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CHAPTER



Longwall equipment

POLICY INITIATIVES AND REFORM MEASURES

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Measures related to augmenting Production and Efficiency in Coal Sector:

Enhanced exploration efforts

CMPDIL is the nodal agency for implementing the Plan scheme of Detailed Drilling in Non-CIL blocks. CMPDIL executes the job through MECL and also through outsourcing. The actual drilling vis-à-vis specified targets in non-CIL blocks during last three financial years, anticipated drilling during 2015-16 and the target for the financial year 2016-17 are as under:

(Drilling in Lakh Meter)

Year	Target	Actual	Growth % w.r.t. Previous year
2012-13	1.75	2.28	02.70
2013-14	3.62	2.38	04.39
2014-15	4.16	2.82	18.48
2015-16	4.82	3.20 (Anticipated)	13.48 (Anticipated)
2016-17	3.48		

During the XII Plan-period, drilling of about 19.03 lakh meters in 58 Non-CIL blocks has been planned. To cater to the increased requirement of detailed drilling in CIL & Non-CIL blocks, CMPDIL plans to increase the departmental capacity from 3.56 lakh metres/annum to 4.00 lakh metres/annum by 2015-16

The target for detailed drilling in CIL areas in the XII Plan is about 30.20 lakh meters. The actual drilling in CIL blocks during the last three financial years, anticipated drilling during 2015-16 and the target for the financial year 2016-17 are as follows:

(Drilling in Lakh Meter)

Year	Target	Actual	Growth % w.r.t. Previous year
2012-13	04.07	3.35	23.20
2013-14	05.38	4.59	37.01
2014-15	07.84	5.46	18.95
2015-16	10.18	6.30 (Anticipated)	15.38 (Anticipated)
2016-17	07.52		

The shortfalls are due to many factors, which include the serious law & order problems in many coal blocks, non availability of Forest clearance, lack of skilled manpower and inadequate capacities in the private sector etc. are some of the reasons for non-achievement of target. To offset this, strengthening of CMPDI in the coming years together with a policy prescription for attracting global majors in exploration is being planned. Process of Forest Clearance (FC) is being streamlined by MoEF & Coal Controller to fast track approvals for exploration proposals.

Renewed policy thrust to increase coal production

Coal India Limited (CIL)

An exercise has been carried out to prepare a roadmap for achieving a production level of 1BT of coal by the year 2019-20. So far, mines/ projects to produce about 908.10 MT in 2019-20 have been identified and identification of projects for balance capacity to reach 1BT is under way. In 2015-16, the targeted coal production as per Annual Plan document of MoC was 550 MT. In 2016-17, the envisaged coal production target as per 1 BT document is 597.61 MT excluding the production of NEC. The group-wise production projection for 2015-16 and 2016-17 are as follows:

CIL	2015-2016		2016-2017
	BE	RE	1 BT projection
Existing Projects	36.61	37.88	036.43
Completed Projects	193.12	201.42	208.52
On-going Projects	317.52	295.00	348.53
Future Projects	002.75	002.40	004.13
Total	550.00	536.70	597.61

A major growth in production is envisaged from North Karanpura in CCL, Central India coalfield of SECL and IB & Talcher coalfields in MCL.

Completion of Projects and expansion of existing projects

Coal India Limited (CIL)

There are 158 on-going projects at different stages of implementation. Projects costing more than Rs 500 Crore and with capacity of 3 MTY and above are reviewed by the Secretary, Ministry of Coal on Quarterly basis. Performance of all projects of Rs. 150 crore and above is monitored by Ministry of Statistics and Programme Implementation (MOSPI). Further, the Ministry monitors on-going projects of CIL through updated information received on its Coal Project Monitoring Portal (CPMP) and also portal at the PMG website of Cabinet Secretariat. CIL has also identified 129 new / future projects, with estimated capacity of 458.04 MTY and estimated capital requirement of Rs. 79200 crore. Out of this, 29 projects having capacity of 171.14 MTY and capital 24150.84 crore. has so far been approved. Project reports for another 77 projects for an estimated capacity of 200.05 MTY have also been prepared.

At present in NEC, there are four (4) existing working mines. Out of 4 mines, 3 are opencast mines and 01 is underground mine. During the financial year 2015-16, it is anticipated to produce 5.12 Lakh tonnes of coal. NEC has identified 07 (Seven) numbers of New Projects, which are at various stages of construction.

Measures being taken to increase coal production

In respect of CIL, major increase in production is envisaged from on-going & future group of projects mainly from four subsidiaries viz. SECL, MCL CCL & NCL. Out of 158 on-going projects, clearances are available for 87 projects with a total output capacity of 227.59 MT. A contribution of 129.76 MT has been realized in 2014-15 from these 87 projects.

The balance 71 projects, with a total capacity of 424.06 MTY will require clearances to achieve their planned capacity. However with part clearances obtained in forest land, these projects have produced 125.19 MT. in 2014-2015.

CIL has taken the following steps to increase production of coal :

- High capacity mines are being planned with State-of-the-Art mechanization.
- Mines are being modernized for increasing productivity both in underground & opencast mines depending upon geo- mining conditions.

- Improving capacity utilization through efficiency improvement and modernization.
- Ensuring implementation of on-going projects in time bound manner to achieve targeted production as per schedule.
- Capacity augmentation of running projects through special dispensation under the EP Act 2006.
- Effective monitoring & persuasion of issues related to projects with related Ministries & State Government.
- Effective & persistent support from the Ministry of Coal, etc.

Technology development and Modernization of Mines in CIL

A study has been conducted by M/S KPMG for assessment of the need for up gradation of current technology in CIL mines including UG mines and scope for further modernization. The recommendations of the report have been accepted by CIL for implementation. In view of declining coal production from underground mines of CL, CIL/CMPDI is in the process of selection of a consultant for specific study on underground mines

Allocation of coal mines cancelled/de-allocated by Hon'ble Supreme Court of India

The Hon'ble Supreme Court, vide its judgment/order dated 25.08.2014 and 24.09.2014 in Writ Petition (Criminal) No. 120 of 2012 and other connected matters, has cancelled the allocation of 204 coal blocks out of 218 blocks allocated since 1993.

For the management and re-allocation of 204 coal blocks cancelled/de-allocated by the Hon'ble Supreme Court of India, Government had enacted 'Coal Mines (Special Provisions) Act, 2015' to ensure smooth transfer of rights, title and interests in the mines along with its land and other associated mining infrastructure to the new allottees to be selected through an auction or allotment to Government company, as the case may be. The process of allocation under the Act started with the publication of first Notice Inviting Tenders (NIT) published on 25/12/2014. As on date, the Central Government has successfully auctioned 31 coal mines and allotted 42 coal mines to Central/ State Government Companies.

The estimated revenue which would accrue to coal bearing States during the life of mine/lease period from the auction of 31

coal mines is Rs 1,96,700 Crore. Further, an estimated amount of Rs. 1, 48,275 Crore would accrue to coal bearing States from allotment of 42 coal mines. In addition, the benefit to consumers in terms of reduction of electricity tariff is likely to be about Rs. 69,310 Crore. Allotment of remaining coal mines for specified end uses under the Coal Mines (Special Provisions) Act, 2015 will be undertaken during 2016-17, keeping in view of prevalent market conditions.

Taking the process forward and to augment availability of domestic coal thereby reducing dependence on imported coal, Government is considering allocation of coal mines for commercial mining to Central/State PSUs. Apart from augmenting coal production, this measure would create a healthy competition in the sector thereby improving service standards in the coal industry.

Eastern States with a large tribal population would be the biggest beneficiary and additional revenue from auction and allotment can be ploughed back for the welfare of the people of the State. Further, levy on coal to be contributed to District Mineral Fund (DMF) created under the Mines & Mineral (Development and Regulations) Act could be utilized for the welfare activities exclusively for the District, where the mine is located.

The allocation of these coal mines through auction and allotment will improve coal availability and thus leads to reduction in import. The better availability of coal will spur industrial growth thereby contributing to economic development of the Nation.

Allotment of Coal/Lignite Blocks under MMDR Act

Under the provisions of 'Auction by Competitive Bidding of Coal Mine Rules, 2012', 17 Coal blocks (14 blocks for specified end-use i.e. Power and 03 blocks for Mining) were put on offer for allocation to the State Government companies/corporations/CPSUs. Out of these, 6 coal blocks for power as end-use have already been allotted. The Coal Block Development and Production Agreement has been signed by the Central Government with the allottee companies in respect of 4 coal blocks.

5 lignite blocks were put on offer for allocation to Government companies/corporations of the State of Gujarat and Rajasthan. Out of these, 3 lignite blocks have been allocated to Gujarat Mineral Development Corporation Ltd. and 1 lignite block for Underground Coal Gasification (UCG) has been allotted in-principle to Gujarat Industries Power Company Ltd.

Quality and Third Party Sampling - Recent decisions

To address the issues of dispute between coal companies and power utilities/developers and to bring about improvement in the quality of coal supply, the system of 'Third Party Sampling' has been further improved. In addition to the Agency engaged by CIL, a panel of 25 reputed third party samplers were jointly drawn up by a Committee consisting of representatives from power utilities and CEA with the concurrence of CIL and notified by CIL. Power utilities/developers were authorized to select and appoint a third party sampler from this panel. However, billing was done based on sampling and analysis done at the loading end by the agency. Payment for sampling was made by the power utilities/developers. The system was put in place at several loading points. However, power utilities requested for further improvements in the system.

As per the revised instructions on 3rd Party sampling issued by Ministry of Coal on 26.11.2015, an independent Third Party Agency is to be empaneled by Central Institute for Mining and Fuel Research (CIMFR) at the loading end on behalf of both the power plant (consumer) and the coal companies (supplier). It shall enlist third party agencies through a transparent process.

The authorized representatives of power plant and coal company shall jointly witness the process of sample collection and preparation of the laboratory samples. The samples shall be collected and prepared by the Third Party Agency/independent sampler as per BIS norms. The fee for independent sampling agency shall be equally borne by both the coal company (supplier) and the power utility (consumer). The final laboratory sample shall be divided into 4 (four) parts. Part-1 of the sample is for analysis by the independent Third Party Agency at a Government laboratory or NABL accredited laboratory as appointed by CIMFR. Part-2 and part-3 of the sample are to be handed over to the coal company and the power utility respectively for their own analysis. Part-4 of the sample, called 'referee sample', shall be sealed jointly by the Third Party Agency, representatives of the coal company and the power plant and shall be kept with the Third Party Agency under proper lock and key arrangement. The referee sample shall be preserved for a period of 30 days from the date of sample collection.

The Third Party Agency shall communicate the analysis result of the sample within 18 (eighteen) working days of the sample collection to the coal company and the power plant. The coal

company or the power plant may raise dispute, if any, within 07 (seven) days of the submission of the result by the Third Party. In case of dispute raised within the stipulated time period, the referee sample shall be analysed by in a government laboratory.

This new system has commenced on 01.01.2016 in NCL and shall thereafter be stabilized in other subsidiaries.

Rationalization of Coal Linkages

An Inter-Ministerial Task Force (IMTF) was constituted on 13th June, 2014 by the Ministry of Coal to review rationalization of linkages. The objective of the exercise of rationalization was to undertake a comprehensive review of existing sources of coal and consider the feasibility for rationalization of these sources with a view to optimize transportation cost and materialization under the given technical constraints.

In stage 1, rationalization has been implemented for 17 Thermal Power Plants for which revised Fuel Supply Agreements (FSAs) have been signed. This has resulted in movement rationalization of 24.6 MT coal and annual saving of about Rs 910 crore of recurring transportation cost. In stage 2, one set of swaps has been implemented resulting in movement rationalization of 1.3 MT coal and potential annual saving of Rs. 460 crore of transportation cost. Overall, movement rationalization of 25.9 MT coal has taken place with potential annual saving of about Rs 1,370 crore of transportation cost.

Automatic transfer of coal linkage/LoA granted to the old plants while scrapping and replacing them with new plants

Policy guidelines regarding automatic transfer of coal linkage/LoA granted to the old plants while scrapping and replacing them with new plants have been issued.

Under these guidelines, LoA/linkage granted to the old plant shall be automatically transferred to the new plant of super critical capacity. If the capacity of the new super critical plant is higher than the old plant, additional coal may be accorded on priority subject to availability of coal. This policy shall be applicable to pre-NCDP plants in public sector only, which have already been granted long term Linkages/LoAs. Automatic transfer of linkages/LoA as explained above shall be permissible only when the new plant is set up within the State in which the old plant was located. Old unit which has completed its useful life & is being replaced needs to be retired in a phased manner.

Transparent Auction of coal linkages

All allocations of linkages/LoAs for non-regulated sector viz. cement, steel/sponge iron, aluminum and others [excluding fertilizer (urea) sector], including their CPPs, shall henceforth be on auction basis. The policy on auction of linkages of non-regulated sector has been approved by CCEA and has been circulated to all concerned for implementation on 15.02.2016. The proposed auction of coal linkages is transparent, and creates a level playing field. It ensures that all market participants have a fair chance to secure the coal linkage, irrespective of their size. The auction methodology leads to the price discovery through a market mechanism; it does not seek to maximize revenue.

Policy on Bridge Linkages

Policy guidelines for grant of 'Bridge Linkage' to specified end-use plants of Central and State Public Sector Undertakings (Both in Power as well as Non-Power sector) which have been allotted coal mines/block, have been circulated to all concerned. 'Bridge linkage' shall act like a short term linkage to bridge the gap between requirement of coal of a specified end use plant of Central and State PSUs and the start of coal production from the linked Schedule-III coal mines and coal blocks allotted under MMDR Act.

Thrust on Washing of Coal

CIL is currently supplying coal of less than 34% ash for thermal power stations located at 750 km away from the pitheads. However, the above limitation of distance of 750 km will be reduced further to 500 km from 05.06.2016, as per the MoEF & CC notification issued on 02.02.2014.

In view of the above, CIL has planned to set up 9 new non-coking coal washeries having a total capacity of 94.0 MTPA. These washeries are at various stages of construction. Besides this, 6 new washeries for coking coal for a total capacity of 18.6 MTPA are also in various stages of implementation. In addition to this, efforts are being made to rationalize existing coal linkages.

Master Plan to address Fire, Subsidence and Rehabilitation areas:

Master Plan dealing with fire, subsidence and rehabilitation and diversion of surface infrastructure for Jharia and Raniganj Coalfields has been approved in August, 2009 at an estimated investment of Rs. 9657.61 crore (Rs. 7028.40 crore for Jharia Coalfield and Rs.2629.21 crores for Raniganj Coalfield (RCF)

excluding Rs. 116.23 crore sanctioned earlier for various EMSC schemes for implementation in 10/12 years in two phases of five years each and 2 years pre-implementation period in BCCL.

The Jharia Rehabilitation and Development Authority (JRDA) and Asansol Durgapur Development Authority (ADDA) have been identified as implementing agencies for rehabilitation of non-ECL/non BCCL households by the State Governments of Jharkhand and West Bengal, respectively.

Demographic survey have been completed in Jharia and 91,879 encroacher families have been identified for rehabilitation. It is proposed to optimize the land requirement by opting for G+ 8 constructions and developing integrated townships in four places.

In RCF demographic Survey work has been completed for all 126 locations. In JCF, as per the Master Plan a total 54,159 families were estimated to be surveyed in 595 sites. Survey has been completed in 434 sites for 75,978 families.

In JCF Satellite Township, 3072 houses have been constructed in Belgoria Rehabilitation Township "Jharia Vihar" in which 1340 families have been shifted. Out of 2000 units in BSPU houses under JNNURM norms (carpet area 25.10sqm) are under Construction, 720 units are completed and rest are in progress. Construction of 2000 units G+3(Four storied building) by JRDA at Belgoria Township phase III started. Tender was called for construction of 2000 units at Lipania. Further tender was invited by JRDA for construction of 10000 units G+3 at Belgoria & Lipania.

BCCL under the Master Plan have constructed 1496 houses and families from fire & subsidence places have been shifted to these houses. Construction of 4080 units by BCCL are in progress, out of which 2040 houses are completed in all respects and 1116 houses have been occupied. 4020 triple storied quarters in different non-coal bearing areas which are in progress and advanced stage of completion. Further construction of 2248(B,C,D Type) triple storied quarters and 4008 units triple storied miner quarters have been started.

In the 78th CCDA Committee Meeting held on 28.12.2015, regarding CIL's Master Action Plan on stabilization in Jharia / Raniganj coalfields it was observed that the JAP estimates were prepared in 2009 and since then project cost is likely to increase on various accounts such as overall cost rise, increase in number of Project Affected Persons, escalation in land cost. Accordingly

more resources may be required during later period.

Satellite surveillance for land reclamation

Coal India Limited (CIL)

Reclamation of mined out areas is important for sustainable development. Emphasis is being laid on proper reclamation (both technical and biological) and mine closure. Satellite surveillance for land reclamation is being given the requisite thrust by partnering with the National Remote Sensing Centre (NRSC) at Hyderabad. The company-wise details of the area excavated and reclaimed in 2014-15, for the projects under monitoring based on satellite data, as on 31.03.2015 are furnished in the table below:

Company	Land Exca- vated (Ha)	Reclamation (Ha)	
		Biological	Technical
WCL	11423.96	4305.68	4745.36
SECL	10441.14	5327.51	3362.57
NCL	11278.00	5768.00	3050.00
MCL	5270.95	1553.52	1791.52
CCL	7625.95	3306.78	2193.69
BCCL	1821.19	306.23	1152.41
ECL	2175.12	639.25	1024.04
NEC	279.29	118.57	120.92
TOTAL (CIL)	50315.60	21325.54	17440.51

The image interpretation and analysis for the year 2015-16 is under progress and the results of analysis can be known after final compilation, which will be over by February end.

Singareni Collieries Company Limited (SCCL):

Ministry of Environment, Forest and Climate Change has stipulated in one of the conditions of Environmental Clearances (EC) issued to coal mining projects that "For monitoring land use pattern and for post mining land use, a time series of land use maps based on satellite imagery (on a scale of 1:5000) of the

core and buffer zone, from the start of the project until the end of mine life shall be prepared once in three years (for any one particular season which is consistent in the time series) and the report submitted to MoEF and its regional office at Bangalore” .

Also, MoC advised all the coal mining companies that all the opencast mines shall be brought under satellite surveillance for periodical monitoring of land reclamation.

Accordingly, The Singareni Collieries Company Limited is complying the condition of monitoring land use pattern by satellite imagery maps and submitting the same to MoEF & CC and its regional offices once in three years.

Further, the details of land excavated and land reclaimed pertaining to opencast mines in SCCL is as below:

Company	Land Excavated (Ha.)	Land reclaimed (Ha.)
SCCL	4471.59	1278.42 *

* Most of the OC projects are being operated as relay projects and the back filling operations are still in active stage. The biological reclamation of the back filled areas will be taken up after attaining final profile as per the schedules of approved mining plans.

Review of productivity norms

Coal India Limited (CIL): Different Committees have gone into the issue of productivity of Heavy Earth Moving Machinery (HEMM) at different points of time. Additionally, CMPDI formed a committee in May 2013 to review the 'Availability' and 'Utilization' norms of Heavy Earth Moving Machinery (HEMM). Committee report to review the existing 'Availability' and 'Utilization' norms of HEMM has been submitted to CIL.

As per the advice of CIL Board, a Committee was formed by CIL for review of the productivity norms of Side Discharge Loaders (SDLs) and Load Haul Dumpers (LHDs) used in underground mines. The Committee submitted its draft report to CIL in April 2014. SCCL is following CMPDIL norms for HEMM performance. Norms for underground machinery is being reviewed and revised annually based on various parameters like geological conditions of mines, past performance etc.

Corporate Social Responsibility (CSR)

Coal India Limited (CIL) and its subsidiary companies and Neyveli Lignite Corporation Limited (NLC) are undertaking different welfare activities under the CSR policy. The allocations of funds under CSR are effective from 01.04.2004 as per DPE guidelines. These guidelines are based on Section 135(1) of Companies Act, 2013 which stipulates to spend at least 2% of the average net profit of the company for the three immediate preceding financial years. While Neyveli Lignite Corporation Limited (NLC) has allocated CSR funds as above, Coal India Limited (CIL) has formulated its own policy and allocated funds based on 2% of the average net profit of the company for the three immediate preceding financial years or Rs.2 per tonne of coal production of previous year, whichever is higher.

The details of the amount earmarked and utilized by the Coal India Limited (CIL), its subsidiaries and NLC under Corporate Social Responsibility (CSR) during each of the last three years and the current year, subsidiary-wise, are as under:

(Figures in Crore)

Company Coal India and its subsidiarie	2012-13		2013-14		2013-15		2015-16	
	Allocated	Utilized	Allocated	Utilized	Allocated	Utilized	Allocated	Utilized (April- Dec., 15)
ECL	23.89	09.42	29.35	---	37.90	24.85	46.22	36.79
BCCL	23.63	07.43	30.50	20.00	30.00	14.33	48.67	39.94
CCL	47.72	13.66	26.42	26.94	47.86	48.87	350.67	196.44
WCL	40.67	20.96	29.46	23.80	7.96	20.15	91.92	59.64
SECL	181.79	46.63	63.94	43.91	129.97	40.43	379.46	103.11
MCL	73.36	25.56	101.72	111.48	113.96	61.30	421.50	111.33
NCL	95.73	17.64	48.99	39.72	80.28	61.77	196.25	116.31
CMPDIL	1.63	01.06	1.82	01.82	2.00	1.68	2.00	0.91
CIL & NEC	107.32	07.19	142.16	141.70*	24.04	24.72	98.85	27.82
2.Neyveli Lignite Corporation Limited (NLC)	13.00	14.26	26.04	26.30	41.60	47.49	44.27	49.00

The above budget include the fund earmarked for Swachh Vidyalaya Abhiyan. The expenditure also include the amount spent in FY 2015-16 on Swachh Vidyalaya Abhiyan upto 31/12/2015. Under this Abhiyan:

- CIL & its subsidiaries have constructed 53,412 of toilets in and around 35,226 of schools. These toilets were constructed in six States viz., Chhattisgarh, Jharkhand, Madhya Pradesh, Odisha, Uttar Pradesh and West Bengal. A total of approximately Rs. 688.03 crore was spent in the project.
- NLC have constructed 1414 toilets (1270 toilets in 635 schools in Tamilnadu and 144 toilets in 77 schools in Rajasthan) for a value of Rs.39.70 Crore.