## Chapter

## Coal – An Overview

### 1.1

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#### **Background**

Coal is the most valuable and reliable source of energy to the Economy and more than half of the current commercial energy requirement is met by coal. With the passage of time, the Power sector has emerged as the main consumer of coal for thermal power generation in India. Metallurgical and Cement sectors are other major consumers of coal.

The production of coal assumed greater significance after 2003 when Government of India (GOI) pronounced a mission "Power to all by 2012". Accordingly, the GOI envisaged capacity addition of 1,00,000 MW of power by 2012 and in order to meet this increased capacity, corresponding increase in the coal production was required in the X to XI Plan periods (i.e. 2002-12).

The roles and responsibilities of various agencies involved in exploration, production and allocation of coal are indicated below:

#### **Ministry of Coal (MOC)**

The Ministry of Coal (MOC) has the overall responsibility of framing policies and strategies for exploration and development of coal reserves. It also lays down general guidelines for production, supply and distribution of coal.

#### **Coal Controller's Organisation (CCO)**

The Coal Controller's Organisation (CCO) is a subordinate office of MOC having its headquarters at Kolkata. The CCO discharges various statutory functions such as inspection of collieries for ensuring class, grade and size of coal, adjudicating claims of consumers on grade and size of coal; collection and publication of statistical information on coal and to grant opening/ reopening of coal mines. In 2005, MOC appointed CCO as the nodal agency for monitoring the production of coal blocks allocated for captive mining.

#### **Coal India Limited (CIL)**

Coal India Limited (CIL), a Maharatna Company, under MOC, was incorporated in November 1975. CIL has seven wholly owned coal producing subsidiaries, i.e. Bharat Coking Coal Limited (BCCL), Central Coalfields Limited (CCL), Eastern Coalfields Limited (ECL), Mahanadi Coalfields Limited (MCL), Northern Coalfields Limited (NCL), South Eastern Coalfields Limited (SECL), Western Coalfields Limited (WCL) and one mine planning and consultancy company *viz*. Central Mine Planning and Design Institute Limited (CMPDIL).

CIL is the largest coal producing company in the world. It produced 431.32 million tonne of coal and earned a net profit of ₹ 10,867 crore during 2010-11. As on 31 March 2011, CIL operates 471 mines across eight states in India. Of these, 163 were open cast mines, 273 underground mines and 35 mixed mines.

#### **Central Mine Planning and Design Institute Limited (CMPDIL)**

CMPDIL provides technical support to the seven producing subsidiary companies in the area of geological exploration and drilling, project planning and designing, engineering services, research and development, environmental services etc.

Besides, Geological Survey of India (GSI) and Mineral Exploration Corporation Limited (MECL) undertake prospecting in areas that could potentially have coal reserves. Such prospecting is funded by the GOI. Detailed exploration is entrusted to CMPDIL, which based on the results of detailed drilling, prepares geological reports for a block area. After the result of regional/ promotional drilling has been analysed, it in turn, forms the basis of planning and designing of mines, preparation of mine plans and deciding on the mine capacity that can be sustained for the reserves in the block.

## 1.2

#### Coal reserves in the country

The table below indicates the quantum of Geological Reserves (GR) of coal available in the country:

(Figures in million tonne)

As on	Geological reserves of coal in the country			
	Proved <sup>1</sup>	Indicated <sup>2</sup>	Inferred <sup>3</sup>	Total
1 January 2006	95,866	119,769	37,666	253,301
1 April 2007	99,060	120,177	38,144	257,381
1 April 2008	101,829	124,216	38,490	264,535
1 April 2009	105,820	123,470	37,920	267,210
1 April 2010	109,798	130,654	36,358	276,810
1 April 2011	114,002	137,471	34,390	285,863

As may be seen from the above, the total GR of coal in India as of 01 April 2011, stood at 2,85,863 million tonne, of which 1,14,002 million tonne was in the 'Proved' category, 1,37,471 million tonne was in the 'Indicated' category and 34,390 million tonne was in the 'Inferred' category. Over the last five years, the coal reserves have increased by 32,562 million tonne.

<sup>&</sup>lt;sup>1</sup> Represents resource base with the highest confidence level of 90%.

<sup>&</sup>lt;sup>2</sup> Represents resource base with confidence level of 70%.

<sup>&</sup>lt;sup>3</sup> Represents resource base with confidence level of 40%.

### 1.3 National coal demand

The Planning Commission projected a demand of 731.10 million tonne of coal for the terminal year of the XI Plan, i.e. 2011-12, based on a cumulative annual growth rate (CAGR) of 9.7 per cent. In the mid-term appraisal, the Planning Commission revised the demand for coal to 713.24 million tonne for the terminal year based on a CAGR of 8.98 per cent. The sector-wise demand forecasts for 2011-12, as per the original projections and mid-term appraisal of the XI Plan are given in table below.

(Figures in million tonne)

Sector	Demand projection by Plannning Commision		
	Original	Revised	
Power	483.00	473.00	
Captive Power Plants	68.50	68.50	
Steel	31.90	33.35	
Cement	57.06	47.00	
Others	90.54	91.39	
Total	731.00	713.24	

## 1.4

#### **Domestic production of coal**

The Planning Commission envisaged coal production to reach 680 million tonne (520.50 million tonne for CIL) in 2011-12. The incremental production envisaged was 247.50 million tonne as against 104.71 million tonne in the X Plan. CIL was expected to add 156.70 million tonne, Singareni Collieries Company Limited (SCCL) 3.30 million tonne and captive blocks 86.53 million tonne.

In the mid-term appraisal, the Planning Commission revised coal production target from 680 million tonne to 629.91 million tonne (520.50 million tonne to 486.50 million tonne for CIL) for 2011-12, mainly because 17 major projects of CIL, which were to contribute 100.65 million tonne were expected to contribute only 46.72 million tonne due to delays in getting necessary forest and environmental clearances.



#### Coal production by CIL

At present, CIL contributes about 81.10 per cent of the total supply of coal to various consumers in the country as per the New Coal Distribution Policy (NCDP) 2007 which came into force from 18 October 2007. The new policy envisages distribution of coal mainly through two channels – Fuel Supply Agreements (FSAs)<sup>4</sup> at notified

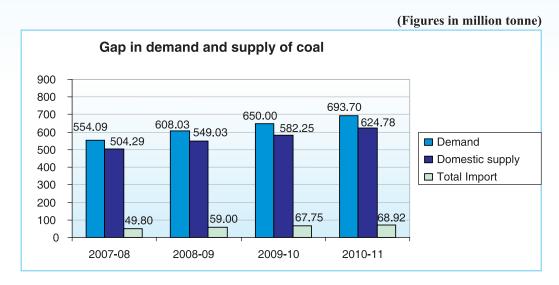
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<sup>&</sup>lt;sup>4</sup> All the existing linkage holders of erstwhile core and non-core sectors not having FSAs were required to enter into FSA with the coal companies. The concept of core and non-core sector was discontinued after NCDP 2007.

prices to be fixed and declared by CIL and e-auction. The balance for consumers with requirements upto 4,200 tonne per annum, is through the agencies nominated by the State Governments at notified prices of CIL plus actual freight and service charge.

## 1.5 National demand - supply gap of coal

Discussion paper on Annual Plan 2012-13 furnished by MOC to the Planning Commission indicated that gap between demand and supply of coal will be met by import. The import policy allows coal to be freely imported under Open General License by the consumers themselves considering their need and exercising their own commercial prudence. Gap between demand and supply of coal vis-à-vis actual import, as worked out by the Planning Commission, is shown in Chart below.



It may be seen from above graph that due to the gap in demand supply of coal, the quantum of import increased from 49.80 million tonne in 2007-08 to 68.92 million tonne in 2010-11 which had an adverse impact on the country's foreign currency outgo.

## 1.6 Allocation of coal blocks

Under the Coal Mines (Nationalisation) Act 1973, coal mining was exclusively reserved for the public sector. However, Coal Mines (Nationalisation) Amendment Act, 1976 allowed the following exceptions to the above policy, *viz.*,

- Captive mining by private companies engaged in production of iron and steel, and
- Sub lease for coal mining to private parties in isolated small pockets not amenable to economic development and not requiring rail transport.

The process was carried further by another amendment to the Coal Mines (Nationalisation) Amendment Act in 1993 which allowed coal mining for captive consumption for power generation and other end uses to be notified by the Government from time to time. Thus, mining of coal by Indian private companies was allowed in phases for their end use in iron and steel production, generation of power, and cement production.

In July 1992, Government of India constituted a Screening Committee<sup>5</sup> for screening proposals received for captive mining by the private power generation companies. The significant events are listed in *Annexure-I*.

Till 2004, there was no clearly spelt out criteria for allocation of coal mines and most

of the mines were allocated to the applicants who had produced only a letter of recommendation from the concerned State Government indicating that the party was planning to set up a permitted end use project of specified capacity.

Meanwhile. GOI constituted (December 2004), an Expert Committee on Road Map for Coal Sector Reforms (Expert Committee) headed by Shri T. L. Sankar, Chairman, Energy Group Administrative Staff College of India to prepare a comprehensive roadmap for modernisation of the coal sector. The major recommendations (2005) of the Expert Committee are included at Annexure-II.

# Major recommendations of Expert Committee (2005)

- Continue to regulate price of coal to ensure least cost of supply of coal for power generation while allowing a competitive and transparent coal market to supply the needs of other consumers.
- Emphasis on the role of captive mining to contribute significantly to the production of the coal in the short to medium term.
- The procedure and processes of allocation of coal blocks needed to be improved to expedite the allotment of captive coal blocks in a transparent and effective manner.
- Production from captive mines during mine development or periodic surpluses during mine operations must be sold to CIL/SCCL at negotiated price.
- Encashment of bank guarantees of nonserious players.
- De-reservation of CIL coal blocks that cannot be put into production before 2026-27.
- Setting up a permanent special task force for monitoring progress of clearances and project implementation to enhance the domestic coal capacity.

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<sup>&</sup>lt;sup>5</sup> Under the chairmanship of the Additional Secretary, MOC, and Advisor(Projects), MOC, Joint Secretary, and Financial Adviser, Representatives of the Ministry of Railways, Power and the concerned State Government as members.

The GOI framed (1993) the guidelines for allocation of coal blocks which, in order to improve the system and bring transparency for deciding the *inter se* priority amongst the competing applicants, were modified by the MOC in 2005, 2006 and 2008. Brief of these guidelines is given below:

- MOC in consultation with public sector coal companies would identify and prepare a list of such coal blocks for allocation.
- From the blocks so identified, MOC would invite applications for a few blocks at a time through advertisements in important national and regional newspapers.
- For allocation under Government dispensation, the list of identified blocks would be circulated inviting applications from the concerned Government companies.
- These applications would be scrutinised by a Screening Committee under the Chairmanship of Secretary (Coal) and recommended for allocation of the blocks.

Till March 2011, the MOC has allocated 194 coal blocks (net)<sup>6</sup> (44,440 million tonne) for captive mining of which 142 were explored blocks (GR: 23,391 million tonne) and the balance 52 were either regionally explored or unexplored coal blocks (GR: 21,049 million tonne).

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<sup>&</sup>lt;sup>6</sup> After taking into consideration de-allocation and re-allocation of coal blocks.