# Ready Reckoner

## Snapshot of India's Oil & Gas data

## May, 2016

Analysis • Knowledge • Information

**Petroleum Planning & Analysis Cell**

(Ministry of Petroleum & Natural Gas)

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# Highlights

| | |
|---|---|
| • | Indigenous crude oil production during May, 2016 was lower by 3.3 % (106 TMT) than that of May, 2015. On overall basis, indigenous crude oil production was less by 2.7% (170 TMT) during April-May, 2016 in comparison with corresponding period of April-May, 2015. |
| • | RIL SEZ refinery undertook shut down of one of the crude distillation units for routine maintenance & inspection (M&I) activities from May 01, 2016, for about 3 weeks. Total crude oil processed during May, 2016 by the refineries was 19,955 TMT against crude oil processing of 19,706 TMT in May, 2015 and a target of 20,634 TMT for the month of May, 2016. On cumulative basis, crude oil processed during April-May, 2016 by the refineries was 40,112 TMT against crude oil processing of 36,796 TMT in comparison to 2015 and a target of 39,800 TMT for the period of April-May, 2016. |
| • | Production of petroleum products during May, 2016 saw a growth of 3.1% (608 TMT) over the corresponding month of the previous year and on a cumulative basis, a growth of 10.4% (3,730 TMT) was recorded during April-May, 2016. |
| • | Export of POL products increased during May, 2016 by 1.1% (51 TMT) as compared to May, 2015. Further, imports grew by 6.7% (178 TMT) over corresponding period of 2015 with LPG, Naphtha, HSD, Lubes and Petcoke contributing 81.9% share in import of POL products. |

| | |
|---|---|
| • | Petroleum product consumption registered a growth of 6.7% during May, 2016 as compared to 5.3% growth during May, 2015. Except for Kerosene and Naphtha, all other products registered positive growth during May, 2016. During the period April 2016 to May 2016, petroleum product consumption registered a growth of 8.3% (2.5 MMT) as compared to the same period last year. |
| • | Gross production of natural gas for the month of May, 2016 was 2,656 MMSCM which was lower by 6.9 % compared with the corresponding month of the previous year (2,852 MMSCM). The cumulative gross production of natural gas 5,144 MMSCM for the current year till May, 2016 was lower by 6.9% compared with the corresponding period of the previous year (5,523 MMSCM). |
| • | LNG import for the month of May, 2016 was 2,082 MMSCM which was 43.4 % higher than the corresponding month of the previous year (1,452 MMSCM). The cumulative import of 4,224 MMSCM for the current year till May, 2016 was higher by 44.4% as compared with the corresponding period of the previous year (2,925 MMSCM). |
| • | The prices of Brent crude averaged $46.88/bbl during May, 2016 as against $41.48/bbl during April, 2016. Similarly, the Indian basket crude averaged $44.97/bbl during May, 2016 as against $39.85/bbl during the previous month. |
| • | The import bill of crude oil is estimated to increase by 2% from $ 64 billion in 2015-16 to $66 billion in 2016-17 considering Indian basket crude oil price of $ 45/bbl and $/Rs=67 for the balance part of the financial year. |

## 1. Selected indicators of the Indian economy

| | Economic indicators | Unit/Base | 2012-13 | 2013-14 | 2014-15 | 2015-16 (P) |
|---|---|---|---|---|---|---|
| 1 | Population (as on 1st March 2011) | Billion | 1.2 | - | - | - |
| 2 | GDP at Factor Cost (Constant prices) | Growth % | 5.6<br>2nd RE (NS) | 6.6<br>2nd RE (NS) | 7.2<br>1st RE (NS) | 7.6<br>(PE) |
| 3 | Agricultural Production (Food grains) | MMT | 257.1 | 265.0 | 252.0 | 252.2<br>3rd AE |
| | | Growth % | -0.8 | 3.1 | -4.9 | 0.1 |
| 4 | Gross Fiscal Deficit | % | -4.9 | -4.5 | -4.1 | -3.9<br>(RE) |

| | Economic indicators | Unit/ Base | 2014-15 | 2015-16 (P) | May | | April-May | |
|---|---|---|---|---|---|---|---|---|
| | | | | | 2015 | 2016 (P) | 2015 | 2016 (P) |
| 5 | Index of Industrial Production@ | Growth % | 2.8 | 2.4 | 3.0 | -0.8 | - | - |
| 6 | Imports | $ Billion | 448.0 | 380.7 | 32.8 | 28.4 | 65.8 | 53.9 |
| 7 | Exports | $ Billion | 310.3 | 262.0 | 22.3 | 22.2 | 44.4 | 42.7 |
| 8 | Trade Balance | $ Billion | -137.7 | -118.6 | -10.4 | -6.3 | -21.4 | -11.1 |
| 9 | Foreign Exchange Reserves | $ Billion | 341.4 | 355.6 | 352.5* | 360.2^ | - | - |

@IIP is for the month of April, 2016; NS-New Series; AE-Advanced Estimates; RE-Revised Estimates; PE- Provisional Estimates; *As on May 29, 2015; ^As on May 27, 2016

| 2. Crude oil and petroleum products at a glance | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Economic indicators | | Unit/ Base | 2014-15 | 2015-16 (P) | May | | April-May | | |
| | | | | | 2015 | 2016 (P) | 2015 | 2016 (P) | |
| 1 | Crude oil production in India | MMT | 37.5 | 36.9 | 3.2 | 3.1 | 6.2 | 6.0 | |
| 2 | Consumption of petroleum products | MMT | 165.5 | 183.5 | 15.5 | 16.6 | 30.2 | 32.8 | |
| 3 | Production of petroleum products | MMT | 220.7 | 231.3 | 19.5 | 20.1 | 35.9 | 39.6 | |
| 4 | Imports & exports: | | | | | | | | |
| Crude oil imports | | MMT | 189.4 | 202.9 | 17.5 | 17.7 | 33.0 | 35.7 | |
| | | $ Billion | 112.7 | 64.0 | 7.6 | 5.3 | 13.8 | 10.1 | |
| Petroleum products (POL) imports | | MMT | 21.3 | 28.3 | 2.6 | 2.8 | 4.5 | 5.9 | |
| | | $ Billion | 12.1 | 10.0 | 1.1 | 1.0 | 1.9 | 2.0 | |
| Gross petroleum imports (Crude + POL) | | MMT | 210.7 | 231.2 | 20.1 | 20.5 | 37.5 | 41.5 | |
| | | $ Billion | 124.9 | 74.0 | 8.7 | 6.3 | 15.7 | 12.0 | |
| Petroleum products exports | | MMT | 63.9 | 60.5 | 4.5 | 4.6 | 8.3 | 9.5 | |
| | | $ Billion | 47.3 | 27.1 | 2.7 | 2.0 | 4.7 | 4.0 | |
| 5 | Petroleum imports as % of India's gross imports (in value) | % | 27.9 | 19.4 | 26.4 | 22.0 | 23.8 | 22.3 | |
| 6 | Petroleum exports as % of India's gross Exports (in value) | % | 15.2 | 10.3 | 11.9 | 9.1 | 10.6 | 9.3 | |
| 7 | Import dependency (On Consumption) | % | 78.5% | 80.8% | 81.3% | 81.9% | 81.2% | 82.0% | |

| 3. Indigenous crude oil production (Million Metric Tonne) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Details | 2014-15 | 2015-16 (P) | May | | | April-May | | |
| | | | 2015 (P) | 2016 (Target)* | 2016 (P) | 2015 (P) | 2016 (Target)* | 2016 (P) |
| ONGC | 18.6 | 18.5 | 1.6 | 1.9 | 1.5 | 3.1 | 3.7 | 3.0 |
| Oil India Limited (OIL) | 3.4 | 3.2 | 0.3 | 0.3 | 0.3 | 0.6 | 0.5 | 0.5 |
| Private / Joint Ventures (JVs) | 11.7 | 11.3 | 1.0 | 0.9 | 0.9 | 1.9 | 1.8 | 1.8 |
| **Total Crude Oil** | **33.8** | **33.1** | **2.9** | **3.0** | **2.7** | **5.6** | **6.0** | **5.4** |
| Condensate | 3.7 | 3.8 | 0.3 | | 0.3 | 0.6 | | 0.6 |
| **Total (Crude + Condensate) (MMT)** | **37.5** | **36.9** | **3.2** | **3.0** | **3.1** | **6.2** | **6.0** | **6.0** |
| **Total (Crude + Condensate) (Million Bbl)** | **274.7** | **270.8** | **23.3** | **22.4** | **22.6** | **45.5** | **44.1** | **44.2** |

*Target is inclusive of condensate. Note: Some sub-totals/ totals may not add-up due to rounding off at individual levels

| 4. Domestic oil & gas production vis a vis overseas production | | | | | | |
|---|---|---|---|---|---|---|
| Details | 2014-15 | 2015-16 (P) | May (P) | | April-May (P) | |
| | | | 2015 | 2016 | 2015 | 2016 |
| Total domestic production (MMTOE) | 71.1 | 69.2 | 6.0 | 5.7 | 11.7 | 11.2 |
| Overseas production (MMTOE) | 9.58 | 9.69 | 0.84 | 0.80 | 1.63 | 1.58 |
| Overseas production as % of domestic production | 13.5% | 14.0% | 13.9% | 14.0% | 13.9% | 14.2% |

Source - ONGC Videsh, GAIL, OIL , IOCL & HPCL

| 5. High Sulphur (HS) & Low Sulphur (LS) crude oil processing (MMT) | | | | | | | |
|---|---|---|---|---|---|---|---|
| Details | | 2014-15 | 2015-16 (P) | May (P) | | April-May (P) | |
| | | | | 2015 | 2016 | 2015 | 2016 |
| 1 | High Sulphur crude | 161.4 | 165.4 | 14.3 | 14.3 | 26.7 | 28.8 |
| 2 | Low Sulphur crude | 61.9 | 67.5 | 5.5 | 5.7 | 10.1 | 11.3 |
| **Total Crude** | | **223.3** | **232.9** | **19.7** | **20.0** | **36.8** | **40.1** |
| **Share of HS crude in total crude oil processing** | | **72.3%** | **71.0%** | **72.3%** | **71.5%** | **72.5%** | **71.7%** |

| 6. Quantity and value of crude oil imports | | | |
|---|---|---|---|
| Year | Quantity (MMT) | $ Million | Rs. Crore |
| 2015-16 (Actuals) | 202.85 | 63,961 | 416,361 |
| 2016-17 (Estimated) | 202.71 | 65,505 | 438,695 |

Note: April & May 2016 imports are based on actuals and for June 2016 to March 2017, the imports are estimated at $45/bbl and Rs.67/$.

Impact of variation in Crude oil price & Exchange rate on Crude oil imports for June 2016 - March 2017:

If crude prices increase by one $/bbl - Net Import bill increases by Rs. 8,251 crores ($ 1.23 bn)

If exchange rate of $ increases by Rs. 1/$ - Net Import bill increases by Rs. 5,542 crores ($ 0.82 bn)

| 7. Self-sufficiency in petroleum products (Million Metric Tonnes) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Details | | 2014-15 | 2015-16 (P) | May (P) | | April-May (P) | | |
| | | | | 2015 | 2016 | 2015 | 2016 | |
| 1 | Indigenous crude oil processing : | 34.2 | 34.1 | 2.8 | 2.9 | 5.5 | 5.7 | |
| **a)** | Products from indigenous crude (93.3% of crude oil processed) | 32.0 | 31.9 | 2.6 | 2.7 | 5.1 | 5.3 | |
| **b)** | Products from fractionators (Including LPG and Gas) | 3.7 | 3.4 | 0.3 | 0.3 | 0.6 | 0.5 | |
| 2 | Total production from indigenous crude & condensate **(a + b )** | 35.6 | 35.2 | 2.9 | 3.0 | 5.7 | 5.9 | |
| 3 | Total domestic consumption | 165.5 | 183.5 | 15.5 | 16.6 | 30.2 | 32.8 | |
| **% Self-sufficiency (2 / 3)** | | **21.5%** | **19.2%** | **18.7%** | **18.1%** | **18.8%** | **18.0%** | |

## 8. Refineries: Installed capacity and crude oil processing (MMTPA / MMT)

| Company | Refinery | Installed capacity (1.4.2016) | 2014-15 | 2015-16 (P) | Crude oil processing | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | May | | | April-May | | |
| | | | | | 2015 (Actual) | 2016 (Target) | 2016 (P) | 2015 (Actual) | 2016 (Target) | 2016 (P) |
| IOCL | Barauni (1964) | 6.0 | 5.9 | 6.5 | 0.5 | 0.6 | 0.6 | 1.0 | 1.1 | 1.1 |
| | Koyali (1965) | 13.7 | 13.3 | 13.8 | 1.2 | 1.2 | 1.2 | 1.8 | 2.4 | 2.5 |
| | Haldia (1975) | 7.5 | 7.7 | 7.8 | 0.7 | 0.7 | 0.7 | 1.3 | 1.4 | 1.4 |
| | Mathura (1982) | 8.0 | 8.5 | 8.9 | 0.7 | 0.8 | 0.8 | 1.4 | 1.5 | 1.6 |
| | Panipat (1998) | 15.0 | 14.2 | 15.3 | 1.4 | 1.3 | 1.4 | 2.7 | 2.6 | 2.7 |
| | Guwahati (1962) | 1.0 | 1.0 | 0.9 | 0.1 | 0.1 | 0.1 | 0.2 | 0.2 | 0.1 |
| | Digboi (1901) | 0.7 | 0.6 | 0.6 | 0.1 | 0.1 | 0.05 | 0.1 | 0.1 | 0.1 |
| | Bongaigaon(1979) | 2.4 | 2.4 | 2.4 | 0.2 | 0.2 | 0.2 | 0.5 | 0.4 | 0.4 |
| | Paradip (2016) | 15.0 | - | 1.8 | 0.0 | 0.7 | 0.5 | 0.0 | 1.3 | 0.9 |
| | **IOCL TOTAL** | **69.2** | **53.6** | **58.0** | **4.8** | **5.6** | **5.6** | **8.9** | **10.9** | **10.9** |
| HPCL | Mumbai (1954) | 6.5 | 7.4 | 8.0 | 0.4 | 0.7 | 0.7 | 1.0 | 1.3 | 1.4 |
| | Visakh (1957) | 8.3 | 8.8 | 9.2 | 0.8 | 0.8 | 0.8 | 1.5 | 1.6 | 1.6 |
| HMEL | Bathinda (2012) | 9.0 | 7.3 | 10.7 | 0.9 | 0.8 | 0.9 | 1.8 | 1.6 | 1.9 |
| | **HPCL-TOTAL** | **23.8** | **23.5** | **27.9** | **2.2** | **2.3** | **2.5** | **4.3** | **4.4** | **4.9** |
| BPCL | Mumbai (1955) | 12.0 | 12.8 | 13.4 | 1.2 | 1.2 | 1.2 | 2.3 | 2.3 | 2.3 |
| | Kochi (1966) | 9.5 | 10.4 | 10.7 | 0.9 | 0.9 | 0.9 | 1.8 | 1.8 | 1.8 |
| BORL | Bina (2011) | 6.0 | 6.2 | 6.4 | 0.6 | 0.5 | 0.6 | 0.6 | 1.1 | 1.2 |
| | **BPCL-TOTAL** | **27.5** | **29.4** | **30.5** | **2.7** | **2.6** | **2.7** | **4.7** | **5.2** | **5.3** |

| Com-pany | Refinery | Installed capacity (1.4.2016) | 2014-15 | 2015-16 (P) | Crude oil processing | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | May | | | April-May | | |
| | | | | | 2015 (Actual) | 2016 (Target) | 2016 (P) | 2015 (Actual) | 2016 (Target) | 2016 (P) |
| CPCL | Manali (1969) | 10.5 | 10.2 | 9.1 | 0.9 | 0.9 | 0.8 | 1.8 | 1.7 | 1.6 |
| | CBR (1993) | 1.0 | 0.5 | 0.5 | 0.04 | 0.1 | 0.05 | 0.1 | 0.1 | 0.1 |
| | **CPCL-TOTAL** | **11.5** | **10.8** | **9.6** | **1.0** | **0.9** | **0.9** | **1.9** | **1.8** | **1.7** |
| NRL | Numaligarh (1999) | 3.0 | 2.8 | 2.5 | 0.2 | 0.2 | 0.2 | 0.2 | 0.5 | 0.5 |
| ONGC | Tatipaka (2001) | 0.1 | 0.1 | 0.1 | 0.004 | 0.004 | 0.006 | 0.008 | 0.008 | 0.01 |
| MRPL | Mangalore (1996) | 15.0 | 14.6 | 15.5 | 1.3 | 1.5 | 1.2 | 2.4 | 2.6 | 2.4 |
| | **ONGC TOTAL** | **15.1** | **14.7** | **15.6** | **1.3** | **1.5** | **1.2** | **2.5** | **2.7** | **2.4** |
| RIL* | Jamnagar (DTA) (1999) | 33.0 | 30.9 | 32.4 | 2.7 | 2.7 | 2.9 | 4.8 | 4.8 | 5.6 |
| | Jamnagar (SEZ) (2008) | 27.0 | 37.2 | 37.1 | 3.1 | 3.1 | 2.2 | 6.1 | 6.1 | 5.3 |
| EOL | Vadinar (2006) | 20.0 | 20.5 | 19.1 | 1.8 | 1.7 | 1.8 | 3.5 | 3.4 | 3.5 |
| **All India** | | **230.1** | **223.3** | **232.9** | **19.7** | **20.6** | **20.0** | **36.8** | **39.8** | **40.1** |

* RIL target for 2016-17 is previous year crude processing. Note: Some sub-totals/ totals may not add up due to rounding off at individual levels.

## 9. Major crude oil and product pipeline network

| | | ONGC | OIL | Cairn | HMEL | IOCL | BPCL | HPCL | Other | Total |
|---|---|---|---|---|---|---|---|---|---|---|
| **Crude Oil** | Length (KM) | 1,180 | 1,193 | 670 | 1,017 | 4,867 | 937 | | - | **9,864** |
| (as on 1.4.2016) | Cap (MMTPA) | 57.1 | 8.4 | 8.7 | 9.0 | 40.4 | 6.0 | - | - | **129.6** |
| **Products** | Length (KM) | - | 654 | - | - | 6,739 | 1,935 | 2,957 | 2,687 | **14,972** |
| (as on 1.4.2016) | Cap (MMTPA) | - | 1.7 | - | - | 40.2 | 14.9 | 31.6 | 9.3 | **97.7** |

**Other** includes GAIL and Petronet India.

## 10. Gross Refining Margins (GRM) of refineries ($/bbl)

| Company | Refinery | 2012-13 | 2013-14 | 2014-15 | 2015-16 |
|---|---|---|---|---|---|
| IOCL | Barauni | 2.40 | 6.68 | -1.20 | 2.93 |
| | Koyali | 4.61 | 4.52 | 4.79 | 6.80 |
| | Haldia | 0.85 | 2.84 | -1.51 | 3.96 |
| | Mathura | 0.55 | 2.10 | -2.19 | 3.30 |
| | Panipat | 3.34 | 3.62 | -1.97 | 4.15 |
| | Guwahati | 9.52 | 6.38 | 8.68 | 15.88 |
| | Digboi | 20.81 | 15.41 | 13.73 | 16.17 |
| | Bongaigaon | 5.26 | 6.71 | -0.26 | 11.09 |
| | Paradip | - | - | - | -0.65 |
| | **Average** | **3.16** | **4.24** | **0.27** | **5.06** |
| BPCL | Kochi | 5.36 | 4.80 | 3.17 | 6.87 |
| | Mumbai | 4.67 | 3.95 | 3.97 | 6.37 |
| | **Average** | **4.97** | **4.33** | **3.62** | **6.59** |
| HPCL | Mumbai | 2.08 | 5.38 | 4.88 | 8.09 |
| | Visakhapatnam | 2.08 | 1.50 | 1.12 | 5.46 |
| | **Average** | **2.08** | **3.43** | **2.84** | **6.68** |
| CPCL | Chennai | 0.99 | 4.08 | 1.97 | 5.27 |
| MRPL | Mangalore | 2.45 | 2.67 | -0.64 | 5.20 |
| NRL | Numaligarh | 10.52 | 12.09 | 16.67 | 23.68 |
| BORL | Bina | 7.00 | 7.70 | 6.10 | 11.70 |
| RIL | Jamnagar | 9.20 | 8.10 | 8.60 | 10.80 |
| Essar | Vadinar | 7.96 | 7.98 | 8.37 | Not yet declared |

| 11. GRM of North-East refineries excluding excise duty benefit ($/bbl) | | | | | |
|---|---|---|---|---|---|
| **Company** | **Refinery** | **2012-13** | **2013-14** | **2014-15** | **2015-16** |
| **IOCL** | Guwahati | 3.43 | 0.88 | 0.96 | 1.26 |
| | Digboi | 13.25 | 8.50 | 5.42 | 4.16 |
| | Bongaigaon | 0.25 | 2.34 | -6.51 | 0.08 |
| **NRL** | Numaligarh | 4.86 | 6.98 | 9.46 | 8.06 |

| 12. Production and consumption of petroleum products (Million Metric Tonnes) | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **Products** | **April-March 2016 (P)** | | **May 2015** | | **May 2016 (P)** | | **April-May 2015** | | **April-May 2016 (P)** | |
| | **Production** | **Consumption** | **Production** | **Consumption** | **Production** | **Consumption** | **Production** | **Consumption** | **Production** | **Consumption** |
| LPG | 10.6 | 19.6 | 0.8 | 1.5 | 0.9 | 1.6 | 1.6 | 3.0 | 1.7 | 3.2 |
| MS | 35.3 | 21.8 | 2.8 | 1.8 | 3.2 | 2.1 | 5.1 | 3.6 | 6.2 | 4.1 |
| NAPHTHA | 17.7 | 13.4 | 1.5 | 1.2 | 1.4 | 1.1 | 2.9 | 2.2 | 2.7 | 2.3 |
| ATF | 11.8 | 6.2 | 0.8 | 0.5 | 1.1 | 0.6 | 1.4 | 1.0 | 2.2 | 1.1 |
| SKO | 7.5 | 6.8 | 0.6 | 0.6 | 0.6 | 0.5 | 1.1 | 1.1 | 1.1 | 1.0 |
| HSD | 98.6 | 74.6 | 8.7 | 6.4 | 8.1 | 7.0 | 15.8 | 12.9 | 16.1 | 13.7 |
| LDO | 0.4 | 0.4 | 0.03 | 0.02 | 0.04 | 0.04 | 0.1 | 0.1 | 0.1 | 0.1 |
| LUBES | 1.0 | 3.2 | 0.1 | 0.2 | 0.1 | 0.3 | 0.2 | 0.5 | 0.2 | 0.5 |
| FO/LSHS | 10.7 | 6.7 | 1.0 | 0.5 | 1.2 | 0.6 | 1.8 | 1.0 | 2.2 | 1.3 |
| BITUMEN | 5.2 | 5.8 | 0.5 | 0.6 | 0.6 | 0.6 | 1.0 | 1.1 | 1.2 | 1.2 |
| OTHERS | 32.5 | 24.9 | 2.6 | 2.1 | 3.0 | 2.1 | 5.0 | 3.7 | 5.9 | 4.2 |
| **ALL INDIA** | **231.3** | **183.5** | **19.5** | **15.5** | **20.1** | **16.6** | **35.9** | **30.2** | **39.6** | **32.8** |
| **Growth (%)** | **4.8%** | **10.9%** | **5.7%** | **5.3%** | **3.1%** | **6.7%** | **0.6%** | **7.1%** | **10.4%** | **8.3%** |

| 13. LPG consumption (Thousand Metric Tonne) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **LPG category** | **2014-15** | **2015-16 (P)** | **May** | | | **April-May** | | |
| | | | **2015** | **2016(P)** | **Gr (%)** | **2015** | **2016(P)** | **Gr (%)** |
| **1. PSU Sales** : | | | | | | | | |
| LPG-Packed Domestic | 16,040.4 | 17,182.5 | 1,321.7 | 1,396.5 | 5.7 | 2627.6 | 2788.0 | 6.1 |
| LPG-Packed Non-Domestic | 1,051.0 | 1,464.0 | 107.0 | 130.0 | **21.5** | 207.5 | 261.0 | **25.8** |
| LPG-Bulk | 315.7 | 316.4 | 25.8 | 31.5 | 22.0 | 49.1 | 61.0 | 24.2 |
| Auto LPG | 163.8 | 170.8 | 14.6 | 13.9 | **-4.5** | 28.4 | 27.0 | **-4.8** |
| **Sub-Total (PSU Sales)** | **17,570.9** | **19,133.7** | **1,469.1** | **1,571.9** | **7.0** | **2,912.6** | **3,137.0** | **7.7** |
| **2. Direct Private Imports** | 429.2 | 417.3 | 27.5 | 35.6 | 29.5 | 63.6 | 71.2 | 11.9 |
| **Total (1+2)** | **18,000.1** | **19,551.0** | **1,496.6** | **1,607.5** | **7.4** | **2,976.2** | **3,208.2** | **7.8** |

| 14. Industry marketing infrastructure (as on 01.04.2016) (Provisional) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **Particulars** | **IOCL** | **BPCL** | **HPCL** | **RIL** | **ESSAR** | **SHELL** | **Others** | **Total** |
| Terminal/ Depots **(Nos.)** | 129 | 84 | 88 | 16 | 11 | 2 | 6* | **336** |
| Aviation Fuel Stations **(Nos.)** | 100 | 40 | 37 | 27 | | | 1@ | **205** |
| Retail Outlets (total) **(Nos.)** | 25,363 | 13,439 | 13,802 | 1,400 | 2,100 | 82 | 4^ | **56,190** |
| LPG Distributors (total) **(Nos.) (PSUs only)** | 9,144 | 4,494 | 4,278 | | | | | **17,916** |
| SKO/LDO agencies **(Nos.)** | 3,909 | 1,001 | 1,638 | | | | | **6,548** |
| LPG Bottling plants **(Nos.) (PSUs only)** | 91 | 51 | 46 | | | | | **188** |
| LPG Bottling capacity **(TMTPA) (PSUs only)** | 8,335 | 3,375 | 3,462 | | | | | **15,172** |
| Rural ROs **(Nos.)** | 6,691 | 2,353 | 2,847 | 127 | 385 | 10 | | **12,413** |
| RGGLVY **(Nos.)** | 2,761 | 1,385 | 1,340 | | | | | **5,486** |
| LPG consumers **(Nos. crore) (PSUs only)** | 9.88 | 5.06 | 5.24 | | | | | **20.18** |

*2 NRL, 4 MRPL ; @ Shell MRPL ; ^1 ONGC, 3 MRPL

## 15. Natural gas at a glance

(MMSCM)

| Details | 2014-15 | 2015-16 (P) | May 2015 (P) | May 2016 (Target) | May 2016 (P) | April-May 2015 (P) | April-May 2016 (Target) | April-May 2016 (P) |
|---|---|---|---|---|---|---|---|---|
| (a) Gross production | 33,657 | 32,249 | 2,852 | 2,722 | 2,656 | 5,523 | 5,244 | 5,144 |
| (b) Net production (excluding flare gas and loss) | 32,693 | 31,138 | 2,757 | | 2,574 | 5,335 | | 4,974 |
| (c) LNG import | 18,536 | 21,309 | 1,452 | | 2,082 | 2,925 | | 4,224 |
| (d) Total consumption including internal consumption (Net production + Import) (b + c) | 51,229 | 52,448 | 4,209 | | 4,655 | 8,259 | | 9,198 |
| (e) Total consumption (in BCM) | 51.23 | 52.45 | 4.21 | | 4.66 | 8.26 | | 9.20 |
| (f) Import dependency based on consumption [c/d*100] | 36.18 | 40.63 | 34.50 | | 44.72 | 35.41 | | 45.92 |

## 16. Coal Bed Methane (CBM) gas development in India

| | | |
|---|---|---|
| Prognosticated CBM resources | 92 | TCF |
| Established CBM resources | 9.9 | TCF |
| Total available coal bearing area | 26,000 | Sq. KM |
| Exploration initiated | 17,200 | Sq. KM |
| Blocks awarded | 33 | Nos. |
| **Commercial production of CBM gas (May, 2016)** | **42.646** | **MMSCM** |

## 17. Major natural gas pipeline network

| Nature of pipeline | | GAIL | Reliance | GSPL | ARN | IOCL | ONGC | Total |
|---|---|---|---|---|---|---|---|---|
| **Natural gas** (as on 1.4.2016) | Length (KM) | 11,077 | 1,469 | 2,540 | 1,000 | 140 | 24 | **16,250** |
| | Cap (MMSCMD) | 206 | 80 | 43 | 6 | 9.5 | 6 | **350.5** |

## 18. Gas pipelines under execution / construction as on 31.3.2016

| Network/ Region | Entity | Length (KM) | Design Cap. (MMSCMD) | Pipeline Size |
|---|---|---|---|---|
| Kochi-Kottanad-Bengaluru-Mangalore | GAIL (India) Ltd | 1,063 | 16 | 24"/18"/12" |
| Dabhol - Bengaluru (DBPL) | GAIL (India) Ltd | 315 | 16 | 36"/30"/24"/18" |
| Surat - Paradip | GAIL (India) Ltd | 2,112 | 74.81 | 36"/24"/18" |
| Jagdishpur- Haldia | GAIL (India) Ltd | 1,860 | 32 | 30"/24"/18"/12"/8"/4" |
| Mallavaram – Bhopal - Bhilwara | GSPC India Transco Ltd | 2,042 | 78.25 | 42"/36"/30"/24"/18"/12" |
| Mehsana - Bathinda | GSPC India Gasnet Ltd | 2,052 | 77.11 | 36"/24"/18"/12" |
| Bathinda - Jammu - Srinagar | GSPC India Gasnet Ltd | 725 | 42.42 | 24"/18"/16"/12"/8"/6" |
| Kakinada - Vizag - Srikakulam | AP Gas Distribution Co. | 391 | 90 | 24"/18"/8"/4" |
| Shahdol - Phulpur | Reliance Gas Pipelines Ltd | 312 | 3.5 | 16" |
| Ennore - Nellore | Gas Transmission India Pvt. Ltd | 430 | 36 | 24"/12"/8" |
| Ennore-Thiruvallur-Bengaluru-Puducherry-Nagapattinam-Madurai-Tuticorin | Indian Oil Corporation Limited | 1,385 | 84.67 | 28"/24"/16"/12" /10" |
| **Total** | | **12,687** | | |

## 19. Existing LNG terminals as on 31.3.2016

| Existing | Promoters | Capacity (MMTPA) | Capacity Utilisation in % (in 2015-16) |
|---|---|---|---|
| Dahej | Petronet LNG Ltd (PLL) | Existing 10 MMTPA to be increased to 15 MMTPA by 2016 | 110.0 |
| Hazira | Hazira LNG Pvt Ltd (HLPL) | 5 MMTPA | 70.4 |
| Dabhol | RGPPL (GAIL - NTPC JV) | 1.692 MMTPA in phase-1 without break water to be increased to 5 MMTPA | 80.8 |
| Kochi | Petronet LNG Ltd (PLL) | 5 MMTPA | 5.6 |

| 20. Status of PNG connections and CNG stations across India (Nos.) | | | | |
|---|---|---|---|---|
| **State** | **Entity operating** | **Geographical region** | **CNG stations** | **PNG connections** |
| | | | **(as on 1.4.2016)** | **(as on 1.5.2016)** |
| **Haryana** | Haryana City Gas, Adani Gas Limited, GAIL Gas Ltd. | Sonepat, Faridabad, Gurgaon | 24 | 31,523 |
| **Andhra Pradesh** | Bhagyanagar Gas Ltd | Kakinada, Vijayawada | 12 | 3,154 |
| **Telangana** | Bhagyanagar Gas Ltd | Hyderabad | 21 | 1,140 |
| **Assam** | Assam Gas Co. Ltd | Tinsukia, Dibrugarh, Sibsagar, Jorhat, Golaghat | 0 | 29,000 |
| **Gujarat** | Sabarmati Gas Ltd, Gujarat Gas Ltd, Adani Energy Ltd , Vadodara Gas Ltd, Hindustan Petroleum Corporation Ltd, Charotar Gas Sahakari Mandal Ltd | Gandhinagar, Mehsana, Sabarkantha, Nadiad, Halol, Hazira, Rajkot, Khambhat, Palej, Valsad, Navsari, Surendernagar, Vadodara, Ahmedabad, Surat, Ankleshwar, Bhavnagar, Anand | 377 | 15,11,616 |
| **Madhya Pradesh** | Avantika Gas Ltd, GAIL Gas Ltd | Dewas, Vijaipur, Indore including Ujjain, Gwalior | 22 | 6,316 |
| **New Delhi** | Indraprastha Gas Ltd | National Capital Territory of Delhi (Including Noida & Ghaziabad) | 340 | 6,41,656 |

| State | Entity operating | Geographical region | CNG stations | PNG connections |
|---|---|---|---|---|
| | | | (as on 1.4.2016) | (as on 1.5.2016) |
| **Rajasthan** | GAIL Gas Ltd | Kota | 3 | 189 |
| **Maharashtra** | Mahanagar Gas Ltd, Maharashtra Natural Gas Ltd, GAIL Gas Ltd | Thane & adjoining contiguous areas including Mira Bhayender, Navi Mumbai, Thane City, Ambernath, Bhiwandi, Kalyan, Dombivily, Badlapur, Ulhasnagar, Panvel, Kharghar & Taloja, Pune City including Pimpri Chinchwad and along with adjoining contiguous areas of Chakan, Hinjewadi & Talegaon GA, Panvel | 225 | 8,98,021 |
| **Tripura** | Tripura Natural Gas Co. Ltd | Agartala | 5 | 23,039 |
| **West Bengal** | Great Eastern Energy Corporation Ltd | Kolkata | 7 | 0 |
| **Uttar Pradesh** | GAIL Gas Ltd, Sanwariya Gas, Green Gas, Central U.P. Gas, Siti Energy Ltd | Meerut, Mathura, Agra, Kanpur, Bareilly, Lucknow, Moradabad, Ferozabad | 45 | 34,447 |
| | | **Total** | **1,081** | **31,80,101** |

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

## International prices/ Exchange rates ($/bbl)

| | 2014-15 | 2015-16 | Apr-May`16 |
|---|---|---|---|
| Crude (Indian Basket) | 84.16 | 46.17 | 42.35 |
| Petrol | 95.45 | 61.72 | 53.76 |
| Diesel | 96.64 | 55.02 | 49.71 |
| Kerosene | 96.98 | 55.71 | 50.69 |
| LPG ($/MT) | 683.87 | 394.71 | 348.00 |
| FO ($/MT) | 471.99 | 235.13 | 195.51 |
| Naphtha ($/MT) | 717.44 | 420.14 | 380.86 |
| Exchange (Rs./$ ) | 61.15 | 65.46 | 66.72 |

## Customs & excise duty rates (w.e.f. 1.3.2016)

| | Basic customs duty | Excise duty |
|---|---|---|
| Petrol | 2.50% | Rs 21.48/Ltr |
| Diesel | 2.50% | Rs 17.33/Ltr |
| PDS SKO | Nil | NIL |
| Non-PDS SKO | 5.00% | 14.00% |
| Sub. Dom LPG | NIL | NIL |
| Non Domestic LPG | 5.00% | 8% |
| Furnace Oil (Non-Fert) | 5.00% | 14% |
| Naphtha (Non-Fert) | 5.00% | 14% |
| ATF | NIL | 14% * |
| Crude Oil | NIL+Rs.50/ -MT as NCCD | NIL+ Cess@ 20%+Rs.50 /-MT NCCD |

*8% for scheduled commuter airlines from regional connectivity scheme airports

## Price buildup of petroleum products (Rs./litre/Cylinder)

| | Petrol | Diesel |
|---|---|---|
| Price before taxes and dealer commission | 27.40 | 27.72 |
| Central taxes | 21.99 | 17.85 |
| State taxes | 13.96 | 8.17 |
| Dealer commission | 2.30 | 1.45 |
| Retail selling price (RSP) | 65.65 | 55.19 |

| | PDS SKO* | Sub. Dom LPG |
|---|---|---|
| Price before taxes and dealer commission | 13.16 | 502.91 |
| Central taxes | 0 | 0 |
| State taxes | 0.44 | 0 |
| Dealer commission | 1.42 | 46.01 |
| Retail Selling Price | 15.02 | 548.50 |
| Less cash compensation (CC) under DBTL | | 86.77 |
| CC by OMCs towards uncompensated cost | | 42.55 |
| Effective cost to consumer after subsidy | | 419.18 |

* SKO at Mumbai as on 3rd June, 2016. Petrol and diesel at Delhi as on 16th June, 2016 and LPG as on 1st June, 2016 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 | 850 | 1260 |

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

## Under-recoveries & Burden Sharing

| | 2013-14 | 2014-15 | 2015-16 |
|---|---|---|---|
| **Per unit under-recovery (Rs./litre/Cylinder)** | | | |
| Diesel | 8.39 | 2.70^ | Deregulated |
| PDS SKO | 33.98 | 27.93 | 13.47 |
| **Sub. Dom LPG** | **499.52** | **409.72** | **150.82*** |
| **Total under-recoveries including DBTL (Rs. Crores)** | | | |
| Diesel | 62,837 | 10,935^ | Deregulated |
| PDS SKO | 30,574 | 24,799 | 11,496 |
| Sub. Dom LPG# | 50,327 | 40,551 | 16,074 |
| Total | 143,738 | 76,285 | 27,570 |

**Burden sharing (Rs. Crores)**

| | 2013-14 | 2014-15 | 2015-16 |
|---|---|---|---|
| Government | 74,610 | 31,279 | 26,301** |
| Upstream | 67,021 | 42,822 | 1,251 |
| OMCs | 2,107 | 2,184 | 18 |

**Fiscal subsidy under Govt. schemes (Rs. Crores)**

| | | |
|---|---|---|
| PDS SKO | 681 | Scheme was extended till 31.3.2015 |
| Sub. Dom LPG | 1,920 | |

*Average of DBTL and under-recovery towards non-DBTL; #Includes subsidy under DBTL (2013-14: Rs.3,869 crore, 2014-15: Rs.3,971 crore, 2015-16: Rs.16,056 crore; ** Govt. compensation pending disbursement: Rs.7,469 crore; ^up to 18.10.2014 only

## Sales & profit of Petroleum Sector (Rs. Crores)

| 2015-16 | Turnover | PAT |
|---|---|---|
| Upstream Companies (PSU) | 138,676 | 20,633 |
| Downstream Companies (PSU) | 717,700 | 21,694 |
| Standalone Refineries (PSU) | 75,641 | 3,141 |
| Private (RIL & EOL*) | 336,332 | 29,258 |

*Q4 2015-16 results for EOL not yet declared.

## Borrowings of OMCs (Rs. Crores)

| | 2013-14 | 2014-15 | 2015-16 |
|---|---|---|---|
| IOCL | 86,263 | 55,248 | 52,469 |
| BPCL | 20,322 | 13,098 | 15,976 |
| HPCL | 32,164 | 20,335 | 21,337 |

## Petroleum sector contribution to Central/State Govt.

| | 2013-14 | 2014-15 | 2015-16 |
|---|---|---|---|
| Central Government | 152,900 | 172,066 | 258,443 |
| % to total revenue receipt | 15% | 16% | 21% |
| State Governments | 152,460 | 160,554 | 160,209 |
| % to total revenue receipt | 11% | 9% | 8% |
| **Total (Rs. Crores)** | **305,360** | **332,620** | **418,652** |

## Subsidy as a % of GDP(at current prices)

| | 2013- | 2014-15 | 2015-16 |
|---|---|---|---|
| Petroleum subsidy | 1.30 | 0.62 | 0.25 |

Note- GDP figure for 2013-14 are 2nd RE. 2014-15 are RE & 2015-16 are PE

## 22. Capital expenditure of PSU oil companies

| Company | 2013-14 | 2014-15 | 2015-16 (P) | April-May | |
|---|---|---|---|---|---|
| | | | | Target* | 2016 (P) |
| ONGC Videsh Ltd (OVL) | 35,357 | 7,172 | 6,783 | 14,843 | 8,167 |
| ONGC Ltd | 32,470 | 29,997 | 29,502 | 29,307 | 3,150 |
| Oil India Ltd (OIL) | 9,351 | 3,774 | 3,550 | 4,020 | 472 |
| GAIL (India) Ltd | 4,070 | 1,632 | 1,880 | 1,929 | 144 |
| Indian Oil Corp. Ltd. (IOCL) | 16,661 | 14,314 | 14,368 | 15,395 | 1,572 |
| Hindustan Petroleum Corp. Ltd (HPCL) | 2,642 | 2,670 | 5,459 | 6,862 | 319 |
| Bharat Petroleum Corp. Ltd (BPCL) | 4,374 | 6,875 | 10,926 | 13,097 | 877 |
| Mangalore Refinery & Petrochem Ltd (MRPL) | 1,449 | 2,747 | 1,550 | 600 | 10 |
| Chennai Petroleum Corp. Ltd (CPCL) | 229 | 466 | 1,318 | 1,148 | 96 |
| Numaligarh Refinery Ltd (NRL) | 372 | 103 | 237 | 352 | 25 |
| Balmer Lawrie Co. Ltd (BL) | 120 | 80 | 38 | 50 | 2 |
| **TOTAL** | **107,095** | **69,830** | **75,611** | **87,603** | **14,834** |

* Targets are for financial year 2016-17 and actual is for April-May 2016. Budget Estimates are for both Plan and Non-Plan

## 23. 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 | 1.411 | 8.50 |
| Diesel (HSD) | 1 | 1.210 | 7.45 |
| Kerosene (SKO) | 1 | 1.285 | 7.90 |
| ATF | 1 | 1.288 | 8.10 |
| Light Diesel Oil (LDO) | 1 | 1.172 | 7.37 |
| Furnace Oil (FO) | 1 | 1.071 | 6.74 |
| Crude Oil | 1 | 1.170 | 7.33 |

### Exclusive Economic Zone

| | |
|---|---|
| 200 Nautical Miles | 370.4 Kilometers |

### Volume conversion

| From | To |
|---|---|
| 1 US Barrel (bbl) | 159 litres |
| 1 US Barrel (bbl) | 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) | 3,412 Btu |

### Natural gas conversions

| | |
|---|---|
| 1 Standard Cubic Metre | 35.31 Cubic Feet |
| 1 BCM/year of Gas | 2.74 MMSCMD |
| 1 TCF of Gas Reserve | 3.88 MMSCMD |
| 1 MMTPA of LNG | 3.60 MMSCMD |
| 1 MT of LNG | 1,314 SCM |

| | |
|---|---|
| 1 MMBTU | 25.2 SCM @10000 kcal/SCM |
| GCV (Gross Calorific Value | 10,000 kcal/SCM |
| NCV (Net Calorific Value) | 90% of GCV |
| Gas required for 1 MW power generation | 4,541 SCM/day |
| Power generation from 1 MMSCMD of gas | 220 MW |