of Petroleum Products (Million Metric Tonnes)								
Products	June 2013		June 2014 <sup>(P)</sup>		April-June 2013		April-June 2014 <sup>(P)</sup>	
	Production	Consumption	Production	Consumption	Production	Consumption	Production	Consumption
LPG	0.8	1.2	0.8	1.4	2.3	3.7	2.3	4.1
MS	2.5	1.4	2.5	1.6	7.4	4.4	7.5	4.8
NAPHTHA	1.6	0.9	1.5	0.9	4.7	2.8	4.5	2.8
ATF	0.8	0.4	0.8	0.5	2.7	1.4	2.3	1.4
SKO	0.6	0.6	0.6	0.6	1.8	1.8	1.9	1.8
HSD	7.6	5.9	8.0	6.1	23.1	18.5	23.2	18.6
LDO	0.04	0.0	0.03	0.0	0.1	0.1	0.1	0.09
LUBES	0.08	0.2	0.06	0.2	0.2	0.7	0.2	0.7
FO/LSHS	1.1	0.5	1.03	0.5	3.2	1.5	3.0	1.5
BITUMEN	0.4	0.4	0.5	0.5	1.5	1.5	1.5	1.6
OTHERS	2.4	1.4	2.4	1.4	7.0	4.1	6.9	4.4
<b>ALL INDIA</b>	<b>17.9</b>	<b>13.0</b>	<b>18.1</b>	<b>13.7</b>	<b>54.0</b>	<b>40.4</b>	<b>53.3</b>	<b>41.7</b>
<b>Growth (%)</b>			<b>1.2</b>	<b>5.3</b>			<b>-0.8</b>	<b>3.0</b>

13. Self Sufficiency in Petroleum Products (Million Metric Tonnes)					
Details	2013-14 <sup>(P)</sup>	June		April-June	
		2013	2014 <sup>(P)</sup>	2013	2014 <sup>(P)</sup>
1. Indigenous Crude Oil Processing :	33.9	2.61	2.82	8.32	8.20
<b>a)</b> Products from Indigenous Crude (93.3% of crude oil processed)	31.6	2.43	2.63	7.76	7.65
<b>b)</b> Products from Fractionators (Including LPG and Gas)	3.8	0.33	0.31	0.99	0.92
2. Total Production from Indigenous Crude & Condensate ( <b>a + b</b> )	35.5	2.76	2.94	8.75	8.57
3. Total Domestic Consumption	158.2	13.02	13.71	40.42	41.65
<b>% Self Sufficiency (2 / 3)</b>	<b>22.4%</b>	<b>21.2%</b>	<b>21.5%</b>	<b>21.6%</b>	<b>20.6%</b>

<b>14. Industry Marketing Infrastructure</b> (as on 31.3.2014) (Provisional)								
<b>Particulars</b>	<b>IOCL</b>	<b>BPCL</b>	<b>HPCL</b>	<b>RIL</b>	<b>ESSAR</b>	<b>SHELL</b>	<b>Others</b>	<b>Total</b>
Terminal/ Depots (Nos.)	135	82	95	5	2		1	<b>320</b>
Aviation Fuel Stations (Nos.)	98	36	33	27	3	5	2	<b>204</b>
Retail Outlets (total) (Nos.)	23993	12503	12869	1400	1382	98	3	<b>52248</b>
LPG Distributors (total) (Nos.)	7035	3355	3506					<b>13896</b>
SKO/LDO Dealers (Nos.)	3930	1014	1638					<b>6582</b>
LPG Bottling (TMTPA)	7170	3075	2960					<b>13205</b>
Rural ROs (Nos.)	6002							<b>6002</b>
CNG Stations (Nos.)	140	208	189		29		239	<b>805</b>
RGGLVY (Nos.)	1421	817	798					<b>3036</b>
LPG Consumers (Nos. Crores)	8.18	4.12	4.33					<b>16.63</b>

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

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

*Others include GAIL and Petronet India*

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

Sales & profit of Petroleum Sector (Rs. Crores)		
2013-14	Turnover	PAT
Upstream Companies	149527	29451
Downstream Cos.	955147	12814
Standalone Refineries	130373	668
Private/JVs	499655	22110

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	2.5%	Rs.9.48/Ltr
Diesel	2.5%	Rs.3.56/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.) at Delhi		
	Petrol	Diesel
Price before taxes and dealer comm.	48.89	45.45
Central taxes	10.43	4.52
State taxes	12.27	6.68
Dealer comm.	2.02	1.19
Retail Selling Price	73.60	57.84
	PDS SKO	Sub. Dom LPG
Price before taxes and dealer comm.	12.96	373.41
Central taxes	0.00	0.00
State taxes	0.71	0.00
Dealer comm.	1.29	40.71
Retail Selling Price	14.96	414.00

Change in Ex. Rate/ Crude price : Impact on Under-recoveries		
(Rs. Crores)	Rs.1/\$ Ex. Rate	\$1/bbl Crude
Impact on Under-recovery	8000	4400

16. Information on Prices, Taxes and Under-recoveries							
<b>Under-recoveries &amp; Burden Sharing</b>				<b>International Prices/ Exchange rates (\$/bbl)</b>			
	<b>2011-12</b>	<b>2012-13</b>	<b>2013-14</b>		<b>2011-12</b>	<b>2012-13</b>	<b>2013-14</b>
<b>Per unit under-recovery (Rs./litre/Cyl.)</b>							
Diesel	10.39	11.26	8.39	Crude (Indian Basket)	111.89	107.97	105.52
PDS SKO	26.46	31.16	33.98	Petrol	121.60	118.98	114.31
Sub. Dom LPG	320.30	427.14	499.52	Diesel	125.38	121.97	119.41
<b>Total Under-recoveries (Rs. Crores)</b>				Kerosene	125.99	123.11	118.80
Diesel	81192	92061	62837	LPG (\$/MT)	899.42	885.2	880.49
PDS SKO	27352	29410	30575	FO (\$/MT)	667.41	632.52	595.79
Sub. Dom LPG	29997	39558	46458	Naphtha (\$/MT)	931.61	888.49	881.30
Total	138541	161029	139869				
<b>Burden Sharing (Rs. Crores)</b>				<b>Exchange (Rs./\$ )</b>	<b>47.95</b>	<b>54.45</b>	<b>60.50</b>
Govt.	83500	100000	70772	<b>Petroleum Sector Contribution to Central/State Govt.</b>			
Upstream	55000	60000	67021	Central Government	119850	117422	123316
OMCs	41	1029	2076	State Government	112919	126516	140881
<b>Fiscal Subsidy under Govt. Schemes (Rs. Crores)</b>				<b>Total (Rs. Crores)</b>	<b>232769</b>	<b>243939</b>	<b>264197</b>
PDS SKO	868	746	681	<b>Borrowings of OMCs (Rs. Crores)</b>			
Sub. Dom LPG	2155	2007	1920	IOCL	75447	80894	86263
<b>Subsidy as a % of GDP</b>				BPCL	22994	23839	20322
Petroleum Subsidy	1.70	1.75	1.37	HPCL	29831	33789	32164

## 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