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CHAPTER

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CONSERVATION AND DEVELOPMENT OF TRANSPORT INFRASTRUCTURE

Conservation and Development of Transport Infrastructure

COAL CONSERVATION

Conservation of Coal is an important area, particularly when our Coal reserves are finite. The aspect of conservation of Coal is taken into account right from the planning stage and maximum recovery is ensured during the implementation stage. Mines are designed to work the Coal seams either through opencast or through underground methods depending on the technical feasibility and economic viability.

Mechanised opencast (OC) mining is presently the commonly adapted technology for extraction of thick seams at shallow depth. This is also important from the conservation point of view since the percentage recovery by this technology is around 80% to 90%. Presently, this technology dominates the Coal industry contributing about 90% of country's Coal production. Further, whenever it is feasible, the developed pillars of underground mines are being extracted through opencast operations.

In view of underground (UG) mining, introduction of new technologies like longwall method, shortwall method, blasting gallery technology, highwall mining and continuous miner technology have resulted in increased percentage of extraction.

With the improvement in roof support technology with mechanized bolting with resin capsules it has been possible to maintain wider gallery span and extract seams under bad roof conditions more efficiently resulting in improved conservation of Coal.

The Ministry of Coal (MoC) governs the Coal Mines (Conservation & Development) Act 1974 for conservation of Coal and development of mine areas through Coal Controller Organization. A stowing excise duty of ₹ 10/- per tonne is collected on Coal production/despatch and Coal companies are extended assistance for undertaking conservation measures.

SAND STOWING

Sand stowing in underground mines is yet another effective means of Coal conservation, which is widely in use for extraction of Coal pillars from underground Coal seams lying below built-up areas, such as important surface structures, railway lines, rivers, nallahs, etc. which otherwise would have resulted in locking of Coal in pillars. Stowing also helps in the extraction of thick seams in several lifts increasing the percentage of extraction. Due to scarcity of sand, various experimental trials are being conducted to use other materials like fly ash, boiler ash, crushed overburden material etc. for stowing in underground mines as substitute for sand. Currently, crushed overburden material is being used commercially for stowing purposes in underground Coal mines where sand is not available in the near vicinity of the mine or it is costlier to transport sand from distant river sources.

Conservation and Safety in Coal Mines and Development of Transport Infrastructure under CCDA.

Under these schemes the expenditure incurred by coal companies is reimbursed partially as per the statutory provisions under the Coal Mines (Conservation and Development) Act, 1974. The principal objective of the Act is to collect excise duty on coal for disbursing the same to the coal mines for conservation and development related works including infrastructure development.

The examination and scrutiny for reimbursement is carried out by a duly constituted 'Coal Conservation and Development Advisory Committee' (CCDA Committee) as per the provisions of Coal Mines (Conservation and Development) Rules, 1975. The Government partially reimburses costs due to coal companies through budget provision taking into account commitment/ liability already existing during the preceding financial year. The details of achievement made under these two schemes during the financial years 2012-13, 2013-14 and 2014-15 (Upto Dec. 14) are given in the table on the following page:

	2012-13	2013-14	2014-15 Actual Upto Dec. 14
Amount disbursed for Stowing & protective work	₹ 119.00 crores	₹ 184.96 crores	₹ 185.00 crores
No. of stowing mines	96	90	78
Sand stowed	61.22 lakh cum.	61.80 lakh cum	66.55 lakh cum
No. of protective work taken up	32	17	19
Amount disbursed for transport infrastructure development	₹ 40.00 crores	₹ 76.02 crores	₹ 75.00 crores
No. of road projects partially funded	24	13	16
No. of rail projects partially funded	5	2	3

Railway Infrastructure Projects

In order to achieve the planned growth in production and evacuation in future, CIL has undertaken the following major Railway Infrastructure Projects to be executed by Indian Railways Authority;

- Tori-Shivpur-Khatotia new BG Line with a length of about 93.45 Km for North Karanpura Coalfields of Central Coalfields Limited, Ranchi, Jharkhand. The work is under execution in Tori-Shivpur Section by East Central Railway, Patna.
- Jharsuguda –Barpalli Railway Infrastructure Project with a length of about 52.4 Km for IB Coalfields of Mahanadi Coalfields Limited, Sambalpur, Odisha. The work is under execution by South Eastern Railways, Kolkata.

➤ To cater to evacuation of coal from Mand-Raigarh and Korba-Gevra Coalfields of SECL, following 2 Railway Corridors have been identified for construction:

- East Corridor (Bhupdeopur-Gharghoda-Dharamjaiigarh upto Korba with a spur from Gharghoda to Donga Mahua to connect mines of Gare-Pelma Block) with a length of about 180 km.
- East-West Corridor (Gevra Road via Dipka, Kathghora, Sindurgarh, Pasan) with a length of about 122 Km