GOVERNMENT OF INDIA
MINISTRY OF COAL

ANNUAL REPORT
2019-20
GOVERNMENT OF INDIA

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2019-20

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ORGANISATIONAL STRUCTURE AND FUNCTIONS

ANNUAL REPORT 2019-20
**Introduction**

The Ministry of Coal has the overall responsibility of determining policies and strategies in respect of exploration and development of coal and lignite reserves, sanctioning of important projects of high value and for deciding all related matters. These key functions are exercised through its public sector undertakings, namely Coal India Limited (CIL), NLC India Limited (NLCIL) and Singareni Collieries Company Limited (SCCL), a joint sector undertaking of Government of Telangana and Government of India with equity capital in the ratio of 51:49.

**Vision**

Modern, sustainable and competitive coal sector enabling accelerated coal production for energy security and economic growth.

**Objectives**

- Ensuring achievement of Annual Action Plan targets for coal production and off-take, Over Burden Removal (OBR), lignite production and lignite based power generation.
- Infrastructure development to augment coal and washed coal production.
- Leveraging technology to minimize environmental externalities.
- Cutting edge research and development initiative.
- Enhancing exploration to augment resource base.
- Quality and reliability in customer services.
- Expeditious and joint solutions to inter-ministerial issues.
- Improving efficiency of Coal India.
- Attracting private investments.
- Allocating coal blocks in a transparent manner.

**Functions of the Ministry of Coal**

The Ministry of Coal is concerned with exploration, development and exploitation of coal and lignite reserves in India. The subjects allocated to the Ministry of Coal (includes Subordinate or other organizations including PSUs concerned with their subjects) under the Government of India (Allocation of Business) Rules, 1961, as amended from time to time as follows :

(i) Exploration and development of coking and non-coking coal and lignite deposits in India.

(ii) All matters relating to production, supply, distribution and prices of coal.

(iii) Development and operation of coal washeries other than those for which the Department of Steel is responsible.

(iv) Low temperature carbonization of coal and production of synthetic oil from coal.

(v) All work related to coal gasification.


(vii) The Coal Mines Provident Fund Organization.


(ix) Rules under the Mines Act, 1952 (32 of 1952) for the levy and collection of duty of excise on coke and coal produced and dispatched from mines and administration of rescue fund.

(x) Administration of the Coal Bearing Areas (Acquisition and Development) Act, 1957(20 of 1957).

(xi) Administration of the Mines and Minerals (Development and Regulation) Act, 1957 (67 of 1957) and other Union Laws in so far the said Act and Laws relate to coal and lignite and sand for stowing, business incidental to such administration including questions concerning various States.


**Organisation Structure**

The Secretariat of Ministry of Coal is headed by a Secretary who is assisted by one Additional Secretary, five Joint Secretaries (including the Financial Advisor and Nominated Authority), one Project Advisor, one Economic Advisor, one Deputy Director General, thirteen Directors/Deputy Secretaries/Joint Directors, twelve Under Secretaries, twenty four Section Officers, one Deputy Director, two Assistant Directors, one Controller of Accounts, one Deputy Controller of Accounts, two Senior Accounts Officers and three Assistant Accounts Officers and their supporting staff. Organization chart of Ministry of Coal as given at Annexure.

**Subordinate office and Autonomous Organization**

The following subordinate office and autonomous organizations are under the administrative control of Ministry of Coal –

(i) Office of the Coal Controller’s Organization (CCO) – a subordinate office;

(ii) Coal Mines Provident Fund Organization (CMPFO) – an autonomous body.

**Public Sector/Joint Sector Companies**

**Coal India Limited (CIL)**

Coal India Limited (CIL) is a ‘Maharatna’ company under the Ministry of Coal, Government of India with headquarters at Kolkata, West Bengal. CIL is the single largest coal producing company in the world and one of the largest corporate employers with manpower of 2,77,357 (as on 31st Dec’19). CIL operates through 83 mining areas spread over 8 provincial states of India. Coal India Limited has 364 mines of which 166 are underground, 180 opencast and 18 mixed mines. CIL further operates 16 coal washeries, (12 coking coal and 4 non-coking coal) and also manages other establishments like workshops, hospitals, and so on. CIL has 27 training Institutes. Indian Institute of Coal Management (IICM) is an excellent training centre operates under CIL and imparts multidisciplinary management development programmes to the executives. Coal India’s major consumers are Power and Steel sectors. Others include cement, fertilizer, brick kilns, and a host of other industries.

CIL has eight fully owned subsidiary companies:

- Eastern Coalfields Limited (ECL),
- Bharat Coking Coal Limited (BCCL),
- Central Coalfields Limited (CCL),
- Western Coalfields Limited (WCL),
- South Eastern Coalfields Limited (SECL),
- Northern Coalfields Limited (NCL),
- Mahanadi Coalfields Limited (MCL) and
- Central Mine Planning & Design Institute Limited (CMPDIL).

In addition, CIL has a foreign subsidiary in Mozambique namely Coal India Africana Limitada (CIAL).

The mines in Assam i.e. North Eastern Coalfields is managed directly by CIL.

Mahanadi Coalfields Limited, a subsidiary of Coal India Ltd is having four (4) Subsidiaries, South Eastern Coalfields Ltd has two (2) Subsidiaries and Central Coalfields Ltd has one (1) subsidiary.

Coal India’s major consumers are Power and Steel sectors. Others include cement, fertilizer, brick kilns, and a host of other industries.

**The Singareni Collieries Limited (SCCL)**

- The Singareni Collieries Company Limited (SCCL) is a Joint Venture of Govt. of Telangana and the Govt. of India with equity participation in the ratio of 51:49 respectively. SCCL is having 10622 Million Tonnes of Proved reserves in the Pranhit – Godavari Valley Coalfield. SCCL is producing around 9% of the total all India Production.

- SCCL is having the registered office in Kothagudem, Bhadravathi District of Telangana. SCCL is presently operating 18 Opencast Mines and 27 Underground Mines in the six districts of Telangana State with manpower of 47,178.

- Naini coal block is allotted to SCCL in August 2015 in the Angul district of Odisha for which pre-mining activities and proposals are in progress to obtain various permissions/approvals. Penagaddpa coal block located in the Bhadravathi District of Telangana State is allotted to SCCL on 15th December, 2016. Exploration drilling is completed and GR is submitted. New Patrapara Coal
Block in Odisha State is allotted to SCCL on 30.10.2019. SCCL has initiated necessary steps for taking up the pre-mining activities as per schedule.

- Presently, 2X600 MW Singareni Thermal Power Station is in operation in the Mancherial district of Telangana. In 2018-19, total 8698 MU and in 2019-20 (upto Dec 2019) total 6755 MU of electricity is generated.
- SCCL proposed to set up 300 MW Solar Power Plant at various locations in SCCL command area in Telangana. 129 MW solar plants are under erection & will be completed by March 2020. In 2nd Phase, 90 MW solar plants are under erection and will be installed by 30.09.2020 and in 3rd Phase, for 81 MW solar plants land is identified.

NLC India Limited (NLCIL)

NLC India Limited, a “Navratna” company with its registered office at Chennai and corporate office at Neyveli in Tamil Nadu is a pioneer among the Central Public Sector Enterprises in the energy sector. NLCIL has lined up a number of projects and spreading its wings in Tamil Nadu, Rajasthan, Uttar Pradesh, Odisha, Jharkhand, Andaman States including expansion/ augmentation of its existing mines and power plants, setting up of green-field mines & power plants, acquisition of power assets, setting up of wind and solar power plants across the country with Pan-India Foot Prints. NLCIL is an Energy Major utilising Lignite & Coal and harnessing Thermal Power and Green Energy. NLC India Limited operates.

Lignite Mines

Three Opencast Lignite Mines of total capacity of 28.5 Million Tonne Per Annum (MTPA) at Neyveli Tamil Nadu and one opencast lignite mine of capacity 2.1 MTPA at Barsingar, Rajasthan. The present installed capacity is 30.60 MTPA in lignite front.

Lignite based Thermal Power Station

Five Lignite based Thermal Power Stations with a total installed capacity of 3390 Mega Watt (MW) at Neyveli Tamil Nadu and one Thermal Power Station at Barsingar, Rajasthan with an installed capacity of 250 MW. The Total Installed lignite based Thermal power generation capacity is 3640 MW.

Renewable Energy

NLCIL has set its footprint in generation of Renewable Energy through its Wind power plant with an installed capacity of 51 MW in Kazhaneerkulam, Tirunelveli District, Tamil Nadu. NLCIL has setup solar plants viz., 140 MW (130MW + 10MW) Solar Power plant at Neyveli, Roof top Solar Power Plant of 1.06 MW capacity in Neyveli, 500 MW Solar Power Plant in Tirunelveli, Ramanathapuram and Virudhunagar districts of Tamil Nadu was Commissioned in March 2019.

709 MW Solar Power Projects in Tirunelveli, Ramanathapuram, Tuticorin and Virudhunagar districts of Tamil Nadu was commissioned in September 2019 & COD declared in October 2019.

NLCIL has become the first PSU to install 1 GW Solar power project. The present installed capacity of solar projects is 1.35 GW.

Coal based Thermal power station:

A coal based Thermal Power Plant at Tuticorin, Tamil Nadu with two units of 500 MW capacity each (1000 MW) through NLC Tamil Nadu Power Limited (NTPL), a Joint Venture between NLC India Limited and TANGEDCO (equity participation in the ratio of 89:11) is in operation.

The total installed power generating capacity of NLC India Limited & its subsidiaries as on December 2019 is 6043.56 MW.


Four Lignite Thermal Power Stations and the three Mines at Neyveli in Tamil Nadu, as well as the lignite Mines and Lignite based Thermal Power Station in Barsingar, Rajasthan are certified with ISO 14001 (Environment Management System), ISO 9001 (Quality Management System) and OHSAS 18001 (Occupational Health and Safety Management System). NLC India Limited’s growth is sustained and its contribution to India’s social and economic development is significant.

Projects under pipeline/formulation

Talabira II & III Open Cast Coal Mine Project of 20.0 MTPA Capacity in Odisha is expected to be commencing its Coal production in FY 2019-20. Overburden removal has commenced from 11.12.2019.

2x10MW (20 MW) Solar Power Project at South Andaman work is under progress. Out of 20 MW 2.5 MW has been commissioned.
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Balance 17.5 MW is expected to be commissioned by March 2020.

2400 MW pithead coal based Thermal Power Project at Odisha (NTTPP), is expected to be commissioned by 2024-25.

Thermal Power Station II Second Expansion (2X660 MW) in Neyveli, Tamil Nadu, and the anticipated date of completion is 2024-25.

Ground Mounted 10 MW Solar Project in Neyveli – Evaluation of Technology to achieve higher CUF is in progress. Expected to be commissioned in 2020-21.

In order to meet the fuel requirement of Thermal Power Station-II Second Expansion NLCIL is proposed to develop Mine –III at Neyveli, (11.50 MTPA) Mining Plan and Feasibility Report have been submitted to MoC for approval. Environmental Appraisal Committee of MoEF&CC has approved the Terms of Reference (TOR). Public Hearing was held on 11th Dec- 2018 in Neyveli. Approved Minutes of meeting of Public hearing is published in TNPCB website on Sep 2019. Final EC application is uploaded in MoEF&CC website on Nov 2019.

**Coal Controller’s Organization**

The Coal Controller’s Organization is a subordinate Office of Ministry of Coal, having it’s headquarter at Kolkata and field Offices at Dhanbad, Ranchi, Bilaspur, Nagpur, Sambalpur, Asansol and Kothagudem.

This office is headed by Coal Controller, JS equivalent officer assisted by 5 other Group – A level gazetted officers, the details of which are given below,

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Name of the post</th>
<th>Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Director ( Indian Statistical Service )</td>
<td>L-13</td>
</tr>
<tr>
<td>2</td>
<td>Dy. Director ( Indian Statistical Service )</td>
<td>L-11</td>
</tr>
<tr>
<td>3-5</td>
<td>Dy. Assistant Coal Controller (3)</td>
<td>L-10</td>
</tr>
</tbody>
</table>

Since most of the technical posts are lying vacant for a prolonged period, different officials from CIL/SCCL have been hired by CCO on loan basis to run the office in public interest.

Currently, each of the field offices is headed by one executive from CIL/SCCL working in the capacity of ‘Officer on Special Duty (OSD)’ being supported by other technical officials of CIL/SCCL.

In addition to these, there are four officials from CIL/SCCL who have been posted at CCO, Kolkata as ‘Officer-on-Special Duty’ and two mining officers and one finance officer (CA), all from CIL, to assist the jobs of Coal Controller.

This office plays an important role in approving the grades of Coal, Monitoring of Captive Coal Blocks, Nodal office for collection, compilation and dissemination of all the Statistical information on Coal, granting of Opening permission, Opening of Escrow Accounts and Reimbursement for mine closure, NOC for land acquisition under CBA (A&D), Act, 1957, Monitoring of the residual works of Collection of Stowing Excise Duty, CCDA, Works related to Commissioner of Payment, etc.

**Functions:**

The Coal Controller’s Organization discharges various statutory functions derived from the following statutes:


(iv) The Coal Bearing Areas (Acquisition & Development) Act, 1957(20 of 1957)

The Coal Controller’s Organisation also discharges the following functions:-

(a) Job of monitoring of coal production of the captive coal blocks (Vested & Allotted)

(b) Job of monitoring of washeries

(c) Follow up of submission of Mine Closure Plan and act as the representative of Govt of India for signing up Escrow agreement with different coal/ lignite companies.

A brief description of Coal Controller’s Organization’s performance during the period 1st April, 2019 to 31st December, 2019 are given as under :-

1. **Grant of Permission for opening and re-opening of coal mines:-**

Coal Controller’s Organisation granted permission for opening and re-opening of 9 Coal mines/Lignite mines during 1st April, 2019 to 31st December, 2019.
(2) Disposal of cases under Section 8 of the Coal Bearing Areas (Acquisition and Development) Act, 1957

During the period from 1st April, 2019 to 31st December, 2019, Coal Controller submitted reports to the Ministry of Coal under section 8 of CBA Act, 1957 in respect of 8 notifications.

(3) Coal Samples collected & analyzed, Statutory Complaint Received & Settled:-

Under the Colliery Control Rules, 2004, and under the Coal Mines (Conservation & Development) Amendment Rules, 2011, Coal Controller is to approve the quality of Coal dispatched from collieries and also settle quality complaints of consumers. Statutory Complaints Received till 31.12.2019 – 27 nos. Action has been taken to resolve the cases.

For grade determination purposes during 2019-20, CCO carried out random sampling activities all through the year in different coal mines and sidings of all coal companies of India. Total number of coal samples (check) collected and analyzed from 1st April, 2019 to 31st December, 2019 is 1011 nos.

(4) Collection of Excise Duty:-

There is no collection of Stowing Excise Duty during 1st April to 31st December, 2019 as through Taxation Laws Amendment Act, 2017, the Stowing Excise Duty – SED, as per the Coal Mines (Conservation & Development) Act, 1974 has been abolished w.e.f the date of GST roll out i.e., 01.07.2017.

Apart from excise duty, this office collects information on Royalty, GST, NMET, etc. and send to MoC regularly.

(5) Collection, Compilation and Publication of coal Statistics

CCO being the sole agency for collection, compilation, publication and dissemination of data regarding different parameters of production and dispatch of coal and lignite, provides monthly data to Central Statistics Office, RBI, DIPP, Indian Bureau of Mines and other national and international organizations. It also publishes Annual Coal Directory and Provisional Coal Statistics. Coal Directory 2017-18 and Provisional Coal Statistics 2018-19 have already been published. Work of Coal Directory 2018-19 is under process.

(6) Monitoring and progress of Coal Blocks

Coal Controller’s Office monitors the Bank Guarantee issue related to earlier allocated coal blocks and sends reports as and when required by Ministry. It also quantifies linkage quantity of coal through Bridge Linkage.

(7) Compliance of Mine Closure Plan and Escrow Account agreement.

Coal Controller office has been entrusted to perform the implementation and monitoring of Mine closure activities of the mining areas as per approved Mine Closure plan (Progressive and Final) and certification of works done from Government Notified Institutes like CMPDIL / NEERI, Nagpur / ISM, Dhanbad / IIT KGP / IIEST, Shibpur regarding Environment protection, complete safety zone fencing, expenditure incurred for protective and reclamation, rehabilitation works and opening a fixed deposit Escrow Account with any scheduled Bank for depositing annual mine closure cost as per approved Mine Closure Plan where Coal Controller is an exclusive beneficiary under the provision of MOC’s guidelines for preparation of Mine Closure Plan dated 7.1.2013 and 16.12.2019.

During 2019-20 till December, 2019, total 45 Tripartite Escrow Agreement (5 new and 40 amended) have been executed for 6 coal mines under CIL/ subsidiary companies, 37 mines under SCCL and 2 captive coal mine.

Up to 31st December, 2019, 559 tripartite Escrow Accounts agreements have been executed between the coal/lignite companies with scheduled banks and CCO covering 589 coal and lignite mines. The total amount deposited with interest upto 31st December, 2019 to the Escrow Account stands at ₹ 9765.4022 Crore (Provisional).

Up to 31st December, 2019, ₹ 978.077 Cr. has been reimbursed against progressive/final mine closure activities from Escrow Accounts of 37 different coal and lignite mines.

(8) Work as Commissioner of Payments-

Two offices of Commissioner of Payments (COP) were set up in pursuance of the Coking Coal Mines (Nationalisation) Act, 1972 and the Coal Mines (Nationalisation) Act, 1973, one each at Dhanbad and Kolkata for the purpose of disbursement of amounts to settle the liabilities of the ex-owners of coal mines nationalized in 1972-73. After the work of Dhanbad Office had
been disposed of substantially, that office was wind up and its residual work was transferred to the Office of Commissioner of Payment, Kolkata in 1987.

Subsequently, in compliance with the recommendations of the Economic Reforms Commission (ERC), the office of Commissioner of Payments, Kolkata has also been wind up w.e.f. 6th June, 2007. Residual work of the office of Commissioner of Payments, Kolkata has been transferred to the office of Coal Controller. At present, the Coal Controller is functioning as ex-officio Commissioner of Payments.

The performance of the COP is as under.

### Status of fund under Coking Coal Mines (Nationalisation) Act, 1972 and Coal Mines (Nationalisation) Act, 1973

<table>
<thead>
<tr>
<th></th>
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<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Number of collieries nationalised by the Central Government and corresponding colliery-accounts opened by the Commissioner of Payments</td>
<td>226</td>
<td>711</td>
</tr>
<tr>
<td>2</td>
<td>Number of colliery-accounts closed up to 31-03-2019</td>
<td>187</td>
<td>627</td>
</tr>
<tr>
<td>3</td>
<td>Number of colliery-accounts closed during 2018-19 (April, 2018 to March, 2019)</td>
<td>nil</td>
<td>nil</td>
</tr>
<tr>
<td>4</td>
<td>Number of colliery-accounts yet to close as on 31-03-2019</td>
<td>39</td>
<td>84</td>
</tr>
<tr>
<td>5</td>
<td>Compensation amount disbursed during 2018-19 (up to 31.03.2019)</td>
<td>Nil</td>
<td>Nil</td>
</tr>
<tr>
<td>6</td>
<td>Amount left for disbursement as on 31-03-2019</td>
<td>₹ 415.37 Lakh</td>
<td>₹ 848.61 Lac</td>
</tr>
</tbody>
</table>

By virtue of The Coal Mines (Special Provisions) Act, 2015, the Commissioner of Payments has been appointed to disburse the compensation amount payable to him by the Nominated Authority, Ministry of Coal, also appointed under this Act. The payments made for the year 2016-17, 2017-18, 2018-19 and 2019-20 (up to December, 2019) are given as under:-

<table>
<thead>
<tr>
<th>Year</th>
<th>Amount disbursed in ₹</th>
</tr>
</thead>
<tbody>
<tr>
<td>2016-17</td>
<td>944,69,37,538/-</td>
</tr>
<tr>
<td>2017-18</td>
<td>197,31,98,353/-</td>
</tr>
<tr>
<td>2018-19</td>
<td>2,47,41,088/-</td>
</tr>
<tr>
<td>2019-20 (up to December, 2019)</td>
<td>Nil</td>
</tr>
</tbody>
</table>

### COAL MINES PROVIDENT FUND ORGANISATION (CMPFO)

The Coal Mines Provident Fund Organisation is an Autonomous body established under the Coal Mines Provident Fund and Miscellaneous Provisions Act, 1948, and is responsible for administering the Coal Mines Provident Fund Scheme, 1948, Coal Mines Deposit Linked Insurance Scheme, 1976, and Coal Mines Pension Scheme, 1998. These three schemes are administered by a tripartite Board of Trustees, consisting of Central and State Government’s representatives, employers’ representatives and employees’ representatives.

The Organization renders services to 4,00,000 Provident Fund subscribers and about 5,35,000 pensioners approximately as on 31st March, 2020. The Headquarters of CMPFO is at Dhanbad and its 20 Regional Offices are spread in the Coal producing states in the Country.

### Coal Mines Provident Fund Scheme.

At the end of the financial year 2019-20 the total number of Coal mines & office units covered under the Scheme stood at 876 excluding coke plants operating in Private Sector. Live membership of the Provident Fund Scheme, 1948 as on 31.03.20 is 4,00,000 approx.

During 2019-20 i.e. (01.04.2019 to 30-11.2019) Coal Mines Provident Fund Contributions including voluntary contributions amounting to ₹ 4500 Crores approx and from 01.12.2019 to 31.03.2020 is ₹ 2250 Crore approx were received in the Coal Mines Provident Fund raising thereby the total contributions upto ₹ 48000 Crores approx. The entire accumulation in the fund is invested in accordance with the guidelines laid down by the Ministry of Finance. The total Face value of the fund’s investment
upto 30-11- 2019 stood at ₹ 1,00,000 Crores approx (including SDS investment of ₹ 16522 Crore). The Incremental Investment (Face Value) from 01.04.2019 to 30.11.2019 is ₹ 3900 Crore approx and from 01.12.19 to 31.03.20 is ₹ 600 Crore approx.

During 2018-19, provisional interest has been allowed on members’ accumulation at rate of 8.00% (proposed by BOT) per annum. However BoT recommended at the rate of interest 8.6% (Subject to approval of Govt.)

Refund and Advance cases of Provident Fund

<table>
<thead>
<tr>
<th>Refund and Advance cases of Provident Fund</th>
<th>No of cases settled (from 01.04.2019 to 30-09-2019) and disbursed #</th>
<th>No of cases settled (from 01.10-2019 to 31.03.2020) and disbursed #</th>
</tr>
</thead>
<tbody>
<tr>
<td>Provident Fund Refund Cases</td>
<td>15033</td>
<td>15000 approx.</td>
</tr>
<tr>
<td>Marriage Advance</td>
<td>2195</td>
<td>3237</td>
</tr>
<tr>
<td>Education Advance</td>
<td>255</td>
<td></td>
</tr>
<tr>
<td>House Building Advance</td>
<td>787</td>
<td>3000 approx</td>
</tr>
<tr>
<td>The amount disbursed on P.F. and Advances</td>
<td>₹ 600 Crores approx.</td>
<td>₹ 2800 Crore approx.</td>
</tr>
<tr>
<td></td>
<td>(wef 01-04-19 to 30-11-19)</td>
<td>(wef 01-12-19 to 31-03-1920)</td>
</tr>
</tbody>
</table>

# all figures are provisional.

The cost of Administration of CMPF Scheme is met out of the administrative Charge @ 3% paid by the Coal companies to the CMPFO.

Refund from Provident Fund during 2019-20 (upto 31st Mar, 20) together with the advances paid is indicated below:-

The trend of pendency in Settlement of Provident Fund refunds is shown in the figure given below:

Coal Mines Deposit Linked Insurance Scheme

In the event of death of an employee in harness who was a member of Coal Mines Provident Fund Scheme, his/her nominee was entitled to receive in addition to the Provident Fund, an amount equal to the average balance, in the account of the deceased during the preceding 3 years, subject to a maximum of ₹ 10,000/-.

In accordance with the Scheme, the employers were required to contribute at the rate of 0.5% of the aggregate wages of covered workers. The Central Government was also required to pay half of the amount contributed by the employers under the Scheme. Currently, for meeting the cost of administration of this scheme, Private Sector employers contribute @ 0.1% of aggregate wages and the Central Government contribute 50% thereof i.e. 0.05% of aggregate wage.
The executive cadre employees of CIL were exempted from operation of the said Scheme vide Gazette Notification No. S.O.822 (E) dated 24.03.2009. The workers of the CIL and its subsidiaries were exempted earlier from the operations of the Scheme by Ministry of Coal.

**Coal Mines Pension Scheme, 1998**

In exercise of the powers conferred by Section 3E of the Coal Mines Provident Fund and Miscellaneous Provisions Act, 1948 (46 of 1948) and in suppression of the Coal Mines Family Pension Scheme, 1971, except in respect of things done or omitted to be done before such supersession, the Central Government has framed the Coal Mines Pension Scheme, 1998. The Coal Mines Pension Scheme has come into force with effect from the 31st day of March, 1998.

The total pension claims settled and disbursed under the Coal Mines Pension Scheme, 1998 during 1.4.2019 to 31.9.2019 and 1.10.2019 to 31.3.2020(expected) are indicated below:

<table>
<thead>
<tr>
<th>Coal Mines Pension Scheme, 1998</th>
<th>No of cases settled (from 01.04.2019 to 31.09.2019) and disbursed</th>
<th>No of cases settled (from 01.10.2019 to 31.03.2020) and disbursed</th>
</tr>
</thead>
<tbody>
<tr>
<td>The number of new claims of Pension settled</td>
<td>15261</td>
<td>15000 approx.</td>
</tr>
<tr>
<td>The amount disbursed on Coal Mines Pension Scheme, 1998</td>
<td>₹ 2200.00 Crores approx.</td>
<td>₹ 1080.00 Crores approx.</td>
</tr>
</tbody>
</table>

# all figures are provisional.

**Corpus of the Fund and its Sustainability:-**

The Pension Fund consists of the following:-

(a) Net assets of the Coal Mines Family Pension Scheme, 1971 as on the appointed day;

(b) An amount equivalent to two and one-third percent of the salary of the employee, being the aggregate of equal shares of the employee and the employer from their respective contributions to the fund, to be transferred from the appointed day from the Fund of the employee;

(c) An amount equivalent to two percent of the Basic and dearness allowance paid of the employee from the first day of April, 1989 or the date of joining, whichever is later, up to the 31st day of March, 1996 and two percent of the notional salary of the employee from the 1st day of April, 1996 or the date of joining, whichever is later, to be transferred from his salary;

(d) An amount equivalent to one increment to be calculated on the basis of the salary of the employee as on the first day of July, 1995 or the date of joining, whichever is later, to be transferred from the first day of July, 1995 or the date of joining, whichever is later, to be transferred from the salary of the employee;

(e) An amount equivalent to one and two-third percent of the salary of the employee to be contributed by the Central Government from the appointed day;

Provided that in the case of an employee whose salary exceeds rupees one thousand six hundred per month, the contribution payable by the Central Government shall be equal to the maximum of the amount payable on the salary of rupees one thousand six hundred per month only;

(f) Amounts to be deposited by Pension members including new optee in terms of the provisions of the Scheme.

During 2019-20 i.e. 01.04.2019 to 30.11.2019 ₹ 2450.00 crores approx and from 01.12.2019 to 31.03.2020 ₹ 1225.00 crore approx was diverted to Pension Fund from Provident Fund as mandatory pension contributions of in service members. The pension contribution of in-service members as on 31st Mar, 2020 (including Government Share and interest) is expected to be ₹ 4125.00 crores approx.

**Coverage:-**

(a) All employees who were members of the erstwhile Coal Mines Family Pension Scheme, 1971 and were on rolls on 31st March, 1998.

(b) All such employees who are appointed on or after 31st March, 1998.

(c) All such optee members who opted for membership of the Pension Fund in form PS-1 and PS-2 as the case may be with the condition specified under the Scheme.
(d) All such employees who died while in service during the period 01.04.1994 to 31.03.1998 are treated as deemed optee of the scheme vide G.S.R. No. 521(E) dated 12.08.2004.

**Benefits:**

(a) Monthly Pension. (Superannuation, Voluntary Retirement, exit from service);
(b) Disablement Pension;
(c) Monthly widow or widower pension;
(d) Children Pension;
(e) Orphan Pension;
(f) Ex-gratia Payment.

The trend of pendency in settlement of Pension cases is shown in the figure given below:

![Trend of Pendency Pension Claims](image)

**Note:** All figures provided in the material for Annual Report of the Ministry of Coal for the year 2019-20 are provisional (un-audited).
THE YEAR AT A GLANCE

ANNUAL REPORT 2019-20
Coal Reserves in India

The inventory of Geological Resources of Indian coal as on 1.4.2019 and up to a depth of 1200 meter prepared by the Geological Survey of India on the basis of resources estimated by CMPDI, MECL, GSI, SCCL and others is 326.05 Bt.

Type wise and category wise resources:

<table>
<thead>
<tr>
<th>Coal Type</th>
<th>Measured/Proved</th>
<th>Indicated</th>
<th>Inferred</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prime Coking</td>
<td>4.67</td>
<td>0.66</td>
<td>0.00</td>
<td>5.32</td>
</tr>
<tr>
<td>Medium Coking</td>
<td>14.88</td>
<td>11.25</td>
<td>1.86</td>
<td>27.98</td>
</tr>
<tr>
<td>Semi Coking</td>
<td>0.52</td>
<td>0.99</td>
<td>0.19</td>
<td>1.71</td>
</tr>
<tr>
<td><strong>Sub-Total of Coking</strong></td>
<td><strong>20.06</strong></td>
<td><strong>12.90</strong></td>
<td><strong>2.06</strong></td>
<td><strong>35.00</strong></td>
</tr>
<tr>
<td>Non-Coking</td>
<td>134.96</td>
<td>127.49</td>
<td>27.42</td>
<td>289.87</td>
</tr>
<tr>
<td>Tertiary Coal</td>
<td>0.59</td>
<td>0.12</td>
<td>0.90</td>
<td>1.62</td>
</tr>
<tr>
<td><strong>Grand Total</strong></td>
<td><strong>155.61</strong></td>
<td><strong>140.51</strong></td>
<td><strong>30.38</strong></td>
<td><strong>326.50</strong></td>
</tr>
</tbody>
</table>

Depth wise resources are as follows:

<table>
<thead>
<tr>
<th>Depth Range(m)</th>
<th>Measured/Proved</th>
<th>Indicated</th>
<th>Inferred</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-300</td>
<td>113.76</td>
<td>65.20</td>
<td>9.22</td>
<td>188.18</td>
</tr>
<tr>
<td>300-600</td>
<td>23.45</td>
<td>60.31</td>
<td>15.21</td>
<td>98.97</td>
</tr>
<tr>
<td>0-600(for Jharia only)</td>
<td>14.06</td>
<td>0.45</td>
<td>0.00</td>
<td>14.51</td>
</tr>
<tr>
<td>600-1200</td>
<td>4.34</td>
<td>14.54</td>
<td>5.96</td>
<td>24.84</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>155.61</strong></td>
<td><strong>140.51</strong></td>
<td><strong>30.39</strong></td>
<td><strong>326.50</strong></td>
</tr>
</tbody>
</table>

Lignite Reserves in India

The Lignite reserves in the country are estimated at around 45.76 Billion Tonne (1.4.2019). The major deposits are located in the State of Tamil Nadu, followed by Rajasthan, Gujarat, Kerala, West Bengal, Jammu and Kashmir and Union Territory of Puducherry.

Coal Production

The overall production of Coal for 2019-20 was projected at 810 Mte. During the year 2019-20, the actual production during the year (April-Dec.19) was 480.04 Million tonnes compared to 498.51 Million tonnes (MT) during corresponding period of 2018-19 and showing a negative growth 3.71 per cent. The Company-wise details for coal production from CIL, SCCL and Others are given below:-
Annual Report | 2019-20

### Production (2019-20) in Mte.

<table>
<thead>
<tr>
<th></th>
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<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>CIL*</td>
<td>606.89</td>
<td>660.00</td>
<td>388.39</td>
<td>58.85</td>
<td>-5.83</td>
<td>271.61</td>
</tr>
<tr>
<td>SCCL</td>
<td>64.40</td>
<td>67.00</td>
<td>46.75</td>
<td>69.77</td>
<td>2.56</td>
<td>20.25</td>
</tr>
<tr>
<td>Captive</td>
<td>49.90</td>
<td>73.00</td>
<td>39.74</td>
<td>54.44</td>
<td>14.09</td>
<td>33.26</td>
</tr>
<tr>
<td>Others</td>
<td>7.53</td>
<td>10.00</td>
<td>5.16</td>
<td>51.60</td>
<td>-8.69</td>
<td>4.84</td>
</tr>
<tr>
<td>Total</td>
<td>728.72</td>
<td>810.00</td>
<td>480.04</td>
<td>59.26</td>
<td>-3.71</td>
<td>329.96</td>
</tr>
</tbody>
</table>

* Including production of Gare Palma (GP) IV/2&3 and GP IV/1.

### Coal Production Trend (2010-2019):

#### Raw Coal Dispatch

- **CIL**: 606.89 MT (2018-19) vs. 660.00 MT (2019-20)
- **SCCL**: 64.40 MT (2018-19) vs. 67.00 MT (2019-20)
- **Captive**: 49.90 MT (2018-19) vs. 73.00 MT (2019-20)
- **Others**: 7.53 MT (2018-19) vs. 10.00 MT (2019-20)

#### Total:

- **2018-19**: 728.72 MT
- **2019-20**: 810.00 MT

**Growth**: -3.71% over the corresponding period of previous year.

### Coal Dispatch

- **Period**: Apr’19 – Dec’19
- **CIL**: 417.08 MT vs. 460.00 MT (2018-19 vs. 2019-20)
- **SCCL**: 46.00 MT vs. 64.91 MT (2018-19 vs. 2019-20)

**Growth**: -6.19% over the corresponding period of previous year.

### Company-wise Raw Coal Dispatch (in MT)

<table>
<thead>
<tr>
<th>Name</th>
<th>2018-19 Actual</th>
<th>Target (BE)</th>
<th>Target (RE)</th>
<th>Actual (Apr-Dec, 2019)</th>
<th>Achievement (%)</th>
<th>Growth (%)</th>
<th>Actual (Jan-Dec, 2019)</th>
</tr>
</thead>
<tbody>
<tr>
<td>CIL</td>
<td>607.95</td>
<td>660</td>
<td>660</td>
<td>417.08</td>
<td>63.2</td>
<td>-6.19</td>
<td>64.91</td>
</tr>
<tr>
<td>SCCL</td>
<td>67.67</td>
<td>68.00</td>
<td>66.00</td>
<td>46.35</td>
<td>68.2</td>
<td>-5.6</td>
<td>64.91</td>
</tr>
</tbody>
</table>
## Sector wise Raw Coal Dispatch (Provisional)

(in Million tonnes)

<table>
<thead>
<tr>
<th>Sector</th>
<th>Apr’19- Dec’19</th>
<th>Apr’18- Dec’18</th>
<th>% growth in Apr’19-Dec’19 over Apr’18-Dec’18</th>
</tr>
</thead>
<tbody>
<tr>
<td>Steel *</td>
<td>1.74</td>
<td>1.41</td>
<td>24</td>
</tr>
<tr>
<td>Power ( Utility )**</td>
<td>373.6</td>
<td>403.61</td>
<td>-7.4</td>
</tr>
<tr>
<td>Power (Captive) ***</td>
<td>38.04</td>
<td>34.42</td>
<td>10.5</td>
</tr>
<tr>
<td>Cement</td>
<td>4.84</td>
<td>6.1</td>
<td>-20.7</td>
</tr>
<tr>
<td>Others</td>
<td>45.38</td>
<td>48.22</td>
<td>-5.9</td>
</tr>
<tr>
<td>Total (CIL &amp; SCCL) #</td>
<td>375.34</td>
<td>405.02</td>
<td>-7.32</td>
</tr>
</tbody>
</table>

* includes coking coal feed to washeries, direct feed and blendable to steel plants

** includes non-coking coal feed to washary and Bina Deshaling Plant for beneficiation and special forward e-auction to power

*** Captive Power includes despatches to fertilizer sector

# excludes colliery consumption

---

### Raw Coal Despatch in MT

![Bar chart showing raw coal dispatch in million tonnes]
Coal Supply

Actual Raw Coal Supply / Off-take during 2016-17, 2017-18 and 2018-19 is given below:

<table>
<thead>
<tr>
<th></th>
<th></th>
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<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>CIL</td>
<td>598.61</td>
<td>543.32</td>
<td>600.00</td>
<td>580.27</td>
<td>610.00</td>
<td>608.09</td>
<td>660.00</td>
<td>417.08</td>
<td></td>
</tr>
<tr>
<td>SCCL</td>
<td>58.00</td>
<td>60.83</td>
<td>62.00</td>
<td>64.62</td>
<td>67.00</td>
<td>67.67</td>
<td>68.00</td>
<td>46.35</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>656.61</td>
<td>604.15</td>
<td>662.00</td>
<td>644.89</td>
<td>677.00</td>
<td>675.76</td>
<td>728.00</td>
<td>463.43</td>
<td></td>
</tr>
</tbody>
</table>

*upto December 2019

Coal Supply from CIL

Coal Supply from SCCL

*upto December 2019
Lignite Production

The Neyveli Lignite Corporation of India Ltd. (NLCIL) is an integrated mining cum Power Company with open cast lignite mines linked to Thermal Power Stations. During the year 2019-20 (April 2019-Dec. 2019), lignite production and power generation by NLC India Limited was 17.01Mte and 15801.60 MU respectively against the target (2019-20) of 25.57Mte for Lignite and 23500.00 MU for power generation. Details are given in the table.

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Target</td>
<td>Actual (Provl)</td>
<td>Target</td>
</tr>
<tr>
<td>Overburden</td>
<td>MM³</td>
<td>176.40</td>
<td>44.16</td>
<td>115.45</td>
<td>107.08</td>
</tr>
<tr>
<td>Lignite</td>
<td>MT</td>
<td>25.56</td>
<td>8.21</td>
<td>14.86</td>
<td>14.73</td>
</tr>
<tr>
<td>Power Gross</td>
<td>MU</td>
<td>23500.00</td>
<td>5586.17</td>
<td>14760.08</td>
<td>13930.75</td>
</tr>
<tr>
<td>Power Ex-port</td>
<td>MU</td>
<td>20296.90</td>
<td>4766.54</td>
<td>12750.94</td>
<td>11902.46</td>
</tr>
</tbody>
</table>
Measures related to augmenting Production and Efficiency in Coal Sector:

Enhanced exploration efforts

CMPDI is the nodal agency for implementing the Plan scheme of Detailed Drilling in Non-CIL blocks. CMPDI executes the job through departmental resources, MECL and through tendering.

CMPDI increased the departmental capacity from 4.51 lakh metre in 2017-18 to about 5.00 lakh metre in 2018-19 with a growth of 11% to cater to the increased requirement of detailed drilling in CIL & Non-CIL/Captive blocks.

Drilling in non-CIL/Captive mining blocks

The actual drilling vis-à-vis targets in non-CIL/Captive mining blocks during last five financial years and the target for financial year 2019-20 are as follows:

<table>
<thead>
<tr>
<th>Year</th>
<th>Target</th>
<th>Actual</th>
<th>Growth % w.r.t. Previous year</th>
</tr>
</thead>
<tbody>
<tr>
<td>2014-15</td>
<td>4.16</td>
<td>2.82</td>
<td>18.48</td>
</tr>
<tr>
<td>2015-16</td>
<td>4.82</td>
<td>2.87</td>
<td>1.77</td>
</tr>
<tr>
<td>2016-17</td>
<td>3.48</td>
<td>3.08</td>
<td>7.32</td>
</tr>
<tr>
<td>2017-18</td>
<td>4.99</td>
<td>4.86</td>
<td>57.79</td>
</tr>
<tr>
<td>2018-19</td>
<td>5.93</td>
<td>4.84</td>
<td>-0.41</td>
</tr>
<tr>
<td>2019-20</td>
<td>8.16</td>
<td>4.23 (Apr.’19 – Dec.’19)</td>
<td></td>
</tr>
</tbody>
</table>

The shortfalls in target achievement are due to many factors, including non-availability of required fund, serious law & order problems in many coal block areas, non-availability of forest clearance, etc.

Drilling in CIL blocks

The actual drilling in CIL blocks during the last five financial years and the target for financial year 2019-20 are as follows:

<table>
<thead>
<tr>
<th>Year</th>
<th>Target</th>
<th>Actual</th>
<th>Growth % w.r.t. Previous year</th>
</tr>
</thead>
<tbody>
<tr>
<td>2014-15</td>
<td>7.81</td>
<td>5.45</td>
<td>18.74</td>
</tr>
<tr>
<td>2015-16</td>
<td>10.15</td>
<td>7.06</td>
<td>29.54</td>
</tr>
<tr>
<td>2016-17</td>
<td>7.20</td>
<td>7.97</td>
<td>12.89</td>
</tr>
<tr>
<td>2017-18</td>
<td>7.04</td>
<td>8.48</td>
<td>6.40</td>
</tr>
<tr>
<td>2018-19</td>
<td>7.13</td>
<td>8.34</td>
<td>-1.65</td>
</tr>
</tbody>
</table>

Renewed policy thrust to increase coal production

Based on the demand projection in “Vision 2030” for coal sector in the country and subsequent demand projection on CIL, a Perspective Plan has been prepared to conceptualise a 5 years Action Plan to grow at the rate of about 8% till FY 2023-24 in order to meet the coal demand of the country. To achieve projected growth in production, CIL has identified major projects and assessed their related issues.

In 2018-19, CIL has achieved a coal production of about 607 Million Tonne (Mt) against the target of 610 Mt with 99% achievement. In 2019-20, the Annual Plan target is 660 Mt. Further, CIL has envisaged its coal production target of 710 Mt in 2020-21. The group-wise production during 2018-19 and Annual Plan target of 2019-20 and projection of 2020-21 are as follows:
A major growth in production is envisaged from North Karanpura in CCL, Korba of SECL and IB & Talcher coalfield in MCL.

**Completion of Projects and Expansion of existing Projects:**

**Coal India limited (CIL).**

During 2019, 11 mining projects have been sanctioned and 01 mining projects have been completed in CIL.

As on date, there are 121 on-going coal projects, costing ₹ 20 Crs and above, that are under different stages of implementation.

Implementation and completion of these projects depend upon critical extraneous factors such as possession of land, green clearances, evacuation infrastructure etc.

In order to ensure timely completion of projects various steps have been taken by CIL which are as below:

- **a)** Persistent persuasion with State governments to expedite land authentication in States of Jharkhand, Odisha, Chhattisgarh, MP and Maharashtra. Further, land owners are being constantly persuaded to accept compensation and handover land acquired by the company.

- **b)** Constant coordination and liaising with State governments for expediting the process of grant of FC.

- **c)** State Governments have been constantly persuaded by the coal companies at all levels to initiate necessary action for curbing the frequent law & order issues.

- **d)** The implementation of the projects that are delayed are reviewed regularly at the subsidiary and CIL level. MoC reviews projects costing more than ₹ 500 Crs and / or of capacities 3 Mty and above on quarterly basis.

- **e)** The projects monitoring group takes-up critical issues with State Govt. at highest level at regular interval. The MoC on its part follows up issues affecting implementation of projects with other Ministries & with State Govt. specially for facilitating Forestry Clearances and physical possession of land.

- **f)** To address issues related with evacuation problem associated with affected projects, CIL is now investing around ₹ 34,750 Crs in Railways and associated infrastructure projects including roadway infrastructure.

For effective monitoring & facilitating quick & informed decision making, CIL has launched the MDMS Portal with an aim to assimilate every detail of projects/mines, analyse the performance and generate relevant reports. Further, MoC has already established the e-CPMP (online Coal Project Monitoring Portal) for resolving issues pending at State level & with the Central Ministries.

In order to meet the growing coal demand CIL has already taken up new projects & OC patches. Further, capacity expansions of existing mines/projects are being taken up through EC expansion or through EPRs wherever feasible.

**Measures being taken to increase coal production**

In 2018-19, the contribution from On-going projects of CIL was 309.06Mt. During 2019-20, CIL envisages to produce 359.29 Mt. from the same group with an increase of 50.2 Mt.

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Existing &amp; Completed</td>
<td>291.98</td>
<td>292.88</td>
<td>92.92</td>
<td>296.76</td>
<td>159.67</td>
<td>Under preparation</td>
</tr>
<tr>
<td>Ongoing Projects</td>
<td>312.48</td>
<td>309.06</td>
<td>99.69</td>
<td>359.29</td>
<td>168.29</td>
<td></td>
</tr>
<tr>
<td>Future Projects</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Gare Palma block</td>
<td>5.54</td>
<td>4.95</td>
<td>1.83</td>
<td>3.95</td>
<td>2.43</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>610.00</td>
<td>606.89</td>
<td>194.44</td>
<td>660.00</td>
<td>330.39</td>
<td>710.00</td>
</tr>
</tbody>
</table>
In respect of CIL, major increase in production is envisaged from 121 nos. of on-going projects (as on 30.11.2019) and mainly from three subsidiaries viz. SECL, MCL & CCL.

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

- High capacity mines are being planned, approved & executed with State-of-the-Art mechanization wherever feasible;
- Mines are being modernized for increasing man productivity both in underground & opencast mines depending upon geo-mining conditions;
- Improving capacity utilization;
- Expediting implementation of on-going projects to achieve targeted production as per schedule;
- Capacity augmentation of running projects through special dispensation under the EP acts 2006;
- Effective monitoring & persuasion of issues related to projects with related Ministries & State Government;
- In order to maintain the planned growth in production and evacuation in future, CIL has undertaken 7 Railway Infrastructure Projects on deposit basis (3 nos) and JVs(4 nos) to be executed by Indian Railways in coalfields of SECL, MCL & CCL having potential of growth;
- Effective & persistent support from the Ministry of Coal;
- Allocation of additional coal blocks to some of the subsidiaries of CIL to enhance production substantially.

**Technology development and Modernization of Mines in CIL**

**Under Ground Mine Mechanization:**

A consortium of IIT-ISM (Dhanbad), SCCL and PWC was engaged for “Study of Underground Coal Mining-problems, potential, technology, modernization, production and safety” that conducted study of 90 underground mines of CIL. The recommendations of the study highlighted the use of mass production technology like PSLW and Continuous Miners for enhancement of Underground Coal Production.

To implement the recommendations of the report, a committee has been constituted for identification of potential mines for amalgamation, revival of closed mines, co-operation with global technology providers, Indigenous manufacture of underground mining machineries and further research and development for improvement of production and productivity in underground mines of CIL.

Subsequent to the recommendations, CIL has planned to introduce 26 nos of CM in 19 mines and 2 PSLW in 2 mines in the coming 5 years, i.e within 2023-24 for which PRs have either been approved or under process.

**Open Cast Mine Mechanization:**

CIL has introduced state of the art technology to improve work efficiency. High capacity HEMMs like 42 cum Shovel with 240 T Rear Dumper have been introduced in Gevra Expansion, Dipka & Kusmunda open cast mines.

Surface Miners have been introduced in opencast mines in a big way to improve operational efficiency, customer satisfaction and to cater environmental needs. Around 50% coal production during 2018-19 was from Surface Miners.

In order to further improve the operational efficiency, Operator Independent Truck Dispatch System (OITDS) and In-pit crushing & conveying/In pit conveying system has been introduced in the mines of CIL. GPS based vehicle tracking, RFID system of monitoring devices with boom barrier are being introduced to enable real time monitoring of the movement of vehicles which also facilitate corrective measures against pilferage etc.

For rapid coal evacuation, RLS/Silos in the mines of CIL are being added consistently. CIL in its 5 years Vision Plan has identified 35 First Mile Connectivity (FMC) projects of 415 Mty capacity for mega projects of having capacity of more than 4 Mty.

For survey/check measurements, CIL has started using technology like 3D Terrestrial Laser Scanner (TLS).

CIL is also in process of introducing Enterprise Resource Planning (ERP) and other IT-enabled system to manage its human, physical and financial resources which will give a big boost to the operating efficiency of the CIL and thus help reduce its losses.

**SCCL**

**First Mile Connectivity-100 days programme:** The Ministry of Coal, has prepared 100 Days Action Plan for the Coal Industry covering various aspects like reducing imports, adoption of modern technologies and environmental protection which include ease of living as directed by the PMO. Achieving 100%
mechanized loading from the coal production units to dispatch unit is one of the major thrust areas. MoC has directed to focus on larger projects producing/planned to produce more than 4 Mty in next 5 years.

SCCL has envisaged to ramp up production to 85 Mt in the next 5 years and to achieve the targeted dispatches through rail by reducing road transport of coal, it is proposed to construct three new CHPs under First Mile Connectivity. The status of activities is as below:

<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>Description</th>
<th>No. of Projects</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Board approval</td>
<td>3</td>
</tr>
<tr>
<td>2</td>
<td>NIT approval</td>
<td>2</td>
</tr>
<tr>
<td>3</td>
<td>Tender floated</td>
<td>2</td>
</tr>
<tr>
<td>4</td>
<td>Tender awarded</td>
<td>2</td>
</tr>
<tr>
<td>5</td>
<td>Land clearance</td>
<td>2</td>
</tr>
<tr>
<td>6</td>
<td>Construction started</td>
<td>2</td>
</tr>
<tr>
<td>7</td>
<td>More than 50% construction</td>
<td>1</td>
</tr>
<tr>
<td>8</td>
<td>Trail run started</td>
<td>1</td>
</tr>
<tr>
<td>9</td>
<td>Commissioning achieved</td>
<td>NIL*</td>
</tr>
<tr>
<td>10</td>
<td>Forward/Backward link completed</td>
<td>1</td>
</tr>
</tbody>
</table>

*All works of SRPOC CHP completed and awaiting for the approval from Railways

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

(i) The allocation of 204 coal mines de-allocated by Honble Supreme Court is now made under the provisions of the Coal Mines (Special Provisions) Act, 2015. Under the provisions of the said Act, 99 coal mines have so far been successfully allocated. Of these 99 coal mines, 29 have been allocated through e-auction (28 to private companies and 1 to a Government company) and 70 have been allotted to Government Companies.

Sector-wise allocation of these 99 coal mines are: 51 coal mines to the regulated sector i.e. power, 27 coal mines to the non-regulated sector i.e. iron & steel, cement and captive power as well as 21 coal mines for sale of coal.

<table>
<thead>
<tr>
<th>S. No.</th>
<th>Particulars</th>
<th>Auction</th>
<th>Allotment</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Power</td>
<td>6</td>
<td>45</td>
<td>51</td>
</tr>
<tr>
<td>2</td>
<td>NRS</td>
<td>23</td>
<td>4</td>
<td>27</td>
</tr>
<tr>
<td>3</td>
<td>Sale of Coal</td>
<td>-</td>
<td>21</td>
<td>21</td>
</tr>
<tr>
<td></td>
<td><strong>Total</strong></td>
<td><strong>29</strong></td>
<td><strong>70</strong></td>
<td><strong>99</strong></td>
</tr>
</tbody>
</table>

Pie Diagram of 99 allocated coal mines is given below:

(ii) Under the provisions of the Coal Mines (Special Provisions) Act, 2015, 15 coal mines have been allocated during 2019-20 (upto 31.12.2019). Details are as under:

<table>
<thead>
<tr>
<th>S. No.</th>
<th>Particulars</th>
<th>Auction</th>
<th>Allotment</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Power</td>
<td>-</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>2</td>
<td>NRS</td>
<td>5</td>
<td>1</td>
<td>6</td>
</tr>
<tr>
<td>3</td>
<td>Sale of Coal</td>
<td>-</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td><strong>Total</strong></td>
<td><strong>5</strong></td>
<td><strong>10</strong></td>
<td><strong>15</strong></td>
</tr>
</tbody>
</table>

(iii) The CCEA in its meeting held on 19.02.2019 has approved the proposal with regard to allowing allocatees of coal mines for specified end use or own consumption to sell 25% of actual production in open market (ROM basis) with payment of additional premium on such sale and an order in this regard has been issued on 07.03.2019. So far, 10 mines have been allocated incorporating the above proposal.

(iv) Under the provisions of the Mines and Minerals (Development and Regulation) Act, 1957, previous approval of the Central Government for grant of mining lease/relaxation in area limits has been accorded in respect of 6 coal mines.
**Auctioned coal mines** - Out of the 15 Schedule II Coal Mines (coal mines which were operational at the time of cancellation auctioned under the provisions of the Coal Mines (Special Provisions) Act, 2015) mining operations have commenced/ mine opening permission granted in 13 coal mines. The remaining Schedule II coal mines are awaiting various clearances for operationalization. Further, out of the 10 Schedule III coal mines, 1 coal mine has been granted Mining Opening Permission. Remaining Schedule III coal mine which were scheduled to be operational from June 2018 are yet to be operational.

**Allotted coal mines** – Out of the 18 Schedule II coal mines (coal mines which were operational at the time of cancellation) allotted to Public Sector Undertakings (PSUs)/ Gencos, 5 coal mines are operational/ started mine operations as on date. The remaining Schedule II coal mines are awaiting various clearances/ judgement for operationalization. Out of the 42 (24 Schedule III and 18 Schedule I) coal mines, 8 coal mines have received mine opening permissions. The scheduled III &I coal mines are scheduled to be operational from 2018 onwards as they were not operational at the time of the allocation.

The total revenue generated till March, 2019 is ₹6795.60 Crores (excluding Royalty, taxes, cess etc.).

Total coal produced from the time of allocation of mine under CMSP Act, 2015 till March 2019 is 68.14 Million Tonne, out of which coal produced during 2018-19 24.82 Million Tonne.

**Allotment of Coal/Lignite Blocks under MMDR Act**

Under the provisions of MMDR Act, 1957 and rules made there under, 11 Coal Blocks have been allocated to Government Companies (Central/ State). Out of above 11 coal blocks, 9 coal blocks are allocated for end use power and 2 coal blocks are allocated for commercial mining/sale of coal. Coal Block Development & Production Agreement (CBDPA) has been signed with respect to 11 coal blocks. Further, 6 coal blocks have been decided to allocate to CIL/its subsidiaries for making them more than 100 MT companies. Also, 3 lignite blocks have been allocated under the provisions of MMDR Act, 1957 and rules made there under to the State PSU of Gujarat [1 for end use power and 2 for commercial mining/sale of lignite]. Lignite Block Development & Production Agreement (LBDPA) has been signed with respect to two lignite blocks.

137 additional non-CIL blocks have been identified by the committee constituted under chairmanship of Additional Secretary (Coal) under Rule-3(2) of the Coal Blocks Allocation Rules, 2017, out of which a total of 89 coal blocks (including 8 coal blocks identified for CIL) are presently available for allocation. This Ministry is considering allocation of these 89 coal blocks under MMDR Act, 1957. Allocation of 12 coal blocks are under process for auction for sale of coal.

**Quality and Third Party Sampling - Recent Decisions**

To address the concerns of consumers (Power Utilities) regarding coal quality, third party sampling procedure (SOP) was put in place. Tripartite Memorandum of Understanding (MoU) were signed between Supplier (coal companies), Purchaser (Power Utilities) & CIMFR for sampling and testing of coal at the loading end. The sampling and coal testing charges are borne by the buyer and the seller equally.

For extending sampling facility for Non-Power consumers taking coal through linkage auction and supply to Power Utilities under Special Forward auction for Power, QCI and IIT-ISM have been engaged. Both QCI and ISM have started third party sampling after signing tripartite agreement with different Subsidiary Companies of CIL and the consumers.

Directions for coverage of Third Party Sampling to following remaining categories have also been issued to coal companies by Coal India Limited.

I. **Non-Power FSAs.**

II. **Coal Supplied to SNAs**

III. **Spot e-auction**

IV. **Special Spot Auction**

V. **Exclusive e-auction**

Now, third party quality validation is available to consumers for supply of coal under all E-Auction schemes and FSAs. It has been directed that Power Utility and coal company should do grade reconciliation, by 5th of every month (or subsequent day in case of holiday) for all settled results against coal supplies during the month preceding the previous month.

Direction for ensuring the quality of coal, controlling grade slippage and regarding 15-day time frame for declaring the results of referee samples by nominated Referee laboratories have also been issued.
Coal India Limited (CIL) has assigned the work to CIMFR and QCI for carrying out sampling of 529 Million Tonne (MT) and 66.00 MT respectively and Singareni Company Limited (SCCL) has assigned the work to CIMFR and IICT for carrying out sampling of 48.00 MT and 0.67 MT respectively.

An App, named as UTTAM (Unlocking Transparency by Third Party Assessment of Mined Coal), has been launched through which all consumer/stakeholders as well as Coal Companies can access the declared grade, third party sample analysis results and referee analysis results.

**Rationalization of Coal linkages:**

Ministry of Coal has issued the policy for linkage Rationalisation for power plants of State/Central PSUs in 2015. Coal linkage rationalisation in power sector (for State/Central PSUs) has resulted in decrease in transportation cost from the mines to the power plants leading to more efficient coal base power generation. So far overall movement rationalization of 61.08 MT for power plants of State/Central PSUs has taken place with annual potential savings of ₹ 3651 Crores.

Ministry of Coal has issued the policy for linkage Rationalisation for Independent Power Producers (IPP) in 2018. Linkage Rationalization of 2 IPPs have been done and the approximate saving in electricity cost by the end consumer, as estimated by Central Electricity Authority (CEA) would be about ₹ 118 crores.

**Auction of coal linkages for non-regulated sector**

Following the policy guidelines issued by Ministry of Coal on 15.02.2016 for allocation of coal linkages to the non-regulated sector, CIL has been conducting linkage auctions for coal allocation to Cement, Sponge Iron, CPP, Others (Non-Coking), Others (Coking) and Steel (Coking) sub-sectors.

Presently, CIL has completed four tranches of linkage auctions so far, where about 80.5 MTPA of coal linkage was booked by the successful bidders with an average percentage premium of about 20% over non power notified price.

The fifth tranche is underway, where linkage auctions for Steel (coking) and Sponge Iron subsectors have been completed. Under Steel (coking) subsector, 1.3 MTPA of coking coal linkage was booked with no premium. In the linkage auction for Sponge Iron sub-sector, 4.19 MTPA of coal linkage was booked by the successful bidders with an average premium of about 19%.

**Coal linkages to power sector under SHAKTI**

On 22.05.2017, Ministry of Coal came out with a new policy for allocation of future coal linkages in a transparent manner for such power sector consumers. This policy is known as ‘Scheme for Harnessing and Allocating Koyala (Coal) Transparently in India’ (SHAKTI). With the approval of CCEA, SHAKTI Policy, 2017 has been amended and the same has been issued by Ministry of Coal on 25.03.2019. The policy is expected to positively contribute in resolution of a number of stressed assets. The salient features of the policy are:

A. **Under the old regime of LoA-FSA**
   i. FSA may be signed with the pending LoA holders after ensuring that the plants are commissioned by 31.03.2022.
   ii. The 583 pending application for LoA may be closed.
   iii. The capacities totaling 68000 MW as per CCEA decision dated 21.06.2013 would continue to get coal at 75% of ACQ even beyond 31.03.2017.
   iv. About 19000 MW capacity out of 68000 MW which could not be commissioned by 31.03.2015 may be allowed coal supply under FSA at 75% of ACQ provided these plants are commissioned within 31.03.2022.
   v. Actual coal supply to power plants shall be to the extent of long term PPA and medium term PPAs to be concluded in future against bids to be invited by Discoms as per bidding guidelines issued by MoP.

With these, the old regime of LoA-FSA would come to finality and fade away.

B. **Following to be considered under new more transparent coal allocation policy for power sector, 2017-SHAKTI (Scheme for Harnessing and Allocating Koyala (coal) Transparently in India)**
   i. CIL/ SCCL may grant coal linkages to State/Central Gencos/JVs at notified price on recommendations of Ministry of Power.
   ii. Linkages to IPP having PPA based on domestic coal but no linkage:
      a. shall be on auction basis where bidders shall quote discount on tariff

   v. Actual coal supply to power plants shall be to the extent of long term PPA and medium term PPAs to be concluded in future against bids to be invited by Discoms as per bidding guidelines issued by MoP.
b. Bid Evaluation Criteria shall be the non-zero Levelized Value of the discount

iii. Linkages to IPPs/Power Producers without PPAs shall be on auction basis where methodology would be similar to that followed under linkage auction to non-regulated sector i.e. the bidders would bid for premium above the notified price of the coal company.

iv. Coal linkages may also be earmarked for fresh PPAs, by pre-declaring the availability of coal linkage with description, to the States. States may indicate these linkages to Discoms/SDAs.

v. Power requirement of group of States can also be aggregated and procurement of such aggregated power can be made by an agency designated by Ministry of Power or authorized by such States on the basis of tariff based bidding.

vi. Linkages shall be granted for full normative quantity to Special Purpose Vehicle (SPV) incorporated by nominated agency for setting up Ultra Mega Power Projects (UMPP) under Central Government initiative through tariff based competitive under the guidelines for determination of tariff, on the recommendation of MoP.

vii. MoC in consultation with MoP may formulate a detailed methodology of a transparent bidding process for allocating coal linkages to IPPs, having PPAs based on imported coal, with full pass through of cost saving to consumers.

viii. (a) Short term linkage coal to Power Plants including private generators, which do not have PPAs under B (iii) and B (iv) of SHAKTI Policy.

(b) A generator which terminates PPA in case of default in payment by the Discom, may be allowed to use existing linkage coal for sale of Power through short term PPAs on Power exchange.

(c) Aggregation of Power by Nodal Agency under Para B (v) for a group of States even without requisition.

(d) PSU to act as an aggregator of Power of such Stressed Power assets and procure it through transparent bidding process and offer that Power to the Discom against their existing PPAs.

(e) Net surplus after meeting operating expenses generated in case where provisions of B (viii) (a) (b) (c) and (d) are utilized, shall be entirely used for servicing debt in first place.

Status of Implementation of SHAKTI

- A (i): Clearance has been given for signing of FSA for 10 power plants with a total capacity of 6,550 MW.
- B (i): 23 Thermal Power Plants (TPPs) have been granted linkage for a total capacity of 25,340 MW.
- B (ii): First round of linkage auction under B (ii) of SHAKTI policy was conducted in September, 2017, whereby 27.18 Million Tonne (MT) of annual coal linkage was booked by ten successful bidders for about 9,045 MW capacity. Second round of B (ii) auction has been concluded by CIL on 24.05.2019. During this second round quantity of 2.97 MT of annual linkage has been booked by eight bidders for about 874.9 MW capacity. Based on the recommendations of Inter-Ministerial Committee (IMC) meetings, Power Finance Corporation Limited (PFCCL) has been directed to conduct the future rounds of auction under para B(ii).
- B (iii): CIL is also in the process of conducting coal linkage auction under para B (iii) of SHAKTI policy dated 22.05.2017 as well as the linkage auction under para B (viii) (a) of SHAKTI policy amendment dated 25.03.2019 issued by MoC.
- B (iv): Coal linkage granted from CIL for the States of Gujarat, Uttar Pradesh and Madhya Pradesh for a capacity of 4,000 MW, 1,600 MW and 2,640 MW respectively.
- B (v): Coal linkage granted from CIL for a capacity of 2,500 MW.

Policy on Bridge Linkage

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 as 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. In 2019-20 (till 31st Dec), Bridge Linkage has been granted to 3 Thermal Power Plants i.e. Ennore SEZ (1st unit, 660 MW), Ghatampur TPP (3 x 660 MW) & Barauni TPS (2 x 250 MW) and extended the bridge linkage of 2 Thermal Power Plants Mejia TPS (Unit 7 & 8) & Chandrapura TPS (Unit 8) in Central/ State Public Sector Undertakings.

**Thrust on Washing of Coal**

CIL presently has 16 existing washeries - 12 coking coal and 4 non-coking coal with aggregate capacity of 38.40 Mty, of which 22.18 MTy is coking coal and 16.22 Mty is non-coking. However, other than 1 coking coal washery which has been commissioned in 2018, most of the existing washeries are very old and have outlived their designed lives leading to low efficiency.

Besides this, 5 proposed coking coal washeries, having a total capacity of 17 MTy, are also being set up and are at different stages of implementation for enhancing the washed coking coal quantity, in an effort to reduce the import of coking coal.

Further, to comply with the guidelines issued by MoEF&CC for supply of coal with less than 34% ash to thermal power plants located beyond 500 KM, CIL had planned to set up 7 new non-coking coal washeries having a total capacity of 59 MTy. One of these seven, namely, IB valley in MCL with 10 MTy capacity is under construction and for 3 others, LoIs have been issued.

NITI Aayog has been directed by PMO to get a comprehensive study done on the environmental and economic impacts of coal washeries for non-coking coal within two months in consultation with various stakeholders and experts. The study should factor the issues related to rejects at washeries as well as include all other aspects. It was decided that Ministry of Coal may await completion of this study before any further decision on setting up other new non-coking coal washeries is taken.

Apart from above, CIL has taken initiative for revamping its existing coking coal washeries to augment the production of clean coking coal.

**Re-Classification of Coking coal**

A technical committee was constituted by MoC vide OM No. CRC1-43016/1/2017-CRC dated 16.04.18 to review the existing system of coking coal gradation and re-classify the coking coal. The committee proposed to continue with existing grading of coking coal upto 35% ash and further addition of two new grades as Washery Grade-V (exceeding 35% and upto 42% ash) & VI (exceeding 42% and upto 49% ash) to encompass the unclassified Low Volatile Medium Coking (Ash>35%). The proposed reclassification was agreed by MoC, GoI through Gazette notification No. S.O. 17 dated 24.01.19. Addition of these two new grades will result in additional financial benefit to subsidiaries of CIL especially BCCL & CCL by increased availability of coking coal having higher sale price. It will also lead to saving of Foreign Exchange as import of coking coal will be reduced.

**Master Plan to address Fire, Subsidence and Rehabilitation areas**

Master Plan with a scope of dealing with Fire, Subsidence and rehabilitation of people from endangered areas was approved by the President of India, on 12.08.2009.

The time schedule of implementation in Jharia Coalfield (JCF) is 12 years including 2 years of pre-implementation activities and for Ranganj Coalfield (RCF) it was considered for 10 years as per approved Master Plan. The periods of implementation of Master Plan for JCF is due to expire; and that for RCF has expired.

As per directive of the 19th HPCC, draft revised comprehensive proposal for RCF incorporating alternative rehabilitation package, time and cost overrun have been prepared by ECL. Draft revised comprehensive proposal for JCF is under preparation at BCCL.

**Satellite Surveillance for land reclamation**

Satellite Surveillance for land reclamation is being given the requisite thrust in order to assess the progressive status of mined land reclamation and to take up remedial measures, if any, required for environmental protection.

Land Reclamation Monitoring based on Satellite Data is being done for mines coming under two categories (a) Mines producing more than 5 mcm (Coal+OB) per annum and (b) Mines producing less than 5 mcm (Coal+OB) per annum. The mines coming under more than 5 mcm (Coal+OB) per annum category are monitored
POLICY INITIATIVES AND REFORM MEASURES

on annual basis whereas the mines / clusters coming under less than 5 mcm (Coal+OB) per annum category are monitored at an interval of three years in a phase wise manner.

In the year 2019-20, total 87 mines/clusters of CIL were selected for monitoring based on satellite data. Out of which, 52 OC Mines belong to more than 5mcm (Coal+OB) per annum category and 35 mines /clusters belong to less than 5 mcm (Coal+OB) per annum category. Cluster wise Land reclamation monitoring for four clusters each of BCCL and ECL has been done as per their specific requirements. The company-wise details of the excavated area, biological & technical reclamation and green cover generated, etc. for the projects under monitoring in the year 2019-20 based on satellite data are furnished in the table below:

### Status of Land Reclamation Monitoring in 87 OC Mines / Clusters based on Satellite Data (For the Year 2019-20)

<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>Company</th>
<th>No. of Mines Clusters</th>
<th>Total Leasehold Area</th>
<th>Excavated Area</th>
<th>Active Mining Area</th>
<th>Reclamation</th>
<th>Plantation on OB Dumps</th>
<th>Total Green Cover Generated</th>
<th>Total Area under Reclamation</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Technical</td>
<td>Biological</td>
<td>Ext. OB Dumps</td>
<td>Social Forestry</td>
</tr>
<tr>
<td>1</td>
<td>WCL</td>
<td>21</td>
<td>174.35</td>
<td>38.48</td>
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<td>12.41</td>
<td>3.87</td>
<td>16.84</td>
<td>11.26</td>
</tr>
<tr>
<td>2</td>
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<td>26.80</td>
<td>11.03</td>
<td>9.00</td>
</tr>
<tr>
<td>3</td>
<td>NCL</td>
<td>10</td>
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<td>73.84</td>
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<td>31.88</td>
<td>14.78</td>
<td>10.99</td>
<td>26.14</td>
</tr>
<tr>
<td>4</td>
<td>MCL</td>
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<td>156.43</td>
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<td>22.74</td>
<td>8.26</td>
<td>3.18</td>
<td>3.41</td>
</tr>
<tr>
<td>5</td>
<td>CCL</td>
<td>16</td>
<td>107.11</td>
<td>27.60</td>
<td>8.81</td>
<td>11.63</td>
<td>7.16</td>
<td>7.33</td>
<td>6.84</td>
</tr>
<tr>
<td>6</td>
<td>BCCL</td>
<td>6</td>
<td>81.51</td>
<td>15.87</td>
<td>3.84</td>
<td>10.06</td>
<td>1.97</td>
<td>1.06</td>
<td>4.00</td>
</tr>
<tr>
<td>7</td>
<td>ECL</td>
<td>6</td>
<td>351.36</td>
<td>28.23</td>
<td>9.01</td>
<td>15.24</td>
<td>3.98</td>
<td>1.33</td>
<td>14.26</td>
</tr>
<tr>
<td><strong>Total CIL</strong></td>
<td><strong>87</strong></td>
<td><strong>1225.33</strong></td>
<td><strong>308.41</strong></td>
<td><strong>108.08</strong></td>
<td><strong>133.51</strong></td>
<td><strong>66.82</strong></td>
<td><strong>51.78</strong></td>
<td><strong>74.89</strong></td>
<td><strong>193.49</strong></td>
</tr>
</tbody>
</table>

Note: 1. Above compiled data is based on digital image processing of satellite data of the year 2019.
2. The data in the above Table has been rounded to two decimal places.
3. The data in the above Table is provisional.

### New Initiatives

- An innovation Cell has been established in CMPDI which was inaugurated on 30th October, 2019 by Shri A.K. Jain, Secretary, Ministry of Coal.
- CMPDI has developed Online Coal Block Information System (OCBIS) for the use of Coal India and its subsidiaries. It is overlaid on Google maps for presentation of the classified data. OCBIS consists of information about layers of coal blocks, coalfields & CBM.
- Mine Data Management System (MDMS) Portal was developed by CMPDI for Coal India Limited, which depicts the salient features of projects being monitored by CIL. The main features of the portal is to monitor the progress of coal projects which encompass Environmental Clearance (EC), Forest Clearance (FC), Land Acquisition, Rehabilitation & Resettlement (R&R), financial parameters, HEMM procurement, production and other major infrastructure such as Coal Handling Plant (CHP), Silo and Railway sidings. Additionally, Environmental parameters are also being monitored through this portal.

By implementing the portal, the monitoring agencies are reaping the benefits through retrieval of information from a single source.
• CMPDI has established MS Project Server. All the subsidiaries are updating the project status information on this server and CIL & MoC are able to monitor the progress of the projects.

• CMPDI has developed Coal Dashboard for MoC, depicting at a glance statistics of Exploration, Production, Information about Super 35/75 projects, Offtake, S&T Expenditure, CEA information about critical & Super critical Thermal Plants.

Review of Productivity Norms

Output Per Manshift (OMS)

<table>
<thead>
<tr>
<th>Year</th>
<th>Coal India Ltd.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>UG</td>
</tr>
<tr>
<td>2018-19 (Actual)</td>
<td>0.95</td>
</tr>
<tr>
<td>2019-20 (Actual)* Apr’19 – Nov’19</td>
<td>0.95</td>
</tr>
</tbody>
</table>

* Provisional

Policy Initiatives and Reform Measures regarding Corporate Social Responsibility (CSR) CIL

Coal India Ltd. (CIL) and its subsidiary companies are undertaking different developmental activities under Corporate Social Responsibility (CSR) following the latest DPE guidelines and provisions of the Companies Act, 2013. The allocation of funds is done as per the CSR policy of CIL under which the higher of the two amounts – 2% of the average net profit for the three immediately preceding financial years OR ₹ 2.00 per tonne of coal production of the previous year (consolidated coal production of CIL in case of CIL (HQ)) is allocated for a particular financial year.

The details of CSR statutory provision and the amount utilized by CIL and its subsidiaries each for the last three years and the current year are as under:

<table>
<thead>
<tr>
<th></th>
<th></th>
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<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
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</thead>
<tbody>
<tr>
<td>ECL</td>
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<td>29.19</td>
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<td>20.89</td>
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<tr>
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<td>26.85</td>
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</tr>
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<td>10.64</td>
<td>4.50</td>
</tr>
<tr>
<td>SECL</td>
<td>120.24</td>
<td>120.24</td>
<td>42.50</td>
<td>93.30</td>
<td>171.04</td>
<td>93.62</td>
<td>81.04</td>
<td>158.46</td>
<td>83.55</td>
<td>83.85</td>
<td>158.76</td>
<td>24.93</td>
</tr>
<tr>
<td>MCL</td>
<td>113.36</td>
<td>113.36</td>
<td>166.60</td>
<td>122.85</td>
<td>122.85</td>
<td>267.52</td>
<td>136.36</td>
<td>136.36</td>
<td>167.16</td>
<td>156.50</td>
<td>156.50</td>
<td>70.70</td>
</tr>
<tr>
<td>NCL</td>
<td>74.23</td>
<td>74.23</td>
<td>77.33</td>
<td>72.47</td>
<td>72.47</td>
<td>36.59</td>
<td>75.44</td>
<td>111.32</td>
<td>73.57</td>
<td>92.27</td>
<td>130.02</td>
<td>24.54</td>
</tr>
<tr>
<td>CMPDIL</td>
<td>0.78</td>
<td>1.20</td>
<td>1.02</td>
<td>0.80</td>
<td>1.50</td>
<td>1.18</td>
<td>1.53</td>
<td>1.85</td>
<td>1.58</td>
<td>3.00</td>
<td>3.27</td>
<td>0.76</td>
</tr>
<tr>
<td>CIL (incl. NEC)</td>
<td>13.52</td>
<td>127.34</td>
<td>128.05</td>
<td>7.88</td>
<td>110.83</td>
<td>24.31</td>
<td>6.99</td>
<td>199.99</td>
<td>27.33</td>
<td>8.08</td>
<td>294.04</td>
<td>57.00</td>
</tr>
<tr>
<td>TOTAL</td>
<td>483.78</td>
<td>557.27</td>
<td>489.67</td>
<td>383.05</td>
<td>622.15</td>
<td>483.78</td>
<td>353.98</td>
<td>750.84</td>
<td>416.47</td>
<td>404.27</td>
<td>888.86</td>
<td>194.79</td>
</tr>
</tbody>
</table>
As per DPE guidelines dated 10.12.18, CSR expenditure on thematic programmes i.e. school education and healthcare has to be around 60% of the total CSR expenditure. CIL and its subsidiaries have collectively spent ₹ 278.29 crores on thematic programmes in FY 18-19 which is approx. 67% of the total CSR expenditure of the year.

The major CSR activities undertaken during the current financial year are as under:

1. **Healthcare**
   a. Construction of 300 bedded hospital at Godda, Jharkhand by CIL has been approved.
   b. Construction of 500 bedded hospital and 100 seater medical college at Angul, Odisha by MCL is nearing completion.

2. **Sanitation**
   a. Swachhta Pakhwada was observed during 16th to 30th June 2019 and Swacchta Hi Sewa campaign was observed in October 2019 during which various activities were undertaken by CIL and subsidiaries to spread the message of Swachh Bharat Mission.
   b. Various activities such as Creation of sanitation infrastructure, support to Open Defection Free (ODF) campaign etc. are being undertaken as part of Swachhta Action Plan.

3. **Education**
   a. Free coaching and boarding/lodging arrangements for meritorious students for appearing in engineering entrance examinations is provided under the Lal/Ladli scheme of CCL and BCCL.
   b. Construction of lab, library, classrooms and hostel facility at Nivedita Shiksha Sadan Balika Inter College, Varanasi has been initiated by CIL.

4. **Skill Development**
   a. 1659 candidates have been trained at various centers of Central Institute of Plastic Engineering and Technology (CIPET) by CIL. More than 80% of the trained students have been placed.
   b. Approx. 3500 persons have been trained in different trades under different skill development initiatives of subsidiaries of CIL.

5. **Disaster Management**
   - CIL has assisted Odisha Power Transmission Corporation Ltd. (OPTCL) with ₹ 50.32 crores for restoration of damaged electricity lines in Odisha during cyclone Fani in May 2019.

6. **Welfare of the differently abled**
   - Assistive aids and appliances have been provided to 1250 beneficiaries in Andhra Pradesh, Telangana and Karnataka through Sri Guru Deva Charitable Trust by CIL.

**Policy Initiatives and Reform Measures regarding Corporate Social Responsibility (CSR): SCCL**

The Company has formulated CSR Policy and CSR activities are being taken up. Under this SCCL provides Healthcare and Sanitation facilities, promoting Education, Women Empowerment, Rural and Slum area development, promoting Environmental sustainability in adjacent villages. ₹ 37.05 crores is sanctioned during 2019-20 (up to Dec, 2019) for CSR activities.

**Policy Initiatives and Reform Measures regarding Corporate Social Responsibility (CSR): NLCIL**

NLC India Limited (NLCIL) is undertaking different sustainable development activities and welfare activities under the CSR policy. The allocations of funds under CSR are as per DPE guidelines effective from 01.04.2014. 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.

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

<table>
<thead>
<tr>
<th>Company</th>
<th>2016-17</th>
<th>2017-18</th>
<th>2018-19</th>
<th>2019-20</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Allocated</td>
<td>Utilised</td>
<td>Allocated</td>
<td>Utilised</td>
</tr>
<tr>
<td>NLC India Limited</td>
<td>43.46</td>
<td>37.19*</td>
<td>43.59 #</td>
<td>43.59</td>
</tr>
</tbody>
</table>

*CSR activities for an amount of ₹6.27 Cr. was carried forward from 2016-17 to 2017-18 and completed fulfilling the norms. 
# includes ₹6.27 Cr carried forward from 2016-17 (₹ 37.32 Cr+₹6.27 Cr).
FINANCIAL OUTLAYS AND OUTCOMES

ANNUAL REPORT 2019-20
The budget provisions and expenditure during the last two years are detailed below:

(In ₹ crore)

<table>
<thead>
<tr>
<th>Year</th>
<th>Budget Estimate</th>
<th>Revised Estimate</th>
<th>Expenditure</th>
<th>% of expenditure with regard to RE</th>
</tr>
</thead>
<tbody>
<tr>
<td>2018-19</td>
<td>770.91</td>
<td>781.85</td>
<td>708.34</td>
<td>90.60</td>
</tr>
<tr>
<td>2018-19</td>
<td>1159.05</td>
<td>933.60</td>
<td>800.13 (upto Dec-2019)</td>
<td>85.70</td>
</tr>
</tbody>
</table>

During the financial year 2018-19, ₹ 708.34 crores was utilized against the allocation of ₹ 781.85 crores at RE. The un-utilized amount in financial year 2018-19 mainly pertained to the mandatory provisions for the North-East region of the Central Sector Schemes.

The utilization of fund during the financial year 2019-20 was ₹ 800.13 crores (upto December, 2019) against the reduced allocation of ₹ 933.60 crores at RE stage.

The allocation for FY 2020-21 has been kept at ₹ 882.61 crores. Of this, ₹ 819.98 crores is allocated for Central Sector Schemes.

The remaining balance of ₹ 62.63 crores is for Establishment and other central sector expenditure, which mainly comprises of funds required for the Secretariat (Economic Services), Coal Controller’s Organization, Nominated Authority and payment of Government contributions statutorily required under Coal Mines Pension Scheme, 1998.

The Capital Expenditure (CAPEX) component of Coal PSUs for FY 2020-21 is ₹ 18467 crores, to be provisioned from Internal and Extra Budgetary Resources. A detailed profile of PSU wise budget allocation and expenditure is given below:

(₹ In crore)

<table>
<thead>
<tr>
<th>Name of PSU</th>
<th>2018-19</th>
<th>2019-20</th>
<th>2020-21</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>BE</td>
<td>RE</td>
<td>Exp.</td>
</tr>
<tr>
<td>CIL</td>
<td>9500</td>
<td>9500</td>
<td>7311.46</td>
</tr>
<tr>
<td>NLCIL</td>
<td>4298.69</td>
<td>6922.34</td>
<td>7208.16</td>
</tr>
<tr>
<td>SCCL</td>
<td>2000</td>
<td>1100</td>
<td>1229.69</td>
</tr>
<tr>
<td>Total</td>
<td>15798.69</td>
<td>17522.34</td>
<td>15749.31</td>
</tr>
</tbody>
</table>
The scheme / programme wise allocations for financial year 2020-21 are given below:

<table>
<thead>
<tr>
<th>Sl No</th>
<th>Name of Scheme/ Programme</th>
<th>Revenue</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Secretariat (Economic Services)</td>
<td>26.19</td>
</tr>
<tr>
<td>2.</td>
<td>Coal Mines Pension Scheme-1998 (CMPS-98) including part reimbursement of Administrative charges of CMPFO</td>
<td>22.35</td>
</tr>
<tr>
<td>3.</td>
<td>Coal Controller’s Organization</td>
<td>10.82</td>
</tr>
<tr>
<td>4.</td>
<td>Nominated Authority</td>
<td>3.27</td>
</tr>
<tr>
<td>5.</td>
<td>Research &amp; Development programmes</td>
<td>25.00</td>
</tr>
<tr>
<td>6.</td>
<td>Conservation Safety and Infrastructure Development in Coal Mines</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Conservation and safety in coal mines</td>
<td>10.00</td>
</tr>
<tr>
<td></td>
<td>Development of Transport Infrastructure in coal field areas.</td>
<td>84.48</td>
</tr>
<tr>
<td></td>
<td>Environmental Measures and Subsidence Control</td>
<td>0.50</td>
</tr>
<tr>
<td>7.</td>
<td>Exploration and Detailed Drilling</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Regional Exploration of Coal &amp; Lignite</td>
<td>70.00</td>
</tr>
<tr>
<td></td>
<td>Detailed Exploration in Non-CIL Blocks</td>
<td>630.00</td>
</tr>
<tr>
<td>10.</td>
<td>Total</td>
<td>882.61</td>
</tr>
</tbody>
</table>
CHAPTER 5

PUBLIC SECTOR UNDERTAKINGS

ANNUAL REPORT 2019-20
Coal India Limited

Coal India Limited (CIL) is an organized state owned coal mining corporate came into being in November 1975 with the Government taking over private coal mines. With a modest production of 79 MT at the year of its inception CIL today is the single largest coal producer in the world.

CIL works within the framework of an overall vision to emerge as a global player in the primary energy sector by attaining environmentally socially sustainable growth through best practices from mine to market. Coal India Limited (CIL) is headed by a Chairman-cum-Managing Director. He is assisted by four Functional Directors, namely, Director (Technical), Director (Personnel and Industrial Relations), Director (Finance) and Director (Marketing). Each Subsidiary Company has its own Board of Directors headed by Chairman-cum-Managing Director. In addition, there are four functional Directors in each of the seven production companies viz. Director (Personnel), Director (Finance), Director (Technical/Planning and Projects) and Director (Technical/Operations). Another Subsidiary company Central Mine Planning & Design Institute Limited (CMPDIL) has four functional Directors on its Board Directors designated as Director (Technical) Engineering Services, Director (Coal Resource and Development), Director (Planning and Design) and Director (Research, Development & Technology). In addition, there are several part-time or nominee Directors on the Board of CIL and its subsidiary companies, who are appointed in accordance with the Articles of Association of the Company and Government guidelines prescribed in this regard from time to time.

During 2018-19, CIL & its subsidiaries produced 606.89 MT of coal achieved an off-take of 608.14 MT, with a growth of 6.97% and 4.8% over previous year and achieved a gross sales of ₹ 140603 crores. CIL and its Subsidiaries paid/adjusted ₹ 44826.43 crores towards Royalty, Cess, Sales Tax and other levies. CIL has paid a total dividend of ₹ 8105.58 crores @ ₹ 13.10 per share, out of above the share of Govt of India was ₹5839.33 crores.

CIL’s Strategic Relevance

- Produce around 83 % of India’s overall Coal production.
- Feeds 125 out of 134 coal based thermal power plants monitored by CEA in India.
- Accounts for 76% of total thermal power generating capacity of the utility sector. (CEA)
- Supplies coal at prices discounted to international prices.
- Insulates Indian coal consumers against price volatility in international market.
- Make the end user industry globally competitive.

Milestone in 2018-19

- Sustaining the growth trajectory in production and off-take, Coal India Limited (CIL), for the first time, has crossed the 600 Million Tonne (MT.) mark in coal production and off-take ending FY 2019, clocking growths of 7% and 4.8% respectively.
- The upbeat production tempo of the world’s largest coal producer in the recent years was evident in the fact that it leaped from the 500 MTs production to 600 MTs in a mere three years, whereas it took the company seven years to migrate from 400 MTs production to that of 500 MTs.
- For the FY 2019 ECL, CCL, NCL and WCL have surpassed their respective production targets. NCL went past its production target of 100 MTs five days ahead of the closure of the fiscal, in the process becoming the third subsidiary of CIL to join the coveted 100 MTs producing companies after SECL and MCL. In another new high SECL became the first subsidiary company of CIL to cruise over 150 MTs production mark. ECL and WCL have become 50 Mt. plus companies for the first time.
- Scripting a new high in coal supplies to thermal power plants of the country, ending FY 2019, CIL’s sources supplied 488 MTs of coal against 454 MTs supplied last fiscal the increase in volume terms being approximately 34 MTs clocking a year-on-year growth of 7.4%.
• At the end of FY 2019 not a single power station in the country is in critical or supercritical list of CEA for want of coal. End of last fiscal there were 28 power plants in critical mode.

• **Rake loading to Power Sector** grew by a healthy 11.2% during FY 2018-19. CIL as a whole loaded 255.6 rakes/day on an average to power stations ending FY 2019 against 229.8 rakes/day in last fiscal, the increase in absolute terms being 25.8 rakes/day.

• The synergy between Railways, MoC and MoP resulted in **overall rake loading** evincing a growth of 5.6% during FY 2019 as CIL on an average loaded 280.7 rakes/day during the fiscal, against 265.8 rakes last fiscal. The increase in absolute number is 14.9 per day.

• Coal stocks at CIL’s pitheads stands around comfortable 54 Million Tonnes at the end of the fiscal of 2018-19. With a total combined stock of 84.41 MTs at power plants and pitheads put together, there is sufficient coal in the system to meet the power demand of the country.

• Tori- Shivpur single Line of 44.37 Kms has been completed in Sept’2018 and is now operational.

• Jharsuguda – Barpali-Sardega Rail link of 52.41 Km has been commissioned in April’2018.

• CERL Phase-I track linking of the first 44 km from Kharsia to Korichhapar is completed.

**Milestone in 2019-20(Till Dec’19)**

• Commissioning of new rail line between Kharsia to Korichhapar (0-44 Km) on 12.10.2019 executed through CERL, a rail JV of SECL.

• Construction of Maheshpur Silo of BCCL completed during 2019-20.

• Obtaining EC for Basundharawashery of MCL on 4.11.2019.

• Coal stock at power plant stands at about 32 Mt (18days) as on Dec’19 compare to about 17 Mt (10 days) same period last year.

• Ordered for equipment and spares of HEMM amounting ₹6700 Crs have been placed in 2019-20.

A. **Transformational HR Initiatives in CIL**

CIL & its Subsidiaries have taken the following HR transformational initiatives among others:

1. **Talent Management:**

   Talent Management Policy has been formulated in CIL for identification and grooming of talent pool of Executives so that they can be developed fast for assuming higher roles and responsibilities in a seamless manner. The plan is to create a leadership pipeline for a smooth transition in the Organization.

2. **DNB Courses in CIL Hospitals:**

   NBE conducts its postgraduate and postdoctoral programmes in teaching hospitals accredited by it in the name of “Diplomate of National Board” (DNB). At the aegis of NITI Aayog, CIL has explored the possibilities of tackling the shortage of Medical Executives through NBE route by leveraging available resources at CIL hospitals for conducting 3 year broad specialty DNB Courses.

3. **Human Resource (HR) Audit:**

   CIL & its Subsidiaries have conducted HR Audit across CIL with the help of internal resources as a comprehensive method to review current Human Resource policies, procedures, documentation and systems to identify needs for improvement and enhancement of the HR function as well as to assess compliances.

   The recommendations of HR Audit are under implementation.

4. **People Capability Maturity Model (P-CMM):**

   Alike HR Audit, CIL & its Subsidiaries have assessed the level of the Organization under P-CMM, with the help of internal resources as a maturity framework that focuses on continuously improving the management and development of the Human assets of an Organization. It provides a framework to implement various Human Resource practices to address the critical issues of the Organization.

   Under P-CMM, the gap areas of CIL & its Subsidiaries have been identified and actions are being taken to upgrade the maturity level of the Organization.
1. **People performance of CIL:** Employees are the central theme of coal mining in India and the people processes in CIL includes not only the multiple stakeholders in the value chain of the company’s operations, but also those affected directly and indirectly by such operations. The multiple stakeholders include the company's own employees and their families, about 72,271 contractors’ workers, villagers around coal fields, auxiliary industries, Govt. & Non Govt. agencies operating in the coalfields etc. Coal India Limited, with a larger social purpose, is deeply committed to all stakeholders and is in constant endeavor to harmonize the varying needs of the stakeholders and that of the company, for suitable growth, with its people centric principles, policies and programmes. The details are given below:

**Manpower**

The total manpower of Coal India Limited including its subsidiaries as on 01.12.2019 is 2,77,357. Company wise status of manpower is given below:

<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>Company</th>
<th>Manpower Strength as on 01.12.18</th>
<th>Manpower Strength as on 01.12.19</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>ECL</td>
<td>60486</td>
<td>58172</td>
</tr>
<tr>
<td>2</td>
<td>BCCL</td>
<td>47069</td>
<td>44522</td>
</tr>
<tr>
<td>3</td>
<td>CCL</td>
<td>39776</td>
<td>38757</td>
</tr>
<tr>
<td>4</td>
<td>WCL</td>
<td>43461</td>
<td>40815</td>
</tr>
<tr>
<td>5</td>
<td>SECL</td>
<td>56129</td>
<td>52795</td>
</tr>
<tr>
<td>6</td>
<td>MCL</td>
<td>22274</td>
<td>22043</td>
</tr>
<tr>
<td>7</td>
<td>NCL</td>
<td>14722</td>
<td>14627</td>
</tr>
<tr>
<td>8</td>
<td>NEC</td>
<td>1421</td>
<td>1282</td>
</tr>
<tr>
<td>9</td>
<td>CMPDI</td>
<td>3327</td>
<td>3205</td>
</tr>
<tr>
<td>10</td>
<td>DCC</td>
<td>310</td>
<td>262</td>
</tr>
<tr>
<td>11</td>
<td>CIL(HQ)</td>
<td>929</td>
<td>877</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td></td>
<td><strong>289904</strong></td>
<td><strong>277357</strong></td>
</tr>
</tbody>
</table>

**EMPLOYEE WELFARE**

The Welfare activities of Coal India Limited for welfare of its employees and their families are given below:

a) **Housing facilities**

  - Amended the ceiling of House Building Advance amount from the existing ₹ 2.5 lakh to ₹ 30 lakhs subsuming the advance amount under CIL Furniture and Household Goods Purchase Scheme.

  - CIL Furniture and Household Goods Purchase Scheme has been formulated and communicated vide CIL OM No.CIL/CSA(PC)/Furniture/2827 dated 08.05.2018.

b) **Water supply**

  - To provide clean drinking water to the employees and their families, many water supply schemes have been taken up. Supply of water is done after proper treatment and several RO plants also exist.

c) **Educational Facilities**

  - The subsidiary companies of CIL have been providing financial assistance and infrastructure facilities to schools operating in mining areas like DAV, Kendriya Vidyalaya, Delhi Public School and other educational institutions run by the State Government to provide quality education to the employees’ children. The following schemes are also extended to employees to help in educating their wards:

    i. **Coal India Scholarship Scheme:**

    - For employees’ children two types of scholarships, namely: Merit and General Scholarship, are being provided every year under certain prescribed terms and conditions.

    ii. **Cash Award and certificate of appreciation:**

    - Every year Cash Award of ₹ 5000 and ₹ 7000 are provided to the Meritorious wards of CIL employees who secure 90% or above Marks in aggregate in 10th and 12th standard Board level examination respectively.

    - Considering the high cost of technical and medical education in the country Coal India Limited is providing financial assistance towards meeting the cost of education of the dependent children of Wage Board Employees to the extent of tuition fees and hostel charges who secure admission in Engineering in colleges viz., IITs, NITs, ISM and Govt. Engineering and Medical college.
d) Medical Facilities

- Coal India Limited and its subsidiaries are extending medical facilities to the employees and their families through various medical establishments from the dispensary level to the central and apex hospitals in different parts of the coalfields. For specialized treatment, where the expertise/facilities is not available, they are also referred for treatment outside in the empaneled hospitals.

- In addition, special emphasis has also been given on Occupational Health, HIV/AIDS awareness programme for the employees and their families.

- CIL Medical Attendance Rules (MAR) was amended by replacing the old MAR rates which was in existence since long with CGHS rates vide CIL OM No. CIL/C5A(PC)/MAR/2829 dated 08.05.2018.

- Contract workers are provided free medical care in company hospitals and dispensaries as outpatient/inpatient.

- Statutory Welfare Facilities In accordance with the provision of the Mines Act, 1952 and Rules and Regulations framed there-under, subsidiaries of Coal India Limited are maintaining various statutory welfare facilities for the coal mines such as Canteen, Rest Shelters etc. These facilities are also being extended to contract workers.

iii. Holiday Homes

Coal India Ltd. has maintained six Holiday homes for the benefit of its employees & their families.

EMPLOYEE TRAINING

The training statistics for the employees of CIL for the year 2019 from 01.01.2019 to 31.12.2019 is as below:

<table>
<thead>
<tr>
<th></th>
<th>2018</th>
<th>2019</th>
</tr>
</thead>
<tbody>
<tr>
<td>Executive</td>
<td>17701</td>
<td>17799</td>
</tr>
<tr>
<td>Non-Executive</td>
<td>91555</td>
<td>77111</td>
</tr>
<tr>
<td>Total</td>
<td>109256</td>
<td>94910</td>
</tr>
</tbody>
</table>

Details in respect of contract workers imparted training are as below:

<table>
<thead>
<tr>
<th></th>
<th>2018</th>
<th>2019</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Contractual workers</td>
<td>67330</td>
<td>72271</td>
</tr>
<tr>
<td>Total Contractual workers trained</td>
<td>39729</td>
<td>35309</td>
</tr>
</tbody>
</table>

Employees’ participation in management:

In general, decisions concerning employees are taken through bilateral forums represented by Trade Unions on behalf of employees and management. Bilateral forums such as JCC, Safety Committee, Housing Committee, Welfare Committee, Canteen Committee etc. are in operation at all project. Similarly, Bipartite meetings, under the Industrial Relations system, are held periodically at unit level, area level and corporate level to resolve issues pertaining to employees’ service conditions, welfare and safety. Every subsidiary is having an Apex Bipartite Committee (Joint Consultative Committee) headed by the Chairman-cum-Managing Director of the Company. The Joint Consultative Committee deliberates on various strategic issues and issues related to quality of life of employees in general. All these bipartite bodies are represented by employee’s representatives.

Contract workers

The Company is a source of employment to the nearby villagers. There are about 72,271 contractors’ workers employed in mines.
through registered contractors for various outsourced work as on 1.12.2019. The company ensures compliance of all legal and company norms, pertaining to the pay and welfare of the contractors’ workers, by the contractor. Minimum wages for the contract workers in Coal India Ltd. who have been engaged in mining activities has been fixed which is higher than the minimum wages prescribed by appropriate government. The Contractor workers are made to undergo compulsory vocational training for working in the Mines.

In addition to the above, the Company provides medical treatment at the Company’s facility free of cost, to the contractors’ workers. All the contractors’ workers are being subjected to medical examination, safety training and are being provided with personal protective equipment viz Helmet, Mining Shoes, Dust Mask, Safety lamps and Raincoats including gumboots & proper hoods in heavy watery mines. The facilities like canteen &rest shelters, first-aid facilities etc., which are provided to the regular employees, are also utilized by the contractor workers. The Company has successfully covered all the contractors’ workers under the Social Security Schemes (CMPF & CMPS/ EPF). The payment of wages to the contractors’ workers is ensured through bank to avoid any exploitation on this count.

For monitoring compliance of payment of wages and other benefits to the Contractors’ Workers under the Contract Labour (R&A) Act, 1971, Coal India Ltd. has created and launched “Contract Labour Payment Management portal”. Comprehensive database, including bank account number and Aadhar number, of all the workers engaged by different contractors in CIL & its Subsidiaries is uploaded on this portal. This portal provides access to all contractors’ workers so that they may view their personal details including rate of wages and payment status.

Further, Ministry of Labour & Employment vide its Gazette Notification dated 7th December, 2015, exempted Subsidiaries of CIL to engage the contractor workers on the works specified (prohibited) at serial nos. 1 to 3 under S.O.2063 dated 21st June, 1988, Published in the Gazette of India, Part-II Section-3, subsection(ii) published by Ministry of Labour & Employment for five years from the date of publication of the notification.

Child Labour/Forced Labour/Bonded Labour:

Engagement of child labour, forced labour or bonded labour, in any form, is prohibited in the Company, either by itself or by any stakeholder in the value chain of the Company’s operation. This is strictly monitored through mandatory initial medical examination of all contract workers engaged in mines.

Freedom of Association:

Democratic values are ingrained in the management of human resource in the company. Employees are free to be part of any registered trade union and other govt./ non-govt. organizations. Branches of all central trade unions and local unions are operating in coalfields. Their representation is allowed in the bipartite bodies in the company under the norms of the Industrial Relations System.

Non-Discrimination:

The Company follows principles of non-discrimination in employee management. There is no discrimination of the employees in the name of religion, caste, region, creed, gender, language etc. All employees are given equal opportunity in service matters.

Continuous improvement and Knowledge Management Initiatives

As an outcome of CPSE conclave, a common Knowledge Management Portal - SAMANVAY has been developed for all CPSEs. The primary objective of this portal is to create a platform for enabling individuals, teams & entire Public Sector Enterprises to collectively and systematically share Knowledge, Infrastructure, Best Practices, SoPs, etc. to learn from others’ experiences and to attain greater heights.

CIL along with its Subsidiaries is one of the active participants in the portal and updates Best Practices, Policies/ Rules, expertise, etc. from time to time.

Organizational Culture Building Initiatives

All the new entrants joining the Organization in Executive cadre are being welcomed under Project ‘Aagman’. Before posting in the Subsidiaries, they are imparted with a 14-days Orientation program at Indian Institute of Coal Management (IICM) – CIL’s Centre of Excellence, Ranchi.

All the superannuation employees are bid farewell and their retiral dues are settled under the Project ‘Samman’. The Chairman, CIL and the CMDs of the Subsidiaries express their gratitude to the contributions laid down by the superannuating employees and their family members to the success of the Organization.
People Development initiatives and Social Security Measures

i. Gratuity - Employees on their retirement receive Gratuity payment upto ₹ 20 lakhs.

ii. CMPF - All employees are covered under the Coal Mines Provident Scheme which is a contributory fund with equal shares both by employee and the employer.

iii. Coal Mines Pension Scheme (CMPS) - All employees are covered under the Coal Mines Pension Scheme by which, on superannuation, they receive upto 25% of their total emoluments as monthly pension. In the event of death of the employee, the dependent is entitled to receive pension.

iv. Post-Retirement Medical Support - CIL has launched a post-retirement medical scheme for its 2.86 lakh employees to provide health support to the employees and their spouse, post retirement. Subject to conditions, the Scheme provides reimbursement of medical expenses for indoor and outdoor treatment for a maximum amount upto ₹ 8 lakhs for Non-Executives and ₹ 25 lakhs for Executives in ordinary cases, and support based on actuals in case of critical diseases such as Heart diseases, Cancer, Renal diseases, Neurological Disorder, HIV-AIDS & Addison’s disease / Adrenal Histoplasmoses, Critical accidents cases, Cerebral fever. CIL has also aims to introduce cashless treatment through Smart Cards with biometric data for authentication purposes and linking with Aadhar details.

v. Superannuation Pension Scheme - CIL has formulated a Superannuation Pension Scheme to provide superannuation benefit in the form of annuity through an Annuity Service Provider, to all Board level and below Board Level Executives. It has been implemented with effect from 01.01.2007.

vi. Employee Compensation - In the event of death/ disablement while on duty, the employee is eligible to receive monetary compensation under the Employee Compensation Act. Apart from that, the Company provides additional ₹ 90,000 as Ex-gratia and compensation of ₹ 15 lakhs in case of fatal mine accident.

vii. Life Cover Scheme - In the event of death of an employee while in service, the dependents of the employee are entitled to receive an amount of ₹ 1,25,000 under the life cover scheme.

viii. Employment to dependent - In the event of death/ disablement of an employee, while in service, one dependent is entitled for employment in the Company.

Grievance Management

The Company has a robust online Stakeholder Grievances system to deal with the grievance of Stakeholders i.e. employees, Consumers and others. Under the policy all grievances are resolved within 10 days and Stakeholders are informed accordingly. As on 31st Dec’19, there is NIL Complaint pending in SEBI SCORES and PG Portal of CIL.

Care for Environment

Coal India Ltd. (CIL) has been constantly addressing the impact of mining activities across environmental and social issues. Eco friendly mining systems have been implemented in all mining areas. More number of Surface Miners and Continuous Miners are being deployed in CIL Mines. CIL has produced around 45% of its total coal production through Surface Miners during Jan.-Dec. 2019. To make environmental pollution mitigation measures more transparent, subsidiaries of CIL are practicing State-Of-The-Art Satellite Surveillance to monitor land reclamation and restoration for all opencast projects.

As a part of ‘Clean & Green’ programme, massive plantation is also taken up by CIL wherever land is available. Till December, 2019, Subsidiary Companies of CIL have planted 19,76,618 saplings. Since inception, CIL has planted 99.6 million trees inside mine lease area till 2019-20 over an area of around 39,842 hectares through well structured Environment Management Plans and Sustainable Development activities. The concept of wind break and vertical greenery system has been developed by CMPDIL for controlling the dust generation due to mining activities and is under implementation in Gevra OCP. Mist sprayers, fog canons, fixed and mobile sprinklers are in operation for suppression of dust produced due to mining activities in the mining areas.

NLC India Limited (NLCIL)

NLC India Limited (NLCIL) was registered as a company on 14th November 1956. The Mining operations in Mine-I were formally inaugurated on 20th May 1957 by the then Prime Minister. NLC
India Limited has been conferred with the “NAVRATNA” status since April 2011.

NLC India Limited present mining capacity of 30.6 MTPA and power generating capacity as on March 2019 is 5543.56 MW. All the Mines and the Power Stations of NLC India Limited have received ISO Certification for Quality Management System (QMS), Environmental Management System (EMS), and Occupational Health & Safety Management System (OSHAS).

**Authorised Capital:**
The authorised capital of NLC India Limited is ₹ 2000 Crore and paid up equity is ₹ 1386.64 Crore (Post buy back – 2018). The investment by Govt. of India as on 30.11.2019 is as under:

<table>
<thead>
<tr>
<th>Investment</th>
<th>( ₹ Crore)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Equity - GOI Portion:</td>
<td>1119.07 (as on NOV 2019)</td>
</tr>
<tr>
<td>Loan from GOI - (including accrued interest)</td>
<td>Nil</td>
</tr>
</tbody>
</table>

**Production Performance:**
Overburden removal, lignite production, gross power generation and export of power during the year 2019-20 are indicated below:

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Actual</td>
<td>Target</td>
<td>Actual</td>
</tr>
<tr>
<td>Overburden</td>
<td>MT³</td>
<td>176.40</td>
<td>44.16</td>
<td>115.45</td>
</tr>
<tr>
<td>Lignite</td>
<td>MT</td>
<td>25.56</td>
<td>8.21</td>
<td>14.86</td>
</tr>
<tr>
<td>Power Gross</td>
<td>MU</td>
<td>32500.00</td>
<td>5586.17</td>
<td>14760.08</td>
</tr>
<tr>
<td>Power Export</td>
<td>MU</td>
<td>20296.90</td>
<td>4766.54</td>
<td>12750.94</td>
</tr>
</tbody>
</table>

**Performance for the year 2019-20**

- **OB (MM3)**: 176.4 (Target: 115.4, Actual: 107.08)
- **Lignite (MT)**: 25.56 (Target: 14.86, Actual: 14.73)
If power surrender of 1248.731 MU (provisional) is added the power gross generation for the period April 2019 to November 2019 would be 15179.48 MU with an achievement of 102.84% (against the present level of 94.38%).

**Productivity:**

The productivity performance in 2018-19 and 2019-20 are furnished in the table below:

**Output per Man Shift (OMS):**

<table>
<thead>
<tr>
<th>OMS</th>
<th>Unit</th>
<th>2018-19 Actual</th>
<th>Jan '19 to Mar '19</th>
<th>2019-20 (upto Nov '19)</th>
<th>Target</th>
<th>Actual (Provl)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mines</td>
<td>Tonne</td>
<td>14.11</td>
<td>18.96</td>
<td>13.89</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Thermal</td>
<td>KwHr</td>
<td>26197</td>
<td>26439</td>
<td>26879</td>
<td></td>
<td>27689</td>
</tr>
</tbody>
</table>

**Plant Load Factor (PLF)**

The PLF achieved by TPS-I, TPS-I Expansion, TPS-II, TPS-II Expansion and Barsingsar TPS during 2018-19 and 2019-20 are as under:

<table>
<thead>
<tr>
<th>PLF</th>
<th>2018-19 Actual</th>
<th>Jan ‘19 to Mar ’19</th>
<th>2019-20 (upto Nov’19)</th>
<th>Target</th>
<th>Actual (Provl)</th>
</tr>
</thead>
<tbody>
<tr>
<td>T.P.S-I</td>
<td>64.73</td>
<td>69.89</td>
<td>0.00</td>
<td>64.66</td>
<td></td>
</tr>
<tr>
<td>T.P.S-IE</td>
<td>80.17</td>
<td>97.88</td>
<td>76.32</td>
<td>87.50</td>
<td></td>
</tr>
<tr>
<td>T.P.S-II</td>
<td>83.44</td>
<td>86.22</td>
<td>78.25</td>
<td>78.65</td>
<td></td>
</tr>
<tr>
<td>T.P.S-II E</td>
<td>44.09</td>
<td>62.01</td>
<td>66.80</td>
<td>38.37</td>
<td></td>
</tr>
<tr>
<td>Barsingsar TPS</td>
<td>61.97</td>
<td>69.60</td>
<td>72.54</td>
<td>65.88</td>
<td></td>
</tr>
</tbody>
</table>
Product wise sales during 2019-20 (April 2019 to November 2019) is as under:

<table>
<thead>
<tr>
<th>Product</th>
<th>Sales 2018-19 (₹ Crore)</th>
<th>Sales 2019-20 (₹ Crore) upto NOV 2019 (Prov)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lignite</td>
<td>579.28</td>
<td>293.90</td>
</tr>
<tr>
<td>Power</td>
<td>6518.09</td>
<td>4348.12</td>
</tr>
<tr>
<td>Other</td>
<td>48.55</td>
<td>30.34</td>
</tr>
<tr>
<td>Total</td>
<td>7145.92</td>
<td>4672.36</td>
</tr>
</tbody>
</table>

Manpower:
The total manpower of NLCIL as on 30th November 2019 is indicated below:

<table>
<thead>
<tr>
<th></th>
<th>Technical</th>
<th>Non-Technical</th>
<th>Others</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Executives</td>
<td>3122</td>
<td>541</td>
<td>209</td>
<td>3872</td>
</tr>
<tr>
<td>Supervisors (NUS)</td>
<td>305</td>
<td>27</td>
<td>4</td>
<td>336</td>
</tr>
<tr>
<td>Non Executives</td>
<td>2885</td>
<td>899</td>
<td>4828</td>
<td>8612</td>
</tr>
<tr>
<td>Total</td>
<td>6312</td>
<td>1467</td>
<td>5041</td>
<td>12820</td>
</tr>
</tbody>
</table>
Employees Welfare

- Welfare measures under the following heads have been extended to the employees.
- 100% housing to employees.
- Subsidized canteen facilities and uniforms/footwear.
- Merit scholarships to school students.
- Special scholarships to SC/ST students.
- Group accident insurance schemes.
- Special increments for acquiring higher qualifications.
- Long service awards.
- Marriage & superannuation gifts.
- Free medical treatment to employees & their dependents.
- Post-retirement medical benefit scheme.
- Death relief scheme.

R&R policy – NLCIL

The R&R measures have been implemented as directed by the R&R Administrator as per the National Rehabilitation and Resettlement Policy, 2007 and the following benefits have been extended by NLCIL over and above the minimum specified in NRRP 2007.

Following are the measures extended by NLCIL

- As per policy, alternate house plot is to be allotted to the displaced family to an extent of actual loss of area of the acquired house. However, NLCIL has been allotting a plot of a minimum of 120 square meters to each eligible Project Affected Family in the resettlement centre.
- Though the dwellers/encroachers of Government lands are not entitled for any compensation, a sum equivalent to 50% of the value of the house structure in which the encroacher has been residing, calculated based on the plinth area rate approved by Public Works Department (PWD) is paid by NLCIL, on compassionate grounds.
- NLCIL has obtained a special Government Order for directly calling for the applications from the Project Affected Persons for ITI Apprenticeship Training in NLCIL, instead of processing through the employment exchange. NLCIL has also been arranging entrepreneurial development programmes for Project Affected Persons in NLCIL’s Learning and Development Centre (L&DC) and sponsor candidates to suitable outside training schools/agencies.
- NLCIL is imparting in-plant training and is also providing opportunities for project work to the PAPs through L&DC.
- NLCIL has been also been quickly resolving the enhanced compensation issues through Lok Adalat, for almost all the acquired lands, instead of contesting them legally. The enhanced compensation rates were negotiated between NLCIL and the Land owners in the presence of Representatives of the villages, Public Representatives and District Collector. NLCIL pays the compensation at the enhanced rates arrived at by consensus, through Lok Adalat conducted by Taluk legal service committee.

The list of R&R benefits provided of NLCIL so far is furnished in the following table.
### Nature of R&R Measures

<table>
<thead>
<tr>
<th>Description</th>
<th>Quantification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Allotment of alternative house site in well developed, well-connected and</td>
<td>7390 Plots.</td>
</tr>
<tr>
<td>conveniently located resettlement centres.</td>
<td></td>
</tr>
<tr>
<td>Resettlement Allowance paid</td>
<td>₹ 348.03 Lakhs.</td>
</tr>
<tr>
<td>Ex-gratia payment made towards value of structures on Government Lands</td>
<td>₹ 493.82 Lakhs.</td>
</tr>
<tr>
<td>Regular employment in NLC provided to the PAFs (excluding the PAFs of</td>
<td>₹ 415.44 Lakhs</td>
</tr>
<tr>
<td>initial schemes of 1950s).</td>
<td></td>
</tr>
<tr>
<td>Subsistence allowance paid</td>
<td>₹ 3.30 lakhs</td>
</tr>
<tr>
<td>Cattle Shed, petty shop Allowances paid</td>
<td>₹ 10,99,80,000</td>
</tr>
<tr>
<td>One time Rehabilitation grant in lieu of employment</td>
<td>₹ 1364.38 lakhs</td>
</tr>
<tr>
<td>Charges incurred for the development of Resettlement Centres</td>
<td>₹150.00 lakh per annum (approx.)</td>
</tr>
<tr>
<td>Recurring expenditure being incurred for maintenance, amenities and</td>
<td>1827 persons</td>
</tr>
<tr>
<td>up-keeping of Resettlement Centres</td>
<td></td>
</tr>
<tr>
<td>ITI apprenticeship training imparted to PAPs</td>
<td>1034 persons</td>
</tr>
<tr>
<td>Apprenticeship Training (Graduate / Diploma)</td>
<td>213 persons</td>
</tr>
<tr>
<td>Diploma in Mining</td>
<td>118 persons</td>
</tr>
<tr>
<td>Working under contract jobs</td>
<td>3500 persons</td>
</tr>
<tr>
<td>Special Training imparted to the PAF members under Medical Lab Technician</td>
<td>69 persons</td>
</tr>
<tr>
<td>Training Scheme</td>
<td></td>
</tr>
<tr>
<td>Training for skill development/ entrepreneurship/ self-employment imparted</td>
<td>1792 persons</td>
</tr>
<tr>
<td>to the members of PAFs in association with training experts.</td>
<td></td>
</tr>
<tr>
<td>Number of PAP Contractors registered on the basis of LA.</td>
<td>128 contractors</td>
</tr>
</tbody>
</table>

The following compensation rates have been paid for the lands acquired from 2006 to 2013, as per the tripartite settlement reached on 05.10.2009.

Rates as per tripartite settlement dt. 5th October 2009:-

<table>
<thead>
<tr>
<th>Classification</th>
<th>Rate inclusive of all (Solatium, interest etc.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wet lands &amp; Irrigated Dry Lands</td>
<td>₹6,00,000 per acre</td>
</tr>
<tr>
<td>Manavari Dry Lands</td>
<td>₹5,00,000 per acre</td>
</tr>
<tr>
<td>House site for Gangaikondan Village (Town Panchayat)</td>
<td>₹50,000 +15,000 Spl. Incentive = ₹65,000 per cent.</td>
</tr>
<tr>
<td>House site for other villages</td>
<td>₹25,000 per cent</td>
</tr>
</tbody>
</table>
So far 18,957 enhanced compensation cases have been settled for lands acquired from 1977 through Lok Adalat. NLCIL has achieved maximum settlement rate in Lok Adalat through complete computerization of the settlement process. Due to these measures, NLCIL has been facing the least resistance to Land Acquisition and 1427 hectares of land has been acquired since April 2006.

### New Land Acquisition Act

From 01.01.2014, GoI has enacted New Land Acquisition Act viz. – “Right to Fair Compensation and Transparency in Land Acquisition Rehabilitation and Resettlement Act, 2013” and for lands acquired from 01.01.2014 onwards in Neyveli region for NLCIL schemes, compensation and R&R benefits are being extended as per the provisions of new LA Act.

### Contract workers

The Company engages contract workmen from the nearby villages. There are about 14,580 contractors’ workers employed in mines and thermal through various registered contractors, INDCOSERVE, HOWSICOS societies and outsourced agencies. The company ensures compliance of all legal and company norms pertaining to the pay and welfare of the contract workers, by the contractors. Minimum wages for the contract workers who have been engaged in mining activities is being followed as per the notification issued by CLC (C) in additions to the wages and benefits extended to the above contract workers by various settlements, the wages being paid in NLCIL is higher than the minimum wages prescribed by CLC (C). The contract workers are also made to undergo compulsory safety, vocational training for working in the lignite mines area. In addition to the above, the Company provides free medical treatment at the Company’s facility to the contract workers. All the contract workers are being imparted safety training and are being provided with personal protective equipment viz., helmet, mining shoes, dust mask, safety lamps and raincoats including gumboots and proper hoods in heavy watery mines. The facilities like canteen and rest shelters, first-aid facilities etc., which are provided to the regular employees, are also utilized by the contract workers.

The following welfare measures are being extended to contract workmen viz,

- Free education for the wards of contract workmen at NLCIL School upto 12th standard

- Free Breakfast, Noon meal & Uniforms to children studying in 11th & 12th standard in NLCIL schools

- Contract workmen Children Merit Scholarship Scheme: has been introduced with effect from the academic year 2014-15 onwards. ₹10000/- per head (100 numbers) and ₹8,000/- per annum (50 numbers) per head towards scholarship and hostel fees for Professional Course and General Degree respectively. (Out of 150 numbers, 75 students are earmarked for girl students).

- Reimbursement of Fees paid by wards of Contract workmen to Jawahar Science College, Neyveli

- Free medical treatment at NLC GH for self, spouse and children (out-patient/in-patient) for AMC contract workmen.

- 1000 Quarters and 3000 plots provided to Contract workmen with free water, subsidized Electricity & nominal rent.

The payment of wages to all the contract workers is ensured through bank. Ex-gratia payment of ₹ 5 lakhs over and above the statutory compensation is paid in case of a contract worker meeting a fatal accident.

NLCIL has rolled out Contract Labour Management System (CLMS) portal for monitoring compliance of payment of wages and other benefits to the Contractors’ Workers under the Contract Labour (R&A) Act, 1971. Comprehensive database (including bank account number and Aadhar number) of all the workers engaged by different contractors in NLCIL is uploaded on this portal. This portal provides access to all contractors’ workers so that they may view their personal details including rate of wages and payment status.

### Child Labour/Forced Labour/Bonded Labour

Engagement of child labour, forced labour or bonded labour, in any form, is prohibited in the Company, either by itself or by any stakeholder in the value chain of the Company’s operation. This is strictly monitored through birth certificate and any other valid proof of age. Cautioned board is being display at the entrance to Mines & Thermal unions prohibiting engagement of Child Labour.

### Freedom of Association

Democratic values are ingrained in the management of human resource in the company. Employees are free to be
part of any registered trade union and other Govt. / non-Govt. organizations. Branches of all central trade unions and local unions are operating in Mines & Thermal Units of NLCIL. Their representation is allowed in the bipartite bodies in the company under the norms of the Industrial Relations System.

**Singareni Collieries Company Limited (SCCL)**

The Singareni Collieries Company Limited (SCCL) is a Joint venture of Govt. of Telangana and the Govt. of India with equity participation in the ratio of 51:49 respectively. SCCL is contributing around 9 % of the total all India production.

**Coal Production:** The coal production target for 2019-20 is 67 MT and actual coal production up to December, 2019 is 46.75 MT.

<table>
<thead>
<tr>
<th>Target (Jan-Dec, 2019)</th>
<th>Actual (Jan-Dec, 2019)</th>
<th>% Ach</th>
</tr>
</thead>
<tbody>
<tr>
<td>65.18</td>
<td>65.58</td>
<td>100.6</td>
</tr>
</tbody>
</table>

**Coal Despatch:** The coal dispatch target during 2019-20 is 68 MT and actual dispatch up to December, 2019 is 46.35 MT.

<table>
<thead>
<tr>
<th>Target (Jan-Dec, 2019)</th>
<th>Actual (Jan-Dec, 2019)</th>
<th>% Ach</th>
</tr>
</thead>
<tbody>
<tr>
<td>66.90</td>
<td>64.91</td>
<td>97.0</td>
</tr>
</tbody>
</table>

**Productivity (OMS):** Productivity target for the year 2019-20 is 6.48 Tonnes and achieved 6.14 up to Dec, 2019.

<table>
<thead>
<tr>
<th>Year</th>
<th>Singareni Collieries Co. Ltd.</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>UG</td>
<td>OC</td>
<td>Overall</td>
</tr>
<tr>
<td>2019-20 Target</td>
<td>1.46</td>
<td>16.50</td>
<td>6.48</td>
</tr>
<tr>
<td>2019-20 Actual (up to Dec, 2019)</td>
<td>1.45</td>
<td>15.80</td>
<td>6.14</td>
</tr>
</tbody>
</table>

**Manpower:** As on 31.12.2019 employees on roll of SCCL are 47,178 including 1298 Female employees.

**STPP:** Presently, 2X600 MW Singareni Thermal Power Station is in operation in the Mancherial district of Telangana. In 2018-19, total 8698 MU and in 2019-20 (upto Dec 2019) total 6755 MU of electricity is generated.

**Solar Power Plant:** SCCL proposed to set up 300 MW Solar Power Plant at various locations in SCCL command area in Telangana. 129 MW solar plants are under erection & will be completed by March 2020. In 2nd Phase, 90 MW solar plants are under erection and will be installed by 30.09.2020 and in 3rd Phase, for 81 MW solar plants land is identified.

**Employment opportunity in SCCL:** Massive drive for recruitment for vacancies through External and Internal sources is being taken up by SCCL. After formation of Telangana (June 2014) more than 13,000 persons are provided employment.

**Plantation:** SCCL has planted 30 Lakh saplings in 652 Ha. as a part of flagship programme “TelanganakuHaritha Haram” during 2019-20.

**DEVELOPMENT ACTIVITIES IN NORTH ESTERN COALFIELDS**

In the North Eastern Region, Coal India Limited has its mining activities mainly in 3(Nos) of mines of Makum Coalfields of Assam. These mines are Tirap, Tikak and Tipong. Out of these, Tirap and Tikak Colliery are open cast Mines/Projects while Tipong Colliery is an Under Ground Mine.

At present, coal production comes from are 3(three) open cast outsourcing patches. These are Tirap(East), Tirap(West) and Tikak(OCM). The coal production of Last 4(four) years has been shown in the following table I.

<table>
<thead>
<tr>
<th>Year</th>
<th>2015-16</th>
<th>2016-17</th>
<th>2017-18</th>
<th>2018-19</th>
<th>2019-20 Target as per AAP</th>
</tr>
</thead>
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<td>4.86</td>
<td>6.00</td>
<td>7.81</td>
<td>7.83</td>
<td>7.50</td>
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During the current financial year, entire coal production has come from only 3(three) OC patches.
PERFORMANCE OF NEC (Period from 01.01.2019 to 31.12.2019)

Table – II (Actual Data)

<table>
<thead>
<tr>
<th>1</th>
<th>Coal Production Unit</th>
<th>Quantity</th>
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<tbody>
<tr>
<td>I.</td>
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<tr>
<td>II.</td>
<td>Open Cast Lakh Tonnes</td>
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<td>TOTAL</td>
<td>Lakh Tonnes</td>
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</table>

2 Coal Despatch/Off take

<table>
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<tr>
<th></th>
<th>Despatch Lakh Tonnes</th>
<th>Domestic Consumption</th>
<th>Off take Lakh Tonnes</th>
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<tr>
<td>I)</td>
<td></td>
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</tr>
<tr>
<td>II)</td>
<td></td>
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<td></td>
</tr>
<tr>
<td>III)</td>
<td></td>
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</tbody>
</table>

3 Pit-head coal stock as on 31.12.19 Lakh Tonnes 0.73

PERFORMANCE OF NEC FOR PAST 5 YEARS

<table>
<thead>
<tr>
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<tbody>
<tr>
<td>TIPONG (UG)</td>
<td>3096</td>
<td>3043</td>
<td>3033</td>
<td>3000</td>
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<tr>
<td>TIRAP (OC)</td>
<td>457648</td>
<td>178954</td>
<td>197215</td>
<td>468461</td>
<td>529767</td>
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<tr>
<td>TIKAK (OC)</td>
<td>316332</td>
<td>212355</td>
<td>330035</td>
<td>286182</td>
<td>252252</td>
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<tr>
<td>LEDO (OCP)</td>
<td>1944</td>
<td>92180</td>
<td>7005</td>
<td>23688</td>
<td>1968</td>
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<tr>
<td>TOTAL:-</td>
<td>779020</td>
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OB REMOVAL (Fig.in Cum.) As per Measurement

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</thead>
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<tr>
<td>TIRAP (OC)</td>
<td>6147947</td>
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<td>5126499.90</td>
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<td>3932380</td>
<td>3253707</td>
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<td>2668553.75</td>
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<tr>
<td>LEDO (OCP)</td>
<td>104789</td>
<td>897557</td>
<td>185399.69</td>
<td>58092.80</td>
<td>14729.27</td>
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<td>7853146.45</td>
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COAL DESPATCH (Fig.in tes)

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</thead>
<tbody>
<tr>
<td>TIPONG (UG)</td>
<td>-</td>
<td>-</td>
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<td>111814.57</td>
<td>430592.61</td>
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<td>252542.20</td>
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<tr>
<td>LEDO (OCP)</td>
<td>29410.01</td>
<td>17896.36</td>
<td>81300.33</td>
<td>20894.74</td>
<td>849.71</td>
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<tr>
<td>TOTAL:-</td>
<td>732901.66</td>
<td>341869.56</td>
<td>776960.16</td>
<td>894617.37</td>
<td>753881.04</td>
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O.M.S.(Fig.in tes)

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<td>UG</td>
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<td>0.02</td>
<td>0.02</td>
<td>0.02</td>
<td>0.00</td>
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<tr>
<td>OC</td>
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<td>2.80</td>
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<tr>
<td>OVERALL:-</td>
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<td>1.39</td>
<td>1.92</td>
<td>2.86</td>
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OPENING STOCK(Fig.in tes)

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<th>As on 1.4.17</th>
<th>As on 1.4.18</th>
<th>As on 1.4.19</th>
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</thead>
<tbody>
<tr>
<td>TOTAL</td>
<td>214762.41</td>
<td>359405.45</td>
<td>182727.29</td>
<td>69434.93</td>
<td>99523.33</td>
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## MANPOWER (Fig. in nos.)

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<th>As on 1.4.17</th>
<th>As on 1.4.18</th>
<th>As on 1.4.19</th>
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<tbody>
<tr>
<td>EXECUTIVE</td>
<td>113</td>
<td>107</td>
<td>96</td>
<td>99</td>
<td>105</td>
</tr>
<tr>
<td>NON-EXECUTIVE</td>
<td>1914</td>
<td>1770</td>
<td>1610</td>
<td>1436</td>
<td>1290</td>
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<tr>
<td><strong>TOTAL:-</strong></td>
<td><strong>2027</strong></td>
<td><strong>1877</strong></td>
<td><strong>1706</strong></td>
<td><strong>1535</strong></td>
<td><strong>1395</strong></td>
</tr>
<tr>
<td>PROFIT/LOSS(Fig. in Cr.)</td>
<td>(+) 29.18</td>
<td>(-) 59.72</td>
<td>(-)123.56</td>
<td>(-)121.06</td>
<td>(-) 84.33</td>
</tr>
</tbody>
</table>
# Coal and Lignite Production

## Coal Demand

There has been a continuous increase in overall consumption of coal over the years. Consumption / actual supply of coal (including import) increased from 836.93 million tonnes in 2016-17 to 968.03 million tonnes in 2018-19. As per data provided by CIL/CCO, Demand for coal for 2019-20 was estimated at 1000 million tonnes against which, actual supply of coal in 2019-20 upto December, 2019 (provisional) was 695.49 Mte. The sector wise breakup is given in the table:-

<table>
<thead>
<tr>
<th></th>
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<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>I. Coking Coal</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1 Steel / Coke Oven &amp; Cookeries (Indigenous)</td>
<td>10.34</td>
<td>-</td>
<td>11.45</td>
<td>-</td>
<td>17.66</td>
<td>---</td>
<td>12.259</td>
</tr>
<tr>
<td>2 Steel (Import)</td>
<td>41.64</td>
<td>-</td>
<td>47.00</td>
<td>-</td>
<td>51.84</td>
<td>----</td>
<td>39.522</td>
</tr>
<tr>
<td><strong>Sub Total</strong></td>
<td>51.98</td>
<td>63.17</td>
<td>58.45</td>
<td>58.37</td>
<td>69.50</td>
<td>70.00</td>
<td>51.781</td>
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<tr>
<td><strong>II. Non Coking Coal</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3 Power (Utilities)</td>
<td>490.99</td>
<td>622.96</td>
<td>519.58</td>
<td><strong>655.66</strong></td>
<td>546.17</td>
<td>682.00</td>
<td>379.088</td>
</tr>
<tr>
<td>4 Power (Captive)</td>
<td>44.06</td>
<td>90.34</td>
<td>65.91</td>
<td><strong>105.00</strong></td>
<td>91.78</td>
<td>102.00</td>
<td>63.702</td>
</tr>
<tr>
<td>5 Cement</td>
<td>6.35</td>
<td>22.32</td>
<td>7.71</td>
<td><strong>37.99</strong></td>
<td>8.82</td>
<td>42.00</td>
<td>6.120</td>
</tr>
<tr>
<td>6 Sponge Iron/ CDI</td>
<td>5.56</td>
<td>24.61</td>
<td>8.53</td>
<td><strong>41.33</strong></td>
<td>12.23</td>
<td>48.00</td>
<td>8.489</td>
</tr>
<tr>
<td>7 BRK &amp; Others including Fertilizer</td>
<td><strong>88.68</strong></td>
<td>85.00</td>
<td>76.83</td>
<td><strong>93.00</strong></td>
<td>56.13</td>
<td>56.00</td>
<td>38.962</td>
</tr>
<tr>
<td><strong>Sub Total</strong></td>
<td>635.64</td>
<td>845.23</td>
<td>678.56</td>
<td><strong>932.98</strong></td>
<td>715.13</td>
<td>930.00</td>
<td><strong>487.257</strong></td>
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<tr>
<td>8 Non coking coal Import</td>
<td><strong>149.31</strong></td>
<td>---</td>
<td>161.24</td>
<td>----</td>
<td>183.40</td>
<td>----</td>
<td>147.348</td>
</tr>
<tr>
<td><strong>Total Raw Coal</strong></td>
<td><strong>836.93</strong></td>
<td>908.40</td>
<td>898.25</td>
<td><strong>991.35</strong></td>
<td>968.03</td>
<td>1000.00</td>
<td><strong>695.491</strong></td>
</tr>
</tbody>
</table>

P= Provisional,
Source : Coal Controller Organisation

## Coal Supply

As per CIL/CCO, the demand for coal for 2019-20, was estimated to be 1000 Million Tonnes, whereas the indigenous availability was estimated at 811 Million Tonnes. The gap of 189 Mte was projected to be met through imports. During the year 2019-20 upto Dec. 19, the actual indigenous supply of coal was 508.62 Mte (provisional). Of this the supply of coal from CIL, SCCL and Others including captive blocks was 417.08 Mte, 46.35 Mte and 45.19 Mte respectively.
The total import of Coal as per figures available (upto October, 2019), was placed at 186.87 MT provisional. Accordingly, the source wise break up of actual supply for 2019-20 is given in the following table along with figures for 2016-17 to 2018-19.

**Coal Supply and Demand**

(In million tonnes)

<table>
<thead>
<tr>
<th></th>
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<th></th>
<th></th>
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<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>CIL</td>
<td>542.98</td>
<td>600.00</td>
<td>580.01</td>
<td>610.00</td>
<td>607.95</td>
<td>660.00</td>
<td>417.08</td>
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<tr>
<td>SCCL</td>
<td>60.79</td>
<td>62.00</td>
<td>64.62</td>
<td>67.00</td>
<td>67.67</td>
<td>68.00</td>
<td>46.35</td>
</tr>
<tr>
<td>Others</td>
<td>42.21</td>
<td>68.10</td>
<td>45.37</td>
<td>55.00</td>
<td>57.17</td>
<td>83.00</td>
<td>45.19</td>
</tr>
<tr>
<td>Total indigenous supply</td>
<td>645.98</td>
<td>730.10</td>
<td>690.00</td>
<td>732.00</td>
<td>732.79</td>
<td>811.00</td>
<td>508.62</td>
</tr>
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</table>

**Demand projected / Actual supply (Domestic+ Import)**

<table>
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<th></th>
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<th></th>
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</thead>
<tbody>
<tr>
<td>ECL</td>
<td>40.52</td>
<td>43.57</td>
<td>46.76</td>
<td>50.16</td>
<td>53.50</td>
<td>33.33</td>
<td>62.30</td>
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<tr>
<td>BCCL</td>
<td>37.04</td>
<td>32.60</td>
<td>38.00</td>
<td>31.04</td>
<td>36.00</td>
<td>18.66</td>
<td>51.83</td>
</tr>
<tr>
<td>CCL</td>
<td>67.05</td>
<td>63.40</td>
<td>68.70</td>
<td>68.72</td>
<td>77.00</td>
<td>39.17</td>
<td>50.88</td>
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<td>93.02</td>
<td>95.00</td>
<td>101.50</td>
<td>106.25</td>
<td>79.59</td>
<td>74.90</td>
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<tr>
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<td>45.63</td>
<td>46.22</td>
<td>49.70</td>
<td>53.18</td>
<td>56.00</td>
<td>33.06</td>
<td>59.04</td>
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<td>39.74</td>
<td>66.57</td>
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<tr>
<td>Others</td>
<td>9.85</td>
<td>8.96</td>
<td>15.00</td>
<td>9.12</td>
<td>10.00</td>
<td>5.16</td>
<td>51.60</td>
</tr>
<tr>
<td>Total</td>
<td>657.87</td>
<td>675.40</td>
<td>730.00</td>
<td>730.35</td>
<td>810.00</td>
<td>480.04</td>
<td>59.26</td>
</tr>
</tbody>
</table>

P – Provisional *Up to December, 2019

**Coal Production**

In 2019-20, the production of coal by the CIL (April-Dec.19) was 388.39 Mte.as against the annual target of 660 Mte. The SCCL produced 46.75 Mte of coal during 2019-20 against the annual target of 67 Mte. during this period. The company wise raw coal production target for 2019-20 and achievement is given in the table.

**Company wise production of Coal**

(In million tonnes)

<table>
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<tr>
<th></th>
<th></th>
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<th></th>
<th></th>
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<th></th>
<th></th>
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<tr>
<td>ECL</td>
<td>40.52</td>
<td>43.57</td>
<td>46.76</td>
<td>50.16</td>
<td>53.50</td>
<td>33.33</td>
<td>62.30</td>
<td>20.17</td>
</tr>
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<td>BCCL</td>
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<td>32.60</td>
<td>38.00</td>
<td>31.04</td>
<td>36.00</td>
<td>18.66</td>
<td>51.83</td>
<td>17.34</td>
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<tr>
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<td>63.40</td>
<td>68.70</td>
<td>68.72</td>
<td>77.00</td>
<td>39.17</td>
<td>50.88</td>
<td>37.83</td>
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<tr>
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<td>74.90</td>
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<tr>
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<td>46.22</td>
<td>49.70</td>
<td>53.18</td>
<td>56.00</td>
<td>33.06</td>
<td>59.04</td>
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<td>157.35</td>
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<td>95.15</td>
<td>55.81</td>
<td>75.35</td>
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<td>143.06</td>
<td>151.50</td>
<td>144.15</td>
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<td>70.78</td>
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<td>0.78</td>
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<td>0.54</td>
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<td>606.89</td>
<td>660.00</td>
<td>388.39</td>
<td>58.85</td>
<td>271.61</td>
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<td>64.41</td>
<td>67.00</td>
<td>46.75</td>
<td>69.77</td>
<td>20.25</td>
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<tr>
<td>Captive</td>
<td>32.54</td>
<td>37.07</td>
<td>40.00</td>
<td>49.93</td>
<td>73.00</td>
<td>39.74</td>
<td>66.57</td>
<td>33.26</td>
</tr>
<tr>
<td>Others</td>
<td>9.85</td>
<td>8.96</td>
<td>15.00</td>
<td>9.12</td>
<td>10.00</td>
<td>5.16</td>
<td>51.60</td>
<td>4.84</td>
</tr>
<tr>
<td>Total</td>
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<td>675.40</td>
<td>730.00</td>
<td>730.35</td>
<td>810.00</td>
<td>480.04</td>
<td>59.26</td>
<td>329.96</td>
</tr>
</tbody>
</table>

*Provisional # Including Gare Palma IV/1,2&3 Block’s
Import

The total import of coal during the period April 2019-December 2019 was estimated 186.87 Mte.

Lignite Production and Power Generation

The Neyveli Lignite Corporation (NLC) had a target of 25.56 Mte of Lignite and 235000 MU of Power Generation for 2019-20 against which actual production (April – Dec. 2019) of lignite was 17.01 Mte and 15801.60 MU of power generations (provisional) for the year 2019-20 and the projected production of Lignite and Power Generation for the period January 2020 to March 2020 is 8.55 Mte and 7698.40 MU respectively. The details of which are given in the table:

<table>
<thead>
<tr>
<th>Year</th>
<th>Lignite (MTe)</th>
<th>Power Generation (MU)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2017-18 (BE)</td>
<td>26.80</td>
<td>22000.00</td>
</tr>
<tr>
<td>2017-18 (RE)</td>
<td>24.84</td>
<td>20500.00</td>
</tr>
<tr>
<td>2017-18 (Actual)</td>
<td>25.15</td>
<td>20740.84</td>
</tr>
<tr>
<td>2018-19 (BE)</td>
<td>24.69</td>
<td>20500.00</td>
</tr>
<tr>
<td>2018-19 (RE)</td>
<td>25.93</td>
<td>21251.00</td>
</tr>
<tr>
<td>2018-19 (Actual)</td>
<td>24.25</td>
<td>20676.18</td>
</tr>
<tr>
<td>2019-20 (BE)</td>
<td>25.56</td>
<td>23500.00</td>
</tr>
<tr>
<td>2019-20 (RE)</td>
<td>24.52</td>
<td>23062.00</td>
</tr>
<tr>
<td>2019-20 (Actual) * Upto Dec. 2019</td>
<td>17.01</td>
<td>15801.60</td>
</tr>
<tr>
<td>2019-20 (Estimated) Jan. 20 to March 20</td>
<td>8.55</td>
<td>7698.40</td>
</tr>
</tbody>
</table>

*Provisional.
Output Per Manshift (OMS)

<table>
<thead>
<tr>
<th>Year</th>
<th>Coal India Ltd.</th>
<th></th>
<th></th>
<th>Singareni Collieries Co. Ltd.</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>UG</td>
<td>OC</td>
<td>Overall</td>
<td>UG</td>
<td>OC</td>
<td>Overall</td>
</tr>
<tr>
<td>2017-18 (BE)</td>
<td>0.95</td>
<td>12.88</td>
<td>7.57</td>
<td>1.52</td>
<td>14.00</td>
<td>5.29</td>
</tr>
<tr>
<td>2017-18 (RE)</td>
<td>0.95</td>
<td>12.88</td>
<td>7.57</td>
<td>1.36</td>
<td>13.74</td>
<td>4.79</td>
</tr>
<tr>
<td>2017-18 (Actual)</td>
<td>0.86</td>
<td>14.10</td>
<td>7.71</td>
<td>1.08</td>
<td>13.73</td>
<td>4.89</td>
</tr>
<tr>
<td>2018-19 (BE)</td>
<td>0.90</td>
<td>15.11</td>
<td>8.33</td>
<td>1.48</td>
<td>15.70</td>
<td>5.75</td>
</tr>
<tr>
<td>2018-19 (RE)</td>
<td>0.94</td>
<td>15.11</td>
<td>8.33</td>
<td>1.41</td>
<td>16.80</td>
<td>6.08</td>
</tr>
<tr>
<td>2018-19 (Actual)</td>
<td>0.95</td>
<td>14.68</td>
<td>8.51</td>
<td>1.40</td>
<td>16.94</td>
<td>6.23</td>
</tr>
<tr>
<td>2019-20 (BE)</td>
<td>1.01</td>
<td>15.28</td>
<td>9.08</td>
<td>1.46</td>
<td>16.50</td>
<td>6.48</td>
</tr>
<tr>
<td>2019-20 (RE)</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>2019-20 (Actual)*</td>
<td>0.95</td>
<td>12.57</td>
<td>7.32</td>
<td>1.45</td>
<td>15.80</td>
<td>6.14</td>
</tr>
</tbody>
</table>

*Upto December, 2019

Capital Outlay:

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>SCCL</td>
<td>2809.00</td>
<td>2820.22</td>
<td>2013.55</td>
<td>1477.39</td>
<td>1100.00</td>
<td>1850.00</td>
<td>1850.00</td>
<td>1123.09</td>
</tr>
</tbody>
</table>

* Upto Dec 2019

SCCL Capitailet Outlay

- BE
- RE
- Exp.
Plan Expenditure:

<table>
<thead>
<tr>
<th>Year</th>
<th>Capital Expenditure of SCCL (₹ Crs.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2014-15 (BE)</td>
<td>3850.00</td>
</tr>
<tr>
<td>2014-15 (RE)</td>
<td>3760.00</td>
</tr>
<tr>
<td>2014-15 (Actual)</td>
<td><strong>2809.00</strong></td>
</tr>
<tr>
<td>2015-16 (BE)</td>
<td>2390.00</td>
</tr>
<tr>
<td>2015-16 (RE)</td>
<td>3550.00</td>
</tr>
<tr>
<td>2015-16 (Actual)</td>
<td><strong>2820.22</strong></td>
</tr>
<tr>
<td>2016-17 (BE)</td>
<td>2300.00</td>
</tr>
<tr>
<td>2016-17 (RE)</td>
<td>2300.00</td>
</tr>
<tr>
<td>2016-17 (Actual)</td>
<td><strong>2013.55</strong></td>
</tr>
<tr>
<td>2017-18 (BE)</td>
<td>1600.00</td>
</tr>
<tr>
<td>2017-18 (RE)</td>
<td>1400.00</td>
</tr>
<tr>
<td>2017-18 (Provl.)</td>
<td><strong>1477.39</strong></td>
</tr>
<tr>
<td>2018-19 (BE)</td>
<td>2000.00</td>
</tr>
<tr>
<td>2018-19 (RE)</td>
<td>1100.00</td>
</tr>
<tr>
<td>2018-19 (Actual)</td>
<td><strong>1229.69</strong></td>
</tr>
<tr>
<td>2019-20 (BE)</td>
<td>1850.00</td>
</tr>
<tr>
<td>2019-20 (RE)</td>
<td>1850.00</td>
</tr>
<tr>
<td>2019-20 (Actual up to Dec, 2019)</td>
<td><strong>1123.09</strong></td>
</tr>
</tbody>
</table>
CHAPTER 7

COAL DISTRIBUTION AND MARKETING

ANNUAL REPORT 2019-20
Coal Distribution and Marketing

Allocation of coal to power, cement and steel plants

The allocation of coking coal to Steel plants was earlier made by the Coal Controller. However, after deregulation of coking coal, the supplies of coking coal are being made by the coal companies themselves on the basis of linkages established by the SLC (LT) or on the basis of their existing MoU commitments.

Sector wise Coal Off-take from Coal India Limited (Provisional)

Sector-wise coal off-take from CIL during the period from January 2019 to December 2019 is as below:

<table>
<thead>
<tr>
<th>Sector</th>
<th>AAP Targeted off take</th>
<th>Actual Off take</th>
<th>Supply % against Target</th>
</tr>
</thead>
<tbody>
<tr>
<td>Steel*</td>
<td>3.39</td>
<td>2.37</td>
<td>70</td>
</tr>
<tr>
<td>Power ( Utilities) **</td>
<td>514.53</td>
<td>463.03</td>
<td>90</td>
</tr>
<tr>
<td>Captive Power ***</td>
<td>52.80</td>
<td>51.67</td>
<td>98</td>
</tr>
<tr>
<td>Cement</td>
<td>5.40</td>
<td>5.32</td>
<td>99</td>
</tr>
<tr>
<td>Sponge Iron</td>
<td>12.28</td>
<td>10.14</td>
<td>83</td>
</tr>
<tr>
<td>Others</td>
<td>91.44</td>
<td>48.04</td>
<td>53</td>
</tr>
<tr>
<td>Total Despatch</td>
<td>643.62</td>
<td>580.57</td>
<td>90</td>
</tr>
<tr>
<td>Colliery Consumption</td>
<td>0.19</td>
<td>0.20</td>
<td>106</td>
</tr>
<tr>
<td>Total</td>
<td>643.81</td>
<td>580.77</td>
<td>90</td>
</tr>
</tbody>
</table>

* Includes coking coal feed to washeries, direct feed and blendable to steel plants.

** Includes non-coking coal feed to washeries and Bina Deshaling Plant for beneficiation and special forward e-auction to power.

*** Captive Power includes despatches to fertilizer sector.
Sector wise Coal Off take from SCCL

Sector-wise coal off-take from SCCL during the period from January 2019 to December 2019 is as below:

<table>
<thead>
<tr>
<th>Sector</th>
<th>AAP Targeted off-take</th>
<th>Actual</th>
<th>Supply % against target</th>
</tr>
</thead>
<tbody>
<tr>
<td>Power (Utility)</td>
<td>53.14</td>
<td>54.71</td>
<td>103</td>
</tr>
<tr>
<td>Power (CPP)</td>
<td>4.30</td>
<td>3.6</td>
<td>83.7</td>
</tr>
<tr>
<td>Steel (SI)</td>
<td>0.64</td>
<td>2.47</td>
<td>23.4</td>
</tr>
<tr>
<td>Cement</td>
<td>3.27</td>
<td>0.15</td>
<td>75.5</td>
</tr>
<tr>
<td>Others</td>
<td>5.55</td>
<td>3.98</td>
<td>71.7</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>66.90</strong></td>
<td><strong>64.91</strong></td>
<td><strong>97.0</strong></td>
</tr>
</tbody>
</table>

**Power Houses**

Off-take of coal to power sector during the period from January 2019 to December 2019 against AAP from CIL was 463.03 MT registering 90% materialization of target. Off-take has decreased by 20.3 MT, with a decline of 4.3% as compared to same period last year.

**Cement Plants**

The dispatch to cement plants from CIL during the period from January 2019 to December 2019 was 4.49 MT (provisional) as against 5.32 MT during the same period last year. Dispatch has decreased by 0.83 MT, with a decline of 15.6 % as compared to same period last year.

**Distribution of coal to small, medium and other consumers**

For supply of coal to small, medium and other consumers (whose requirement is less than 10,000 tons per annum), 8 MT have been earmarked by CIL for allocation to agencies nominated by the State Govts./ Union Territories. Till 31st December’ 2019, 13 states have sent their nomination for 14 State agencies for the year 2019-20 of which 10 state agencies have signed FSA for an aggregate quantity of 2.63 MT.

**E-Auction of coal**

**Coal India Limited**

Coal is being regularly sold through electronic auction (e-auction) route at a market driven price in accordance to the NCDP provision. Currently CIL is conducting e-auction under different schemes as below:

- Spot E-Auction: Under this scheme, any Indian buyer can procure coal through a consumer-friendly single window in a simple and transparent manner for their own consumption or for trading. Spot E-auction is in operation from November 2007.
- Special Spot E-Auction: Special Spot E-Auction was introduced during 2015-16. Any Indian buyer including traders can buy coal under Special Spot E-Auction with longer validity period of lifting. During FY 2019-20 for the period April 2019-December 2019 about 0.7 MT of raw coal was allocated to the successful bidders under this scheme.
- Special forward E-Auction: Special forward E-Auction was introduced in the year 2015-16 to make the coal available to the power producers with flexible period of lifting.
- Exclusive E-Auction: Exclusive E-Auction was introduced in the year 2015-16 for non-power consumers including CPP with flexible period of lifting.
Auctions held during FY 2018-19 & 2019-20 (up to December’19) are as below:

<table>
<thead>
<tr>
<th>Auction</th>
<th>Spot</th>
<th>Special Forward for Power</th>
<th>Exclusive for Non-power</th>
<th>Special Spot</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Qty allocated (in MT)</td>
<td>21.2</td>
<td>17.5</td>
<td>6.8</td>
<td>0.7</td>
<td>46.2</td>
</tr>
<tr>
<td>Total Notified Value (in Crore ₹)</td>
<td>3499.5</td>
<td>2490.8</td>
<td>1261.9</td>
<td>70.6</td>
<td>7322.8</td>
</tr>
<tr>
<td>Total Booking Value (in Crore ₹)</td>
<td>5817.9</td>
<td>3288.9</td>
<td>1686.5</td>
<td>91.9</td>
<td>10885.1</td>
</tr>
<tr>
<td>Increase over Notified Value (in %)</td>
<td>66</td>
<td>32</td>
<td>34</td>
<td>30</td>
<td>49</td>
</tr>
<tr>
<td><strong>2018-19</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total Qty allocated (in MT)</td>
<td>34.3</td>
<td>30.5</td>
<td>11.4</td>
<td>3.6</td>
<td>79.8</td>
</tr>
<tr>
<td>Total Notified Value (in Crore ₹)</td>
<td>5146.3</td>
<td>4170.8</td>
<td>1898.4</td>
<td>403.6</td>
<td>11619.2</td>
</tr>
<tr>
<td>Total Booking Value (in Crore ₹)</td>
<td>9902.3</td>
<td>6997.9</td>
<td>3007.4</td>
<td>694.7</td>
<td>20602.1</td>
</tr>
<tr>
<td>Increase over Notified Value (in %)</td>
<td>92</td>
<td>68</td>
<td>58</td>
<td>72</td>
<td>77</td>
</tr>
</tbody>
</table>

**Special auction for Power**

Special Forward E-Auction for Power producers was launched in 2015-16 and is being continued for making the coal available to the power consumers who are in need of coal. During FY 2019-20 (April’19-December’19) a quantity about 17.5 MT of raw coal was allocated to the power producers.

**Exclusive auction for Non-Power**

Exclusive E-Auction Scheme for Non-Power consumer was launched in 2015-16 to make coal available to non-power consumer including CPPs is being continued. During FY 2019-20 (April’19-December’19) a quantity of 6.8 MT of raw coal was allocated to non-power sector consumers.

**E-Auction of coal in SCCL**

SCCL started spot e-auction of coal in December, 2007. Spot Auctions held during 2018-19 and 2019-20 (up to Dec’19) are as below:

<table>
<thead>
<tr>
<th>Spot e-Auction</th>
<th>2018-19</th>
<th>2019-20 (up to Dec’19)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Qty allocated (in MT)</td>
<td>9.95</td>
<td>9.85</td>
</tr>
<tr>
<td>Total Notified Value (in Crore ₹)</td>
<td>474.80</td>
<td>244.48</td>
</tr>
<tr>
<td>Total Booking Value (in Crore ₹)</td>
<td>565.37</td>
<td>289.68</td>
</tr>
<tr>
<td>Increase over Notified Value (in %)</td>
<td>30</td>
<td>20</td>
</tr>
</tbody>
</table>

**MODES OF TRANSPORT**

Important modes of transport of coal and coal product in CIL are Railways, Road, Merry-Go-Round Systems (MGR), Conveyor Belts and the Multi Modal Rail-cum-Sea Route. The share of these modes of transport in the total movement of coal and coal product during January 2019 to December 2019 has been approximately as under:
### Progress Made Under New Coal Distribution Policy (NCDP)

Under this policy each sector / consumers have been treated on merit, keeping in view the regulatory provisions applicable thereto.

For Power, cement and sponge iron sector the Standing Linkage Committee (long term) is authorized to recommend their coal requirement. On the basis of such recommendation a Committee on letter of Assurance (LOA) at CIL issues coal company wise allocation of quantity. Coal companies issue letter of Assurance with specified milestones to be achieved by the LoA holder within stipulated period to become entitled for executing Fuel Supply Agreements (FSA) for coal supply. Supply of Coal to all existing valid consumers has been brought under legally enforceable Fuel Supply Agreements.

Progress made by CIL in implementing the provisions of NCDP is summarized below:

#### Coal India Limited

a. Linkage system was replaced with a system of Fuel Supply Agreement (FSA). After implementation of NCDP in October 2007, FSAs of existing consumers were signed in 2008. Tenure of these FSAs being 5 years, many of the FSAs expired. Some of them are renewed or in the process of renewal. Out of these FSAs, as on date, about 43 FSAs are existing with coal companies in categories other than Power Utilities.

### Sector-wise position of Non-Power FSAs

<table>
<thead>
<tr>
<th>Sector</th>
<th>Existing (Pre NCDP)</th>
<th>Through LOA route</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>CPP</td>
<td>4</td>
<td>16</td>
<td>20</td>
</tr>
<tr>
<td>Sponge Iron</td>
<td>1</td>
<td>14</td>
<td>15</td>
</tr>
<tr>
<td>Cement</td>
<td>2</td>
<td>4</td>
<td>6</td>
</tr>
<tr>
<td>Others</td>
<td>2</td>
<td>-</td>
<td>2</td>
</tr>
<tr>
<td><strong>Total CIL</strong></td>
<td><strong>9</strong></td>
<td><strong>34</strong></td>
<td><strong>43</strong></td>
</tr>
</tbody>
</table>

b. No new FSAs for non-power sector under NCDP executed in the calendar year 2017 however FSA executed under the auction of coal linkages/LoAs to non-regulated sector has been given separately.

c. For Power Sectors, 121 FSAs under pre-2009 TPPs are valid as on date.

d. As per the Presidential Directives dated 17.07.2013, CIL was to sign FSAs with 173 TPPs for the aggregated capacity of 78535 MW, out of these, 24 cases were covered under Tapering Linkages ceases to exist as per MOC OM dated 30.06.2015. For 3 cases FSAs could not be signed for the reasons not attributable to CIL. In 2 cases, the category of the units have been changed from CPP to IPP and 1 case have been transferred to SCCL, therefore, as on date, the number of valid FSAs for Post-NCDP Power plants are 143, having an aggregated capacity of 66625 MW for the Annual Contracted Quantity (ACQ) of 227 MT.

e. No New FSAs has been signed under the Presidential Directive dated 17.07.2013. However due to submission of PPA, the FSA quantity has been increased to 227 MT from the earlier quantity of 218.55 MT

#### New Policies Further To NCDP

##### Linkage Auction for Non-Regulated Sector Consumers

CIL has been conducting Auction of Coal Linkages for Sponge Iron, Cement, CPP, ‘Others (non-coking)’, Steel (coking) and ‘Others (coking)’ sub-sectors under Non-Regulated Sector in accordance with the policy guidelines dated 15.02.2016 issued by Ministry of Coal. Four tranches of auction have already been concluded whereby about 80.5 MTPA of annual coal linkages...
have been booked at an average premium of about 20% over non-power notified price. The Tranche-V is under way, where auctions of Steel (coking) & Sponge Iron subsectors have already been completed. In the auction for Steel (coking) subsector, coking coal linkage to the tune of 1.3 MTPA was booked by a Steel sector consumer with no premium. The sponge Iron subsector linkage auction witnessed a booking of 4.19 MTPA coal linkage resulting in about 19.2% average premium over non power notified price.

The performance report is placed below.

<table>
<thead>
<tr>
<th>Sub-sector</th>
<th>Tranche - I (Quantity booked (MTPA))</th>
<th>Tranche - II (Quantity booked (MTPA))</th>
<th>Tranche - III (Quantity booked (MTPA))</th>
<th>Tranche - IV (Quantity booked (MTPA))</th>
<th>Tranche – I- IV (Quantity booked (MTPA))</th>
<th>% gain over notified price for non-power</th>
<th>Tranche - V (Quantity booked (MTPA))</th>
<th>% gain over notified price for non-power</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sponge Iron</td>
<td>2.05</td>
<td>4.29</td>
<td>2.54</td>
<td>6.37</td>
<td>15.25</td>
<td>19.8</td>
<td>4.19</td>
<td>19.2</td>
</tr>
<tr>
<td>Cement</td>
<td>0.68</td>
<td>0.77</td>
<td>0.12</td>
<td>4.26</td>
<td>5.83</td>
<td>19.2</td>
<td>To be conducted</td>
<td></td>
</tr>
<tr>
<td>CPP</td>
<td>18.07</td>
<td>8.18</td>
<td>4.59</td>
<td>15.90</td>
<td>46.75</td>
<td>18.7</td>
<td>To be conducted</td>
<td></td>
</tr>
<tr>
<td>Others</td>
<td>1.34</td>
<td>1.27</td>
<td>0.67</td>
<td>6.00</td>
<td>9.28</td>
<td>34.2</td>
<td>To be conducted</td>
<td></td>
</tr>
<tr>
<td>Steel (coking)</td>
<td>--</td>
<td>0.22</td>
<td>0.00</td>
<td>0.65</td>
<td>0.87</td>
<td>0.1</td>
<td>1.30</td>
<td>0.0</td>
</tr>
<tr>
<td>Others (coking)</td>
<td>--</td>
<td>0.04</td>
<td>0.36</td>
<td>2.17</td>
<td>2.57</td>
<td>16.1</td>
<td>To be conducted</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>22.14</td>
<td>14.76</td>
<td>8.28</td>
<td>35.35</td>
<td>80.53</td>
<td>20.2</td>
<td>5.49</td>
<td>10.4</td>
</tr>
</tbody>
</table>

**Coal linkages to power sector under SHAKTI**

On 22.05.2017, Ministry of Coal pronounced the SHAKTI [Scheme for Harnessing and Allocating Koyala (Coal) Transparently in India] policy for allocation of future coal linkages in a transparent manner to power plants who became stressed due to want of long term coal linkages.

On 25.03.2019, MoC communicated the approval of the Government on the recommendations of Group of Ministers (GOM) constituted to examine the report of a High Level Empowered Committee (HLEC). Subsequently, an amendment of SHAKTI policy was issued by MoC on 25 March 2019.

The status of implementation of SHAKTI is given below:

- **A (i):** Clearance has been given for signing of FSA for 10 power plants with a total capacity of 6,550 MW.
- **B (i):** 23 Thermal Power Plants (TPPs) have been granted linkage for a total capacity of 25340 MW.
- **B (ii):** First round of linkage auction under B(ii) of SHAKTI policy was conducted in September, 2017, whereby 27.18 MT of annual coal linkage was booked by ten successful bidders for about 9,045 MW capacity. Second round of B (ii) auction has been concluded by CIL on 24.05.2019. During this second round quantity of 2.97 MT of annual linkage has been booked by eight bidders for about 874.9 MW capacity. Based on the recommendations of Inter-Ministerial Committee (IMC) meetings, Power Finance Corporation Limited (PFCL) has been directed to conduct the future rounds of auction under para B (ii).
- **B (iii):** CIL is also in the process of conducting coal linkage auction under para B (iii) of SHAKTI policy dated 22.05.2017 as well as the linkage auction under para B(viii) (a) of SHAKTI policy amendment dated 25.03.2019 issued by MoC.
- **B (iv):** Coal linkage granted from CIL for the States of Gujarat, Uttar Pradesh and Madhya Pradesh for a capacity of 4000 MW, 1600 MW and 2640 MW respectively.
- **B (v):** Coal linkage granted from CIL for a capacity of 2500 MW.
IMPORT SUBSTITUTION

Ministry of Coal has engaged with other Ministries to discuss the way forward for reducing coal imports by various sectors. Ministry of Power (MoP), Ministry of Steel and DPIIT were requested to provide annual demand projections for domestic coal and to jointly work out strategy with Ministry of Coal for import reduction.

An action plan for import substitution was worked out in a sub-group meeting on 19.09.2018. As per this plan, coal is being lifted by power houses from Coal India Limited (CIL). In 2019-20, CIL has offered 3.375 MT Coal to the Power plants under Import Substitution.

For the financial year 2019-20, MoP has projected domestic coal demand of 530 MT from CIL, 54 MT from Singareni Collieries Company Ltd (SCCL) and 50 MT from Captive coal blocks. MoP has also projected that 47 MT coal is likely to be imported by the power plants that are based on imported coal.

Coal Consumers Council

Regional coal consumer’s councils were set up in each coal company for monitoring and redressing consumer’s grievances/complaints. Moreover, National Coal Consumer’s Council was set up at CIL (HQ) to act as the apex body in such matters. In case reply on complaints is not received within one month or the complainant is not satisfied with reply provided by the coal company, the matter may be referred to National Coal Consumer’s Council. These councils were lastly reconstituted during 2010-11.

In keeping with technological innovations and newer methods of communication, On-line Grievance Management System (OLGMS) was introduced by CIL some years back to facilitate e-filing of complaints. A customized web-site for such purpose was developed. Subsequently, CIL adapted Centralized Public Grievance Redress and Monitoring System (CPGRAMS) which was designed and developed by National Informatics Centre (NIC). PG Portal of CPGRAMS is used as single window for receipt and disposal of grievances in CIL & its subsidiaries. The system generates SMS alert for nodal officers whenever a complaint relating to their department is received. Action is taken to redress the grievance without delay and communication is made to complainant with appropriate response.

In case complaints/ grievance relate to coal companies, Nodal officer forwards the same to respective coal companies for their comments/ action. Grievances/ complaints received on-line are thus being dealt and disposed of expeditiously and efficiently under the above system.
CHAPTER 8

RESEARCH & DEVELOPMENT

ANNUAL REPORT 2019-20
RESEARCH & DEVELOPMENT

Research Projects Under S&T Grant of Ministry of Coal

The R&D activities in Coal sector are administered through an apex body namely, Standing Scientific Research Committee (SSRC) with Secretary (Coal) as its Chairman. The other members of this apex body include Chairman CIL, CMDs of CMPDI, SCCL and NLCIL, Director General (DG) of Directorate General of Mines Safety (DGMS), Directors of concerned CSIR Laboratories, Representatives from Department of S&T (DST), NITI Aayog and Educational Institutions, etc. The main functions of SSRC are to plan, programme, budget and oversee the implementation of research projects. The SSRC is assisted by a Technical Sub-Committee headed by CMD, CMPDI.

The R&D projects are covered under 5 thematic areas viz. improvement in production, productivity & safety in coal mines, coal beneficiation, coal utilization, protection of environment & ecology and clean coal technology.

CMPDI acts as the Nodal Agency for co-ordination of research activities in the coal sector, which involves identification of ‘Thrust Areas’ for research activities, identification of agencies which can take up the research work in the identified fields, processing the proposals for Government approval, preparation of budget estimates, disbursement of fund, monitoring the progress of implementation of the projects, etc.

A total of 392 S&T projects have been taken up till 31.12.2019 and 322 S&T projects have been completed till 31.12.2019.

PHYSICAL PERFORMANCE

The status of Coal S&T projects during 2019-20 is as under:

<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>Parameters</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Projects on-going as on 01.04.2019</td>
<td>13</td>
</tr>
<tr>
<td>2</td>
<td>Projects completed during 2019-20</td>
<td>1+3*</td>
</tr>
<tr>
<td></td>
<td>(* Expected to be completed by March, 2020)</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Projects on-going as on 01.04.2020</td>
<td>13</td>
</tr>
<tr>
<td></td>
<td>(Considering expected approval of 4 projects &amp; completion of 4 projects)</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Projects approved by SSRC during 2019-20</td>
<td>4*</td>
</tr>
<tr>
<td></td>
<td>(* Expected to be approved by March, 2020)</td>
<td></td>
</tr>
</tbody>
</table>

Financial status

Budget provisions vis-à-vis actual fund disbursement during the period are given below:

<table>
<thead>
<tr>
<th></th>
<th>2018-19</th>
<th>2019-20</th>
</tr>
</thead>
<tbody>
<tr>
<td>RE</td>
<td></td>
<td></td>
</tr>
<tr>
<td>RE</td>
<td>Fund received from MoC</td>
<td>Actual</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>25.00</td>
<td>24.19</td>
<td>24.22</td>
</tr>
</tbody>
</table>
Status of Research Projects under CIL R&D

For in-house R&D work of CIL, an R&D Board headed by Chairman, CIL is also functioning. CMPDI acts as the Nodal Agency for processing the proposals for CIL approval, preparation of budget estimates, disbursement of fund, monitoring the progress of implementation of the projects, etc.

In order to enhance R&D base in command areas of CIL, the CIL Board in its meeting held on 24th March 2008 had delegated substantial powers to CIL R&D Board and the Apex Committee of the R&D Board. The Apex Committee is empowered to sanction individual R&D project up to ₹ 5.0 Crore value with a limit of ₹ 25.0 Crore per annum considering all the projects together, whereas CIL R&D Board is empowered to sanction individual R&D project up to ₹ 50.0 Crore.

So far, 92 CIL R&D projects have been taken up till 31.12.2019, out of which 62 projects have been completed till 31.12.2019.

PHYSICAL PERFORMANCE

The status of CIL R&D Projects during 2019-20 is as follows:

<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>Parameters</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Projects on-going as on 01.04.2019</td>
<td>21</td>
</tr>
<tr>
<td>3</td>
<td>Projects completed during 2019-20</td>
<td>4 + 1* (*Expected to be completed by March, 2020)</td>
</tr>
<tr>
<td>4</td>
<td>Projects on-going as on 01.04.2020 (Considering Completion of 1 project)</td>
<td>18</td>
</tr>
</tbody>
</table>

FINANCIAL STATUS

Budget provisions vis-à-vis actual fund disbursement during the period are given below:

<table>
<thead>
<tr>
<th>Year</th>
<th>RE Actual</th>
<th>2019-20 Actual</th>
</tr>
</thead>
<tbody>
<tr>
<td>2018-19</td>
<td>30.00</td>
<td>13.57</td>
</tr>
</tbody>
</table>

Following CIL R&D project have been completed during 2019-20 till 31.12.2019. Their project completion report is to be accepted by R&D Board of CIL.

1. Assessment of applicability and performance of Ground based Interferometry Synthetic Aperture Radar (GbInSAR) in safety zoning of surface mining slopes Implementing agencies: IIT, Kharagpur and ECL, Sanctoria

2. Seismic data processing, interpretation and identification of thin coal seams using Inverse Continuous Wavelet Transform Deconvolution (ICWT-Decon) for resource estimation.

Implementing agencies: Gujarat Energy Research and Management Institute (GERMI), Gandhi Nagar and CMPDI, Ranchi

3. Dry Beneficiation of High Ash Indian Thermal Coal.

Implementing agency(s): National Metallurgical Laboratory (NML), Jamshedpur, CMPDI, Ranchi and MCL, Sambalpur

4. An integrated geo-physical approach for tectonic study in main coal basin of Singrauli Coalfields (CF) using 3-D inverse modelling of Gravity, Magnetic and AMT data.

Implementing agency(s): IIT-ISM, Dhanbad and CMPDI, Ranchi.

Research & Development in SCCL:

Various scientific institutions such as CIMFR, NIRM, CSIRO-Australia, IIT (BHU), IIT (ISM), IITK, NITK, and other reputed scientific institutions are involved to introduce the various modern and advanced mining technologies in SCCL to improve safety and productivity in coal mining operations.

The following various scientific studies are being conducted by the reputed scientific agencies:

- Design & monitoring for development and extraction of panels by various underground technologies, support design, design of opencast benches & dumps, monitoring of underground environment and prevention of spontaneous heating.

- As on now, 44 scientific studies are on hand in different UG mines and OC Projects by various scientific institutions at a cost of approximately ₹ 5.30 Crores.
Under Coal S&T and DST project, following R&D studies are in progress:

- Design and Stability of pillars/Arrays of pillar for different Mining methods in coal mine workings. Models for simulation of pillar behaviour are in progress (approximate cost of the project is ₹ 562 lakhs).
- Hybrid Presrix process for simultaneous remediation of acid mine drainage (AMD) and recovery of Individual metal sulphides (approximate cost of the project is ₹ 74 lakhs).
- Microbial recovery of biogenic methane from coal washery rejects with CO2 sequestration using novel hybrid geo-photo bioreactor and reclamation of the site (DST Project-approximate cost ₹ 102 lakhs).

RESEARCH & DEVELOPMENT PROJECTS IN NLCIL

Centre for Applied Research & Development (CARD) is the in house R&D Centre of NLC India Limited and has been recognized by the Department of Science &Technology. CARD is also carrying out various activities related to environmental measures like monitoring of air, water and soils dump. CARD is rendering analytical services to production / service units of NLCIL and other outside industries with its well-established analytical facilities. CARD has been granted NABL accreditation by National Accreditation Board for Testing and Calibration Laboratories (NABL) ,is based on the international standard ISO/IEC 17025:2005.

ON GOING RESEARCH & DEVELOPMENT PROJECTS

I. Electronification of Ground water Control & conveyor systems in Mines.

Implementing Agencies : NLC India Limited & National Institute of Technology / Tiruchirappalli

Total Approved Cost : ₹179.53 lakhs, with duration of 18 Months

NLCIL is operating three mines deploying around 130 KMs of conveyers and 120 KMs of Ground water control pipe lines. As the area of mine is vast expanding and, it has become a necessity to monitor and control the full network electronically. Hence it is proposed to take up a project. Procurement action has been initiated. The project is jointly taken up with NIT Trichy.

Proactive input for Ground water control system will enhance Mines production. Automation of Mining conveyor system will reduce break-downs. The sanction letter for the project has been received from MoC for fund allotment from CMPDI. The project start date is 01.01.2018. NITT has developed a Laboratory set up at NITT for the conveyor set up & GWC pumping modelling. The real time pumping data has been taken up at NLCIL mine for the analysis. Installation of GWC system completed on 30.08.19. For Conveyor system, procurement of equipment is in progress.

II. Use of Overburden Clay as alternate for coarse aggregate (OB to sand)

Implementing Agencies: NLC India Limited & Indian Institute of Technology, Madras.

Total Approved Cost : ₹173.00 lakhs , with a duration of 36 Months

The overburden formation is being removed and dumped during excavation. The overburden materials contain about 30 to 40% of sand materials. It is proposed to explore the possibilities for extraction of sand from the overburden materials which can replace the river sand and also provides scope for additional revenue. A project proposal has been submitted to MoM and sanctioned on 30.10.2018 the project has been jointly taken up with IITM. OB samples were collected from NLCIL Mines and preliminary lab studies conducted. Pilot plant equipment for extraction of sand from over burden installed at CARD.OB samples taken from mines and about seventeen trials conducted. Processed sand testing is in progress at IITM. Further sampling, trials in progress.

III. IN HOUSE RESEARCH PROJECTS

- Drying of lignite using solar energy.
- Humic Acid - on farm demonstration studies and promoting Organic farming in Agriculture applications.
- Solar Cold Storage.
- Development of pilot scale Floating Solar system.
- Studies on Zeolite based catalyst for mitigation of exhaust gas pollution.
- Studies on Aqua culture development in Neyveli with Humic products.
- Pilot Plant studies on Beneficiation of Iron recovered from bottom slag.
- Development of mobile EV based air quality modelling for NLCIL.
- Development of alternative materials for pebbles using waste materials.
- Formation of Innovation –Incubation centre.
- Lignite to Diesel.
CHAPTER 9

PROMOTIONAL AND DETAILED EXPLORATION

ANNUAL REPORT 2019-20
PROMOTIONAL AND DETAILED EXPLORATION

Promotional Exploration

Mineral Exploration Corporation Limited (MECL), State Governments and CMPDI are conducting Promotional Exploration under the Ministry of Coal’s Plan scheme of “Promotional Exploration for Coal & Lignite”. The summary of Promotional Drilling carried out in coal & lignite during the period 2016-17, 2017-18, 2018-19 and 2019-20 (April’19-Dec’19 Actual and Jan’20-Mar’20 Projected) is given below:

(Drilling in Metre)

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Drilling in CIL Command Area</td>
<td>49043</td>
<td>92787</td>
<td>91238</td>
<td>55202</td>
<td>85988</td>
<td>34000</td>
</tr>
<tr>
<td>Drilling in SCCL Command Area</td>
<td>0</td>
<td>0</td>
<td>4747</td>
<td>9075</td>
<td>13009</td>
<td>500</td>
</tr>
<tr>
<td>Drilling in Lignite Areas</td>
<td>55624</td>
<td>41894</td>
<td>43023</td>
<td>23983</td>
<td>34489</td>
<td>12500</td>
</tr>
<tr>
<td>Total</td>
<td>104567</td>
<td>134681</td>
<td>139008</td>
<td>88259</td>
<td>133486</td>
<td>47000</td>
</tr>
<tr>
<td>Growth%</td>
<td>-6%</td>
<td>28%</td>
<td>3%</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Achievement of target depends upon timely availability of forest clearance to take up drilling in forest areas, local support and occurrence of lignite in identified blocks.

Detailed Drilling in Non-CIL Blocks

CMPDI carries on Detailed Exploration in CIL and Non-CIL blocks as per strict timelines to bring resources falling in indicated and inferred category into the measured (proven) category. The exploratory drilling in non-CIL/captive Mining blocks is taken up under the Ministry of Coal’s Plan scheme of “Detailed Drilling in Non-CIL Blocks”.

The details of actual drilling in Non-CIL/Captive Mining Blocks during the period 2016-17, 2017-18, 2018-19 and 2019-20 (Apr’19–Dec’19) and projected achievement for 2019-20 (Jan.’20–Mar.’20) are given below:

(Drilling in Metre)

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>CMPDI (Departmental)</td>
<td>57663</td>
<td>113228</td>
<td>140683</td>
<td>110882</td>
<td>145624</td>
<td>140000</td>
</tr>
<tr>
<td>Outsourcing by CMPDI</td>
<td>251044</td>
<td>372661</td>
<td>342926</td>
<td>312316</td>
<td>406126</td>
<td>160000</td>
</tr>
<tr>
<td>Total</td>
<td>308070</td>
<td>485889</td>
<td>483609</td>
<td>423198</td>
<td>551750</td>
<td>300000</td>
</tr>
<tr>
<td>Growth %</td>
<td>7%</td>
<td>57%</td>
<td>0%</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
CMPDI has substantially improved its capacity of drilling during the XI & XII plan period. As against the achievement of 2.09 lakh metre in 2007-08, CMPDI achieved 4.98 lakh metre in 2011-12, 13.60 lakh metre in 2018-19 and 8.90 lakh metre in 2019-20 upto Dec’19 (Projected drilling from Apr.’19-Mar.’20 is 14.00 lakh metre) through Departmental resources and outsourcing.

For capacity expansion through modernization of departmental drills, 39 new Mechanical drills & 26 Hydrostatic drills have been procured since 2008-09, out of which 15 have been deployed as additional drills and 33 as replacement drills. CMPDI has also replaced 38 mud pumps and 74 trucks in last nine years.

To meet the increased work load, recruitment has been taken up through campus interviews/open examinations. 259 Geologists, 34 Geo-physicists and 20 Mechanical Engineers as drilling Engineers have joined CMPDI since 2008-09. About 1240 non-executive staffs have also been inducted for exploration work. Out of this, 45 Geologists, 7 Geo-physicists, 5 Mechanical Engineers & 14 non-executives have resigned.

During 2019-20 (April’19 to December’2019), a total of about 3.21 lakh metre drilling was carried out through Departmental resources, about 5.69 lakh metre drilling was carried out through outsourcing, out of which 2.42 lakh metre drilling was carried out through tendering & 3.26 lakh metre drilling through MoU with MECL.

### Drilling Performance in 2019-20:

CMPDI deployed its departmental resources for detailed exploration of CIL/Non-CIL blocks whereas State Govt. of Odisha deployed resources in CIL blocks only. In addition, seven other contractual agencies have also deployed resources for detailed drilling/exploration in CIL/Non-CIL blocks. A total of 130 to 150 drills were deployed in 2019-20, out of which, 71 were departmental drills.

Apart from the above, CMPDI continued the technical supervision of Promotional (Regional) Exploration work undertaken by MECL in coal Sector in 14 blocks, DGM (Nagaland) in 1 block & Outsourced Agencies in 2 blocks. CMPDI has also taken up promotional drilling in 2 blocks. Promotional Exploration work was undertaken by MECL in Lignite Sector in 6 blocks. A total of about 0.88 lakh metre of Promotional (Regional) drilling was carried out in Coal (0.64 lakh metre) & Lignite (0.24 lakh metre) during 2019-20 (April’19 to December’2019).

In 2019-20, CMPDI and its contractual agencies took up exploratory drilling in 114 blocks/Mines of 19 coalfields situated in 14 States. Out of 114 blocks/mines, Departmental drills of CMPDI took up exploratory drilling in 57 blocks/mines, whereas, contractual agencies took up exploratory drilling in 57 blocks.

The overall performance of exploratory drilling during 2019-20 (upto Dec.’19) is given below:

<table>
<thead>
<tr>
<th>Agency</th>
<th>ACHIEVEMENT DURING APR.’19-DEC.’19 (lakh metre)</th>
<th>Achieved Apr’18-Dec’18</th>
<th>Growth (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Target</td>
<td>Achiev.</td>
<td>Achiev. (%)</td>
</tr>
<tr>
<td>I. Departmental (CIL, Consultancy &amp; Non-CIL)</td>
<td>3.562</td>
<td>3.211</td>
<td>90%</td>
</tr>
<tr>
<td>St. Govts. (CIL)</td>
<td>0.006</td>
<td>0.013</td>
<td>237%</td>
</tr>
<tr>
<td>MECL-MOU(CIL/Non-CIL)</td>
<td>2.619</td>
<td>3.257</td>
<td>124%</td>
</tr>
<tr>
<td>Tendering(CIL/Non-CIL)</td>
<td>3.133</td>
<td>2.421</td>
<td>77%</td>
</tr>
<tr>
<td><strong>Sub-Total Outsourcing:</strong></td>
<td><strong>5.757</strong></td>
<td><strong>5.691</strong></td>
<td><strong>99%</strong></td>
</tr>
<tr>
<td><strong>Grand Total</strong></td>
<td><strong>9.319</strong></td>
<td><strong>8.902</strong></td>
<td><strong>96%</strong></td>
</tr>
</tbody>
</table>
In 2019-20 (upto Dec.’19), CMPDI achieved 96% of its overall drilling targets. The shortfall is mainly due to local law & order problem, pending forest permission & no bid/ high rate in tendering. MECL and CMPDI could not achieve the targets of Promotional (Regional) drilling due to less deployment of drills because of priority in detailed drilling and DGMs (NER) could not deploy its rigs due to adverse law & order condition, forest cover & special tenancy Act.

**Progress of 2D & 3D seismic survey**

CMPDI has taken up 2D seismic survey on large scale and data acquisition with depth range about 1000 metre. Data acquisition for North of Piparwar PH- II block (20.68 sq km), NKCF with Paradigm Software (High speed seismic data processing) has been completed and Interim Report submitted during 2019-20. In addition to this, data acquisition in 2 blocks i.e. Northern Part of North of Arkhapal, Talcher CF &Nigwani-Bakeli-A, Sohagpur CF have been taken up during 2019-20. Tentatively, 29 blocks have been identified for undertaking detailed exploration of Coal & Lignite by integrating 2D/3D seismic survey along with drilling covering an area of about 666 sq km in G1/G2 level of exploration with borehole density of 2-4 boreholes/sq km in 2020-21 & 2021-22.

A Workshop on “Modern Technologies for Coal/Lignite Sector to expedite current pace of Exploration” was organised by CMPDI at Scope Convention Center, New Delhi under the aegis of Ministry of Coal in which a number of papers were presented by experts for use of seismic survey for Coal/Lignite exploration by CMPDI, MECL, ONGC & other stakeholders. After detailed deliberations with all the experts & stakeholders a roadmap was prepared and submitted to MoC for implementation of modern technologies in Coal/Lignite exploration.

A project has been taken up in association with NGRI, Hyderabad on “3-D Seismic survey for coal in Belpahar sector of IB valley Coalfield”. The primary objective is to identify Lay and disposition of coal seams in the surveyed area. The outcome of project will help in evaluating 3-D seismic technology for coal exploration in Indian scenario and its implementation in CMPDI. The Interim Report submitted and vetting comments submitted to NGRI for finalization of Report.

**Geological Reports**

In 2019-20(upto Dec.’19), 12 Geological Reports were prepared on the basis of detailed exploration conducted in previous years. About 6.428 Billion Tonnes of additional coal resources under Measured (Proven) category were added. About 14 GRsis expected to be submitted during Jan.’20-Mar.’20 with estimated resource of about 4.0 billion tonnes.

**Geophysical Studies**

HRSS Survey has been carried out in the Dispose of Sakhigopal ‘A’ block, Talcher Coalfield, Bartara block in Sohagpur Coalfield and the survey is under progress in North of Piparwar Phase-II block, N.K. area. A sum total of 80 line km. survey has been carried out. Vibroseis imported from M/s SERCEL, France was commissioned
and deployed in North of Piparwar Phase-II block. Interim report submitted.

Disposal of 24 Km of disused radiation source have been completed with M/s AFRB, BARC, Mumbai. All the disused radiation sources were accumulated for the last 30 years. Two lakh meter of Geophysical logging were carried out departmentally especially for complimenting non-coring drilling.

**Hydrogeological Studies**

Hydrogeological studies of 15 numbers of mining projects/mines were taken up for preparation of ‘Groundwater Clearance Application’ for CGWA approval and EMP Clearance. CMPDI is carrying out groundwater monitoring of MOEF cleared projects (74 nos. of mines of WCL area and 15 nos. Cluster of Mines in BCCL area). Water level monitoring in other areas of ECL, CCL, SECL, NCL and MCL are also in progress. Total 90 nos. of Hydrogeological studies on GR/PR/Piezometers and others have been completed.

Hydrogeological studies in 5 projects have been carried out for water supply arrangements to mines, colony and villages.

**COAL RESOURCES**

**Inventory of Geological Resources of coal in India**

As a result of exploration carried up to the maximum depth of 1200m by the GSI, CMPDI, SCCL and MECL, a cumulative total of 326.496 Billion tonnes of geological resources of coal have so far been estimated in the country as on 01.04.2019. The details of State-wise geological resources of coal are given below:

**STATEWISE GEOLOGICAL RESOURCES OF COAL IN INDIA AS ON 01.04.2019**

<table>
<thead>
<tr>
<th>STATE</th>
<th>Measured (Proved)</th>
<th>Indicated (Exploration)</th>
<th>Inferred (Mapping)</th>
<th>Inferred</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>WEST BENGAL</td>
<td>14219</td>
<td>12847</td>
<td>4624</td>
<td></td>
<td>31690</td>
</tr>
<tr>
<td>BIHAR</td>
<td>310</td>
<td>1513</td>
<td>11</td>
<td></td>
<td>1834</td>
</tr>
<tr>
<td>JHARKHAND</td>
<td>48032</td>
<td>30400</td>
<td>6074</td>
<td></td>
<td>84506</td>
</tr>
<tr>
<td>MADHYA PRADESH</td>
<td>12182</td>
<td>12736</td>
<td>3875</td>
<td></td>
<td>28793</td>
</tr>
<tr>
<td>CHHATTISGARH</td>
<td>21446</td>
<td>36260</td>
<td>2202</td>
<td></td>
<td>59908</td>
</tr>
<tr>
<td>UTTAR PRADESH</td>
<td>884</td>
<td>178</td>
<td>0</td>
<td></td>
<td>1062</td>
</tr>
<tr>
<td>MAHARASHTRA</td>
<td>7573</td>
<td>3257</td>
<td>1847</td>
<td></td>
<td>12677</td>
</tr>
<tr>
<td>ODISHA</td>
<td>39654</td>
<td>33473</td>
<td>7713</td>
<td></td>
<td>80840</td>
</tr>
<tr>
<td>ANDHRA PRADESH</td>
<td>97</td>
<td>1078</td>
<td>432</td>
<td></td>
<td>1607</td>
</tr>
<tr>
<td>TELANGANA</td>
<td>10622</td>
<td>8565</td>
<td>2652</td>
<td></td>
<td>21839</td>
</tr>
<tr>
<td>SIKKIM</td>
<td>0</td>
<td>58</td>
<td>43</td>
<td></td>
<td>101</td>
</tr>
</tbody>
</table>
PROMOTIONAL AND DETAILED EXPLORATION

STATE Category-wise Coal Resources (in Million Tonnes)

<table>
<thead>
<tr>
<th>State</th>
<th>Measured (Proved)</th>
<th>Indicated (Exploration)</th>
<th>Inferred (Mapping)</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>ASSAM</td>
<td>465</td>
<td>57</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>ARUNACHAL PRADESH</td>
<td>31</td>
<td>40</td>
<td>13</td>
<td>6</td>
</tr>
<tr>
<td>MEGHALYA</td>
<td>89</td>
<td>17</td>
<td>28</td>
<td>443</td>
</tr>
<tr>
<td>NAGALAND</td>
<td>9</td>
<td>22</td>
<td>118</td>
<td>298</td>
</tr>
<tr>
<td><strong>GRAND TOTAL</strong></td>
<td><strong>155614</strong></td>
<td><strong>140501</strong></td>
<td><strong>29631</strong></td>
<td><strong>750</strong></td>
</tr>
</tbody>
</table>

Source: Geological Survey of India’s Inventory of Geological Resources of Indian Coal as on 1.4.19. The inventory did not take into account the mined out reserves.

Categorization of Resources

The coal resources of India are available in older Gondwana formations of peninsular India and younger tertiary formations of north eastern region. Based on the results of Regional/Promotional Exploration, where the boreholes are normally placed 1-2 Km apart, the resources are classified into ‘Indicated’ or ‘Inferred’ category. Subsequent Detailed Exploration in selected blocks, where boreholes are less than 400 meter apart, upgrades the resources into more reliable ‘Proved’ category. The formation-wise and Category-wise coal resources of India as on 1.4.2019 are given in table below:

<table>
<thead>
<tr>
<th>Formation</th>
<th>Proved</th>
<th>Indicated</th>
<th>Inferred</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gondwana Coals</td>
<td>155021</td>
<td>140379</td>
<td>29472</td>
<td>324872</td>
</tr>
<tr>
<td>Tertiary Coals</td>
<td>594</td>
<td>121</td>
<td>909</td>
<td>1624</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>155614</strong></td>
<td><strong>140501</strong></td>
<td><strong>30381</strong></td>
<td><strong>326496</strong></td>
</tr>
</tbody>
</table>

The Type and Category-wise resources of India as on 1.4.2019 are given in table below:

<table>
<thead>
<tr>
<th>Coal Type</th>
<th>Proved</th>
<th>Indicated</th>
<th>Inferred</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prime Coking</td>
<td>4668</td>
<td>645</td>
<td>0</td>
<td>5313</td>
</tr>
<tr>
<td>Medium Coking</td>
<td>14876</td>
<td>11245</td>
<td>1863</td>
<td>27984</td>
</tr>
<tr>
<td>Semi Coking</td>
<td>519</td>
<td>995</td>
<td>193</td>
<td>1708</td>
</tr>
<tr>
<td><strong>Sub-Total of Coking</strong></td>
<td><strong>20063</strong></td>
<td><strong>12885</strong></td>
<td><strong>2056</strong></td>
<td><strong>35004</strong></td>
</tr>
<tr>
<td>Non-Coking</td>
<td>134958</td>
<td>127494</td>
<td>27416</td>
<td>289868</td>
</tr>
<tr>
<td>Tertiary Coal</td>
<td>594</td>
<td>121</td>
<td>909</td>
<td>1624</td>
</tr>
<tr>
<td><strong>Grand Total</strong></td>
<td><strong>155614</strong></td>
<td><strong>140501</strong></td>
<td><strong>30381</strong></td>
<td><strong>326496</strong></td>
</tr>
</tbody>
</table>
Exploration by SCCL

Drilling for coal exploration and achievements by SCCL, Telangana State from 2014-15 are as follows.

(In MT)

<table>
<thead>
<tr>
<th>Year</th>
<th>No. of Drills</th>
<th>Metreage Drilling (target)</th>
<th>Metreage Drilling (actual)</th>
<th>Exploration Cost (in Crores)</th>
<th>Reserves Proved (mt) G1 stage</th>
</tr>
</thead>
<tbody>
<tr>
<td>2014-15</td>
<td>31</td>
<td>1,30,000</td>
<td>1,35,306</td>
<td>55.18</td>
<td>77.27</td>
</tr>
<tr>
<td>2015-16</td>
<td>31</td>
<td>1,35,000</td>
<td>1,36,858</td>
<td>59.90</td>
<td>321.93</td>
</tr>
<tr>
<td>2016-17</td>
<td>31</td>
<td>1,40,000</td>
<td>1,51,431</td>
<td>64.91</td>
<td>273.81</td>
</tr>
<tr>
<td>2017-18</td>
<td>31</td>
<td>1,30,000</td>
<td>1,09,109</td>
<td>79.61</td>
<td>72.64</td>
</tr>
<tr>
<td>2018-19</td>
<td>25</td>
<td>1,05,000</td>
<td>99,544</td>
<td>74.64</td>
<td>147.42</td>
</tr>
<tr>
<td>2019-20</td>
<td>25</td>
<td>1,05,000</td>
<td>60,880</td>
<td>51.08 (Tentative)</td>
<td>-</td>
</tr>
<tr>
<td>Jan-Dec, 19</td>
<td>25</td>
<td>1,05,000</td>
<td>94,815.50</td>
<td>-</td>
<td>147.42</td>
</tr>
<tr>
<td>Jan-Dec, 18</td>
<td>31 (partially)</td>
<td>1,11,250</td>
<td>1,00,592</td>
<td>-</td>
<td>72.64</td>
</tr>
</tbody>
</table>

During 2019-20 (Apr-Dec, 2019), a total of 0.6088 lakh metres of drilling has been carried out in 15 blocks and also in the identified projects/mines by deploying 25 drills in the SCCL command area of Godavari Valley Coal Field.

A total of 46,693 mtr. involving 173 boreholes were Geophysically logged.

During the period under reference, 8 boreholes core data sent for Physico Mechanical Properties tests and results of 11 Bhs received. In various mines, 76 underground & 37 opencast visits carried out for geo-technical mapping, subsequently 20 geotechnical reports, 15 RMR reports and 9 ‘Q’ value reports submitted. 46 no. of Standard penetration tests (SPT) conducted for obtaining soil characteristics of proposed OB dump areas pertaining to various mines.

During the same period, in mining areas 145 piezometric wells and 339 Phreatic wells were monitored in all seasons. 94 bore well sites were identified to augment water supply. One mine water inflow assessment investigation carried out. 13 Hydrogeological environment reports for EIA/EMP submitted and 2 environmental inventory reports submitted to incorporate in GR.

Exploration activities in Penagadapa Captive Coal Block, GVCF, Telangana state completed by drilling 11 Bhs with a metreage of 4682m and Geological Report submitted on 14-12-2019.

Inventory of Geological Resources of Coal:

As on 1.4.2019, the total measured coal resources in GVCF, Telangana amount to 10,622.32 MT (331) and the Indicated & Inferred geological resources amount to 8,564.74 MT (332) and 2,651.88 MT (333) respectively. The total geological resources of coal in GVCF, Telangana state are 21,838.94 MT (as per the National Inventory of coal for the year 2018-19).

Lignite Reserves in India

Lignite reserves in India have been currently estimated at around 45758.70 million tonnes as on 01.04.2019. The state wise distribution of lignite reserves as on 01.04.2019 is as follows:
### Resource in million tonne

<table>
<thead>
<tr>
<th>State</th>
<th>Measured</th>
<th>Indicated</th>
<th>Inferred</th>
<th>Total</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pondicherry</td>
<td>0.00</td>
<td>405.61</td>
<td>11.00</td>
<td>416.61</td>
<td>0.91</td>
</tr>
<tr>
<td>Tamil Nadu</td>
<td>4340.35</td>
<td>22496.63</td>
<td>9392.85</td>
<td>36229.83</td>
<td>79.18</td>
</tr>
<tr>
<td>Rajasthan</td>
<td>1168.53</td>
<td>3029.78</td>
<td>2150.77</td>
<td>6349.08</td>
<td>13.88</td>
</tr>
<tr>
<td>Gujarat</td>
<td>1278.65</td>
<td>283.70</td>
<td>1159.70</td>
<td>2722.05</td>
<td>5.95</td>
</tr>
<tr>
<td>Jammu &amp; Kashmir</td>
<td>0.00</td>
<td>20.25</td>
<td>7.30</td>
<td>27.55</td>
<td>0.06</td>
</tr>
<tr>
<td>Kerala</td>
<td>0.00</td>
<td>0.00</td>
<td>9.65</td>
<td>9.65</td>
<td>0.02</td>
</tr>
<tr>
<td>West Bengal</td>
<td>0.00</td>
<td>1.13</td>
<td>2.80</td>
<td>3.93</td>
<td>0.01</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>6787.53</strong></td>
<td><strong>26237.1</strong></td>
<td><strong>12734.07</strong></td>
<td><strong>45758.70</strong></td>
<td><strong>100.00</strong></td>
</tr>
</tbody>
</table>

### Promotional exploration

**a) Promotional Regional Exploration:**

During the year 2019-20, a target of 35000 metres of drilling work under Promotional exploration is allotted in the states of Tamil Nadu & Rajasthan. Out of which, 30000 meters is allotted to MECL and 5000meters is allotted to NLCIL which is going to be taken up through MoU with MECL. The details of work done against the target are given below.

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Tamil Nadu</td>
<td>35000</td>
<td>-</td>
</tr>
<tr>
<td>2</td>
<td>Rajasthan</td>
<td></td>
<td>7877.90</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td><strong>35000</strong></td>
<td><strong>7877.90</strong></td>
</tr>
</tbody>
</table>

**b) Detailed exploration by NLCIL under MoC Central Sector Scheme:**

During the year 2019-20, MoC has allotted 30000 meters in RS.Mangalam block, Ramnad, Tamil Nadu to NLCIL under Central Sector Scheme of MoC. NLCIL has entered into MoU with MECL during November-2019 for taking up this detailed exploration work.

**c) Detailed Exploration under NMET Scheme (MoM):**

During the year 2019-20, a target of 25000 mts of drilling work is earmarked for MECL to be carried out in the states of Tamil Nadu. The details of work done against the target are given below.

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Veeranam, Tamil Nadu</td>
<td>25000</td>
<td>13754.00</td>
</tr>
</tbody>
</table>

**d) Contractual scheme By NLCIL:**

During 2019-20 (up to November 2019), NLCIL has not taken up detailed/check drilling work in any of its future lignite blocks.
CONSERVATION AND DEVELOPMENT OF TRANSPORT INFRASTRUCTURE

ANNUAL REPORT 2019-20
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 adopted 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 over 94% of country's Coal production. Further, whenever it is feasible, the developed pillars of underground mines are being extracted through opencast operations.

Introduction of new technologies like longwall method, shortwall method, highwall mining and Continuous Miner technology have resulted in increased percentage of extraction in underground mining (UG).

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.

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 DEVELOPMENT OF TRANSPORT INFRASTRUCTURE

The Coal Controller acts as the Member Secretary for the Coal Conservation & Development Advisory Committee (CCDAC), constituted under the Coal Mines (Conservation & Development) Act, 1974. The office of the Coal Controller receives process and scrutinizes applications/claims from Coal Companies regarding Protective work, Scientific Development Works, road and railways infrastructure projects in the coalfields areas to release of funds through CCDAC.

Ministry of Coal vide its Office Memorandum No. 20011/12/2018-IFD dated 04.01.2019 has communicated the Budget for two Plan Schemes as-

- Conservation & Safety in Coal Mines (BE&RE) - ₹ 4.00 Cr.
- Development of Transport Infrastructure in Coalfields – ₹ 130.50 Cr. (BE), ₹ 90.00 Cr. (RE).

There was spill over amount of ₹ 0.37 Cr. in Conservation and Safety Head and ₹ 68.50 Cr. in Development of Transport Infrastructure Head from 2018-19.

MoC has released an amount of ₹3.60 Cr. in Conservation & Safety and ₹ 75.46 Cr. in Development of Transport Infrastructure Head upto 31st December, 2019.

CIL: Railway Infrastructures Projects

In order to achieve the planned growth in production and evacuation in future, CIL has undertaken the construction of major railway infrastructure projects. These railway infra-
projects are being implemented by either Indian Railways (on deposit basis) or through JV companies with IRCON representing Railways, Subsidiary Company (representing CIL) and concerned State Government.

There are two major rail infrastructure projects being implemented on deposit basis and four rail infra projects being implemented by JV companies.

Deposit basis:

- East Central Railway, Patna is executing the Tori- Shivpur new BG line with a length of about 44.37 KM for North Karanpura Area of CCL, in Jharkhand with a project cost of ₹ 2399 Crores. The doubling of the entire line is complete along with OHE, Signaling and Communication almost complete. Presently coal is being dispatched through this new BG line.

- South Eastern Railways, Kolkata has executed the Jharsuguda- Barpali- Sardega railway infrastructure project with a length of about 52.412 KM for Ib Valley Coalfields of MCL situated in Sundargarh district of Odisha at a cost of ₹ 1123.90 Crores and the line has been commissioned in April-2018. SE Rly has taken over maintenance, security, operation etc. from 26.11.2019.

Joint Venture basis:

- Execution of Shivpur- Kathotia section with a length of 49.085 KM is being undertaken by a JV company named Jharkhand Central Railway Limited (JCRL) with CCL, IRCON and State Government of Jharkhand as its partner at an estimated cost of ₹1799.64 Crores.

- Chhattisgarh East Rail Limited (CERL), a JV company formed by SECL, IRCON and the State Government of Chhattisgarh, is executing the construction of East Rail Corridor, in two phases:
  - Phase-I: Kharsia- Dharamjaigarh with spur to Gare- Palma and three feeder lines of about 132 Km. at an estimated cost of ₹ 3055 Crores. Kharsia- Korichapar (0-45 Km) section; commissioned on: 12.10.2019.
  - Phase-II: Dharamjaigarh – Korba with a length of about 62.5 Km at an estimated cost of ₹ 1686.22 Cr.

- Chhattisgarh EastWest Rail Limited (CEWRL), a JV company formed by SECL, IRCON and the State Government of Chhattisgarh, is executing the construction of East-West Rail Corridor (Gevra Road to Pendra) via Dipka, Katghora, Sindurgarh and Pasan with a length of about 135 KM and Feeder lines of about 35 Km at an estimated project cost of ₹ 4970.11 Crores.

- Mahanadi Coal Railway Limited (MCRL), a JV company formed by MCL, IRCON and the State Government of Odisha is executing the construction of railway infrastructure projects in the Talcher coalfield of MCL, to cater to the evacuation of coal, in two phases:
  - Phase-I (Inner Corridor): Angul- Balram- Jharpada- Tentuloi link at Talcher Coalfield of MCL with a length of 69.10 KM (which consists of the Jharpada- Kalinga- Angul link of 14.22 KM length) with an estimated cost of ₹ 1700 Cr (excluding the cost of land).
  - Phase-II (Outer Corridor): Tentuloi- Budhapunk of approximately 136 KM length.

FIRST MILE CONNECTIVITY PROJECTS

CIL has identified 35 First Mile Connectivity Projects in mines having capacity 4 Mty and above. All CIL subsidiaries have ‘in-principally’ approved their FMC projects in their respective Boards. Out of 35 Projects, tenders floated for 12 Projects, schemes of rest 23 Projects are under different stages of formulation. Out of 12 floated tenders, work has been awarded in respect of 8 projects, which are under constructions for 117 Mty capacity. Till now, one project namely Kusmunda PH-I has been commissioned.

Singareni Collieries Company Limited (SCCL):

Sand Stowing:

To protect important surface features like Public Buildings, Colonies, Rail lines, Public roads etc., underground Voids /goaf (after coal extraction) are filled up (stowed) with River sand. Due to the acute scarcity of sand, various experimental trials are being conducted to use other materials like Bottom Ash, Boiler Ash and crushed OverBurden material etc. for stowing in underground mines as a substitute for Sand in SCCL Mines.

Stowing in 17 underground mines of SCCL is being carried out by using river sand, Bottom Ash and Processed OverBurden.
Out of 20.22 LCuM stowing material used in underground mines during April to Dec, 2019, contribution of Processed overburden, Bottom ash and River sand was 6 %, 45% and 49% respectively.

Highwall mining is in operation in a mine of SCCL to extract the coal left in the final high wall of deep opencast mine.

**Railway Infrastructure Project:**

Keeping in view the planned enchantment of coal production and dispatch up to 85 MT in the next 5 years, following steps regarding coal evacuation and infrastructure are being taken by SCCL –

- **Coal transport by Rail:** Rail is the safe, economic, eco-friendly mode of transport with capacity of transporting bulk quantity. SCCL has enhanced the quantity of coal by rail mode from 65.7% in 2016-17 to 73.4% in 2019-20.

- **Major ongoing Rail Projects of SCCL to enhance the coal evacuation capacity:**
  1. BDCR to Sathupalli Railway lines in Telangana (12 MTPA capacity) (53.20 Km @ ₹ 704.31 Cr)
  2. MCRL Railway Project in Odisha – for Naini and New Patrapara coal block (25 MTPA capacity)

- **On-going Railway Siding:**
  - KK1 CHP, Railway Siding at Mandamarri (8.50 Km @ ₹ 65.90 Cr)
  - Bethampudi to Koyagudem Railway Siding (8.20 Km @ ₹ 81.31 Crores)
  - Sathupalli Railway Siding (about 8.00 Km length)
  - STPP Railway Siding (33.00 Km @ ₹ 452.65 crores)
  - Status of Goleti Railway Siding (3.15 Km @ ₹ 28.00 Cr)

- **Coal Handling Plant (CHP):** There are 9 nos. CHP of 50 MT capacity through which dispatches are by Rail / MGR systems. Remaining coal is being transported by road.

- **3 Nos. New CHPs also being constructed under 1st Mile connectivity -**

- **SRP CHP:** Works completed. Trial run done and is ready for commissioning after approval by railways.

- **JVR OC CHP:** Work has been started and scheduled to be completed on 30.04.2021.

- **Naini CHP:** Expected to be completed in 2023-24. Approval of DPR of CHP can be done only by firming up the Railway siding by MCRL.

In addition to construction of Railawy line, Railway Siding and Coal Handling Plant, following arrangements are also being done -

- **Pre-Weigh Wagon Loading systems:** There are 07 nos. Pre-Weigh Wagon Loading systems and 12 nos. Truck Loading systems in SCCL, installed & working at various Mines & Coal Handling Plants.

- **Crushers:** In addition to the permanent crushers in the opencast mines, 4 Mobile crusher is installed in SCCL and 6 more are under various stage of commissioning.

- **Approach Road / BT Road/ Asphalt road:** Roads for coal transportation is being constructed and maintained as per requirement.

SCCL has taken following steps to prevent theft of coal during transportation:

- **SAP** is being used as cross check measure in transportation of coal from the mines to CHPs/Railway Sidings by establishing key points enroute. If any point enroute is not entered in SAP, the trip will not be considered as complete trip and necessary investigation will be taken up by concerned officials.

- **Vehicle Track monitoring system** are installed in all area. All the registered vehicles are provided with RFID tags, GPS instruments. The movement of vehicles will be monitored with the help of GPS and any deviation will be immediately communicated to the control rooms established for the purpose of monitoring in all areas.

- **All the vital locations including Offices, mine loading points, weigh bridges, CHPs are provided with CC TV cams** to monitor the movement of trucks. In addition to this, all check posts situated enroute are also provided with CC TV cameras.

- **To keep continuous watch on movement of trucks, wagons from CHPs, a team named** ANTI COAL THEFT SQUAD **is in operation round the clock.**

- **The SCCL departmental and CISF security personnel have been engaged in different areas of the SCCL to prevent pilferage of coal to protect the Company’s property.**

- **Surprise checks/raids are conducted by officials, special teams regularly.**
SAFETY IN COAL MINES

ANNUAL REPORT 2019-20
SAFETY IN COAL MINES

Coal mining poses several inherent, operational and occupational hazards and associated risks to the work persons. Hence, safety is always an utmost priority for Coal Companies and is one of the main ingredients of their mission statements. Coal companies have adopted a well-defined safety policy, which is the core of all safety initiatives. There are well designed Safety Management Plans in place for all mines to ensure safety with an aim to achieve "Zero Harm Potential (ZHP)".

Statutory Frame Work for Coal Mine Safety:
Coal mining, world over, is highly regulated industry due to presence of many inherent, operational and Occupational Hazards. Coal Mine Safety Legislation in India is one of the most comprehensive and extensive statutory framework for ensuring Occupational Health and Safety (OHS). Compliance of these safety statutes is mandatory. The operations in coal mines are regulated by the Mines Act, 1952, the Mine Rules, 1955, the Coal Mine Regulation, 2017 and several other statutes framed thereunder. Some of the important statutes related to coal mine safety are as follows:

<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>Statute</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>The Mines Act, 1952</td>
</tr>
<tr>
<td>2</td>
<td>The Mines Rules, 1955</td>
</tr>
<tr>
<td>3</td>
<td>The Coal Mines Regulations, 2017</td>
</tr>
<tr>
<td>4</td>
<td>The Mines Rescue Rules, 1985</td>
</tr>
<tr>
<td>5</td>
<td>The Electricity Act, 2003</td>
</tr>
<tr>
<td>6</td>
<td>The Central Electricity Authority (measures related to safety &amp; supply) Regulations, 2010</td>
</tr>
<tr>
<td>7</td>
<td>The Mines Vocational Training Rules, 1966</td>
</tr>
<tr>
<td>8</td>
<td>The Mines Crèche Rules, 1966</td>
</tr>
<tr>
<td>9</td>
<td>The Indian Explosive Act, 1884</td>
</tr>
<tr>
<td>10</td>
<td>The Explosive Rules, 2008</td>
</tr>
<tr>
<td>11</td>
<td>The Indian Boiler Act, 1923</td>
</tr>
<tr>
<td>12</td>
<td>The Mines Maternity Benefit Act &amp; Rules, 1963</td>
</tr>
<tr>
<td>13</td>
<td>The Workmen Compensation Act, 2010</td>
</tr>
<tr>
<td>14</td>
<td>The Factories Act, 1948, Chapter -III &amp; IV</td>
</tr>
</tbody>
</table>

Safety Monitoring by Statutory Regulator: The Directorate General of Mine Safety (DGMS) is vested with the responsibility to ensure compliance of provisions under the Mines Act, 1952 and Rules & Regulations made there under for improvement in standard of safety in mines. The structure of DGMS is as follows:
Safety in mines of Coal India Limited

Safety is ingrained in mission statement of CIL and is one of the most important components in overall business strategy. CIL has framed a well-defined safety policy to ensure safety in all mines and establishments. CIL has already established a multi-disciplinary Internal Safety Organization (ISO) in all subsidiaries for the implementation of CIL Safety Policy. All operations, systems and processes of CIL are meticulously planned and designed with due regard to safety, conservation, sustainable development and clean environment. Work place hazards and associated risks of mining operations are identified and Safety Management Plan is prepared for each mine. CIL always encourages employees’ participations in safety management so as to promote a proactive safety culture and improve safety awareness amongst all concerned. Various initiatives are being taken to achieve “Zero Harm Potential (ZHP)” in mines.

Safety Policy of CIL: Safety is always given prime importance in the operations of CIL as embodied in the mission. CIL has formulated a Safety Policy for ensuring safety in mines and implementation of which is closely monitored at several levels. Details of Safety Policy of CIL are as under:

- Operations and systems will be planned and designed to eliminate or materially reduce mining hazards;
- Implement Statutory Rules and Regulations and strenuous efforts made for achieving superior standards of safety;
- To bring about improvement in working conditions by suitable changes in technology;
- Provide material and monetary resources needed for the smooth and efficient execution of Safety Plans;
- Deploy safety personnel wholly for accidents for accident prevention work;
- Organize appropriate forums with employees’ representatives for Joint consultations on safety matters and secure their motivation and commitment in Safety Management;
• Prepare annual Safety Plan and long term Safety Plan at beginning of every calendar year, unit-wise and for the company, to effect improved safety in operations as per respective geo-mining needs to prepare the units for onset of monsoon, to fulfill implementation of decisions by Committee on Safety in Mines and Safety Conferences and to take measures for overcoming accident proneness as may be reflected through study of accident analysis, keeping priority in sensitive areas of roof-falls, haulage, explosives, machinery etc.

• Set up a frame work for execution of the Safety Policy and Plans through the General Managers of Areas, Agents, Managers and other safety personnel of the Mines;

• Multi-level monitoring of the implementation of the Safety Plans through Internal Safety Organization at the company headquarters and Area Safety Officers at area level;

• All senior executives at all levels of management, will continue to inculcate a safety consciousness and develop involvement in practicing safety towards accident prevention in their functioning;

• Institute continuous education, training and retraining all employees with the accent placed on development of safety oriented skills;

• Continue efforts to better the living conditions and help of all the employees both in and outside the mines.

Safety Monitoring in CIL: Besides monitoring by statutory regulators, safety in CIL mines is being monitored at various levels:

1. CIL Safety Board (at CIL corporate level),
   S&R Division, CIL

2. Tri-partite Safety Committee (At Subsidiary HQ),
   ISO (Internal safety Organisation)

3. Tri-partite Safety Committee (At Area),
   Area Safety Officer

4. Workman Inspectors (Mining / Mechanical / Electrical),
   Safety Committee,
   Safety Officer
**Safety Implementation in CIL:** Organizational hierarchy for implementation of Safety Policy in mines of CIL is as under:

- **Owner – Director (Technical) in case of CIL & its subsidiaries**
- **Deemed Agent (Area GM) & Agent / Sub Area Manager / Project Officer**
- **Mine Manager**
- **Safety Officer, Ventilation Officer, Asst. Managers & Engineers**
- **Overman, Foreman & Electrical Supervisor**
- **Mining Sirdar**
- **Competent Persons**

**Analysis of Accident Statistics in CIL**

Accidents statistics is the relative indicator for safety status in mines. Over the years the safety performance of CIL has improved significantly.

This improvement in safety is attributed to the following factors:

- Collective commitment and synergetic collaboration of the management and employees.
- Use of state-of-the-art technology in the field of mining methods, machineries and safety monitoring mechanism.
- Constant vigil, round the clock supervision and assistances from all concerned quarters.
- Continuous improvement in knowledge, skill and awareness of workforce through imparting quality training and relentless safety awareness drives.
Salient features of continuous and sustained improvement in CIL’s safety performance:

Table: 1 - Comparative Accidents Statistics of CIL (5 Yearly Average) since 1975

<table>
<thead>
<tr>
<th>Time frame</th>
<th>Av. Fatal Accidents</th>
<th>Av. Serious Accidents</th>
<th>Av. Fatality Rate</th>
<th>Av. Serious Injury Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Accident</td>
<td>Fatalities</td>
<td>Accident</td>
<td>Injuries</td>
</tr>
<tr>
<td>1975-79</td>
<td>157</td>
<td>196</td>
<td>1224</td>
<td>1278</td>
</tr>
<tr>
<td>1980-84</td>
<td>122</td>
<td>143</td>
<td>1018</td>
<td>1065</td>
</tr>
<tr>
<td>1985-89</td>
<td>133</td>
<td>150</td>
<td>550</td>
<td>571</td>
</tr>
<tr>
<td>1990-94</td>
<td>120</td>
<td>145</td>
<td>525</td>
<td>558</td>
</tr>
<tr>
<td>1995-99</td>
<td>98</td>
<td>124</td>
<td>481</td>
<td>513</td>
</tr>
<tr>
<td>2000-04</td>
<td>68</td>
<td>82</td>
<td>499</td>
<td>526</td>
</tr>
<tr>
<td>2005-09</td>
<td>60</td>
<td>80</td>
<td>328</td>
<td>339</td>
</tr>
<tr>
<td>2010-14</td>
<td>56</td>
<td>62</td>
<td>219</td>
<td>228</td>
</tr>
<tr>
<td>2015-19</td>
<td>33</td>
<td>43</td>
<td>107</td>
<td>112</td>
</tr>
</tbody>
</table>

Note: Subject to reconciliation with DGMS & Accident Statistics are maintained calendar year-wise in conformity with DGMS practice.

Graph - 1 – Trend of 5 Yearly Average Fatalities in CIL since 1975
Graph: 2 – Trend of Yearly Average of Serious Injuries since 1975

Graph-3: Trend of Fatalities & Serious Injuries for last 5 years in CIL
Table – 2: Overall Accident Statistics in 2019 vis-a-vis 2018 in CIL

<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>Parameters</th>
<th>2018</th>
<th>2019</th>
<th>Reduction in absolute nos.</th>
<th>% of Reduction</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Number of fatal accidents</td>
<td>33</td>
<td>30</td>
<td>3</td>
<td>9.09</td>
</tr>
<tr>
<td>2</td>
<td>Number of fatalities</td>
<td>43</td>
<td>34</td>
<td>9</td>
<td>20.93</td>
</tr>
<tr>
<td>3</td>
<td>Number of serious Accidents</td>
<td>87</td>
<td>86</td>
<td>1</td>
<td>1.15</td>
</tr>
<tr>
<td>4</td>
<td>Number of serious injuries</td>
<td>96</td>
<td>90</td>
<td>6</td>
<td>6.25</td>
</tr>
<tr>
<td>5</td>
<td>Fatality Rate per Mte. of coal production</td>
<td>0.07</td>
<td>0.06</td>
<td>0.01</td>
<td>14.29</td>
</tr>
<tr>
<td>6</td>
<td>Fatality Rate per 3 lakhs manshift deployed</td>
<td>0.18</td>
<td>0.15</td>
<td>0.03</td>
<td>16.67</td>
</tr>
<tr>
<td>7</td>
<td>Serious injury Rate per Mte. of coal production</td>
<td>0.16</td>
<td>0.15</td>
<td>0.01</td>
<td>6.25</td>
</tr>
<tr>
<td>8</td>
<td>Serious injury Rate per 3 lakhs man-shift deployed</td>
<td>0.41</td>
<td>0.40</td>
<td>0.01</td>
<td>2.44</td>
</tr>
</tbody>
</table>

Note: Accident Statistics are maintained calendar year wise in conformity with DGMS practice & figures subject to reconciliation with DGMS

Table - 3: Company-wise Accident Statistics of CIL for the year 2019

<table>
<thead>
<tr>
<th>Company</th>
<th>Fatal Accidents</th>
<th>Fatalities</th>
<th>Serious Accidents</th>
<th>Serious Injuries</th>
<th>Fatality Rate</th>
<th>Serious Injury Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Per Mill. Te</td>
<td>Per 3 lac manshifts</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Per Mill. Te</td>
<td>Per 3 lac manshifts</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Per 3 lac manshifts</td>
<td>Per 3 lac manshifts</td>
</tr>
<tr>
<td>ECL</td>
<td>7</td>
<td>7</td>
<td>18</td>
<td>18</td>
<td>0.14</td>
<td>0.16</td>
</tr>
<tr>
<td>BCCL</td>
<td>6</td>
<td>6</td>
<td>10</td>
<td>12</td>
<td>0.21</td>
<td>0.20</td>
</tr>
<tr>
<td>CCL</td>
<td>2</td>
<td>2</td>
<td>4</td>
<td>4</td>
<td>0.03</td>
<td>0.08</td>
</tr>
<tr>
<td>NCL</td>
<td>2</td>
<td>2</td>
<td>12</td>
<td>12</td>
<td>0.02</td>
<td>0.18</td>
</tr>
<tr>
<td>WCL</td>
<td>2</td>
<td>2</td>
<td>16</td>
<td>17</td>
<td>0.04</td>
<td>0.04</td>
</tr>
<tr>
<td>SECL</td>
<td>6</td>
<td>7</td>
<td>22</td>
<td>23</td>
<td>0.05</td>
<td>0.17</td>
</tr>
<tr>
<td>MCL</td>
<td>5</td>
<td>8</td>
<td>4</td>
<td>4</td>
<td>0.06</td>
<td>0.49</td>
</tr>
<tr>
<td>NEC</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>CIL</td>
<td>30</td>
<td>34</td>
<td>86</td>
<td>90</td>
<td>0.06</td>
<td>0.15</td>
</tr>
</tbody>
</table>

Note: Accident Statistics are maintained calendar year wise in conformity with DGMS practice & figures subject to reconciliation with DGMS
### Table - 4: Company-wise Accident Statistics during the period 2017 to 2019

<table>
<thead>
<tr>
<th>Company</th>
<th>Fatal Accidents</th>
<th>Fatalities</th>
<th>Serious Accidents</th>
<th>Serious injuries</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECL</td>
<td>9</td>
<td>1</td>
<td>7</td>
<td>9</td>
</tr>
<tr>
<td>BCCL</td>
<td>2</td>
<td>2</td>
<td>6</td>
<td>2</td>
</tr>
<tr>
<td>CCL</td>
<td>5</td>
<td>5</td>
<td>2</td>
<td>6</td>
</tr>
<tr>
<td>NCL</td>
<td>3</td>
<td>3</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>WCL</td>
<td>3</td>
<td>2</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>SECL</td>
<td>7</td>
<td>12</td>
<td>6</td>
<td>9</td>
</tr>
<tr>
<td>MCL</td>
<td>5</td>
<td>8</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>NEC</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>CIL</td>
<td>34</td>
<td>33</td>
<td>30</td>
<td>37</td>
</tr>
</tbody>
</table>

### Table – 5: Company-wise Fatality & Serious Injury Rate during the period 2017 to 2019

<table>
<thead>
<tr>
<th>Company</th>
<th>Fatality Rate Per MT of coal production</th>
<th>Fatality Rate Per 3 lac manshifts</th>
<th>Serious Injury Rate Per MT of coal production</th>
<th>Serious Injury per Rate 3 lac manshifts</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECL</td>
<td>0.22</td>
<td>0.04</td>
<td>0.14</td>
<td>0.18</td>
</tr>
<tr>
<td>BCCL</td>
<td>0.06</td>
<td>0.06</td>
<td>0.21</td>
<td>0.06</td>
</tr>
<tr>
<td>CCL</td>
<td>0.09</td>
<td>0.12</td>
<td>0.03</td>
<td>0.20</td>
</tr>
<tr>
<td>NCL</td>
<td>0.03</td>
<td>0.03</td>
<td>0.02</td>
<td>0.24</td>
</tr>
<tr>
<td>WCL</td>
<td>0.06</td>
<td>0.10</td>
<td>0.04</td>
<td>0.06</td>
</tr>
<tr>
<td>SECL</td>
<td>0.06</td>
<td>0.10</td>
<td>0.05</td>
<td>0.20</td>
</tr>
<tr>
<td>MCL</td>
<td>0.04</td>
<td>0.06</td>
<td>0.06</td>
<td>0.32</td>
</tr>
<tr>
<td>NEC</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>CIL</td>
<td>0.07</td>
<td>0.07</td>
<td>0.06</td>
<td>0.16</td>
</tr>
</tbody>
</table>
Major Activities for Safety & Rescue Division of CIL

- Inspection of mines to review safety status of mine & follow up action thereof to improve safety status of mine.
- Fact finding into fatal accidents and major incidences.
- Imparting specialized training by SIMTARS accredited trainers to unit level and Area level executives, mine officials and members of Safety Committee.
- Framing of internal Technical Circulars / Management Guidelines / Advisory related to safety issues and monitoring implementation thereof.
- Maintenance of accidents / major incidents database.
- Analysis of mine accident statistics.
- Monitoring safety related R&D activities in CIL.
- Organizing meeting of CIL Safety Board and monitoring recommendations / suggestions made during meeting.
- Monitoring mine rescue preparedness at different mine rescue establishments.
- Publication of Safety Bulletin for disseminating and sharing of knowledge in order to promote safety awareness and inculcate better safety culture.
- Actively participated in organizing the meeting of Standing Committee on safety in coal mines and monitoring recommendations / suggestions made during meeting.
- Liaisoning with various agencies on the matter of mine safety and ISOs of various subsidiaries.
- Monitoring of CIL Safety Information System (CSIS) database and ensuring updation.
- Response to parliamentary questions related to mine safety including queries raised by different standing committees such as standing committee on Steel & Coal, standing committee on labour, as well as questions raised by COPU, MOC, CA&G and VIPs and information sought under the Right to Information (RTI)- 2005.

Measures taken for improvement of safety in 2019
Apart from compliance of statutory requirements and on-going safety related initiatives, CIL and its Subsidiaries have pursued several measures in the year 2019 for enhancing safety standard in mines, which are given below:

i. **Conducting Safety Audit:** Safety Audit of producing mines of CIL has been conducted through multi-disciplinary Inter-Area Safety Audit teams of respective subsidiaries in 2019 for assessing safety status of mines and deficiencies pointed out during the said safety audits are being rectified.

ii. **Safety Management Plans (SMPs)** – Site-specific risk assessment based SMPs have been prepared for each mine of CIL by involving mine officials and workmen and the same are being reviewed on regular basis. Implementation of SMPs is being monitored through Internal Safety Organization (ISO) of each subsidiary. The process of Safety Management in mines is continuous and on-going for improving safety standards of mines.

iii. **Principal Hazards Management Plans (PHMPs):** Principal Hazards Management Plans (PHMP) are formulated as a part of Safety Management Plan (SMP) to avert any mine disaster or major mine accident. Trigger Action Response Plan (TARP) are prepared to deal with emergency situations effectively.

iv. **Standard Operating Procedures (SOPs):** Site-specific, Risk Assessment based Standard Operating Procedures (SOPs) for all Mining and Allied operations are framed and implemented. The SOPs are being updated on regular basis to cater to the changing mine conditions.

v. **Special Safety Drives on different Safety Issues:** Special Safety drives on various safety issues were organized to improve standard of mines safety and enhance safety awareness amongst employees.

vi. **Safety Training Programme in China:** 2nd educational training program on “Coal Mine Safety Management for CIL Executives and Exposure to Best Practices in China ” from 01.11.2019 to 11.11.2019 was organized at School of Safety Science and Technology, Henan Polytechnic University (HPU), Jiaozuo, Henan, China with collaboration of IIT, which was attended by 10 executives.
vii. **Regular co-ordination with ISOs:** Several meetings were held under the Chairmanship of the Director (Technical), CIL for assessing the safety status of mines and other establishments for enhancing safety.

viii. **56th Meeting of CIL Safety Board:** 56th meeting of apex level tripartite CIL Safety Board was held on 24th June, 2019 in Kolkata under the Chairmanship of Chairman, CIL for assessing the mine safety status and implementation of recommendations of previous meeting.

ix. **National Dust Prevention Committee meeting:** The 18th meeting of the National Dust Prevention Committee (NDPC) was held on 20th September, 2019 in Kolkata under the Chairmanship of the Director (Technical), CIL for assessing the status of dust suppression arrangement and measures taken to reduce adverse effects of dust related problem in mines of CIL and other coal producing companies.

x. **Observation of “ILO’s World Day for Safety and Health at Work”** in CIL (HQ) as well as all subsidiary HQs, Areas and mines on 28th April, 2019 to promote the preventive Safety culture.

Apart from the above specific actions, the following measures are continued for improving safety standards:

xi. **Emphasis on adoption of the state-of-the art technology in suitable geo-mining locales.**

a. Adoption of Mass Production Technology (MPT) in more number of UG mines.

b. Deployment of more nos. of Surface Miners to eliminate blasting operation in OCPs.

c. Deployment of relatively higher capacity HEMM in more number of OCPs.

d. Mechanization of UG drilling operation for roof bolting.

xii. **Adoption of the state-of-the art mechanism for Strata Management**


b. Mechanized Drilling for Roof bolting.

c. Use of Resin Capsules in place of Cement capsules.

d. Use of modern Strata Monitoring Instruments.

e. Strata Control Cell for monitoring efficacy of strata support system. An in-house Rock Testing Laboratory established in Nagpur, WCL for
determination of Rock Mass Rating (RMR) of strata was accredited with NABL certificate.
f. Imparting quality training to support crews & front-line mine officials, supervisors & grass root level workmen.

xiii. Mechanism for monitoring of mine environment:
   a. Detection of mine gases by Multigas detector, Methanometer, CO-detector etc.
   b. Continuous monitoring of mine environment by installing Environmental Tele Monitoring System (ETMS) & Local Methane Detectors (LMD) etc.
   c. Regular Mine Air Sampling and Analysis by using Gas Chromatograph.
   d. Personal Dust Sampler (PDS) for detecting dust concentration.
   e. Use of Continuous Ambient Air Quality Monitoring System (CAAQMS) in large OCPs to assess the ambient dust concentration.

xiv. Strengthening Water Danger Management:
   b. Preparation and maintenance of seam-wise Water Danger Plan.
   c. Preparation and implementation of Monsoon Action Plan.
   d. Adequate Pumping Facilities with adequate capacity of Sumps.
   e. Liaison with the State Meteorological Dept. & Dam Authorities.
   f. Construction of Embankments against water bodies.
g. Inter-mine joint survey between adjoining mines to prove inter-mine barriers.

XV. Training on Mine Safety:
   a. Initial and Refresher training & On-the-Job Training as per statute.
   b. Training on Simulators to HEMM operators.
   c. Skill up-gradation of frontline mine officials on continual basis on various topics.
   d. Sensitization of all employees including Members of Safety Committees and contractual workmen on regular basis.
   e. Various training programme for enhancement of knowledge of mine executives.

XVI. Mine Safety Inspection:
   a. Round-the-clock Supervision of all mining operations by adequate number of competent & statutory Supervisors and mine Officials.
   b. Regular Inspection by Workmen Inspectors appointed in each mine.
   c. Surprise back shift mine Inspections by mine and area level officials.
   d. Regular mine Inspection by officials of Internal Safety Organization of respective subsidiary and CIL.
   e. Periodic mine Inspections by senior officials of CIL & Subsidiaries, Trade union representatives and officials of MOC.
Steps for prevention accidents in OCPs:


b. Code of Practice for HEMM Operators, Maintenance staff & others.

c. Sensitization training of Contractor’s Workmen involved in contractual jobs.

d. Installed a ‘Universal Equipment Simulator’ at Central Excavation Training Institute (CETI) in NCL, Singrauli to impart simulation training to Dragline, Shovel and Dozer Operators. Simulator allows operator to hone their skills.
e. Lighting arrangement by using high mast towers are provided for enhancement of standard of illumination.

f. Eco-friendly Surface Miners for blast free mining and avoidance of associated risks.

g. Dumpers fitted with Proximity Warning Devices, Rear view mirrors and camera, Audio-Visual Alarm (AVA), Automatic Fire Detection & Suppression System (AFDSS) etc.

h. Ergonomically designed seats & AC Cabins for operators’ comfort.

i. Indigenous built solar powered based real time dump monitoring device has been installed in OC mine of WCL. This device is designed for giving early warning in case of movement in OB dump.
j. Automatic pressure water spraying system for cleaning vehicle introduced in WCL.

k. Apart from system of wet drilling and water Sprinklers for dust suppression, mist type fixed as well as trucks mounted water cannons have been introduced in OC mines.

l. GPS based Operator Independent Truck Dispatch System (OITDS) in large OCPs for tracking movement of HEMMs inside OC mine. E-surveillance unit has been installed in mines for monitoring operations 24X7 in real time by using GPS/GPRS-based vehicle tracking, and geo-fencing system.
Mine Emergency Response System:

- Emergency Action Plans prepared as per statute for each mine.
- Mock Rehearsals for examining the efficacy of Emergency Action Plan.
- Demarcating Emergency Escape Routes in below ground.
- Check list prepared for dealing with an emergency in mine.
- Flow Chart prepared for transmission of information regarding crisis / disaster in mines from site of accident to the Ministry of Coal, New Delhi.

Rescue Services for Emergency Response System in CIL:

- CIL is maintaining a well establishment Rescue Organization comprising of 6 Mine Rescue Stations (MRS), 13 Rescue Rooms-with-Refresher Training facilities (RRRT) and 17 Rescue Rooms (RR).
- All Rescue Stations / Rescue Rooms are fully equipped with adequate numbers of rescue apparatus as per the Mine Rescue Rules (MRR), 1985.
- This Rescue Organization is staffed by adequate numbers of Rescue Trained Personnel (RTP) as per the MRR, 1985.
All RTP are being periodically re-trained to conduct rescue operations in hot, humid and irrespirable atmospheres in modern training galleries as well as in mines.

CIL employs Permanent Brigade Members and RTPs who are available on call 24x7.
The Mine Rescue Station and Rescue Rooms are established at strategic locations spreading across different Subsidiaries to cater to the emergencies in their command area.

The details are as under:

<table>
<thead>
<tr>
<th>Company</th>
<th>Mine Rescue Station (MRS)</th>
<th>Rescue room with Refreshers Training (RRRT)</th>
<th>Rescue Room (RR)</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECL</td>
<td>Sitarampur</td>
<td>Kenda</td>
<td>Jhanjra, Kalidaspur, Mugma</td>
</tr>
<tr>
<td>BCCL</td>
<td>Dhansar</td>
<td></td>
<td>Moonidih, Madhuband, Sudamdih</td>
</tr>
<tr>
<td>CCL</td>
<td>Ramgarh</td>
<td>Kathara &amp; Churi</td>
<td>Dhori, Kedla &amp; Urimari</td>
</tr>
<tr>
<td>SECL</td>
<td>Manindragarh</td>
<td>Sohgpur, Kusmunda, Johilla, Bisrampur, Baikunthpur</td>
<td>Chirimiri, Raigarh, Bhatgaon, Jamuna &amp; Kotma, Korba</td>
</tr>
<tr>
<td>WCL</td>
<td>Nagpur</td>
<td>Parasia, Pathakhera, Tadali</td>
<td>Damua, New Majri &amp; Sasti</td>
</tr>
<tr>
<td>MCL</td>
<td>Brajraj Nagar</td>
<td>Talcher,</td>
<td>-</td>
</tr>
<tr>
<td>NEC</td>
<td>-</td>
<td>Tipong</td>
<td>-</td>
</tr>
<tr>
<td>Total</td>
<td>6</td>
<td>13</td>
<td>17</td>
</tr>
</tbody>
</table>

**Neyveli Lignite Corporation India Ltd**

**Accident Statistics of NLCIL - (for last five years):**

<table>
<thead>
<tr>
<th>Year</th>
<th>Fatalities</th>
<th>Serious Injuries</th>
</tr>
</thead>
<tbody>
<tr>
<td>2014-15</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>2015-16</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>2016-17</td>
<td>Nil</td>
<td>1</td>
</tr>
<tr>
<td>2017-18</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td>2018-19</td>
<td>1</td>
<td>Nil</td>
</tr>
<tr>
<td>2019-20 (Apr-Nov)</td>
<td>2</td>
<td>Nil</td>
</tr>
</tbody>
</table>

1. Neyveli Mines are being operated with State of The Art Technology i.e. Specialized Mining Equipment’s Bucket Wheel Excavators having inbuilt safety features.
2. Safety and Health policy is being implemented in its true spirit.
3. Mines are having organizational set up of various divisions and equipped with sufficient number of statutory officials and other required engineers, supervisors, technicians etc.
4. NLCIL has well established Group Vestibule Training Centre, Unit Level Training centres and Learning and Development Centre to impart training and retraining.
5. Risk assessment based Safety Management Plans have been prepared for all the divisions and are under implementation.
6. Standard operating procedures have been established for all the activities of the mines and are strictly implemented.
7. Internal Safety Organization is functioning, headed by Chief General Manager / Mining.
8. Illumination, dust, noise and vibration studies are conducted once in six months and all the parameters are maintained as the norms.
9. All accidents and near miss incidents are thoroughly analyzed and investigated for corrective measures.

**Safety Audits**

1. Mines are inspected everyday by Unit Statutory officials and ISO officials.
2. Workmen Inspectors are inspect various parts of the Mines twice in a week and maintain the records as per statute.
3. Pit Safety Committee (PSC) Members inspect the Mines once in a month and observations are deliberated in the monthly PSC meeting.

4. Inter-Unit Safety Assessment (IUSA) team members inspect the mines once in three months.

5. Central Safety Council Members inspect the mines once in six months.

6. Division-wise Safety Audits are conducted with the co-ordination of ISO officials.

The audit recommendations are implemented and compliance reports are furnished regularly.

### Accident Statistics

<table>
<thead>
<tr>
<th>Sl. No</th>
<th>Particulars</th>
<th>2019-20 April’ 19 to November ’19 Mines</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Numbers of Fatal Accidents</td>
<td>2</td>
</tr>
<tr>
<td>2</td>
<td>Numbers of Fatalities</td>
<td>2</td>
</tr>
<tr>
<td>3</td>
<td>Numbers of Serious Accidents</td>
<td>-</td>
</tr>
<tr>
<td>4</td>
<td>Numbers of Serious injuries</td>
<td>-</td>
</tr>
<tr>
<td>5</td>
<td>Numbers of Reportable Accidents</td>
<td>-</td>
</tr>
<tr>
<td>6</td>
<td>Total man days worked</td>
<td>-</td>
</tr>
<tr>
<td>7</td>
<td>Total Production in Million Tonnes</td>
<td>-</td>
</tr>
<tr>
<td>8</td>
<td>Fatality rate per Million Tonnes of Lignite Production</td>
<td>-</td>
</tr>
<tr>
<td>9</td>
<td>Fatality rate per 3 lakh man shifts deployed</td>
<td>-</td>
</tr>
<tr>
<td>10</td>
<td>Serious injury rate per Million Tonnes of Lignite production</td>
<td>-</td>
</tr>
<tr>
<td>11</td>
<td>Serious injury rate per 3 lakh manshifts deployed</td>
<td>-</td>
</tr>
</tbody>
</table>

### Safety Budget & Actual Expenditure

<table>
<thead>
<tr>
<th>Year</th>
<th>Safety Budget</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Allocated</td>
</tr>
<tr>
<td>2018-19</td>
<td>₹ 230.00 Lakhs</td>
</tr>
</tbody>
</table>

### Safety Trainings

#### Training given at GVTC April 2019 to Nov 2019

<table>
<thead>
<tr>
<th></th>
<th>Basic training</th>
<th>Refresher training</th>
<th>Specific job training</th>
<th>Orientation training to executives</th>
<th>Total no. Of persons trained</th>
</tr>
</thead>
<tbody>
<tr>
<td>Employees</td>
<td>28</td>
<td>650</td>
<td>693</td>
<td>905</td>
<td>132</td>
</tr>
<tr>
<td>Contract</td>
<td>725</td>
<td>1189</td>
<td>905</td>
<td>132</td>
<td>4322</td>
</tr>
<tr>
<td>workers</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

#### First aid training given April 2019 to Nov 2019

<table>
<thead>
<tr>
<th>YEAR</th>
<th>MINE-I</th>
<th>MINEIA</th>
<th>MINE-II</th>
<th>Barsingsar Mine</th>
<th>NLCIL MINES</th>
</tr>
</thead>
<tbody>
<tr>
<td>2019-20 upto Nov</td>
<td>125</td>
<td>69</td>
<td>107</td>
<td>53</td>
<td>354</td>
</tr>
</tbody>
</table>
Safety Workshops

- Safety workshop of Mine-1A conducted on 16.02.2019.
- Safety workshop of Mine-II conducted in February 2019.

Details of Safety initiatives/activities carried out during the year 2019-20

1. Refilling of fire extinguisher is under process.
2. Monthly safety committee meeting conducted as per schedule.
3. Mock drill conducted as per schedule.
4. Organized special training by Volvo Engineer for Dumper Operator.
5. Bipartite safety meeting conducted on 9th August 2019.
6. Illumination survey as per schedule.
7. Initial/ basic training, refresher training, special training given as per schedule.
8. Special awareness drive on SOP & safe working organized for operators & workmen.
9. SOP for water tanker operation distributed to all the operators.
10. Launch of a massive Safety Awareness campaign.
14. Renovation of Haul road, LMV mine road, benches, view point and mine buildings.
15. Conduction of safety talks.
16. LOCK OUT TAG OUT arrangement, various SOP/COP, flag poles are done/developed/streamlined as per DGMS standard.
17. Special one day First Aid class was arranged for 53 persons and theoretical training.

Occupational Health services

- All mines have been equipped with sufficient number of first aid rooms and stations to ensure timely rendering of First Aid Services to the injured.
- A 340 bedded Hospital with state of art infrastructure as well as sufficient number of medical and para-medical staff is maintained in the vicinity of Mines.
- IME/PME Details from 01.04.2019 to 30.11.2019

<table>
<thead>
<tr>
<th>Type of Medical Examination</th>
<th>Number of persons</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Target</td>
</tr>
<tr>
<td>Initial Medical Examination (IME)</td>
<td>479</td>
</tr>
<tr>
<td>Periodical Medical Examination (PME)</td>
<td>3881</td>
</tr>
</tbody>
</table>

Singareni Collieries Company Limited (SCCL):

SCCL has a planned and systematic approach to implement the safety policy of the organisation through an effective safety management system. SCCL is strictly implementing all statutory provisions related to mining operations. Safety measures are being monitored at mine level, Area level, Company level and National level. The deficiencies observed are being entered into web site and their rectifications are being monitored from time to time. SCCL aims to minimize risks in mine, bring safety awareness amongst its employees and thereby aims for achieving zero accident potential in the mines. SCCL uses Risk Assessment methods to determine priorities and set objectives for eliminating hazards and reducing risks.
## Accident Statistics of SCCL

i. Details of fatal and serious accidents and rate of fatality and serious injury during 2014-15 to 2019-20 (up to Dec, 2019) is given in the table below.

<table>
<thead>
<tr>
<th>Year</th>
<th>Fatal Accidents</th>
<th>Fatalities</th>
<th>Serious Accidents</th>
<th>Serious Injuries</th>
<th>Fatality Rate</th>
<th>Serious Injury Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Per MT</td>
<td>Per MT</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Per 3 lakh man-shifts</td>
<td>Per 3 lakh man-shifts</td>
</tr>
<tr>
<td>2014-15</td>
<td>7</td>
<td>7</td>
<td>271</td>
<td>271</td>
<td>0.13</td>
<td>0.15</td>
</tr>
<tr>
<td>2015-16</td>
<td>7</td>
<td>7</td>
<td>225</td>
<td>225</td>
<td>0.12</td>
<td>0.14</td>
</tr>
<tr>
<td>2016-17</td>
<td>10</td>
<td>12</td>
<td>220</td>
<td>224</td>
<td>0.20</td>
<td>0.25</td>
</tr>
<tr>
<td>2017-18</td>
<td>11</td>
<td>12</td>
<td>210</td>
<td>215</td>
<td>0.19</td>
<td>0.24</td>
</tr>
<tr>
<td>2018-19</td>
<td>7</td>
<td>7</td>
<td>187</td>
<td>187</td>
<td>0.11</td>
<td>0.16</td>
</tr>
<tr>
<td>2019-20 (up to Dec, 2019)</td>
<td>6</td>
<td>6</td>
<td>95</td>
<td>95</td>
<td>0.13</td>
<td>0.20</td>
</tr>
</tbody>
</table>

ii. Details of fatal and serious accidents and rate of fatality and serious injury during 2014 to 2019 is given in the table below.

<table>
<thead>
<tr>
<th>Year</th>
<th>Fatal Accidents</th>
<th>Fatalities</th>
<th>Serious Accidents</th>
<th>Serious Injuries</th>
<th>Fatality Rate</th>
<th>Serious Injury Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Per MT</td>
<td>Per MT</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Per 3 lakh man-shifts</td>
<td>Per 3 lakh man-shifts</td>
</tr>
<tr>
<td>2014</td>
<td>8</td>
<td>9</td>
<td>270</td>
<td>271</td>
<td>0.17</td>
<td>0.18</td>
</tr>
<tr>
<td>2015</td>
<td>7</td>
<td>7</td>
<td>245</td>
<td>245</td>
<td>0.12</td>
<td>0.14</td>
</tr>
<tr>
<td>2016</td>
<td>10</td>
<td>12</td>
<td>216</td>
<td>218</td>
<td>0.20</td>
<td>0.25</td>
</tr>
<tr>
<td>2017</td>
<td>11</td>
<td>12</td>
<td>213</td>
<td>219</td>
<td>0.20</td>
<td>0.24</td>
</tr>
<tr>
<td>2018</td>
<td>7</td>
<td>7</td>
<td>190</td>
<td>191</td>
<td>0.11</td>
<td>0.15</td>
</tr>
<tr>
<td>2019</td>
<td>8</td>
<td>8</td>
<td>138</td>
<td>138</td>
<td>0.12</td>
<td>0.20</td>
</tr>
</tbody>
</table>

## Safety Measures in SCCL:

- Phased out conventional mining in UG mines by introducing semi-mechanisation, Continuous Miners and long wall.
- Roof/Sides support is being done based on geo-tech studies by Resin capsules with roof bolters.
- Quad bolters and jumbo drills were provided in continuous miner panels to meet demand of support as per extraction requirement.
- Strata monitoring with TEL-TALES, Roof Extensometers, Load cells and Stress capsules are in use for monitoring strata behavior.
- Services of Scientific Institutions like NIRM, CIMFR & NGRI are being taken up for scientific investigation and studies in different mines on strata management.
- To monitor strata control & mine environment activities, each region is provided with strata monitoring cells. LIDAR (Light detection and scanning terrestrial scanner) has been procured recently and installed for monitoring the dump slope and pit slope on real time basis.
- Men transport systems have been introduced in all underground mines.
- Replaced haulages with belt conveyors for coal evacuation, wherever possible.
- Monitoring of High wall benches (slopes) and dump slopes for early detection of slope failures.
• Use of Rear-view Cameras and proximity-warning devices in Dumpers in Open cast mines.

• Guidelines on precautions to be taken during summer are circulated every year.

• Pre-Monsoon audit of the precautionary measures taken/to be taken against danger of inundation is carried out every year.

• Provided Nitrogen Injection Fire Prevention and extinguishing system at transformers in all 132 KV substations.

• SCCL has utilised the expertise of the Australian mining industry for development, implementation and monitoring of SMP in SCCL mines by Training a team of 10 executives at SIMTARS, Australia on Risk assessment based Safety Management System, under the program “Train the Trainers”.

• Safety Management Plans of all operating mines are prepared and submitted.

• Training on development and implementation of SMP is being imparted to the Safety Management Team of the concerned mines by the SIMTAR accredited trainers. Presently, training in 16 mines is completed.

**Rescue Services in SCCL:**

• A Central monitoring mechanism with Department of Rescue headed by a General Manager has been established at Ramagundam. In addition to this, three Rescue Room for Refresher Training (RRRT) centers were established at Kothagudem, Mandamari and Bhoopalapalli Areas.

• Rescue services in SCCL were modernized in the year 2002 to be the best in India and on par with those in developed countries meeting International Standards.

• Apart from the basic rescue equipment required as per the statute, SCCL has procured state of the art Hydraulic Rescue Tools consisting of Hydraulic Cutters, Spreaders, Combi-Tools, Rescue Rams and Lifting Jacks. Pneumatic High Pressure Lifting bags, Concrete Cutters and Wood Cutters to deal with various types of disasters.

• SCCL Rescue Team led by Directors and GMs attended International Mines Rescue Conference thrice and participated five times in International Mines Rescue Competitions conducted once in two years.

• The Rescue services of SCCL are extended to civil calamities also such as road/train accidents, vehicle collisions, drowning, fire incidents in villages, and fire accidents in thermal power plants.

**Mine Safety Inspections:**

• Every Mine has been provided with statutory man power to supervise/inspect the mining activities for safe operations.

• Area level senior officers will made inspections/surprise inspections to ensure implementation of SOPs, provisions of act, regulations.

• Regular and surprise inspections of the mines and departments by GM (S) of the region and corporate ISO officers to ensure safe operations and implementation of SOPs, provisions of Act, Regulations.

• Periodical inspections of Workmen inspectors.

• Monthly inspections/follow-up inspections by Pit Safety Committee members at Mine level.

• Special drive for accident prevention in OCPs:

  • Conducting special awareness classes to all the employees including contract workmen.

  • Conducting Safety audits to ensure implementation of all statutory provisions.

  • Conducting Safety audit on HEMM and their movement.

**Emergency response system:**

• Emergency response plan prepared and submitted to the Directorate of Mines Safety.

• Mock rehearsals are being conducted at all mines to examine the efficacy of the emergency response system.

• Displayed emergency response flow chart at conspicuous places at the mines.

• Escape routes are prepared and being inspected and maintained for availability in emergencies.
Safety and R&D Initiatives:

- **Introduction of LiDAR equipment for slope monitoring in OC mines:**

  LiDAR is introduced recently in SCCL for Slope Stability Monitoring. The equipment Continuously measure (24x7) mine wall movements with sub-millimetric accuracy at long distance (up to 2.0 km) and Provide reliable early warning for progressive slope movements potentially leading to failures. Scientific studies are conducted for Pit slope and dump slope stabilities in all Opencast mines as per statute by IIT (BHU), NITK, CIMFR etc. Strata Control and Management Plan studies are being conducted for all Underground Mines by NIT, CIMFR, SIMTARS etc. Wi-fi communication for Underground communication system is in process of procurement.

- **Tube Bundle Gas Monitoring System (TBGMS)**

  TBGMS was procured from M/s. SIMTARS, Australia and installed at Adiyala Longwall Project during 2017 for the first time in SCCL mines. It is capable of monitoring 20 locations continuously. Tube Bundle Gas Monitoring Systems are used to monitor the atmosphere at relevant locations in underground. They sample from return airways to detect the onset of spontaneous combustion and to determine gas generation rates, as well as from sealed and active goafs to determine explosibility, air ingress and potential spontaneous combustion activity. System consists of supervisory, control and data acquisition (SCADA) software and hardware developed specifically for continuous automated mine gas monitoring, interpretation and decision support system. The system will measure very accurately Carbon Monoxide, Methane, Carbon dioxide and Oxygen components of the coal mine atmosphere and give the user essential information on the status of the underground atmosphere.

  ![Tube Bundle System in operation at Adiyala Longwal Project](image)

**Occupational Health Services and Initial Medical Examinations:**

- In SCCL, all Periodical Medical Examination (PME) Centers have been equipped with required medical appliances and personnel.
- 23 Doctors were trained in Occupational health services training centre to serve in all 11 IME/PME centers.
- Due importance is being given for detection of occupational diseases at early stages and all the workers are undergoing PME.
- Notified occupational diseases, if any, are being reported scrupulously.
- Occupational Diseases Board was constituted, regular meetings are being held and its recommendations are followed/implemented.
- IME is being done to all departmental and contract workmen before deploying them for duty. PME is being done to the employees below 45 years of age once in every 5 years and once in 2 1/2 years to all those employees above 45 years of age.
INTERNATIONAL COOPERATION

ANNUAL REPORT 2019-20
INTERNATIONAL CO-OPERATION

I. Indo-US Collaboration

- India CMM/CBM Clearing House:

India CMM/CBM Clearing house is functional at CMPDI, Ranchi under the aegis of Ministry of Coal (MoC) and United States Environmental Protection Agency (US EPA) since 17th November, 2008. It has been established with the financial support of US EPA and Coal India Ltd. on behalf of Ministry of Coal in pursuance to a Govt. level understanding between MoC & United States Environmental Protection Agency (US EPA). The Memorandum of Understanding (MoU) was signed on 16th November, 2006 between the representatives of the Government of United States of America (USA) and the Government of India at US EPA Headquarters in Washington DC in this regard. The website of the clearing house is http://www.cmmclearinghouse. cmpdi.co.in. On completion of initial three years’ term, it was extended twice for another three years’ terms each. US EPA further extended grant support in April, 2018 for additional three years i.e. 2018-21.

Implementation of CMM/CBM projects is one of the action programmes of India’s INDCs during COP-21 meeting. Under Global Methane Initiatives (GMI), a Pre-feasibility study on pre-mine methane drainage feasibility for (a) Sawang UG mine, East Bokaro Coalfields in 2014 and (b) Chinakuri UG mine, Raniganj Coalfields in 2016 and Pootkee Bulliary UG mine in Jharia Coalfields in 2019 has been undertaken by the US EPA under the Coal Bed Methane Outreach Programme (CMOP).

International workshops were organized jointly by US EPA-GMI & CMPDI-CIL under aegis of the MoC on (i) “CMM Development in India: An Opportunity Area” (November, 2008), (ii) “Development of Coal based Non-conventional Energy Resources in India” (November, 2013), (iii) “Best Practices in Methane Drainage and Use in Coal Mines” (March, 2017) and (iv) “Optimum Utilization of CMM/CBM in India” (April, 2019) at Ranchi (Jharkhand) India, which is centrally located for the coal mining industry in eastern India.

- Coal Mine Methane (CMM):

“Pre-drainage of Coal Mine Methane (CMM) from Moonidih UG Mine” of Bharat Coking Coal Limited (BCCL) in Jharia Coalfields is proposed to enhance production and safety and recovered gas may also be gainfully utilized. To develop it, a Global e-Tender is to be floated/issued by BCCL for the selection of the suitable and experienced developer for Pre-drainage of methane from UG mine under concept to commissioning basis including operation and maintenance.

CBM/CMM blocks have been identified in and around active mining areas under CIL command areas for commercial exploitation of methane initially in Jharia Coalfields (BCCL command area), Raniganj Coalfields (ECL command area), Sohagpur Coalfields (SECL command area). Its development is proposed to be done through CBM Developer by respective subsidiary on Global Tendering for the commercial development of CBM/CMM in India.

ii. Indo-Australia Collaboration

CMPDI has a Memorandum of Understanding (MoU) with Commonwealth Scientific and Industrial Research Organisation (CSIRO), which has been renewed for further ten years, signed on 16th November, 2018 at Brisbane (Australia) and exchanged on 22nd November, 2018 at Sydney (Australia) in the august presence of Hon’ble President of India to encourage programmes of exchange and collaboration in areas of mutual interest and benefit to both the organizations.

- Capacity Building for CMPDI Lab:

CMPDI has established a State of the Art Coal Bed Methane (CBM) lab that can carry out parametric studies for resource estimation and reservoir characterization for CBM and Shale gas.
A S&T Project “Capacity building for extraction of CMM Resource within CIL command areas” is under implementation under S&T funding of MoC. It is being jointly implemented by CMPDI and CSIRO, Australia.

### iii. Indo-Russian Collaboration

An Indian delegation, led by Hon’ble Minister of Commerce and Industry, Govt. of India visited Russian Far East Region during 12-13th August, 2019 to explore potential for increased cooperation in Coal, Mining and Power Sectors between India and Russian Far East Region.

A bilateral Memorandum of Understanding (MoU) was executed between Coal India Limited (CIL), a Public Sector Undertaking under the aegis of the Ministry of Coal and Far East Investment & Export Agency (FEIEA), an agency of the Russian Federation under the Ministry of Development of Far East and the Arctic in the glorious presence of Hon’ble Prime Minister of India and Hon’ble President of the Russian Federation on 4-Sep-2019 during the Eastern Economic Forum in Vladivostok, Russia. This relationship is aimed at leveraging the cordial bilateral relations to venture into the business of acquisition, development and operation of coking coal assets in the Far East Region of Russia.

UCG Experts from Skochinsky’s Institute of Mining (SIM), Moscow participated in the Workshop on “Prospects of Underground Coal Gasification (UCG) in India”, held on 13th November, 2019 at New Delhi. The dignitaries from NITI Aayog, Ministry of Coal and Officials and representatives from Industries (coal & lignite), scientific organizations also participated actively.

### iv. Indo-Poland Collaboration

The Secretary, Ministry of Coal (MoC), Govt. of India led a delegation comprising Joint Secretary (JS), MoC, Adviser, MoC and Chairman, CIL to Poland during 6th–9th June, 2016 to understand the energy policy of the Republic of Poland with particular reference to development of coal, coal mining technologies, reclamation of mined-out areas, capture and uses of Coal Mine Methane (CMM) and technologies for development of underground (UG) mines etc.

A 5-member team of Polish Experts (3 from AGH University, Krakow, Poland & 2 from GIG, Katowice, Poland) visited MoC, CIL (HQ), ECL, BCCL and CMPDI (HQ) along with a team of 4 members from manufacturers of Poland. This visit (4th-7th July, 2016) was made by Polish Experts in sequel to the visit of the Indian delegation, led by the Secretary (Coal), MoC, Govt. of India to Poland. In view of the above, a Poland Technology Group (PTG) has been constituted, which visited India. A detailed discussion was held on the identified areas at CMPDI (HQ), Ranchi between Polish Experts and Officials of PTG & other officials of MoC, Coal India Limited/CMPDI, wherein technical co-operation was sought on the identified areas from Polish Experts. Five areas for co-operation are short listed namely,

- Slope stability of overburden dumps (using advanced modelling technique),
- Dry Coal beneficiation,
- Extraction of remnant coal pillars with surface structure protection,
INTERNATIONAL COOPERATION

- Pre-drainage of Coal Mine Methane (CMM) and commercial recovery of Coal Bed Methane (CBM), and
- Control measures for mine fires of Jharia for obtaining the solutions from Polish side.

A data dossier on the above identified 5 areas was prepared by CMPDI with necessary technical help from different subsidiaries of CIL and sent to the General Manager (PMD), CIL on 11.10.2016 (soft-copy through e-mail) and also on 22.10.2016 (hard copy as desired by GM(PMD), CIL). The matter was further being taken up at CIL level for onward communication to Poland experts.

In continuation of the collaborative studies, a team of 4 officers (2 from CMPDI and 1 each from CCL & BCCL) visited Poland from 13th-17th February, 2017 to enhance skill in the field of methane extraction and dry coal beneficiation.

- Team of two officers (comprising of one each from CMPDI and BCCL) visited Coal Mine Methane (CMM) extraction and utilization sites and observed the technologies, being followed under guidance of Dean, AGH University of Science and Technology, Krakow, Poland.
- The coal beneficiation team of two officers (comprising of one each from CMPDI and CCL) were taken to Comex AS, Kety, Poland to see a dry beneficiation demonstration plant based on X-Ray sorting technology, developed by Comex Innovative & Industrial Technologies. The team was also taken to one FGX Dry Coal Processing Plant at Poczieszna, Cz. stochowa, Poland. Poland does not manufacture FGX separator; therefore, they couldn’t give any figure related to organic efficiency.

A polish delegation involving representatives from M/s JSW, M/s PeBeKa and Central Mining Institute, Poland visited India during January, 2018 and a meeting was held on 16.01.2018 with the Indian representatives involving officials from CIL & SAIL. Capabilities of the above institutes/organization of Poland were presented and views exchanged for further collaboration in different mining activities including participation in global tender for CMM Drainage in Moonidih UG Mine of BCCL for which Global Bid was published in August, 2018 by BCCL. CIL also presented the brief activities, undertaken during the last few fiscal and the short-listed areas identified under PTG for collaboration. The data dossier, which was earlier sent to Polish group was again handed over to the Dy. Director General of the Central Mining Institute, Poland.

MoU on cooperation in the area of coal mining has been signed between Govt. of Poland and Govt. of India on 4th February, 2019 at New Delhi. Polish delegation visited CIL on 7th Feb, 2019 to explore the possibilities for joint cooperation for which a core team has been constituted, comprising of GM(PA), CIL, GM(TS) to DT, CIL and GM(Geology), CMPDI.

Polish company is regularly participating in the Bidders’ Meet relating to CBM/CMM Global tender.

v. India-Japan Collaboration

a. Dry Coal Beneficiation:

In response to the e-mail of Advisor (Projects), MoC dated 14.03.2016, the Chairman, M/s Nagata Engg Co. Ltd., vide e-mail dated 19.03.2016, was requested to send the detail technology including specification and performance data, commercial availability of the separator and cost thereof with other supports (if any). The same is also being followed up from CMPDI’s end. M/s Engg Co. Ltd. replied, vide email dated 27th Sept 2018, that the Dry Coal Preparation equipment was at the developing stage.

b. Slope Stability Monitoring:

The 6th meeting of India-Japan Coal Working Group was held on 17.04.2018 through video conferencing and subsequent meeting of ministers was held on 01.05.2018. As per the Joint statement, following areas of interest were shortlisted for cooperation, if required:

- Slope Stability Monitoring: Possibility of any collaboration on G2G basis.
- Online monitoring of quantity and quality of Lignite/Coal during Mining.
- Remote real time monitoring of spontaneous
ignition/combustion and prevention methods for lignite/coal stockyard due to continuous storage.

- Introducing monitoring of coal mining technologies & human resource development in the areas of the underground mining and the safety management: To explore cooperation in this area.
- To build up close relationship in coal based electricity generation and energy sector.
- Clean Coal Technologies (CCT) including high efficiency and low emission technology.
- Air quality control technology.
- Renewable energy.
- Promotion of energy efficiency.

**c) Japan-India Energy Dialogue**

The 10th Japan-India Energy Dialogue held on 10.12.2019 in New Delhi. Japanese-side, led by HE Mr. Kajiyama Hiroshi, Minister of Economy, Trade and Industry, and Indian-side, led by Hon’ble Minister of State for Power, and New & Renewable Energy and Skill Development & Entrepreneurship, Shri Raj Kumar Singh attended the meeting. A joint statement of the Energy Dialogue was signed by both the ministers and it was jointly agreed that - “Both countries have been continuing the discussion to consider the possibility of future cooperation since the last Coal Working Group, and now discussing towards implementing the invitation training program”.

**vi. International Cooperation with South-Africa:**

There exists an India-South Africa Joint Ministerial Commission (JMC). Under the aegis of JMC, there are eight Sectoral Sub-Committees out of which Sub-Committee on Minerals and Energy is one of them. Joint Secretary(IC), Ministry of Coal is the co-chair on the Sub-Committee on Minerals and Energy. As per convention, nearer to the Joint Ministerial Commission, sectoral Sub-Committees also meet to discuss the issues concerning their sectors, review the progress of earlier decisions and prepare a roadmap for further cooperation. Coal India Limited is looking forward for possible cooperation in the areas of technology transfers and training of engineers in relevant areas of coal mining and beneficiation technologies.

**vii. Initiatives on Surface Coal Gasification (SCG):**

As a commitment to reduce environment footprint towards addressing Climate Change, Ministry of Coal is promoting the novel initiatives for cleaner and alternative uses of coal through SCG route, viz. conversion from coal to syn-gas and subsequently into chemicals. Such endeavours will position Indian coal as a raw material for production of chemicals rather than just a product of energy.

To start with, Talcher Fertilizers Ltd., (TFL - a JV company of CIL with RCF, GAIL and FCIL), has been entrusted to set up an integrated coal gasification based urea plant at the premises of closed fertilizer plant of FCIL at Talcher (Odisha). Work has been awarded to M/s Wuhuan Engineering Co Ltd, China for setting up of Coal Gasification plant and Ammonia-Urea plant.

In another initiative, CIL is exploring the possibilities to venture into the Coal-to-Chemicals sector on stand-alone basis by setting up a Coal-to-Methanol plant at Dankuni Coal Complex (near Kolkata). Various pre-project activities have been initiated in this regard through M/s Projects & Development India Limited (PDIL).

**International Co-operation in SCCL**

- A collaborative Research project by CSIRO, Australia for Stability Analysis and Design Optimization of OB Dumps and deep OC Mines at SCCL is under progress.
- Mine Advise Pty. Limited (Russell Frith) – Australia is guiding and monitoring the implementation of new generation Longwall technology at Adiriyala Shaft Project.
- Training by SIMTARS, Australia for preparation and implementation of Safety Management Plans.

**International Co-operation in NLCIL**

In order to meet country’s growing demand for coal, international cooperation with the advanced coal producing countries is considered for bringing in new technologies both in underground and in opencast sectors for efficient management in the coal industry, skill development and training etc. Keeping the above in view, joint working group on coal/lignite had been setup
with USA, France, Germany, Russia, Canada, Australia, Japan and China. The priority areas, inter-alia, include acquisition of modern underground technology, introduction of high productive opencast mining technology, working underground in difficult geological conditions, fire control and mine safety.

Training of Indian personnel as well as assimilation of the technology is an important consideration. In this regard, NLC India Limited is seeking international cooperation for producing composite valuables Lignite in NLCIL Mines.

To develop further cooperation and possible projects implementation in the field of metals, mineral, rare earth in the Russian Far East, Cooperation agreement were signed between Far Eastern Mining Company (LLC) (FEMC) and NLC India Limited at the Eastern Economic Forum, held in Vladivostok during September, 2019.
CHAPTER 13

WELFARE MEASURES

ANNUAL REPORT 2019-20
WELFARE MEASURES

Coal India

Implementation of Personswith Disability Act, 1995

Statement showing the representation of persons with disabilities in CIL as on 01.01.2019:

<table>
<thead>
<tr>
<th>Company</th>
<th>Total</th>
<th>VH</th>
<th>HH</th>
<th>OH</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECL</td>
<td>60295</td>
<td>4</td>
<td>25</td>
<td>53</td>
</tr>
<tr>
<td>BCCL</td>
<td>46881</td>
<td>33</td>
<td>17</td>
<td>50</td>
</tr>
<tr>
<td>CCL</td>
<td>39581</td>
<td>16</td>
<td>10</td>
<td>27</td>
</tr>
<tr>
<td>WCL</td>
<td>43298</td>
<td>28</td>
<td>7</td>
<td>85</td>
</tr>
<tr>
<td>SECL</td>
<td>55778</td>
<td>29</td>
<td>6</td>
<td>115</td>
</tr>
<tr>
<td>MCL</td>
<td>22248</td>
<td>36</td>
<td>18</td>
<td>101</td>
</tr>
<tr>
<td>NCL</td>
<td>14648</td>
<td>6</td>
<td>8</td>
<td>69</td>
</tr>
<tr>
<td>NEC</td>
<td>1412</td>
<td>0</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>CMPDI</td>
<td>3321</td>
<td>4</td>
<td>4</td>
<td>20</td>
</tr>
<tr>
<td>DCC</td>
<td>305</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>CIL (HQ)</td>
<td>920</td>
<td>1</td>
<td>0</td>
<td>2</td>
</tr>
<tr>
<td><strong>Total CIL</strong></td>
<td><strong>288687</strong></td>
<td><strong>157</strong></td>
<td><strong>95</strong></td>
<td><strong>523</strong></td>
</tr>
</tbody>
</table>

Details of appointments in Group C & D since 1996-97

<table>
<thead>
<tr>
<th>Year</th>
<th>No. of persons appointed</th>
<th>Number of posts filled under reservation quota</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>VH</td>
</tr>
<tr>
<td>1996-97 to 1.01.2019</td>
<td>11966</td>
<td>135</td>
</tr>
</tbody>
</table>

VH = Visually Handicapped
HH = Hearing Handicapped
OH = Orthopedically Handicapped
RESERVATIONS TO SC/ST

The reservation policy is being implemented in recruitment and promotion of Scheduled Castes and Scheduled Tribes as per the Presidential Directives.

<table>
<thead>
<tr>
<th>For Group-A &amp; B Posts</th>
<th>Direct Recruitment</th>
<th>Promotion</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>SC</td>
<td>ST</td>
</tr>
<tr>
<td>All India basis by means of open basis competitive test (written)</td>
<td>15%</td>
<td>7 ½%</td>
</tr>
<tr>
<td>All India basis otherwise than by not conducting written competitive test</td>
<td>162/3%</td>
<td>7 ½%</td>
</tr>
</tbody>
</table>

Apart from the above, there is a directive on reservation in recruitment on Group C & D posts where state-wise reservation norms are being maintained. Subsidiary-wise/Company-wise reservation percentage is appended below:

<table>
<thead>
<tr>
<th>State</th>
<th>Company</th>
<th>% age of SC</th>
<th>% age of ST</th>
<th>% age of OBC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jharkhand</td>
<td>BCCL</td>
<td>12</td>
<td>26</td>
<td>12</td>
</tr>
<tr>
<td>Jharkhand</td>
<td>CCL</td>
<td>12</td>
<td>26</td>
<td>12</td>
</tr>
<tr>
<td>Jharkhand</td>
<td>CMPDIL</td>
<td>12</td>
<td>26</td>
<td>12</td>
</tr>
<tr>
<td>West Bengal</td>
<td>ECL</td>
<td>23</td>
<td>5</td>
<td>22</td>
</tr>
<tr>
<td>West Bengal</td>
<td>CIL, Kolkata</td>
<td>23</td>
<td>5</td>
<td>22</td>
</tr>
<tr>
<td>Orissa</td>
<td>MCL</td>
<td>16</td>
<td>22</td>
<td>12</td>
</tr>
<tr>
<td>Madhya Pradesh</td>
<td>NCL</td>
<td>15</td>
<td>20</td>
<td>15</td>
</tr>
<tr>
<td>Chhattisgarh</td>
<td>SECL</td>
<td>12</td>
<td>32</td>
<td>6</td>
</tr>
<tr>
<td>Maharashtra</td>
<td>WCL</td>
<td>10</td>
<td>9</td>
<td>27</td>
</tr>
<tr>
<td>Assam</td>
<td>NEC</td>
<td>7</td>
<td>12</td>
<td>27</td>
</tr>
</tbody>
</table>

Group-wise manpower as well as representation of SC/ST/OBC with percentage as on 01.01.2019 in CIL is given below:

<table>
<thead>
<tr>
<th>Group</th>
<th>Total Strength</th>
<th>SC %</th>
<th>ST %</th>
<th>OBC %</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>15543</td>
<td>13.91</td>
<td>5.20</td>
<td>14.98</td>
</tr>
<tr>
<td>B</td>
<td>20524</td>
<td>13.36</td>
<td>7.03</td>
<td>21.8</td>
</tr>
<tr>
<td>C</td>
<td>146253</td>
<td>18.27</td>
<td>15.20</td>
<td>23.59</td>
</tr>
<tr>
<td>D (Excluding Sweeper)</td>
<td>103869</td>
<td>19.71</td>
<td>18.35</td>
<td>20.44</td>
</tr>
<tr>
<td>D (Sweeper)</td>
<td>2498</td>
<td>99.36</td>
<td>0.32</td>
<td>0.00</td>
</tr>
<tr>
<td>TOTAL</td>
<td>288687</td>
<td>18.91</td>
<td>15.09</td>
<td>21.66</td>
</tr>
</tbody>
</table>
NLCIL also implements several welfare measures for the upliftment of SCs, STs and Disabled Persons. As part of its Corporate H.R Department, SC & ST and OBC Cells have been set up to deal with service matters of SC, ST employees, disabled persons, ex-Servicemen and minorities. The Cell(s) ensures speedy disposal of complaints and grievances of the employees belonging to the above categories. One of the functions of the cell is to collect data pertaining to SC, ST and OBC, ex-Servicemen, disabled persons and minorities and furnish the same to various authorities under the administrative control of the Ministry. The objective of the cell is also to enlighten employees about safeguards that are provided by the Government of India in matters of recruitment, promotions and other service matters and to ensure the implementation of the Presidential Directives on Reservation Policy.

The details relating to the percentage of reserved categories of employees as on 30th November 2019 are furnished below:

<table>
<thead>
<tr>
<th>Group</th>
<th>Applicable Percentage of Reservation</th>
<th>Manpower position</th>
<th>Available percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>SC</td>
<td>ST</td>
<td>Total</td>
</tr>
<tr>
<td>A</td>
<td>15.00</td>
<td>7.5</td>
<td>3,611</td>
</tr>
<tr>
<td>B</td>
<td>16.66</td>
<td>7.5</td>
<td>261</td>
</tr>
<tr>
<td>C</td>
<td>19.00</td>
<td>1.0</td>
<td>8,290</td>
</tr>
<tr>
<td>D</td>
<td>19.00</td>
<td>1.0</td>
<td>657</td>
</tr>
<tr>
<td>Safai (C)</td>
<td>2</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Total</td>
<td>12,820</td>
<td>2671</td>
<td>412</td>
</tr>
</tbody>
</table>

- By virtue of time bound promotion Scheme, 2 Nos. of employees belonging to health worker category have been promoted and moved to Group “C”.

Scheduled Caste Sub-Plan for the welfare of SCs /STs:

NLCIL has implemented the Scheduled Caste Sub-Plan (formerly known as Special Component Plan) for the Welfare of Scheduled Caste and Scheduled Tribe Population from the year 2000. There is no separate Tribal Sub-Plan as the ST population is negligible and hence SCSP is implemented for both SC & ST Population.

The welfare measures are centered around -

- Providing 2 sets of uniforms every year free of cost to children studying in NLC India Limited Elementary Schools.
- Providing one set of free footwear children from 1st Std to 5th Std once in two years.
- Scholarships to 367 SC/ST students for pursuing Professional Courses at the rate of ₹12000/- per annum and for pursuing Diploma in Engineering & Under Graduate Courses at the rate of ₹10000/- per annum. This includes hostel fees of ₹3750/-per student.
- Cash awards are disbursed for meritorious students scoring 90% & above marks in SSLC and HSC Examination.
- Reimbursement of tuition fees of students belongs to SC/ST category studying in Jawahar Science Collage, Neyveli.
- Special training programmes like Executive Development Programs are conducted exclusively for the benefits of SC/ST Employees.

Technical and vocational training under apprenticeship training scheme is imparted.

Youth personality development programme including development of sports and cultural activities among SC/ST children are held regularly.
Implementation of Persons with Disabilities Act, 1995

NLC India Limited is implementing various Schemes for the socio–economic development of physically challenged persons. The Neyveli Health Promotion and Social Welfare Society (NHPSWS) extend benefits to disabled population in Cuddalore, Villupuram and neighbouring districts of Tamil Nadu. NLC India Limited also implements 4% reservation for persons with disabilities in appointments as per the PWD Act 1995. Recruitments are made whenever suitable posts are found for persons with disabilities in Group A/B/C/D posts. Promotion within Group ‘D’, from Group ‘D’ to ‘C’ and within Group ‘C’ has been time bound with scope for 100% promotion.

PUBLIC GRIEVANCE REDRESSAL – April 2019 to November 2019

<table>
<thead>
<tr>
<th>Public Grievance received through</th>
<th>Received</th>
<th>Re-dressed</th>
<th>Under process</th>
</tr>
</thead>
<tbody>
<tr>
<td>Online Portal – MOC</td>
<td>34</td>
<td>33</td>
<td>1</td>
</tr>
<tr>
<td>V.I.P. Reference</td>
<td>1</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Chief Minister Special Cell/Chennai</td>
<td>26</td>
<td>25</td>
<td>1</td>
</tr>
<tr>
<td>District Collector/Cuddalore</td>
<td>99</td>
<td>91</td>
<td>8</td>
</tr>
<tr>
<td>Directly addressed to CMD</td>
<td>8</td>
<td>6</td>
<td>2</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>168</strong></td>
<td><strong>155</strong></td>
<td><strong>13</strong></td>
</tr>
</tbody>
</table>

Social Welfare: Grant in Aid towards Public Cause April 2019 to November 2019

<table>
<thead>
<tr>
<th>Name of the Institution</th>
<th>Amount Sanctioned</th>
<th>Purpose</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Department of Coal Recreation Club No. II</td>
<td>₹ 30,000/- on 04.06.2019</td>
<td>Providing recreation facilities for club members of the ministry of coal</td>
<td>Approved by CMD</td>
</tr>
</tbody>
</table>

Death relief fund

<table>
<thead>
<tr>
<th>Total Number of Beneficiaries :</th>
<th>Amount sanction :</th>
</tr>
</thead>
<tbody>
<tr>
<td>76</td>
<td>₹ 8,09,80,430/-</td>
</tr>
</tbody>
</table>

SCCL

Employees’ Welfare measures:

Welfare and social security to the employees are given due importance and various welfare activities viz., housing & sanitation, educational, recreational, medical facilities with super speciality services and social security schemes that were in vogue are being continued.

The overall housing satisfaction is 100%. The company is running 9 high Schools, 1 Women PG & Degree College and 1 Polytechnic college to impart education to the children of employees and also to the nearby other habitants. In addition to this, financial assistance is provided to 3 schools for Mentally challenged students.

RO purification plants are established at offices, mines, hospitals, guesthouses, training centres etc. for supply of purified drinking water to the employees. Yoga & Meditation camps being conducted extensively throughout the year.

Employees are being provided sports facilities & required infrastructure and are also encouraged to participate in sports & games.

Contributory Post-Retirement Medicare scheme is being implemented for retired workmen and their spouses.

The Company has extended insurance coverage to all the employees under Pradhan Manthri Suraksha Bima Yojana (PMSBY) and paying premium.
For physically challenged persons - Toilets constructed with special arrangements (4 in number—one for female & one for male at Main Hospital & Corporate office) with a motto to facilitate the physically challenged persons.

Singareni Seva Samithi (SSS)

The Society shall serve the benefits of employees of the Singareni Collieries Company Limited and their families including of those employees who died while in service or retired on medical grounds; and of the public residing in the coal belt area in general.

Social Security Schemes: Social security schemes being implemented for employees are as below:

<table>
<thead>
<tr>
<th>Name of the schemes</th>
<th>Amount / Benefit under the Scheme</th>
</tr>
</thead>
<tbody>
<tr>
<td>JPAIS</td>
<td>₹1,00,000/-</td>
</tr>
<tr>
<td>FBIS</td>
<td>₹10,000/-</td>
</tr>
<tr>
<td>Group Insurance Scheme</td>
<td>₹1,25,000/-</td>
</tr>
<tr>
<td>Group Service Linked Insurance Scheme (GSLIS)</td>
<td>₹2,00,000/-</td>
</tr>
<tr>
<td>Group Service Linked Insurance Scheme (GSLIS)</td>
<td></td>
</tr>
<tr>
<td>(For Executives)</td>
<td></td>
</tr>
<tr>
<td>Contributory Post-Retirement Medicare Scheme</td>
<td></td>
</tr>
<tr>
<td>Executives (CPRMSE)</td>
<td>The Medical Benefits to the retired executives and their spouses under the scheme will be admissible for the treatment taken only within India and would be regulated as under:</td>
</tr>
<tr>
<td>Contributory Post-Retirement Medicare Scheme</td>
<td>Indoor Treatment: Reimbursement of Medical expenses incurred for On door treatment will be allowed on actual basis subject to the condition that the treatment is obtained in Govt. Hospitals including Hospitals under Municipal Corporation and all other PSUs.</td>
</tr>
<tr>
<td>Executives (CPRMSE) for Non-Executives of SCCL</td>
<td>Outpatient/Domiciliary Treatment: The payment of Outpatient/Domiciliary Treatment at empanelled hospitals.</td>
</tr>
<tr>
<td>Coal Mines Pension Scheme (CMPS)</td>
<td>25% of Basic + DA on completion of 30 years of Pensionable service</td>
</tr>
<tr>
<td>8. Gratuity</td>
<td>₹20.00 Lakhs</td>
</tr>
</tbody>
</table>
EMPOWERMENT OF WOMEN

ANNUAL REPORT 2019-20
EMPOWERMENT OF WOMEN

Coal India Limited

Empowerment of Women

About 19,486 female employees are working in CIL and its subsidiaries under different establishments as on 1.12.2019. The Forum of Women in Public Sector (WIPS) was established under the aegis of Standing Conference of Public Enterprises (SCOPE) on 12th February, 1990. At Coal India it came into existence in the year 1990. The forum has been actively working for the empowerment of women in PSU’s. Coal India Limited has a Sexual Harassment Complaints Committee comprising of members as per the guidelines provided by Hon’ble Supreme Court of India. In addition to the maternity leave as per the Maternity Benefit Act; child care leave upto 730 days for 2 surviving children upto 18 years of age is granted to women employees as per their request in one or more spells.

Welfare Scheme:

a) The provisions of Maternity Benefit Act are being implemented benefiting the Women employees of the Company. Under this Act, Women employees are sanctioned Maternity Benefit Leave.

b) In all the Areas, Women’s Cells have been constituted with the women employees for effective function and to redress problems of women employees relating to their employment. The Convener of the Women’s Cell of the Area concerned conducts regular meetings with the Committee members for redressal of the grievances of the women employees.

SCCL

Women Employees Strength:

As on 31.12.2019, the strength of women employees in SCCL is 1,298 out of 47,178 on roll.

SEWA (Singareni Employees Wives Association)

For empowerment of Employees wives, SEWA is established. SEWA voluntarily organizes the wives of employees and unemployed youth i.e. PAPs & PDFs of surrounding places for their self-sustenance with the support of SCCL management by mobilizing to join various training programmes like Tailoring & Embroidery, Beautician, Motor Driving, Maggam Works, Computer Hard Ware, Paper Carry Bags & Envelop Making etc.

Women trained by Singareni Sewa Samithi in jute bag making run a self-employment unit with the help of management
NLC India Limited

In NLC India Limited the total number of women employees on rolls as on 30th November 2019 is 976 including 331 executives. The following activities were organized for developing their potentials.–

- A Committee consisting of senior women executives’ including a Doctor was formed to protect women employees from Sexual Harassment in work place.
- For the benefit of the working women employees, “Anbalaya” a well-equipped Creche with trained personnel is in operation.
- The NLC India Limited chapter of WIP’s has also organized and conducted several sports, cultural activities, group discussions for the benefit of women employees.

Training Programmes conducted for women:

- Health and hygiene for women employees.
- Healthy living for women employees.
- International women day celebration.
- Road safety for women employees.
- Safe driving practice for women.
- Stress management for women.
- Sustainability development for women.
- Women empowerment.
- Work life balance for women employees.
VIGILANCE

ANNUAL REPORT 2019-20
VIGILANCE

Function

Vigilance Division in the Ministry of Coal oversees the vigilance administration of the Ministry in addition to vigilance issues relating to the organizations working under Ministry of Coal i.e. Coal India Limited (CIL) and its 8 subsidiaries, NLC India Ltd. (NLCIL), Coal Mines Provident Fund Organization (CMPFO) and Coal Controller Organization (CCO). The CVO of the Ministry coordinates vigilance issues with the Central Vigilance Commission (CVC), Central Bureau of Investigation (CBI), DoP&T and other related organizations.

Complaints received in organization are dealt in accordance with the ‘Complaint Handling Policy’ of the CVC and are processed using the Complaint Tracking System (CTS) from receipt up to disposal in proactive, preventive and punitive manners, such as surprise checks, regular checks, quality checks, follow-up checks and CTE type examinations to sensitize the employees of the company.

The details related to the complaints dealt with, vigilance cases disposed off and the pending case during 2018 (for 01.01.2019 to 31.12.2019) in Vigilance Section is as under:-

<table>
<thead>
<tr>
<th>Source</th>
<th>Opening Balance</th>
<th>Received during the Year</th>
<th>Total</th>
<th>Disposed</th>
<th>Balance</th>
<th>Age wise Pendency (Months)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>&lt;1</td>
</tr>
<tr>
<td>CVC</td>
<td>2</td>
<td>4</td>
<td>6</td>
<td>3</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>Others</td>
<td>150</td>
<td>489</td>
<td>639</td>
<td>491</td>
<td>148</td>
<td>59</td>
</tr>
</tbody>
</table>

The nature of the pending vigilance cases are regarding the complaints received from MPs, MLAs and general public alleging irregularities in respect of appointment/promotion of employees, various tenders awarded, theft of coal, corruption regarding compensation, etc. conducted by officers/officials of Ministry of Coal, CIL and its subsidiaries, NLCIL, CMPFO and CCO.

Organization Structure

Vigilance Division in the Ministry is headed by Joint Secretary and Chief Vigilance Officer (CVO). Vigilance wings of CIL and its subsidiaries, NLCIL, Coal Mines Provident Fund Organization and Coal Controller Organization are headed by CVOs appointed on deputation basis. Vigilance issues in respect of below Board-level Officers of the organizations are investigated by the CVO of the company concerned and in respect of Board-level officers, the CVOs of the company furnish factual report to the Ministry for taking appropriate action in consultation with the CVC.

Observation of Vigilance Awareness

Vigilance awareness week focusing on the theme “Integrity – A way of life” “ईमानदारी—एक जीवन शैली” was observed from 28.10.2019 to 02.11.2019. During this week pledge, slogan writing competition, quiz etc. were organized in the Ministry and also in all the companies to create awareness on vigilance issues.

Review/ Monitoring Mechanism

Regular review meetings are being held with the CVOs to review the pending issues relating to vigilance cases and also implementation of IT initiatives. One meeting chaired by JS & CVO, MOC was held on 01.08.2019 at New Delhi during the period 01.04.2019 to 31.12.2019.

Annual Sectoral Review meeting under Central Vigilance Commissioner, CVC was held on 18.09.2019 at Kolkata with the CVOs of Coal Sector.

System Improvement Measures

All organizations are active participants in online submission of Immovable Property Return (IPR), rotational transfer of the officers from sensitive to non-sensitive posts, etc. In addition, following others System improvement suggestions have been taken:-
i. SOP has been issued clearing specifying the role and responsibility of different level of executives for implementation of IT initiatives.

**Implementation of IT Initiatives**

To check theft and pilferage of coal, to capture real-time data and to improve operational efficiency, an integrated system consisting of GPS/GPRS based vehicle tracking system connected through a Wide Area Network (WAN) at vulnerable points like weigh bridges, material stores, entry/exit points, stockyard, sidings, explosive magazines, etc. has been conceived and implemented in all the companies of CIL. The status as on 31st December, 2019 is given as under:

<table>
<thead>
<tr>
<th>S. No.</th>
<th>Name of the item</th>
<th>Requirement</th>
<th>Implementation status as on 31.12.2019</th>
<th>Additional Installed</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>GPS/GPRS based Vehicle Tracking System</td>
<td>8689</td>
<td>8689</td>
<td>Additional installed at MCL &amp; CCL in departmental HEMM, Service vehicles and light vehicles</td>
</tr>
<tr>
<td>2.</td>
<td>Electronic Surveillance by CCTV</td>
<td>4037</td>
<td>3831</td>
<td>Additional CCTV installed at Coal Heaps and other vulnerable locations</td>
</tr>
<tr>
<td>3.</td>
<td>RFID based Boom Barriers &amp; Readers</td>
<td>623</td>
<td>623</td>
<td>Boom barriers &amp; RFID Readers</td>
</tr>
<tr>
<td>4.</td>
<td>Weigh Bridge Status</td>
<td>922</td>
<td>895</td>
<td>Additional WB required due to expansion of mines</td>
</tr>
<tr>
<td>5.</td>
<td>Wide Area Networking</td>
<td>1269</td>
<td>1242</td>
<td>-</td>
</tr>
<tr>
<td>6.</td>
<td>CoalNet Implementation Status</td>
<td>50</td>
<td>47</td>
<td>Coal India is under the process of implementation of SAP-ERP</td>
</tr>
</tbody>
</table>
PROMOTION OF HINDI

ANNUAL REPORT 2019-20
MINISTRY OF COAL

PROMOTION OF HINDI

PROGRESSIVE USE OF HINDI

Ministry of Coal with all its Subordinate offices/Companies and Autonomous Body kept its efforts continued for propagating and spreading the progressive use of official language Hindi during the year 2019-20. This Ministry is committed to increasing the use of official language. Instructions received from Department of Official Language, Ministry of Home Affairs and Committee of Parliament on Official Language are circulated regularly amongst the Officers/sections of the Ministry as well as the administrative heads of Subordinate Offices/Companies and Autonomous Body under the administrative control of MoC to ensure implementation of the statutory provisions of Official Language Policy of the Union.

In order to increase the use of Hindi in day-to-day official work, various circulars, orders and appeals have been issued regularly. With a view to facilitating noting and drafting in Hindi, bilingual standard drafts, English - Hindi dictionaries, help books etc. have been distributed amongst all officers/sections of the Ministry. A copy of the Annual programme issued by the Department of Official Language for the year 2019-20 for transacting the official work of the Union in Hindi has been circulated amongst all the officers & sections of the Ministry as well as Subordinate offices/Companies & Autonomous body under the administrative control of the Ministry for achieving the targets fixed for implementation of official language policy of the Union.

The Official Language Implementation Committee is already functioning in the Ministry. The meetings of the committee are being organized regularly in the Ministry under the Chairmanship of Joint Secretary. All Subordinate offices/Companies and Autonomous Body under the administrative control of the Ministry are also organising such meetings wherein due emphasis is laid on increasing use of Hindi in official work.

With a view to creating consciousness as also accelerating the use of Hindi as Official Language in official work in the Ministry, Hindi fortnight was organized from 01.09.2019 to 14.09.2019. On the occasion of Hindi fortnight, various competitions were organised for officers /employees in each category. In order to remove the hesitation of officers and employees to work in Hindi, Ministry organises Hindi workshop from time to time.

As per the guidelines of the Department of Official Language Hindi Salahkar Samiti is being constituted in the Ministry of Coal. Ministry is running a small library for the personnel of the Ministry with more than 250 books on standard Hindi literature. All the motivational and promotional efforts enumerated above have had a positive effect to increase the use of Official Language in the Ministry.
INFORMATION TECHNOLOGY

With diversification of the ICT landscape and Digital India initiative, it has become absolutely imperative for the Government to bring in qualitative and quantitative transformations in wake of changing user expectations. In the year 2019-20, Ministry of Coal, along with NIC has strived hard and taken lead towards standardization and improvement in IT working environment and service delivery.

- NIC COAL Computer Centre in Ministry of Coal is well equipped with latest computer systems for delivering and implementing secure multi-platform computer based applications/solutions, database support, Internet, Email, network and video conferencing facilities. Ministry of Coal has adopted Cloud services of NIC – Meghraj to ensure optimum utilization of the infrastructure and speed up the development and deployment of e-Governance applications of Ministry of Coal.

- The official website of Ministry of Coal – https://coal.gov.in is bilingual, user-friendly and provides an easy navigation and quick access to important and latest up-to-date information. A clutter-free responsive design helps the end user to access the site on all handheld devices. The site provides rich updated content such as details of senior officers, organizational setup of the Ministry, subordinate offices links, policies, annual reports, publications, acts, rules, notifications, policies, Right to Information (RTI) disclosures, latest announcements and letters. The website is GIGW compliant and certified by STQC.

The website of Ministry is in process of migration into new platform under CMF (Common Management Framework) developed by NIC using open source technology. This framework facilitates standardization and improvement in presentation and content delivery of website. This framework enables static websites to migrate to dynamic portals and a set of functional features, along with embedded modules will automatically become available to the websites of Ministries/Departments on adoption of CMF.

As the shared hosting is stopped this year these websites have been shifted to the cloud environment. SSL certificate installed on the server to make a secure session with browsers.

- Coal Projects Monitoring Portal has been successfully implemented in the Ministry. This comprehensive MIS links all stake holders of Coal sector – Industry, Coal Companies, Coal India Limited (CIL), NLC India Limited (NLCIL), State Governments, Ministries/Departments and Ministry of Coal. Coal Projects with their pending issues with various States and / or departments are submitted into the system. These issues are closely monitored, discussed and resolved on this platform thereby eliminating cumulative information seeking and decision making delays.

- e-Office a web-based system implemented and maintained for effective online monitoring of movement of files and receipt in the ministry. The e-Office product aims to support governance by ushering in more effective and transparent manner for inter and intra-government processes. It is fully functional in Ministry of Coal. There is no physical file movement in the Ministry. VPN support for senior officials has been extended for non NICNET nodes / laptops to ensure nonstop working in e-Office Platform. NIC email facility has been provided to all the officials in the Ministry to access the system and necessary operational training is provided to ministry officials from time to time.

The Ministry of Coal was awarded from DARPG for commendable work done in implementation of e-office in the Ministry.

- Ministry has developed a web portal of Star Rating of Coal Mines to implement a system of self-evaluation of Coal Mines and subsequent reviewed by Reviewer which was appointed by Coal Controller and further validation by Coal Controller’s Organization of all Coal Mines under various factors covered broadly in seven modules as follows - (a) Mining Operations related...
parameters (b) Environment related parameters (c) Adoption of Technologies: Best Mining Practices (d) Economic performance (e) Rehabilitation & Resettlement parameters (f) Worker related Compliance (g) Safety and security related parameters. This portal will be live soon.

- A Dashboard has been developed to monitor the Coal Production, Offtake etc. on a regular basis. The other items which are included as follows – (a) Coal Exploration (b) Central Sector Schemes (c) Status of Coal Stock in Thermal Power Plants (d) MDMS (Mine Data Management Systems) Projects (e) Allocation of Mines (f) Monitoring of Major Coal Mines.

- e-HRMS (Human Resource Management System) has been implemented in the Ministry of Coal. Employees of the Ministry will be able to not only see all their details w.r.t service book, leave, etc., but also apply for different kind of claims/reimbursements, loan/advances, leave, leave encashment, LTC advances, Tour etc. on a single platform. Employees shall not be dependent for data updating on administration, but they may themselves update the data with their login subject to verification by concerned administration. They will be able to track status and match details instantly. Initially the process like Leave Management System, e-Service Book is automated.

- Coal Allocation Monitoring System (CAS) is implemented to monitor the allocation of coal by CIL to States, States to State Nominated Agencies (SNA) and SNA to consumers in a transparent manner. The system is designed to cater to the consumers through SNA in small and medium sector (erstwhile non-core sector). This web application is developed and designed by NIC and hosted on NIC Cloud with various rich features to usher in faster decisions, establish transparency and to connect all distant stakeholders together.

- Ministry is extensively using Video Conferencing facility set up in the Ministry to facilitate Senior Officers to hold important meetings with various Coal PSUs and board meetings. Around 145 Video Conferencing sessions were conducted successfully having conference duration of about 273 hours during this year. This facility is also successfully being used during VC meeting by Hon’ble Prime Minister on PRAGATI.

- Some of the main office automation software being used in the Ministry for day to day working is: Biometric Attendance system, SPARROW for all officials, E-Visitor, Centralised Public Procurement Portal for tender publishing, RTI Proactive disclosure and Annual Return System, PFMS for payroll.

- E-governance applications that have been implemented in the Ministry are- RTI MIS to manage RTI cases, AVMS for monitoring ACC vacancies, CPGRAMS for public grievances and Parliament Questions and Supplementary MIS.
RIGHT TO INFORMATION
## RIGHT TO INFORMATION

Details of RTI applications received in the Ministry of Coal during 1st April, 2019 to 31st December, 2019

<table>
<thead>
<tr>
<th>Name of the Quarter</th>
<th>Opening balance as on bearing of previous quarter</th>
<th>No. of appl. Received as transfer from other PA</th>
<th>Received during quarter</th>
<th>No. of cases transferred to other PA</th>
<th>Decision where request/appeal rejected</th>
<th>Decision where request/appeal accepted</th>
<th>Carry forward</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st Quarter (from 1st April, 2019 to 30th June, 2019)</td>
<td>28</td>
<td>43</td>
<td>106</td>
<td>88</td>
<td>01</td>
<td>61</td>
<td>27</td>
</tr>
<tr>
<td>2nd Quarter (from 1st July, 2019 to 30th September, 2019)</td>
<td>27</td>
<td>68</td>
<td>120</td>
<td>123</td>
<td>01</td>
<td>81</td>
<td>10</td>
</tr>
<tr>
<td>3rd Quarter (from 1st October, 2019 to 31st December, 2019)</td>
<td>10</td>
<td>13</td>
<td>132</td>
<td>106</td>
<td>00</td>
<td>38</td>
<td>11</td>
</tr>
</tbody>
</table>
CAG AUDIT OBSERVATIONS

ANNUAL REPORT 2019-20
Audit Report No.12 of 2019 CAG on “Assessment of Environmental Impact due to Mining Activities and its Mitigation in Coal India Limited and its Subsidiaries

Major Audit Findings:

Environment Management System

i. The National Environmental Policy (NEP) was formulated by the Government of India in September 2006. The NEP enjoined upon all concerned - Central, State/UT and local - to prepare action plans on identified themes and formulate their own strategies to be consistent with the NEP. However, Coal India Limited (CIL) amended its original Corporate Environment Policy (CEP) and formulated a comprehensive Environment Policy only in March 2012, followed by a revised policy in December 2018 (Para 3.1.1).

ii. Ministry of Environment, Forest and Climate Change (MoEF&CC) while according environment clearance (EC) for the projects of the subsidiaries from time to time, stipulated that a well laid down Environment Policy duly approved by the Board of Directors (BoD) of the subsidiaries needs to be in place. Six out of seven coal producing subsidiaries of CIL did not formulate a policy as mandated. Further, although guidelines containing the responsibility and delegation at different levels in environment discipline were formulated by CIL, the same were not dovetailed in their operating manual by the subsidiaries. (Para 3.1.2 & Para 3.1.3).

Air Pollution and Control Measures

iii. According to the Environment Impact Assessment – Environment Management Plan of the mines, requisite number of air quality monitoring stations as specified in EC were to be established in core zone (within 3 km of the mining area) and buffer zone (within 10 km of the mining area) of each mine for monitoring air quality. In 12 of the sampled 30 operating mines/washeries, against 96 monitoring stations, only 58 (60 per cent) were established (Para 4.1.1).

iv. Continuous Ambient Air Quality Monitoring Stations were to be installed and equipped with connectivity to the server of State Pollution Control Boards (SPCB) to facilitate online monitoring of ambient air quality. 12 mines of four subsidiaries did not comply with these directives (Para 4.2).

v. The average ash content in the coal extracted by Hingula, Jagannath, Basundhara (W) and IB Valley mines of Mahanadi Coalfields Limited (MCL) ranged between 40.1 per cent and 43.8 per cent. Although MCL contemplated setting of four washeries as early as in March 2008 for supply of beneficiated coal to thermal plants, these have not been commissioned so far (November 2018). The ash content in the coal supplies executed by Central Coalfields Limited (CCL) also exceeded 34 per cent. (Para 4.3)

vi. The National Ambient Air Quality Standards, 2009 (NAAQS) notified by MoEF&CC in November 2009 mandated monitoring of Particulate Matters (PM10 and PM2.5) on annual and 24 hour basis. Although these norms came into effect from November 2009, ambient air quality was monitored in Eastern Coalfields Limited (ECL) only from May 2015 for the cluster of mines. Further, six locations of ECL were monitored only till March 2015, although PM10 level in these stations always exceeded the prescribed norm (100 μ g/cum) under NAAQS (Paras 4.4.1 & 4.4.2).

vii. The concentration of PM10 and PM 2.5 in air exceeded the levels prescribed in NAAQS in six mines across three subsidiaries during 2013-18 (Para 4.4.3).

viii. Shortcomings were noticed in the implementation of prescribed CIL guidelines (March 2014), in 17 out of the 28 operating mines selected for scrutiny (Para 4.6.1).
ix. Construction of silo at Gevra OCM was completed belatedly in February 2016 at a cost of `138.85 crore. However, works relating to railway siding remained incomplete and coal produced from Gevra OCM continued to be transported through road, thereby contributing to dust generation. In Lingaraj and Lakhanpur projects of MCL, silo was not operationalised due to absence of railway connectivity and coal continued to be transported by road. In Block B mines of Northern Coalfields Limited, coal could not be dispatched through Coal Handling Plant due to absence of rail connectivity and, hence, coal continued to be transported by road beyond August 2016, thereby contributing to air pollution. (Paras 4.9.1, 4.9.2 and 4.9.3).

Water Pollution and Control Measures

x. During 2013-18, out of 28 mines selected for audit scrutiny, in eight mines across three subsidiaries, the pollutants exceeded the limits prescribed by Bureau of Indian Standards (BIS) (Para 5.1).

xi. During 2013-18, 62 lakh Kilo-litre (KL) of untreated water was discharged in nearby water bodies by Lakhanpur (2.95 lakh KL) and Basundhara (W) mines (59.05 lakh KL) of MCL thereby contaminating ground water. Further, CCL, Bharat Coking Coalfields Limited (BCCL) and South Eastern Coalfields Limited (SECL) continued to use ground water for their mining operations without obtaining No Objection Certificate (NOC) from Central Ground Water Authority (CGWA) (Paras 5.2.1 & 5.8.1).

xii. The subsidiaries did not install Sewage Treatment Plant (STP) at the residential colonies of the collieries, thereby contaminating the ground water (Para 5.6).

xiii. Due to absence of mechanical brooming / industrial cleaner in Piparwar OCM, the spillage from overloaded trucks / dumpers accumulated along the sides of the bridge of Safi River, was not cleaned periodically. These eventually drained into the river thereby contaminating the river water. Further, rejects of Kathara washery of CCL was found to be contaminating Damodar River (Paras 5.7.1 & 5.7.2).

xiv. NCL did not get the coal seam samples analysed for mercury content on annual basis. Further, no analysis of coal seam samples was made beyond June 2016, thereby, thwarting the measures for occupational health and safety (Para 5.9).

Land Management – Mitigation of Land Degradation and Reclamation

xv. Out of 23 OC/mixed mines selected for audit, in 13 mines across five subsidiaries, though topsoil was stacked in the earmarked area and reported periodically, basic records of topsoil indicating the quantity and areas of stacking were not maintained. As at the end of March 2018, in three mines of Western Coalfields Limited (WCL), although 75.30 lakh cum of topsoil was stacked at earmarked sites, it remained unutilised since 2013-14 (Paras 6.1.1 & 6.1.2).

xvi. Director General of Mines Safety (DGMS) suspended (June 2017) operations in a patch of Rajmahal OCP as the Overburden (OB) benches in coal II and III seams did not conform to the norms specified in the Regulations. DGMS suspended (January 2017) operations in Quarry 3 of Sonapur Bazari OCP also as the height of the benches of R-VIII coal seam deviated from the Regulation (Para 6.2.1).

xvii. ECL did not set year-wise internal targets for biological reclamation of mined out area through plantation activities. Against the de-coaled area of 3922.85 ha, MCL biologically reclaimed only 2024.73 ha (51.61 per cent) as at the end of March 2018 (Para 6.3.1).

Adherence to Other Regulatory Conditions for Protection of Environment

xviii. 35 mines of ECL which were closed between April 1946 and July 2009 (including six mines which were closed prior to nationalization), did not have Mine Closure Status Report (Para 7.1.1).

xix. MCL did not adopt a uniform policy for the dumping of fly ash. Between April 2009 and December 2014, ECL permitted five thermal power plants to dump 201.26 lakh cubic meter of fly ash in eight abandoned mines without consideration. Further, fly ash generated in the process of power generation by Kathara Captive Power Plant of CCL was dumped in the open space, posing environmental hazard (Para 7.1.3.2, 7.1.3.3 & 7.1.3.4).
xx. Deputy Director of Mines, Odisha levied (June 2017) penalty of ` 50.97 crore invoking the provisions of the Mines and Mineral (Development and Regulation) (MMDR) Act for production of coal in excess of the mine plan. The violation of mining plan was affirmed (August 2017) by the Hon’ble Supreme Court (Para 7.2.2).

xxi. As at the end of March 2018, 16 units relating to two subsidiaries comprising mines (13) and washeries (3) were being operated without valid EC in 9 units, Consent to Establish (CTE) in 1 unit and Consent to Operate (CTO) in 6 units. Consequently, the adequacy of the mitigative measures in vogue to handle environmental pollution as prescribed under various rules / regulations could not be assessed (Para 7.2.3).

xxii. EC for Hurilong Underground (UG) coal project which was in close proximity to the Palamau tiger reserve, was rejected (August 1998) by MoEF&CC. In advance of obtaining the EC, CCL acquired and destroyed 6.58 acre non forest land and constructed infrastructural facilities at a cost of ` 2.98 crore (Para 7.2.4).

xxiii. MCL did not install meters and submit waste water analysis report as stipulated under the Cess Act and hence could not avail of concessional rates of cess. The saving it had to forego on account of this non-compliance was in the amount of ` 2.48 crore during 2013-18 (Para 7.3.3).

Recommendations
1. The companies under coal sector may put in place an Environment Policy duly approved by their respective BoD as mandated by MoEF&CC.

xxiv. Even after a lapse of nine years, since Jharia Master Plan was approved, BCCL did not formulate fire fighting activities as envisaged therein. Fire fighting activities commenced only in 25 projects (as against 45 projects identified). The fires thus continued to endanger the lives of the people residing in and around the fire area, besides adversely impacting the environment (Para 8.1.2).

xxv. While the deployment of executives exceeded the sanctioned strength at CIL Headquarters (HQ) ranged between 20 per cent and 120 per cent of the sanctioned strength during 2013-18. North Eastern Coalfield (NEC) mines experienced shortage of executives ranging between 33 per cent and 100 per cent. There were inconsistencies in deployment of manpower for environmental activities in the subsidiaries also.(Para 9.1.1 and 9.1.2).

xxvi. We observed that while the quality parameters relating to air and water were being monitored on fortnightly basis, the reports were prepared by Central Mine Planning and Design Institute Limited (CMPDIL) and reported to the subsidiaries on quarterly basis, thereby offering no scope for initiating remedial measures on the basis of adverse fortnightly readings recorded (Para 9.2).

Rehabilitation and Resettlement for Mine Fire
xxvii. The fire fighting activities as envisaged in the Jharia Master Plan was not implemented. As a result, the adverse impact of subsidence and fire at Jharia Coalfields on the environment may be expedited.

xxviii. Remedial actions for mitigating and arresting the adverse impact of subsidence and fire at Jharia Coalfields on the environment may be expedited.

xxix. Implementation of solar power project may be put on fast track so that the environmental benefits fructify as envisaged.

Monitoring of Environmental Activities
xx. While the deployment of executives exceeded the sanctioned strength at CIL Headquarters (HQ) in all the years, it fell short at mines, during the period 2013-18. The extent of excess deployment in CIL HQ ranged between 20 per cent and 120 per cent of the sanctioned strength during 2013-18. North Eastern Coalfield (NEC) mines experienced shortage of executives ranging between 33 per cent and 100 per cent. There were inconsistencies in deployment of manpower for environmental activities in the subsidiaries also.(Para 9.1.1 and 9.1.2).

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Recommendations
1. The companies under coal sector may put in place an Environment Policy duly approved by their respective BoD as mandated by MoEF&CC.
8. The monitoring mechanism in the subsidiaries may be strengthened by streamlining the existing reporting process for maintaining neutrality and to ensure proper checks and balances in the system of compliance mechanism. The oversight role of CIL be directed to ensure compliance to prescribed environmental standards.

9. Deficiencies observed in mitigation of environmental pollution were based on audit of sample mines which may be reviewed in other mines to ensure compliance of environmental rules and regulations. Ministry of Coal accepted the recommendations and stated that these recommendations would be applicable to entire coal sector which included companies other than CIL also and assured to take appropriate action.
ANNEXURE

ORGANIZATION CHART OF MINISTRY OF COAL (AS ON 1 JAN. 2020)

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