

## HIGHLIGHTS

### 5. Availability

#### 5.1 Availability of coal and lignite

The total availability of raw coal in India during 2009-10 stood at 586.07 MTs and that of lignite at 33.96 MTs (Table 5.1). The availability of coal in the year 2009-10 increased by 6.6% compared to 2008-09, the availability of lignite also increased by 6.6% during the same period. The availability of coal has increased at a CAGR of about 5.4% during the period from 1970-71 to 2009-10. This increased availability might be attributed to the secular increase in the coal production (72.95MTs during 1970-71 to 532.06 MTs during 2009-10) supplemented by imports.(Table 5.2).

The availability of lignite during 2009-10 increased by 6.6% compared to 2008-09(Table 5.3). The availability of lignite has increased at a CAGR of about 3.17% during the period from 1998-99 to 2009-10.

#### 5.2 Availability of Natural Gas

The availability of natural gas has steadily increased from a mere 0.65 BCMs during 1970-71 to 46.49 BCMs during 2009-10, registering a CAGR of 11.3%. Most of this increase in the indigenous production is due to discovery of new reserves. (Table 5.1)

#### 5.3 Availability of Electricity

Since thermal electricity is not a primary source of energy, being produced either from coal or natural gas in India, electricity availability is considered only for that electricity which is generated from Hydro and Nuclear sources. Without taking into account the transmission and distribution losses, the total availability is equal to the total generation, and this figure increased from 27,666 GWh during 1970-71 to 1,42,576 GWh during 2008-09 and then decreased to 1,25,316 GWh during 2009-10, registering a CAGR of 3.9% over the period (Table 5.1).

#### 5.4 Availability of Crude Oil and Petroleum Products

The availability crude oil in the country increased from 18.51MTs during 1970-71 to 106.52 MTs during 2000-01 and then to 192.95 MTs during 2009-10(Table 5.4). During this period crude oil production increased from 6.82MTs to 33.69 MTs and the net import increased from 11.68 MTs to 159.26 MTs. There was 16% increase in availability of crude oil during 2009-10 over 2008-09

**Table 5.1 : Trends in Availability of Primary Sources of Conventional Energy in India**

Year	Coal	Lignite	Crude Petroleum	Natural Gas	Electricity
	(Million Tonnes)	(Million Tonnes)	(Million Tonnes)	(Billion Cubic Metres)	Hydro & Nuclear (GWh)*
1	2		3	4	5
1970-71	71.24	-	18.51	0.65	27,666
1975-76	92.17	-	22.07	1.12	35,928
1980-81	109.32	-	26.76	1.52	49,543
1985-86	155.54	-	44.78	4.95	56,003
1990-91	214.99	-	53.72	12.77	77,782
1995-96	284.04	-	62.51	20.93	80,561
2000-01	325.45	24.59	106.52	27.86	91,264
2005-06	432.27	30.24	131.60	31.33	1,18,818
2006-07	462.35	30.81	145.49	30.79	1,32,304
2007-08	502.82	34.65	155.79	31.48	1,37,344
2008-09	549.57	31.85	166.28	31.77	1,42,576
2009-10(p)	586.07	33.96	192.95	46.49	1,25,316
<b>Growth rate of 2009-10 over 2008-09(%)</b>	<b>6.64</b>	<b>6.64</b>	<b>16.04</b>	<b>46.32</b>	<b>-12.11</b>
<b>CAGR 1970-71 to 2009-10(%)</b>	<b>5.41</b>	<b>-</b>	<b>6.04</b>	<b>11.28</b>	<b>3.85</b>

(p) - Provisional

GWh = Giga Watt hour =  $10^6$  x Kilo Watt hour

\* Thermal electricity is not a primary source of energy

- Sources:
1. Office of Coal Controller, Ministry of Coal
  2. Ministry of Petroleum & Natural Gas.
  3. Central Electricity Authority.

**Table 5.2 : Trends in Availability of Raw Coal for Consumption in India**

(Million tonnes)

Year	Production (Coking + Non-coking)	Changes in Stock at Pit-heads (Closing - Opening)	Change in Industrial Stock	Imports	Exports	Availability for Consumption
1	2	3	4	5	6	7=2-3+4+5-6
1970-71	72.95	2.48	1.24	0.00	0.47	71.24
1975-76	99.63	4.28	-2.74	0.00	0.44	92.17
1980-81	113.91	4.25	-0.78	0.55	0.11	109.32
1985-86	154.30	-1.25	-1.83	2.03	0.21	155.54
1990-91	214.06	4.83	0.96	4.90	0.10	214.99
1995-96	273.42	-1.85	-	8.87	0.09	284.04
2000-01	313.70	7.89	-	20.93	1.29	325.45
2005-06	407.01	10.28	-	36.87	1.33	432.27
2006-07	430.83	10.01	-	43.08	1.55	462.35
2007-08	457.08	34.65	-	49.79	1.63	502.82
2008-09	492.76	0.54	-	59.00	1.66	549.57
2009-10(p)	532.06	16.80	-	73.26	2.45	586.07
<b>Growth rate of 2009-10 over 2008-09(%)</b>	<b>7.98</b>	<b>3023.42</b>	<b>-</b>	<b>24.16</b>	<b>48.04</b>	<b>6.64</b>

Note: Figures in brackets are in negative.

Source : Office of the Coal Controller, Ministry of Coal

**Table 5.3 : Trends in Availability of Lignite for Consumption in India**

(Million tonnes)						
Year	Production	Changes in Stock at Pit-heads (Closing - Opening)	Change in Industrial Stock	Imports	Exports	Availability for Consumption
1	2	3	4	5	6	7=2-3+4+5-6
1998-99	23.42	0.14	-	-	-	23.28
1999-00	22.48	0.44	-	-	-	22.03
2000-01	24.25	-0.34	-	-	-	24.59
2001-02	24.81	0.00	-	-	-	24.81
2002-03	26.02	-0.01	-	-	-	26.03
2003-04	27.96	-0.52	-	-	-	28.48
2004-05	30.41	0.32	-	-	-	30.09
2005-06	30.23	-0.01	-	-	-	30.24
2006-07	31.29	0.48	-	-	-	30.81
2007-08	33.98	-0.67	-	-	-	34.65
2008-09	32.42	0.57	-	-	-	31.85
2009-10(p)	34.07	0.11	-	-	-	33.96
<b>Growth rate of 2009-10 over 2008-09(%)</b>	<b>5.09</b>	<b>-80.70</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>6.64</b>
<b>CAGR 1998-99 to 2009-10(%)</b>	<b>3.17</b>	<b>-2.22</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>3.20</b>

Source : Office of the Coal Controller, Ministry of Coal

**Table 5.4 : Trends in Availability of Crude Oil and Petroleum Products in India**

(Million tonnes)

Year	Crude Oil			Petroleum Products		
	Production	Net Imports	Gross Availability	Production @	Net Imports	Gross Availability
1	2	3	4=2+3	5	6	7=5+6
1970-71	6.82	11.68	18.51	17.11	0.75	17.86
1975-76	8.45	13.62	22.07	20.83	2.05	22.88
1980-81	10.51	16.25	26.76	24.12	7.25	31.38
1985-86	30.17	14.62	44.78	39.88	1.90	41.78
1990-91	33.02	20.70	53.72	48.56	6.01	54.57
1995-96	35.17	27.34	62.51	55.08	16.90	71.98
2000-01	32.43	74.10	106.52	95.61	0.90	96.52
2005-06	32.19	99.41	131.60	119.75	-10.02	109.73
2006-07	33.99	111.50	145.49	135.26	-15.96	119.30
2007-08	34.12	121.67	155.79	144.93	-18.32	126.61
2008-09	33.51	132.78	166.28	150.52	-18.25	132.27
2009-10(p)	33.69	159.26	192.95	149.65	-36.31	113.34
<b>Growth rate of 2009-10 over 2008-09(%)</b>	<b>0.55</b>	<b>19.95</b>	<b>16.04</b>	<b>-0.57</b>	<b>-99.02</b>	<b>-14.31</b>

.@ Excludes LPG Production from Natural Gas

Source : Ministry of Petroleum & Natural Gas.