

# Ready Reckoner

Snapshot of India's Oil & Gas data

July, 2014



Analysis • Knowledge • Information

**Petroleum Planning & Analysis Cell**

(Ministry of Petroleum & Natural Gas)

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# Highlights

- **Crude Oil Production** (including condensates) is marginally lower at 3.15 MMT during July 2014 as compared to 3.19 MMT during July 2013. Frequent power failures, ageing of fields, leakage in sub-sea well fluid line and rough sea weather affected production in Ankleshwar, Neelam-Heera & Bassein fields
- **Natural Gas Production** (net) is 2652 MMSCM as compared to 2925 MMSCM during July 2013. A total of 10 wells in D1, D3 and 3 wells in MA in KG-DWN-98/3 have ceased to flow due to water/sand ingress
- **Refinery Operations:** Unplanned shutdown from 20<sup>th</sup> June 2014 due to fire in HMEL is continuing and is expected to be back in operation during first week of September 2014.
- Unplanned shutdowns of CRU in Bongaigaon and Essar during July 2014
- Planned shutdown of CDU-3 in CPCL from 22.07.2014 and BORL during July 2014
- Lower indigenous crude feed affected production in NRL during July 2014
- **Consumption** of all petroleum products registered a growth of 2.9 % in July, 2014 as compared to previous year. Cumulative growth during April-July 2014 is 3.3%.
- All petroleum product except SKO, FO and Petroleum Coke registered positive growth during July 2014

## 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	259.29	257.13 FE	264.77 4 <sup>th</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	July		April-July		
			2013	2014	2013	2014	
5	Index of Industrial Production@	Growth %	2.8	-1.8	3.4	-1.0	3.9
6	Imports	\$ Billion	450.9	38.33	39.96	159.20	153.15
7	Exports	\$ Billion	312.4	25.84	27.73	99.28	107.84
8	Trade Balance	\$ Billion	-138.6	-12.49	-12.23	-59.91	-45.31
9	Foreign Exchange Reserves	\$ Billion	303.7	277.18	319.99	-	-

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

2. Import Dependency							
Petroleum & Natural Gas Sector		Unit/Base	2013-14 (P)	July		April-July	
				2013	2014 (P)	2013	2014 (P)
1	Crude Oil Production In India	MMT	37.8	3.18	3.15	12.59	12.54
2	Consumption of Petroleum Products	MMT	158.2	12.80	13.17	53.23	54.97
3	Production of Petroleum Products	MMT	220.2	18.68	17.93	72.64	71.71
4	Imports & Exports:						
	Crude Oil Imports	\$ Billion	142.9	12.23	10.73	47.20	47.13
	Petroleum Products (POL) Imports	\$ Billion	12.3	0.92	1.19	3.55	4.46
	Gross Petroleum Imports (Crude + POL)	\$ Billion	155.2	13.14	11.91	50.75	51.59
	Petroleum Products Exports	\$ Billion	60.7	5.19	4.31	18.78	17.87
5	Petroleum Imports as % of India's Gross Imports	%	34.4	34.3	29.8	31.9	33.7
6	Petroleum Exports as % of India's Gross Exports	%	19.4	20.1	15.5	18.9	16.6
7	Import Dependency (Based on Consumption)	%	77.6%	78.1%	75.4%	78.3%	78.5%

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)	July		April-July	
		2013	2014 <sup>(P)</sup>	2013	2014 <sup>(P)</sup>
ONGC	19.2	1.62	1.59	6.45	6.29
OIL	3.5	0.30	0.29	1.20	1.14
Pvt / JVs	12.0	1.00	0.96	3.91	4.00
<b>Total Crude Oil</b>	<b>34.7</b>	<b>2.93</b>	<b>2.85</b>	<b>11.57</b>	<b>11.42</b>
Condensate	3.1	0.25	0.30	1.02	1.12
<b>Total (Crude Oil +Condensate) (MMT)</b>	<b>37.8</b>	<b>3.18</b>	<b>3.15</b>	<b>12.59</b>	<b>12.54</b>
Total (Crude Oil +Condensate) (Million Barrels)	277.04	23.32	23.06	92.26	91.93
<b>5. Domestic Oil &amp; Gas Production vis a vis Overseas Production</b>					
Year	2013-14 (P)	July		April-July	
		2013	2014 <sup>(P)</sup>	2013	2014 <sup>(P)</sup>
Total Domestic (MMTOE)	73.2	6.2	5.9	24.6	23.9
Overseas production of OVL (MMTOE)	8.4	0.675	0.677	2.813	2.961
Overseas Production as % of Domestic	11.5%	10.9%	11.5%	11.5%	12.4%
<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> )	July		April-July	
					2013	2014 ( <sup>P</sup> )	2013	2014 ( <sup>P</sup> )
1	IOCL	Barauni	6.0	6.5	0.5	0.6	2.0	2.2
2		Koyali	13.7	13.0	0.8	1.2	4.1	4.5
3		Haldia	7.5	8.0	0.7	0.6	2.6	2.6
4		Mathura	8.0	6.6	0.7	0.8	2.8	2.9
5		Panipat	15.0	15.1	1.2	1.2	4.7	4.1
6		Guwahati	1.0	1.0	0.08	0.09	0.34	0.34
7		Digboi	0.7	0.7	0.060	0.056	0.209	0.206
8		Bongaigaon	2.4	2.3	0.2	0.2	0.7	0.7
		<b>IOCL TOTAL</b>	<b>54.2</b>	<b>53.1</b>	<b>4.3</b>	<b>4.7</b>	<b>17.5</b>	<b>17.5</b>
9	HPCL	Mumbai	6.5	7.7	0.7	0.7	2.4	2.1
10		Visakhapatnam	8.3	7.8	0.7	0.8	2.5	2.7
11	HMEL	HMEL-Bhatinda	9.0	9.3	0.9	0.1	3.0	2.5
		<b>HPCL-TOTAL</b>	<b>23.8</b>	<b>24.8</b>	<b>2.3</b>	<b>1.5</b>	<b>7.9</b>	<b>7.2</b>
12	BPCL	Mumbai	12.0	12.7	1.1	1.1	4.0	4.0
13		Kochi	9.5	10.3	0.9	0.9	3.6	3.4
14	BORL	Bina	6.0	5.4	0.4	0.3	1.9	1.8
		<b>BPCL-TOTAL</b>	<b>27.5</b>	<b>28.4</b>	<b>2.4</b>	<b>2.3</b>	<b>9.5</b>	<b>9.1</b>

	Company	Refinery	Installed Capacity (1.4.2014)	Crude Oil Processing				
				2013-14 ( <sup>P</sup> )	July		April-June	
					2013	2014 ( <sup>P</sup> )	2013	2014 ( <sup>P</sup> )
15	CPCL	Manali	10.5	10.1	0.9	0.8	3.6	3.4
16		CBR	1.0	0.6	0.037	0.045	0.134	0.205
		<b>CPCL-TOTAL</b>	<b>11.5</b>	<b>10.6</b>	<b>0.9</b>	<b>0.8</b>	<b>3.7</b>	<b>3.6</b>
17	NRL	Numaligarh	3.0	<b>2.6</b>	0.2	0.2	0.7	1.0
18	ONGC	Tatipaka	0.1	0.1	0.003	0.005	0.018	0.017
19		MRPL-Mangalore	15.0	14.6	1.2	1.1	4.5	4.4
		<b>ONGC TOTAL</b>	<b>15.1</b>	<b>14.7</b>	<b>1.2</b>	<b>1.1</b>	<b>4.5</b>	<b>4.4</b>
20	RIL	Jamnagar (DTA)	33.0	30.3	2.8	2.6	10.6	9.9
21		Jamnagar (SEZ)	27.0	37.7	3.2	3.2	12.5	12.7
22	EOL	Vadinar	20.0	20.2	1.7	1.7	6.9	6.8
		<b>All India</b>	<b>215.1</b>	<b>222.4</b>	<b>19.1</b>	<b>18.1</b>	<b>73.8</b>	<b>72.2</b>

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

	Type of crude	2013-14 ( <sup>P</sup> )	June		April-June	
			2013	2014 ( <sup>P</sup> )	2013	2014 ( <sup>P</sup> )
			1	HS Crude	158.3	14.25
2	LS Crude	64.1	4.87	5.61	19.75	20.86
	<b>Total Crude</b>	<b>222.4</b>	<b>19.12</b>	<b>18.12</b>	<b>73.84</b>	<b>72.23</b>
	<b>Share of HS Crude of total crude processing</b>	<b>71.18%</b>	<b>74.51%</b>	<b>69.05%</b>	<b>73.25%</b>	<b>71.12%</b>



Gross Refining Margins (GRM) of Refineries (\$/bbl)						
Company	Refinery	2011-12	2012-13	2013-14	Apr-Jun'13	Apr-Jun'14
IOCL	Barauni	0.39	2.40	6.68	6.58	8.15
	Koyali	5.07	4.61	4.52	0.62	3.27
	Haldia	2.38	0.85	2.84	3.98	3.75
	Mathura	0.59	0.55	2.10	1.72	-6.13
	Panipat	4.39	3.34	3.62	3.25	3.30
	Guwahati	11.94	9.52	6.38	2.80	-6.65
	Digboi	14.85	20.81	15.41	12.42	2.47
	Bongaigaon	6.25	5.26	6.71	-3.69	5.10
	<b>Average</b>	<b>3.63</b>	<b>3.16</b>	<b>4.24</b>	<b>2.66</b>	<b>2.25</b>
BPCL	Kochi	3.20	5.36	4.80	4.20	2.75
	Mumbai	3.12	4.67	3.95	3.91	3.91
	<b>Average</b>	<b>3.16</b>	<b>4.97</b>	<b>4.33</b>	<b>4.05</b>	<b>3.38</b>
HPCL	Mumbai	1.74	2.08	5.38	5.07	3.84
	Visakhapatnam	2.95	2.08	1.50	0.05	0.71
	<b>Average</b>	<b>2.39</b>	<b>2.08</b>	<b>3.43</b>	<b>2.58</b>	<b>2.04</b>
CPCL	Chennai	4.16	0.99	4.06	4.31	1.88
MRPL	Mangalore	5.60	2.45	2.67	2.94	0.66
NRL	Numaligarh	12.45	10.52	12.09	7.56	11.84
BORL	Bina	-	7.00	7.70	6.20	4.40
RIL	Jamnagar	8.60	9.20	8.10	8.40	8.70
Essar	Vadinar	4.23	7.96	7.98	7.01	9.04

GRM of North East Refineries excluding Excise Duty Benefit						
						\$/bbl
Company	Refinery	2011-12	2012-13	2013-14	Apr-Jun'13	Apr-Jun'14
IOCL	Guwahati	3.73	3.43	0.88	-2.95	-12.01
	Digboi	6.41	13.25	8.50	4.13	-4.55
	Bongaigaon	0.56	0.25	2.34	-7.35	0.81
NRL	Numaligarh	5.80	4.83	6.98	0.60	7.07

9. Natural Gas at a Glance					
(MMSCM)					
	2013-14 (P)	July		April-July	
		2013	2014 (P)	2013	2014 (P)
Gross Production	35390.91	3006.44	2739.10	11961.22	11348.42
Net Production (Excluding Flair Gas)	34554.64	2925.04	2652.34	11686.21	11054.90
<b>LNG Import</b>	<b>14257.0</b>	<b>932.8</b>	<b>1193.82</b>	<b>4828.30</b>	<b>5158.22</b>
<b>Total Consumption (Net Production + Import)</b>	<b>48811.64</b>	<b>3857.84</b>	<b>3846.16</b>	<b>16515.51</b>	<b>16213.12</b>
<b>Total Consumption (in BCM)</b>	<b>48.81</b>	<b>3.86</b>	<b>3.85</b>	<b>16.51</b>	<b>16.21</b>

*(Reliance import figure is not included)*

### 10. Consumption of Petroleum Products (Million Metric Tonnes)

Products	July 2013		July 2014 <sup>(P)</sup>		April-July 2013		April-July 2014 <sup>(P)</sup>	
	Production	Consumption	Production	Consumption	Production	Consumption	Production	Consumption
LPG	0.78	1.36	0.74	1.43	3.10	5.06	3.03	5.56
MS	2.63	1.41	2.65	1.48	10.02	5.79	10.31	6.28
NAPHTHA	1.54	0.96	1.41	1.01	6.20	3.71	5.87	3.79
ATF	0.84	0.44	0.77	0.46	3.55	1.79	3.14	1.85
SKO	0.63	0.60	0.60	0.59	2.44	2.40	2.47	2.36
HSD	8.08	5.40	7.76	5.74	31.13	23.89	31.07	24.29
LDO	0.03	0.03	0.02	0.03	0.13	0.13	0.12	0.12
LUBES	0.10	0.22	0.08	0.23	0.32	0.93	0.26	0.96
FO/LSHS	1.28	0.61	1.18	0.47	4.45	2.14	4.16	1.96
BITUMEN	0.26	0.19	0.33	0.25	1.75	1.70	1.87	1.85
OTHERS	2.51	1.59	2.37	1.48	9.55	5.68	9.42	5.95
<b>ALL INDIA</b>	<b>18.68</b>	<b>12.80</b>	<b>17.93</b>	<b>13.17</b>	<b>72.64</b>	<b>53.23</b>	<b>71.71</b>	<b>54.97</b>
<b>Growth (%)</b>			<b>-4.01%</b>	<b>2.86%</b>			<b>-1.28</b>	<b>3.37%</b>

### 11. Self Sufficiency in Petroleum Products (Million Metric Tonnes)

Details	2013-14 <sup>(P)</sup>	July		April-July	
		2013	2014 <sup>(P)</sup>	2013	2014 <sup>(P)</sup>
1. Indigenous Crude Oil Processing :	33.9	2.65	3.15	10.96	11.35
<b>a)</b> Products from Indigenous Crude (93.3% of crude oil processed)	31.6	2.47	2.94	10.23	10.59
<b>b)</b> Products from Fractionators (Including LPG and Gas)	3.8	0.33	0.30	1.32	1.22
2. Total Production from Indigenous Crude & Condensate ( <b>a + b</b> )	35.5	2.80	3.24	11.55	11.81
3. Total Domestic Consumption	158.2	12.80	13.17	53.23	54.97
<b>% Self Sufficiency (2 / 3)</b>	<b>22.40%</b>	<b>21.90%</b>	<b>24.61%</b>	<b>21.70%</b>	<b>21.49%</b>

### 12. 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	12503	12869	1400	1382	98	3	52248
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
CNG Stations (Nos.)	140	208	189		29		239	805
RGGLVY (Nos.)	1421	817	798					3036
LPG Consumers (Nos. Crores)	8.18	4.12	4.33					16.63

### 13. 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*

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

Sales & profit of Petroleum Sector (Rs. Crores)		
Apr-Jun 2014	Turnover	PAT
Upstream Companies	37844	6255
Downstream Cos.	250568	3785
Standalone Refineries	31278	608
Private/JVs	132716	6641

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.9.48/Ltr
Diesel	2.50%	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.	46.26	45.97
Central taxes	10.36	4.50
State taxes	11.72	6.74
Dealer comm.	1.99	1.19
Retail Selling Price	70.33	58.4
	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	7600	4500

## 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	5.21	4.41
PDS SKO	33.98	28.83	33.82
Sub. Dom LPG	499.52	378.73	470.93
<b>Total Under-recoveries (Rs. Crores)</b>			
Diesel	62837	10554	9037
PDS SKO	30575	6507	7524
Sub. Dom LPG	46458	8518	12129
Total	139869	25579	28691
<b>Burden Sharing (Rs. Crores)</b>			
Government	70772	8000	11000
Upstream	67021	15304	15547
OMCs	2076	2275	2144
<b>Fiscal Subsidy under Govt. Schemes (Rs. Crores)</b>			
<b>Fiscal Subsidy under Govt. Schemes (Rs. Crores)</b>			
PDS SKO	681	224	*
Sub. Dom LPG	1920	624	*

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

International Prices/ Exchange rates (\$/bbl)			
	2012-13	2013-14	Apr-Jun `14
Crude (Indian Basket)	107.97	105.52	107.27
Petrol	118.98	114.31	118.70
Diesel	121.97	119.41	119.56
Kerosene	123.11	118.80	117.97
LPG (\$/MT)	885.20	880.49	823.06
FO (\$/MT)	632.52	595.79	590.68
Naphtha (\$/MT)	888.49	881.30	917.79
Exchange (Rs./\$ )	54.45	60.50	59.77
<b>Borrowings of OMCs (Rs. Crores)</b>			
IOCL	80894	86263	68953
BPCL	23839	20322	15173
HPCL	33789	32164	24608
<b>Petroleum Sector Contribution to Central/State Govt.</b>			
	2011-12	2012-13	2013-14
Central Government	119850	117422	152900
State Government	112919	126516	152460
Total (Rs. Crores)	232769	243939	305360
<b>Subsidy as a % of GDP</b>			
Petroleum Subsidy	1.70	1.75	1.37

## 15. 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