

PLANNING

Command Areas of Operations:

There are 13 operating Areas with 79 working mines comprising of 48 Underground mines, 22 Opencast mines and 9 mixed mines.

Modernization:

In order to increase the level of modernization and mechanization in underground mines, intermediate technology by deploying LHD/SDL was introduced in 56 nos. of mines. As on 31.03.2024, 202 nos. of SDLs, 37 nos. of LHDs and 137 nos. of UDMs were on roll (inclusive of initial Survey-off equipment) in different underground mines. During 2023-24, production achieved from SDLs was 3.125 MT, from LHDs was 0.642 MT, from 2 nos. Highwall was 0.728 MT and from 1 no. Road Header (Part of Longwall Package) is 0.015 MT.

“Mass Production Technology” by deploying Continuous Miner combined with Shuttle Car (11 sets) have been deployed at Jhanjra, Sarpi, Kumardih-B UG, Khottadih UG and Tilaboni projects and are running successfully. The production achieved during 2023-24 from 5 nos. of Standard Height Continuous Miners and 6 nos. Low Height Continuous Miners was 4.127 MT. In Jhanjra, Longwall Technology is running successfully since August, 2016 & production during 2023-24 was 0.557 MT (Excluding Road Header). Overall underground coal production during 2023-24 was 9.183 MT.



In addition to above, the following steps were taken for exploring business opportunities:

Highwall Mining: Highwall Mining at Nimcha Colliery and Narainkuri have been introduced in 2023-24. Empowered Committee of Functional Directors (ECFDs) of ECL Board in its meeting held on 17.02.2024 has directed to update the Scheme with revised financials for Highwall mining at Rajpura-OCP of Mugma Area (0.50 MTY).

Man Riding System: Seven Man Riding Systems are operational in different mines viz. Jhanjra (3 nos., diesel operated Free Steered Vehicle); Parasea (1 set chairlift system); Nimcha (2 sets chairlift system); Bansra (2 sets chairlift system); Shyamsundarpur (1 set chairlift system); Chinakuri Mine III (1 set chairlift system); Amritnagar Colliery (1 set chairlift system); Khottadih Colliery (2 nos. battery operated Free Steered Vehicle) and Chinakuri Mine-I (2 nos. Battery locomotive). Additional Man Riding Systems have been planned at Amritnagar and Dhemomain mines.

Diversification

Coal Bed Methane (CBM):The Raniganj CBM Block (32 Sq. Km. Area) is within ECL mining lease, proposed for CBM extraction. Project feasibility Report (PFR) has been formulated and approved by ECL Board administratively under MDO concept on 22.09.2018 covering lease hold area of Satgram, Kunustoria & Sripur Area. CMPDIL was awarded to work as Project Implementing Agency (PIA) for Coal Bed Methane (CBM) on 08.05.2020. Bid was e-published thrice by CMPDIL on 15.05.2020, 30.10.2020 and 09.06.2021 for selection of Coal Bed Methane Developer (CBMD). However, no bid was received. Subsequently, some additional areas for CBM extraction has been identified and original area has been modified by CMPDIL in consultation with ECL. Fresh tender document is under preparation by CMPDIL. A meeting with the prospective bidders has been organized on before tendering so that their suggestions can be included.

Surface Coal Gasification (SCG):Project feasibility Report (PFR) for setting up of Coal to Methanol Project was approved by the Board on 03.08.2021 and PDIL has been appointed as the Technical Consultant vide LoA issued on 14.09.2021. Tender for selection of BOO processor has been floated on 31st January, 2022 and bid was opened on 5th May, 2022 and no bid has been received. Subsequently, A MoU has been executed between CIL and GAIL (An addendum to the existing MoU) - to jointly explore the opportunities for development of Coal Gasification Project at Eastern Coalfields Limited (ECL) for production of Synthetic Natural Gas (SNG) as the primary Coal to Chemical (C2C) product using low ash coal from the nearby mines of Eastern Coalfields Limited on 12.10.2022. Work order has been issued by CIL to PDIL on 24.11.2022 for preparation of PFR for setting up of Coal –to-SNG plant in ECL on LSTK mode of implementation. Final report of PFR on Coal –to-SNG plant received by CIL from PDIL on 14.03.2023. Land details of SCG Project at ECL were submitted to CIL on 15.11.2023. (Acquired 190 Acres & to be acquired 60 Acres). GAIL has approved on 19th April, 2024 for appointment of PDIL as a PMC consultant for preparation of DPR after tendering on LSTK route.

Underground Coal Gasification (UCG): A Pilot Project to establish UCG technology in Indian geo-mining conditions at Kasta West Block at Jamtara District, Jharkhand approved on 28.03.24 for Rs. 2309.63 lakh. CMPDIL and ECL are the Principal implementing agencies and Ergo Exergy, Canada is the Sub-Implementing agency for the project. Pilot project work to be started by Ergo Exergy very shortly.

Pit Head Power Plant: As forward integration, 2 sites identified for pit head TPP, one at Pirpaithi of Bhagalpur district of Bihar and other at Aamgachi, Kathikund block of Dumka district of Jharkhand. Coal will be supplied from Rajmahal Mines and upcoming mines in Dumka district.

Steps taken to improve underground coal production: Considering the various operational constraints, liquidation of upper seam, delay in availability of land for caving etc. action have been taken to improve underground production mainly by introduction of mass production technology deploying Continuous Miner with Shuttle Car in more number of underground mines in coming years like Jhanjra, Tilaboni, Siduli, Parasea-Belbaid apart from gradual phasing out of manual operations with the intermediate technology. Action has been taken to introduce more UDMs keeping in view of shortage of Drilling gang due to superannuation and the dual purpose of availability of more coal at face and supporting as well.

Details of Projects Formulated during the year 2023-24:

Sl. No.	Name of Project	Capacity (MTY)	Estimated additional Capital (Rs. in Crore)			
			Departmental	Partial Out-sourcing	Out-sourcing	MDO
1.	Parascole Jambad OC	1.80	1398.71	1193.55	-	1446.01 (ECL=877.82, MDO=568.19)
2.	Nimcha UG	2.76	1291.45	559.34	-	1400.75 (ECL=23.44, MDO=1377.31)
3.	Rangamati-A UG	2.88	2101.41	882.50	-	1862.95 (ECL-39.45, MDO- 1823.50)

4.	Bansra UG	0.54	489.79	189.43	-	566.94 (ECL-5.18, MDO- 561.76)
5.	CL Jambad OCP including Highwall	1.00	-	138.61	114.62	-

Projects approved during the year 2023-24:

Sl. No.	Name of the Project	Capacity (MTY)	Approved Capital Investment (Rs. in Crore)	Date of Approval	Remarks
1.	Itapara OCP	3.50	ECL Part: 929.10	12.09.2023	Project Report recommended in MDO mode.
2.	Chuperbhita - Simlong OCP	6.00	ECL Part: 979.08	12.09.2023	Project Report recommended in MDO mode.

Final approval of Completion Report of Project by the Empowered Sub-Committee of CIL Board for Appraisal, Evaluation and Approval of Projects during the year 2023-24:

Sl. No.	Name of the Project	Capacity (MTY)	Approved Capital Investment (Rs. in Crore)	Date of Approval	Remarks
1.	Itapara OC	3.50	ECL Part: 929.1	29.12.2023	Project Report approved in MDO mode
2.	Chuperbhita - Simlong OC	6.00	ECL Part: 979.08	29.12.2023	NIT floated on 06.03.2024. Bid opening scheduled on 25.06.2024.



Final approval of Completion Report of Project by ECL Board during the year 2023-24:

Sl. No.	Name of the Project	Capacity (MTY)	Approved Capital Investment (Rs. in Crore)	Date of Approval	Remarks
1.	Bansra UG	0.54	ECL Part: 5.18	19.10.2023	Scheme approved in MDO mode
2.	CL Jambad OCP including Highwall	1.00	114.62	25.01.2024	Scheme approved in outsourcing mode

OC Patches approved by ECL Board in 2023-24:

Sl. No.	Area	Name of OC Patch	Mineable Reserve		Avg. Stripping Ratio	Peak Prod. (LTY)	Life of Mine (Years)	Date of approval
			Coal (LTE)	OB (L.Cum)				
1.	Sodepur	Scheme of Parbelia Colliery in R-VIII (Hijuli Seam) in outsourcing option	9.50	117.47 & re-handling /backfilling: 28.00	12.365	2.50	4	25.01.2024

Approval of Mine Profile and MDO document for Re-opening of Discontinued Mine in Revenue sharing Model and its status:

Sl. No.	Tranche	Name of Mines	Approval of Mine Profile and MDO document	Present Status
1.	Tranche-IV	Benali colliery	02.02.2024	Tender floated on 04.03.2024. Bid opening scheduled on 12.06.2024
2.		Mahabir (R) colliery	02.02.2024	Tender floated on 04.03.2024. Bid opening scheduled on 12.06.2024

Capital Projects:

During the year 2023-24, ECL has introduced 14 Nos. of Capital Projects out of which 2 nos. of new Greenfield project (Hura-C OCP & Itapara OCP) and 12 nos. of Expansion / Revision / Foreclosure of Projects (Jhanjra Expansion UG, Khottadih CM, Mohanpur Expansion OCP, New Kenda OC, Sonepur-Bazari Expansion OCP, Chitra East OCP, Siduli Mix, Nakrakonda-Kumardih B OCP, Tilaboni UG, Parasea-Belbaid UG, Shyamsundarpur including Sarpi UG&Bonjemehary Expansion OCP).

New Initiatives:

At present, 11 nos. Continuous Miners are operational with caving in five mines (Jhanjra: 02 nos. Standard Height Continuous Miner & 02 nos. Low Height Continuous Miner; Shyamsundarpur: 01 no. Standard Height Continuous Miner; Kumardih B: 02 nos. Low Height Continuous Miner& 01 no. Standard Height Continuous Miner; Khottadih: 01 no. Standard Height Continuous Miner& 01 no.Low Height Continuous Miner and Tilaboni: 01 no. Low Height Continuous Miner).

18 nos. Continuous Miners have been planned for commissioning in 7 mines for which Project Reports have already been approved. These Continuous Miners have been planned for depillaring with caving/backfilling.Timeline of commissioning of 18 nos. Five nos. Continuous Miners each will be commissioned in 2024-25 and 2025-26, while four nos. Continuous Miners each will be commissioned in 2026-27 and 2027-28.

The scheme for Shampur-B for introduction of Continuous Miner with Paste Fill Technology has been approved by ECL Board on 29.01.2022 and re-tendering has been done 17.02.2024. Bid opened on 12.04.2024. No bid received. Pre-NIT meeting held on 12.06.2024.

Foreign collaboration/Technology Absorption-Adaptation and innovation:

Introduction of Continuous Miner at Kumardih-B UG Mine: 1 set of Low Height Continuous Miner has been commissioned during 2023-24 by M/s. JMS Mining Pvt. Ltd. on 07.02.2024.

Introduction of additional 2 nos. Standard Height Continuous Miner at Jhanjra: For supply of 2 nos. Standard Height Continuous Miner, LOA was issued on 08.08.2022 to M/s. Gainwell Commosales Pvt. Ltd. This is expected to be commissioned in 2024-25.

Introduction of Continuous Miner at Tilaboni UG Mine: 1 no.Low Height Continuous Miner has been deployed in R-VIII Top seam for development of Panel during 2023-24 by M/s. JMS Mining Pvt. Ltd. on 12.03.2024.

Successful run of Powered Support Longwall Panel at Jhanjra R-VI Seam producing coal 0.557 MT (Excluding Road Header) in 2023-24.

Introduction of additional 2 nos. Low Height Continuous Miner at Shyamsundarpur UG Mine: For supply of 2 nos.Low Height Continuous Miner, LOA was issued on 08.08.2022 to M/s. Gainwell Commosales Pvt. Ltd. For drivage of 2nd incline as extension of existing incline, LOA issued on 03.06.2024.

For introduction of Continuous Miner at Parasea-Belbaid UG, LOA was issued on 30.03.2023to M/s. Gainwell Commosales Pvt. Ltd.

For introduction of three more Continuous Miner at Tilaboni UG CHP, LOA was issued on 30.03.2023 to M/s. JMS Mining Pvt. Ltd.

Status of achievement of major milestones related to On-going Projects for the year 2023-24:

Sl. No.	Name of Project	Activities/Milestones	Achievement
1.	Sonepur-Bazari Expansion OCP	Notification under section 4 (i) of CBA (A&D) Act, 1957 for acquiring 526.51 Ha	Completed. Notified under section 4 (i) of CBA (A&D) Act, 1957 for acquiring 526.51 Ha sent on 18.12.2023.
2.	Jhanjra Expansion UG Project	Commissioning of 1 no. Low Height Continuous Miner (4 th Low Height Continuous Miner of Jhanjra UG Project)	Completed. The Low Height Continuous Miner is commissioned on 07.02.2024 at Kumardih-B UG Mine.
3.	Itapara OCP	Finalization of Tender in MDO option	Completed. LOA was issued to M/s. R K Transport Company on 08.05.2023 in MDO mode and agreement signed on 10.06.2023.
4.		Start of Coal production	Completed. Coal production started form 20.12.2023.
5.	Chitra East OCP	Notification under section 7 (i) of CBA (A&D) Act, 1957 for acquiring 146.17 Ha	Completed. Notification under Section 7 (i) of CBA (A&D) Act, 1957 for 146.62 Ha land issued vide S.O. No. 415 (E) dated 01.02.2024.
6.	Tilaboni UG	Deployment of 1 no. Low Height Continuous Miner	Completed. The Low Height Continuous Miner is deployed on 12.03.2024.
7.		Application u/s 11 (i) of CBA (A&D) Act, 1957 done for acquisition of 419.0496 Ha tenancy land	Completed. Application made u/s 11 (i) of CBA (A&D) Act, 1957 done for acquisition of 419.0496 Ha on 18.07.2023.
8.	Mohanpur Expansion OCP	Notification u/s 11 (i) of CBA (A&D) Act, 1957 for acquisition of 38.20 ha tenancy land.	Completed. Notified u/s 7 (i) of CBA (A&D) Act, 1957 done 38.20 ha tenancy land on 04.01.2024.

Special achievement during the year 2023-24:

EC amended for Sonapur-Bazari Expansion OCP from 12.00 MTY to 14.00 MTY on 31.07.2023 for a period of 1 year under Cluster No.12 (Total Capacity:31.83 MTY).

EAC meeting held on 21.12.2023 recommended the Barmuri OCP under Mugma Area, EC capacity increased from 0.5 MTY to 0.90 MTY, under Cluster No.2 (Total Capacity:1.1 MTY). EC letter issued on 21.02.2024.

Revised Mine Plan (Including Progressive Mine Closure Plan) for Cluster No.12 (comprising of 14 mixed mines) from 31.83 MTPA to 34.83 MTPA with increase in ML area from 12694.47 Ha to 14814.20 Ha approved by ECL Board meeting held on 12.09.2023. The proposal for obtaining TOR was considered and recommended in 3rdEAC meeting held on 17.11.2023. TOR issued on 04.01.2024. Draft EIA/EMP report is under preparation at CMPDIL.

The proposal for Terms of Reference for expansion of Cluster-3 (3 mixed mines) having existing production capacity of 3.33/3.97 MTY (Normative/Peak) with increase in ML area from 1628.0 Ha to 1774 Ha was considered and recommended in 3rdEAC meeting held on 17.11.2023. TOR issued on 04.01.2024. Draft EIA/EMP report is under preparation at CMPDIL.

EC for area expansion of Itapara OCP from 855.87 Ha to 1003.37 Ha, increase in the overall cluster area from 2720.87 Ha to 2868.37 Ha, keeping the overall cluster capacity 7.71 MTY unchanged under Cluster No.4, Mining Plan has been approved by ECL Board on 25.01.2024.

Coal Gasification Shilpanchal Pariyojana WB, ECL- PFR for the ECL SCG for setting up of Coal to Methanol Project has been approved by ECL Board on 03.08.2021. PDIL has been appointed as the Technical Consultant and LoA has been issued on 14.09.2021. Work order has been issued to PDIL on 24.11.2022 for preparation of PFR for setting up of Coal-to-SNG plant in ECL on 'Lump-sum Turn Key (LSTK)' mode of implementation.

ERP is implemented in SAP Portal through PS module for all fourteen On-going Projects and also the First Mile Connectivity Projects. It enables live monitoring of the On-going Projects through PS module of SAP Portal.