

4

COAL MINING POLICY AND MAJOR INITIATIVES

4.1 LEGISLATIVE CHANGES

4.1.1 Competitive Bidding:

4.1.1.1 With the progressive allocation of coal blocks, the number of coal blocks available for allocation is declining, while the number of applicants per block is increasing, as the demand for coal keeps increasing. This has made selection of an applicant in respect of a block difficult and vulnerable to criticism on the ground of lack of transparency and objectivity.

4.1.1.2 While efforts are on hand to continuously add blocks to the captive list, it is also expected that the demand for blocks would remain in excess of supply. Therefore, there is an urgent need to bring in a process of selection that is not only objective but also demonstrably transparent. Auctioning through competitive bidding is one acceptable selection process.

4.1.1.3 A Bill to amend the Mines and Mineral (Development & Regulation) Act, 1957 seeking to introduce competitive bidding system for allocation of coal blocks for captive use was introduced in the Rajya Sabha. It has since been referred to the

Standing Committee on Steel and Coal for detailed examination. Oral evidence was given before the Standing Committee on 17/02/2009. The Standing Committee tabled its report to the Parliament on 19.02.2009 with the recommendation to have further consultations with the State Governments and stakeholders. Consequent to this, a meeting was taken on 10.08.2009 by the Minister of State for Coal(I/c) with the coal/lignite bearing States/UTs. Majority of the State Govts. have supported the proposal. Based on the outcome of the meeting, a draft Cabinet Note has been sent to the Ministry of Mines for placing it before the Cabinet, seeking approval for passage of the said Bill in the Parliament.

4.1.2 Formation of Empowered Committee

The Government is considering the proposal to utilize the services of Empowered Committee of Secretaries constituted for International Coal Ventures Limited (ICVL) the consortium of i.e. SAIL, NTPC, CIL, RINL to consider the investment abroad proposals of CIL which are beyond CIL's financial powers of Rs.

1,000 crore. The Committee of Secretaries has recommended the proposal. In this regard a draft CCEA Note was circulated to the concerned Ministries/Departments for comments. The proposal/CCEA Note of Formation of Empowered Committee for CIL has been approved by Government and an order to CIL has been issued on 9th September, 2009.

4.1.3 Guidelines for Mine Closure

With a view to restore mined out areas to the primary level to the extent possible, it has been decided to make it mandatory to prepare mine closure plans for which Ministry of coal has issued guidelines for adoption by coal mine owners. This would help in addressing environmental issues related to coal mining. These guidelines are available on the website of this Ministry.

4.1.4 Draft Policy on Washery Rejects/ Surplus Coal

The Policy on Disposal of Surplus Coal, By-Products and Middlings/Rejects from Captive Blocks is under formulation after approval of the competent authority. The concerned file was recently referred to the Ministry of Law & Justice for seeking their advice. Ministry of Law & Justice has requested to discuss the proposed policy with them. The proposed policy will be finalized after receipt of advice from the Ministry of Law & Justice.

4.1.5 Status of the Coal Mines (Nationalisation) Amendment Bill 2000

The Coal Mines Nationalisation Amendment Bill 2000 was introduced in the Rajya Sabha in April, 2000 with an objective of participation of the Private Sector in the field of Coal Mining. The Standing Committee on Energy, to whom it was referred to by the House, submitted its report in August, 2001 recommending passage of the Bill. With stiff resistance from the Trade Unions, the Bill could not be moved further. It has been decided in the Energy Coordination Committee (ECC) meeting headed by the Prime Minister that the Bill shall be moved only after a consensus is arrived. However, Cabinet Secretariat has notified the constitution of a new Group of Minister (GoM) under the Chairmanship of Hon'ble Finance Minister to consider issues related to Coal Mines (Nationalization) Bill, 2000. The GoM will make specific recommendation on policy measures to explorations and mining of coal, including the issues relating to pursuing the said Bill. Finance Minister (Chairman) has been requested for holding a meeting of GoM.

4.1.6 Regular for Coal Sector

The draft Cabinet Note on setting up of a Coal Regulatory Authority along with the Draft Bill, was circulated to various Ministries/Department for their

comments. The comments of all the Ministries/Departments have been received and are under examination. Meanwhile, Ministry of Law has suggested several major modifications in the Draft Bill. The draft Bill is now finalized with the consultation of Ministry of Law and being circulated again for inter-ministerial consultations.

4.2 Captive Coal Mining Blocks:

- 4.2.1 Under the Coal Mines (Nationalisation) Act, 1973, coal mining was mostly reserved for the public sector. By an amendment to the Act in 1976, two exceptions to the policy were introduced viz., (i) captive mining by private companies engaged in production of iron and steel and (ii) sub-lease for coal mining to private parties in isolated small pockets not amenable to economic development and not requiring rail transport.
- 4.2.2 The Coal Mines (Nationalisation) Act, 1973 was amended in June, 1993 to allow coal mining for captive consumption for generation of power, washing of coal obtained from a mine and other end uses to be notified by Government from time to time. As per the provisions in Section 3 (3) (a) (iii) of the Coal Mines (Nationalisation) Act, 1973, a company engaged in production of iron and steel, generation of power, production of cement, and production of syn-gas obtained through coal gasification (underground and surface) and coal liquefaction only can do coal mining in India for captive consumption.
- 4.2.3 The Central Government, a Government company (including a State Government company), a Corporation owned, managed and controlled by the Central Government can do coal mining without the restriction of captive use.
- 4.2.4 The allocation of coal blocks to private parties is done through the mechanism of an Inter-Ministerial and Inter-Governmental body called the Screening Committee. The Screening Committee is chaired by the Secretary (Coal) and has representation from Ministry of Steel, Ministry of Power, Ministry of Industry and Commerce, Ministry of Environment and Forest, Ministry of Railways, Coal India Limited, CMPDIL and the concerned State Governments.
- 4.2.5 There are 229 (148 existing and 81 newly identified) coal blocks for allocation to specified end users and Govt. companies on display on the website of Ministry of Coal. 208 coal blocks have so far been allocated to eligible companies.
- 4.2.6 So far, production has commenced in 25 blocks. The production from these coal blocks for the year 2009-10 (April-November, 2009-Provisional) is 23.660 million tonnes as reported by the Coal

Controller's Office. Production of coal from these coal blocks was 30.02 million tonnes during 2008-2009. Many more coal blocks are likely to come into production in the 11th plan and the production from these blocks in the terminal year of the 11th plan would be approximately 80.89 MT as per the Mid Term Appraisal.

4.2.7 As regards, allocation of small and isolated blocks are concerned, a new policy is being formulated in consultation with Ministry of Law for allocation of such blocks.

4.2.8 Initiatives taken by the Ministry for expediting production from captive blocks were as follows:-

- a) Frequent and regular meetings of Screening Committee.
- b) Allowing disposal of coal produced during development phase through CIL subsidiaries, who'll procure it at a transfer price to be determined administratively.
- c) Taking bank guarantee for adhering to the schedule as per the specified milestones.
- d) Laying bench mark time lines for achieving various milestones from allocation to coal production, advance submission of development schedule by the allocatee and cancellation of allocation for non-adherence.

4.2.9 **Sector-wise allocation of coal blocks**

So far 208 coal blocks have been allocated

to various public sector/public sector companies including Ultra Mega Power Projects of 4000 MW each being set up in Madhya Pradesh, Orissa, and Jharkhand. During the year 2009-2010 (Upto 31st December, 2009), 13 coal blocks with total geological reserves of about 3591.32 MT were allocated to eligible public and private sector companies. Out of these, 06 coal blocks with geological reserves of about 1674.60 million tonnes of coal were allocated for generation of power.

4.2.10 Identification of new coal blocks

In consultation with CIL and NLC, 47 new coal blocks with geological reserves of about 17721.52 million tonnes and 38 lignite blocks with geological reserves of about 6240.34 million tonnes have been identified. There are 25 remaining coal blocks with geological reserves of about 7262.66 million tonnes from the old list. Process of identification and earmarking of new coal/lignite blocks would be finalized after the mode of allocation is determined by the Govt.

4.2.11 Ministry of Power proposes to set up four Ultra Mega Power Projects (UMPP) with capacity of 4000 MW each, through tariff based competitive bidding. The Ministry of Coal has allocated Moher, Moher-Amlori Extension and Chhatrasal coal blocks (GR 750 MT) for the proposed UMPP to be set up at Sasan in Madhya Pradesh; Meenakshi, Meenakshi-B and Dip side of Meenakshi coal blocks (geological reserve 885.24 MT) for the proposed

UMPP to be set up in Orissa; and Kerandari BC coal block (geological reserve 972 MT) for the proposed UMPP to be set up in Jharkhand.

4.2.12 Notification of Coal Gasification and Coal Liquefaction as specified end uses

Guidelines for conducting Underground Coal Gasification and allocation of blocks for UCG have been issued on 13.7.2009. Five lignite blocks and two coal blocks have been identified for allocation.

4.3 TECHNOLOGICAL INITIATIVES

In order to augment coal production from underground mines various mass

production technologies like continuous miners, long-well power supported technology and short-well technologies etc. are being deployed as per the techno-economic feasibility. SCCL has taken up two deep seated underground long-well projects namely Adriyala and Jallaram. SECL is implementing short-well technology in Balrampur underground mines. WCL, SECL and SCCL have adopted continuous miner technology in some of their mines. CIL envisages taken up 7 numbers of greenfields long-well projects in association with global players for which expression of interest has been invited.



Further high-well mining technology is also being adopted in SECL on experimental basis.

4.4 CLEAN COAL AND WASHERY CAPACITY

4.4.1 Coal washing is an important area from economic and environment point of view. A number of studies carried out earlier have clearly highlighted benefits of using washed coal in improving the economics

of power generation and also reduction of emissions. The directive of Ministry of Environment and Forests restricts the use of coal containing more than 34% ash content in power stations located 1000 km away from pit heads. With this as a driver, a number of power utilities have shown inclination to use washed coal for power generation and also coal washing is one of the clean coal technologies prior to combustion of coal.



4.4.2 Coal India is heading in a big way for Coal Beneficiation of all types of coals. The present installed capacity of washery for thermal coal of about 110 Mt per annum is envisaged to reach about 250 Mt per annum in the next five (5) years time.

4.4.3 To meet the demand supply gap of washed coal, guidelines for setting up of coal washeries on Public Sector Coal Company's land have been issued by Coal Ministry in September'05. Accordingly, subsidiary coal companies of CIL are extending necessary assistance to facilitate setting up coal washeries on their land to the private operators.

4.4.4 CIL has also decided in principle to wash all inferior grade coal linked to non-pit head power stations by setting up washeries with the state-of-the art technology on Build-Operate-Maintain (BOM) concept where CIL will provide the capital funding and other infrastructure facilities to the BOM operator. Further, it has been decided that all new opencast projects of 2.5 Mt and above capacity, which are not linked to pithead power stations should be designed with integrated washery.

4.4.5 CIL has already decided to set up 20 (twenty) washeries by the end of XI five years plan in its various subsidiaries with total installed capacity of 111 Mty, out of which 2 (two) washeries of total 6 Mty are proposed under "Turn-key" execution and

the rest 18 (eighteen) are on BOM concept under which the capital funding and other infrastructural facilities will be arranged by CIL/subsidiary company. Tenders for seven washeries - four of BCCL, two of MCL and one of CCL, have already been floated. Offers for six washeries have been received and their evaluation is in progress.

4.5 COAL BED METHANE (CBM)

4.5.1 New area of clean coal technologies like Coalbed Methane (CBM) and Coal Mine Methane (CMM), Underground Coal Gasification (UCG) and Coal Liquefaction are under focus and Government is taking all the necessary steps for development of these areas within the existing legal framework.

4.5.2 CBM is one of the potential greenhouse gases and is invariably associated with coals during their formation. CBM is in adsorbed state on the coal surface and possess a potential threat from safety angle during mining operation. If extracted separately, it forms a supplementary source of energy. In view of the abundant resource of coal in the country, there is a significant scope for commercial development of CBM. Methane associated with virgin coalbeds is conventionally termed as Coalbed Methane. Similarly, extraction of methane from working mines is termed as Coal Mine Methane (CMM).

4.5.3 Consequent to the formulation of CBM Policy in 1997, Govt. of India has so far

allotted 26 CBM blocks to various operators for exploration and exploitation of CBM. 10 more blocks were offered in the 4th round of bidding concluded in Oct'09. The offers received against this bidding are under consideration of the Government for their allotment for commercial development.

CBM is jointly managed by Ministry of Coal and Ministry of Petroleum and Natural Gas. CMM related activities are being addressed by Ministry of Coal separately.

4.5.4 An Expert Committee under the chairmanship of Advisor (Projects), Ministry of Coal is finalizing the issues related to simultaneous and harmonious coal mining and CBM operations.

4.5.5 Implementation of CBM Demonstration Project

CMPDI has successfully implemented an UNDP/GEF/GoI funded CBM/CMM recovery and utilization demonstration project at Moonidih mine of BCCL, which has proved efficacy of CMM production in Indian geo-mining condition. Recovery of CBM from two wells has started in May'2008 and Feb'2009 respectively. The recovered gas is being utilized to generate electricity from the indigenous gas-based generator, which was demonstrated successfully on 27th June'08 at Moonidih. At present, power is being generated by 2x250 kw generators and is being supplied

to Moonidih project. Till Dec'09, 1.04 million units power has been generated. The third well has also been stimulated for gas production which will start soon.

4.5.6 CBM Specific Data Generation

CMPDI is carrying out studies related to "Assessment of Coalbed Methane Gas-in-Place Resource of Indian Coalfields/Lignite fields" through boreholes being drilled under Promotional Exploration (XI Plan period) funding amounting to Rs.8.59 crore. This study will enlarge the CBM resource base of the country and facilitate delineation of more blocks for CBM development. A total of 50 boreholes (30 by CMPDI and 20 by GSI) are to be taken up for CBM related studies during XI plan period. During 2009-10 (up to Dec.'09), CBM related studies have been carried out in 9 boreholes located in different coal/lignite fields by CMPDIL and GSI.

4.5.7 CIL R&D Project on CMM

CMPDI has taken up a CIL R&D project for delineation of prospective CMM blocks in ECL, BCCL and CCL areas of CIL and preparation of data dossier for 1 or 2 most prospective and commercially viable CMM blocks. 5 prospective CMM blocks have been identified in BCCL and CCL areas and an Expression of Interest (EOI) for identification of suitable collaborator for commercial development of CMM is being floated.

4.5.8 CIL-ONGC Collaborative Project on CBM

4.5.8.1 JHARIA CBM BLOCK

As per Govt. of India CBM policy, consortium of CIL and ONGC has been allotted 2 blocks on nomination basis - one each in Raniganj and Jharia coalfields and has entered into a contract with Govt. of India for development of coalbed methane. The Govt. of Jharkhand granted the Petroleum Exploration License (PEL) for Jharia CBM block in August'2003. Slimhole drilling by CMPDI in the block commenced from 30.12.04 and all the 8 slimholes involving 8703.65 metre have since been completed. A report on assessment and compilation of data generated during slimhole drilling has been submitted by CMPDI in Feb'08.

During the period 2008-09, ONGC completed drilling of exploratory wells and the requisite tests are being carried out. ONGC is also continuing Horizontal Multilateral in-seam drilling in the CBM block wherein CMPDI was also associated for collection of samples and other activities.

ONGC has submitted the Final Development Plan for Parbatpur Sector of Jharia CBM block in the office of Directorate General of Hydrocarbons in Oct'09. Further developmental activities in the area would be taken up after approval of the Development Plan by the Govt.

In the meantime, Govt. has given permission for sale of incidentally produced gas from Jharia CBM block. Necessary arrangements are being made for this sale.

4.5.8.2 RANIGANJ CBM BLOCK

The Govt. of West Bengal granted the Petroleum Exploration License (PEL) for Raniganj CBM block in June'04. Slimhole drilling of the identified boreholes was taken up on 07.03.06 and drilling in all the 8 slimholes involving 7853.50 metre has been completed by CMPDI. A report on assessment and compilation of data generated during slimhole drilling has been submitted by CMPDI in March'09.

ONGC has completed drilling of exploratory well in the CBM block during the period and the requisite tests are going on. CMPDI was associated in the activities undertaken by ONGC.

4.5.9 Establishment of Coal Bed Methane (CBM) / Coal Mine Methane (CMM) Clearing house

A CMM/CBM clearinghouse has been established at CMPDI, Ranchi under the aegis of Ministry of Coal and United States Environmental Protection Agencies (US EPA) on 17th Nov'08. The clearinghouse will function as the nodal agency for collection and sharing of information on

CMM/CBM related data of the country and help in the commercial development of CMM projects in India by public/private participation, technological collaboration and bringing financial investment opportunities.

An international workshop on "Development of CBM/CMM in India: An opportunity area" was also organized at CMPDI on 17th & 18th Nov'08. The experts of National/ International fame in the field attended the workshop.

As envisaged in the work programme of the clearinghouse, the clearing house website is being maintained and updated. Close co-ordination is being maintained with USEPA for development of CMM/VAM etc and for the purpose, participation in conference on related subjects is being sponsored.

4.5.10 Considering the huge lignite resources available in Mannargudi lignite field in Tamilnadu, NLC has sent a proposal to Government of Tamilnadu for recommending the same to Ministry of Petroleum & Natural gas for allotting the block to NLC on nomination basis for CBM exploration & Development. This is under scrutiny by Government of Tamilnadu.

4.6 UNDERGROUND COAL GASIFICATION (UCG)

Underground coal gasification involves injecting steam and air or oxygen into an

underground coal seam to form a combustible gas that can be used as a fuel or chemical feedstock at the surface.

In India, UCG was taken up in mid 1980's by ONGC and CIL under technical collaboration with erstwhile USSR. Although one lignite block "Merta Road" in Rajasthan was found suitable, pilot appraisal could not be taken up due to apprehension of contamination of ground water.

Subsequently, consequent to signing of MoU between CIL & ONGC in November'06 for taking up a pilot scale studies for UCG, CMPDI prepared data packages for 5 prospective UCG sites. Out of the five sites, one Kasta block in Raniganj coalfield was selected by the consultant engaged by ONGC.

As required, drilling of 12 nos. of slimholes for generation of additional data has been completed in Kasta block in November'06 for examining possibility of taking up pilot scale UCG project. The analysis of the samples generated through the drilling has been taken up. An assessment report will be submitted for evaluation of the block by the consultant of ONGC.

The guidelines for allocation of captive blocks & guidelines for carrying out UCG have been issued by the Ministry of Coal on 13.7.2009. 7 blocks (5 lignite and 2 coal) had been identified for offer to potential entrepreneurs.

In addition, 2 more blocks within the CIL area namely Kaitha in Ramgarh Coalfield within CCL command area and Thesgora-C in Pench Valley CF within WCL command area have been identified for development of UCG. As decided, Expression of Interest (EOI) for identification of suitable collaborator for commercial development of UCG has been invited.



The MoS (I/C) of Coal & SPI Shri Sriprakash Jaiswal delivering the inaugural address at the International Summit on Coal Gas 2010, in New Delhi on February 24, 2010

4.7 REVISION OF RATES OF COAL ROYALTY ON COAL/LIGNITE

Royalty on coal and lignite was last revised w.e.f. 01.08.2007. Royalty on coal and lignite is payable under Section 9(1) of the Mines and Minerals (Development and Regulation) Act, Section 9(3) of the MMDR Act, 1957 empowers the Central Government to enhance or reduce the royalty rates in respect of any mineral. The proviso to Section 9(3) of the Act prevents the Central Government from enhancing the rate of royalty in respect of any mineral

more than once during any period of three years. Accordingly, a new Study Group on revision of rates of royalty on coal and lignite has been constituted on 04.02.2010.

4.7.1 Royalty paid to State Governments

Royalty paid by NLC during last three years and upto 31.12.2009 Neyveli Lignite Corporation pays royalty on Lignite to Tamilnadu State Govt. Details of Royalty payments are given below:

Period	Amount (Rs. Crore)
2005-06	102.20
2006-07	105.13
2007-08	126.59
2008-09	134.39
2009-10 (upto December 09)	104.70
Provisional for the period January to March 2010	35.43

4.8.1 NAVRATNA STATUS TO NLC

A proposal for grant of Navratna status to NLC has been submitted to the Department of Public Enterprises for their consideration.

4.8.2 MINIRATNA STATUS TO CMPDIL

The Government has granted Miniratna Status (category-II) to Central Mine Planning & Design Institute Limited (CMPDIL), Ranchi in May, 2009. This implies greater autonomy and enhanced financial powers to the company.

4.9 LISTING OF CIL

At the time of awarding the Navratna status to CIL, the Government have put the condition that the listing of CIL should be done in three years. The listing of CIL is expected to infuse better corporate management in the company and considering its performance, CIL standing in market will also improve, including improved valuation of the company.

4.10 REVIVAL OF SICK PSUs

4.10.1 Eastern Coalfields Limited

A revival and rehabilitation scheme for the Eastern Coalfields Ltd. was approved by the Government on 5th October, 2006 is being implemented.

4.10.2 Bharat Coking Coal Ltd. (BCCL)

BCCL was formed in 1971 pursuant to nationalization of coal mines in the country and

became one of the subsidiaries of Coal India Limited w.e.f. 01.11.1975. Since inception, BCCL has been incurring losses. A revival plan for BCCL was submitted to BRPSE. Both BRPSE and BIFR have accorded their approval to the revised proposal of revival scheme of BCCL and the Govt.'s order conveying the sanction of the revival scheme of BCCL has been issued.

4.11 EXPERT COMMITTEE

4.11.1 Government had appointed an Expert Committee headed by Shri T.L. Shanker to suggest a road map for coal sector in the country. The Committee has submitted Part -I of the Report in December, 2005 and Part-II in September, 2007. Major recommendations and action taken thereon is given below:-

Sl. No.	Major Recommendations	Action Taken /proposed to be taken
1	Augmenting domestic coal production to bridge the gap between demand and supply with emphasis on captive coal mining.	Government has allotted a number of new captive coal blocks, besides taking up a number of new coal projects under coal PSUs to augment coal production to bridge the gap between demand and supply.
2	As coal shall remain India's primary source of commercial energy supply, a time-bound plan to cover the entire country by regional mapping in 15 years should be prepared by Geological Survey of India, Central Mine Planning and Design Institute (CMPDIL) and Ministry of Coal (MOC).	An action Plan has been prepared to cover the balance coal bearing area of 5438 sq. km under regional exploration. It is envisaged that an area of 2791 sq. km will be covered during the XI Plan and the balance there after.

Sl. No.	Major Recommendations	Action Taken /proposed to be taken
		Exploratory drilling capacity of CMPDIL is being doubled.
3	Coal India Limited (CIL) may be granted the status of Navratna company and the subsidiaries of CIL may be granted the status of Mini Ratna companies in which case only those proposals of such a subsidiary would need government approval wherein the capital expenditure exceeds Rs. 500 crore.	<p>CIL has been granted Navaratna status.</p> <p>Besides this, 6 of its subsidiary companies (South Eastern Coalfields Ltd.; Western Coalfields Ltd.; Mahanadi Coalfields Ltd.; Northern Coalfields Ltd.; Central Coalfields Ltd., Central Mine Planning and Design Institute Limited) and Neyveli Lignite Corporation Ltd. have been accorded Miniratna Category-I status.</p> <p>In July 2009 the Government has approved enhancing the financial powers of SCCL Board to approve projects, and to incur capital expenditure from 100 crore to Rs. 500 crores.</p>
4	The issue of major restructuring of CIL should be considered during the 12th Plan Period.	This has been agreed to.
5	The environmental issue in respect of coal projects should be taken up on priority consideration by the Government.	The Government has issued new Environment notification on 14.9.2006 as per which the proposals of coal mining projects are being processed for environmental clearance.
6	Planned imports of coal need to be encouraged.	Imports are planned by Power Sector every year in advance keeping in view the requirement. CIL is also contemplating to import coal.

Sl. No.	Major Recommendations	Action Taken /proposed to be taken
7	Increasing proportion of all domestic coal that is not earmarked for Power Sector be brought into the E-auction market over the next 2 to 3 years.	E-auction of coal has already been started.
8	The current system of linkages feeding the power sector may be replaced with formal long term Fuel Supply and Transport Agreements that include the Railways.	The New Coal Distribution Policy of Government provides for long term fuel supply and transport agreements that include railways.
9	All possible legal measures should be evolved to cancel the licenses issued earlier if the allottee has not taken adequate steps to bring the allotted mines to production or in setting up the end use units.	On the basis of regular review of the progress of captive blocks, de-allocation of some coal blocks has been done. Regular monitoring is being done to review the progress periodically.
10	Coal price would need to be regulated in light of the market realities. The regulation of coal price has to be differentiating the pricing of coal for power generation since it consumes 80% of the domestic production and the quality of coal it consumes is not easily saleable to the steel and cement sectors.	So far as Ministry of Coal is concerned, the pricing of coal has been fully deregulated after the Colliery Control Order, 2000 notified with effect from 1st January, 2000 in supersession of the Colliery Control Order, 1945. Under the Colliery Control Order, 2000 the Central Government has no power to fix the prices of coal. Coal Companies are empowered to fix the price of coal.
11	Promotion of underground mining	Action has been initiated by CIL to enhance the level of production from underground mines from around 44 million tonnes achieved in 2006-07 to about 67 million tonnes by 2011-12 mainly by adopting

Sl. No.	Major Recommendations	Action Taken /proposed to be taken
		<p>mechanisation of operations, introduction of continuous miner technology and longwall technology.</p> <p>The additional investment has been estimated at Rs. 5185.59 crores for attaining this production level. CIL has also identified 7 blocks which can be developed into mega mine (more than 2 million tonnes production per annum) with state of the art consultancy and technology with foreign expertise.</p>
12	Improve production and productivity of men & machinery with focus on technology up gradation	<p>Action has been initiated to improve productivity of heavy earth moving machinery (HEMM) in opencast mines mainly by increasing the number of hours of operation and awarding maintenance and repair contracts, streamlining the replacement of old equipment, and deployment of large size equipment. In underground mines, improvement in productivity is being addressed through mechanized coal loading operations adopting side discharge loaders, load haul dumpers, conveyor belts etc. and introduction of continuous miner technology and longwall technology wherever it is feasible. Shortwall technology on experimental basis has also been introduced. Adoption of Highwall technology is also envisaged in some of the opencast mines.</p>

Sl. No.	Major Recommendations	Action Taken /proposed to be taken
13	There is need to have permanent cell for technology evaluation and monitoring and improving the systematic operating procedures for modern new equipment procurement (in CIL).	A department has already been created at Coal India and also at CMPDIL for adoption of new technology. CMPDIL as the planning wing of Coal India provides the initial inputs for adoption of new technology.
14	Switch over to Gross Calorific Value (GCV) based pricing and grading of coal	<p>For adopting the GCV system of grading of coal, it was agreed between Coal India Limited (CIL) and NTPC to try out the proposed bandwidth price structure with 300 k. cal/kg for coal supply at some NTPC power plants initially for 60 days. However, this has not come through due to the lapse of time agreed to between NTPC and Coal India Limited and also lack of installation of automatic mechanical samplers at the loading points.</p> <p>CIL now has four nos. of operating Auto Mechanical Samplers (AMSs) at loading points in NCL and is ready for trials.</p>
15	Promote coal washing	Government has already taken a policy decision to encourage use of washed coal by permitting private entrepreneurs to set up washeries on coal company's land. CIL has also taken a decision to supply washed coal to power sector by setting up new washeries on Build Own Maintain (BOM) basis and funding will be made by CIL. Additional washing capacity of about 140 million tonnes per year is envisaged to be created in next five years time.

Sl. No.	Major Recommendations	Action Taken /proposed to be taken
16	Promotion of cutting edge technologies like Underground Coal Gasification (UCG), Coal Bed Methane (CBM), Coal Mine Methane (CMM), Coal to Liquid (CTL) etc	Government has already permitted CBM operations on commercial lines and 26 blocks have been allotted to various entrepreneurs. Directorate General of Hydrocarbons (DGH) under Ministry of Petroleum & Natural Gas (MoP&NG) regulates the CBM operations. For CMM, coal companies are taking action to extract methane gas from the existing mines and a demonstration project in association with United Nations Development Programme (UNDP) / Global Environmental Fund (GEF) is under implementation in one of the mines of Bharat Coking Coal Ltd. (BCCL). Government has recently recognized UCG, CTL as one of the permitted end uses under the captive mining policy.
17	Although India is not under any obligation under Kyoto Protocol to reduce emissions, it is recommended that India should assume their role of a responsible user of coal taking every effort to reduce the emission level of coal as well as its consumption.	Action already initiated for adopting clean coal technologies. CIL has committed to sell processed coal to all its consumers. Government has given lot of stress for the extraction of coal bed methane which would eventually reduce emission from burning coal.
18	Outsourcing should be differentiated from contract labour employment. It is not a method to extract more work and pay less to unskilled and semi skilled labour. In fact, it becomes relevant and inevitable in tasks, which call for specialized skills.	CIL and its subsidiaries have initiated action and have included clauses in the tenders/ contracts to remove exploitation of labour and also have generated training programmes for uplifting skills of its own workmen.

Sl. No.	Major Recommendations	Action Taken /proposed to be taken
19	Setting up of a Coal Governance & Regulation authority (CGRA) to co-ordinate and attend to all issues relevant for development of coal resources, regulation of coal price (wherever necessary), and nurturing level playing field between the entrenched large public sector coal companies and the emerging small coal companies in the State public sector and the captive mining sector.	Action initiated for creating a Coal Regulatory Authority. As suggested by Ministry of Law some major modifications in the Draft Bill has been examined and modified Draft Bill is under consideration for concurrence in the Ministry of Law.
20	Ensure proper mine closure and restoration of mined out areas. The Coal Regulatory Authority should be given the responsibility to monitor the restoration work. A fee of Rs.10 per tonne of coal mined as Mine-restoration levy should be collected annually and release as grants on for such work.	Draft guidelines for mine closure have been issued by the Ministry of Coal which would be implemented by the Coal Controller till the Coal Regulatory Authority is put in place.
21	Coal R&D fund should be created whereby half of one percent of the turnover of all coal companies in the public and private sectors is deposited. CGRA could manage the funds.	The creation of R&D fund is agreed to. It is preferable that the proposed fund should be kept available with the industry instead of the Coal Regulatory Authority. In the present system the R&D activities are identified, monitored and funded through a Standing Scientific Research Committee (SSRC), which is chaired by Secretary (Coal).