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STANDING COMMITTEE ON
COAL AND STEEL (2016-2017)
SIXTEENTH LOK SABHA

MINISTRY OF COAL

DEMANDS FOR GRANTS (2017-18)

TWENTY- SEVENTH REPORT



LOK SABHA SECRETARIAT

NEW DELHI

March, 2017/Phalguna, 1938(Saka)

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STANDING COMMITTEE ON
COAL AND STEEL (2016-2017)

(SIXTEENTH LOK SABHA)

MINISTRY OF COAL

DEMANDS FOR GRANTS (2017-18)

Presented to Lok Sabha on 10 .03.2017

Laid in Rajya Sabha on 10.03.2017



LOK SABHA SECRETARIAT
NEW DELHI
March, 2017/Phalguna, 1938(Saka)

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(i)

COMPOSITION OF THE STANDING COMMITTEE ON COAL AND STEEL(2016-17)

Shri Rakesh Singh- Chairperson

Name of the Member

Lok Sabha

2. Shri A Arunmozhithevan
3. Shri Kalyan Banerjee
4. Shrimati Jyoti Dhurve
5. Shri Nagesh Godam
6. Shri Shailesh Kumar
7. Dr. Banshilal Mahato
8. Shri Kamalbhan Singh Marabi
9. Shri Ajay Nishad
10. Shrimati Riti Pathak
11. Shrimati Ranjit Ranjan
12. Dr. Ravindra Kumar Ray
13. Shri Chandu Lal Sahu
14. Shri Tamradhwaj Sahu
15. Shri Tathagata Satpathy
16. Shri Janardan Singh "Sigriwal"
17. Shri Pashupati Nath Singh
18. Shri Rama Kishore Singh
19. Shri Sunil Kumar Singh
20. Shri Sushil Kumar Singh
21. Shri Krupal Balaji Tumane

Rajya Sabha

22. Shri Ali Anwar Ansari
23. Dr. Pradeep Kumar Balmuchu
24. Shri Ranjib Biswal
25. Shri Md. Nadimul Haque
26. Shri B.K Hariprasad
27. Shri Ranvijay Singh Judev
28. Shri Ram Vichar Netam
29. Shri Dilip Kumar Tirkey
30. Vacant
31. Vacant

(ii)

SECRETARIAT

1. Shri U.B.S. Negi - Joint Secretary
2. Shri Ajay Kumar Garg - Director
3. Shri Arvind Sharma - Additional Director
4. Ms. Miranda Ingudam - Deputy Secretary

INTRODUCTION

I, the Chairperson, Standing Committee on Coal and Steel having been authorized by the Committee to present the Report on their behalf, present this Twenty-Seventh Report (Sixteenth Lok Sabha) on Demands for Grants (2017-18) relating to the Ministry of Coal.

2. The Demands for Grants of the Ministry of Coal were laid on the Table of the House on 9.03.2017 Under rule 331E of the Rules of Procedure and Conduct of Business in Lok Sabha, the Standing Committee on Coal and Steel are required to consider the Demands for Grants of the Ministries under their jurisdiction and make Report on the same to both the Houses of Parliament.

3. The Committee took evidence of the representatives of the Ministry of Coal on 23.02.2017.

4. The Report was considered and adopted by the Committee at their sitting held on 09.03.2017.

5. The Committee wish to express their thanks to the officials of the Ministry of Coal for the cooperation extended by them in furnishing written replies and for placing their considered views and perceptions before the Committee.

6. The Committee place on record their profound appreciation for the valuable assistance rendered to them by the officials of the Lok Sabha Secretariat attached to the Committee.

7. For facility of reference and convenience, the observations and recommendations of the Committee have been printed in bold letters in Part-II of the Report.

**NEW DELHI;
09 MARCH, 2017
Phalguna, 1938(Saka)**

**RAKESH SINGH
Chairperson
Standing Committee on Coal and Steel**

(iv)

REPORT

PART-I

CHAPTER -I

INTRODUCTORY

The world over Coal's contribution towards primary commercial energy is around 30% and coal helps generate 40% of world's electricity. In the Indian context, the importance of coal scales-up higher than the global average. In India, coal is the most dominant energy fuel meeting around 50% of country's primary commercial energy. Around 72% of the entire power generated in the country is coal based. The pivotal role of coal is expected to continue in the forestalled future primarily because of abundance of coal reserves, easy availability and affordability. As per the Annual Report (2016-17) of the Ministry of Coal, as of 1st April, 2016, the estimated geological resource of Coal reserves estimated by the Geological Survey of India stood at 308.802 billion tonnes. Coal India Limited produces over 84% of the Country's entire coal output virtually fuelling and empowering the power sector in the Country. As our country is expanding industrially and economically, so are its energy needs. In India, coal is the answer to escalating energy demand. The Country's planners, however, are alternately exploring to shift from being a largely fossil driven energy economy to one that is powered by clean and renewable form, especially solar. But, till such time other forms of energy begin to contribute significantly, coal is and shall remain the most dominant energy fuel in providing energy security to the Country.

1.2 The Annual Report (2016-17) of the Ministry of Coal highlights that the Ministry of Coal (MoC) 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 issues. These key functions are exercised through its public sector undertakings, namely Coal India Limited (CIL) and Neyveli Lignite Corporation Limited (NLCIL) and Singareni Collieries Company Limited (SCCL), a joint sector undertaking of State Government of Telangana and Government of India with equity capital in the ratio of 51:49.

Coal and Lignite Reserves in India

1.3 Coal reserves have been estimated at 308.802 billion tonnes by the Geological Survey of India (01.04.2016). The reserves have been found

mainly in the States of Jharkhand, Odisha, Chhattisgarh, West Bengal, Madhya Pradesh, Telangana and Maharashtra. The Lignite reserves in the country have been estimated at around 44.59 billion tonnes by the Geological Survey of India (01.04.2016). The major deposits are located in the States of Tamil Nadu, followed by Rajasthan, Gujarat, Kerala, West Bengal, Jammu & Kashmir and Union Territory of Puducherry.

Coal Production

1.4 The overall production of coal for 2016-17 was projected at 724.71 MT. During the period April to December 2016 the actual production was 453.10 Million tonnes compared to 445.42 Million tonnes (MT) during corresponding period of 2015-16 and showing a growth of 1.7 per cent.

1.5 The Annual Report further stated that the core objectives of Ministry of Coal are linked to its vision of securing the availability of coal to meet the demand of different sectors of the economy in an eco-friendly and sustainable manner and the overall mission of augmenting production through Government companies as well as the captive mining route by adopting state-of-the-art, clean-coal technologies; enhancing exploration efforts with thrust on increasing proven resources and developing the necessary infrastructure for evacuation of coal.

Objectives

- Ensuring achievement of Annual Action Plan targets for coal production and off-take, OBR removal, 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 initiatives.
- Enhancing exploration to augment resource base.
- Quality and reliability in customer services.
- Exeditious and joint solutions to inter-ministerial issues.
- Improving efficiency of Coal India
- Attracting private investments
- Allocating coal blocks in a transparent manner.

Functions

- Facilitating exploration, development and exploitation of coking and non-coking coal and lignite reserves in India.

- All matters related to production, supply, distribution and prices of coal.
- Development and operation of coal washeries other than those for which Department of Steel is responsible.
- Low temperature carbonization of coal and production of synthetic oil from coal.
- All work related to coal gasification.
- Administration of the Coal Mines (Conservation and Development) Act, 1974 (28 of 1974), administration of the Coal Mines Provident Fund and Miscellaneous Provision Act, 1948 (46 of 1948), rules under the Mines Act, 1952 (32 of 1952) for the levy and collection of duty of excise on coke and coal produced and despatched from mines and administration of rescue fund, administration of the Coal Bearing Areas (Acquisition and Development) Act, 1957 (20 of 1957), 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, administration of Coal Mines Nationalization Act, 1973 (26 of 1973), administration of Coal Mines (Special Provisions) Act, 2015 etc.

Organizational Structure

1.6 The Secretariat of MoC is headed by a Secretary who is assisted by one Additional Secretary, five Joint Secretaries (including the Financial Advisor), one Project Advisor, one Economic Advisor, twelve Directors/Deputy Secretaries/Joint Director, eleven Under Secretaries, twenty one Section Officers, two Assistant Directors, one Controller of Accounts, one Deputy Controller of Accounts, two Senior Accounts Officers and four Assistant Accounts Officers and their supporting staff.

Subordinate and autonomous organisation

1.7 Office of the Coal Controller's Organisation (CCO) – a subordinate office and Coal Mines Provident Fund Organisation (CMPFO) – an autonomous organization are functioning under the administrative control of Ministry of Coal.

Public Sector/Joint Sector Companies

Coal India Limited (CIL)

1.8 Coal India Limited (CIL) is a 'Maharatna' company under the Ministry of Coal, Government of India with its headquarter at Kolkata, West Bengal. CIL is the single largest coal producing company in the world and one of the largest employer with manpower of 3,14,906 as on 1st December, 2016. As on 1st April, 2016, CIL has 413 Mines viz. 207 underground, 176 opencast and 30 mixed mines. Coal India is a holding company with seven wholly owned coal producing subsidiary companies and one mine planning & consultancy company. It encompasses the whole gamut of identification of coal reserves, detailed exploration followed by design and implementation and optimizing operations for coal extraction in its mines. For the first time, Coal India's production (538.75 MT) and off-take (534.50 MT) have exceeded Half-a-Billion Tonne mark in 2015-16. Coal India for the first time had surpassed Rs. 1.0 lakh crore in Gross Sales (Rs. 1,08,150.03 crore) during 2015-16. The subsidiary companies of CIL are:

- Eastern Coalfields Limited (ECL), Sanctoria, West Bengal
- Bharat Coking Coal Limited (BCCL), Dhanbad, Jharkhand
- Central Coalfields Limited (CCL), Ranchi, Jharkhand
- South Eastern Coalfields Limited (SECL), Bilaspur, Chhattisgarh
- Western Coalfields Limited (WCL), Nagpur, Maharashtra
- Northern Coalfields Limited (NCL), Singrauli, Madhya Pradesh
- Mahanadi Coalfields Limited (MCL), Sambalpur, Odisha
- The Central Mine Planning and Design Institute Limited (CMPDIL), Ranchi, Jharkhand, a consultancy company
- North Eastern Coalfields (NEC) a small coal producing unit operating in Margherita, Assam is under direct operational control of CIL.

Coal India's major consumers are power and steel sectors in addition other consumers like Cement, Fertilizer, Brick Kilns, and Small Scale Industries, etc.

1.9 As per the Annual Report and Accounts 2015-16 of CIL, for the first time Coal India's production and off-take have exceeded Half-a-Billion Tonne mark, an indication that the Company is on its pursuit of 1 Billion Tonne production by 2019-20. During FY 2015-2016, Coal India as a whole recorded coal production of 538.75 Million Tonnes (MT) stepping into a higher growth trajectory registering nearly 44.51 MTs increase in coal

production during FY 2016- the highest ever incremental increase in a single financial year since the inception of the Company. Raw coal off-take during FY 2015-2016 was 534.50 MTs, an increase of 45.11 MTs on a year-on-year comparison. As in production, all subsidiary companies of Coal India have registered positive growth in off-take. On the Strategies for Growth, the Annual Report (2015-16) of CIL highlights that Coal India is faced with meeting challenging targets in the years ahead. Going forward, in order to meet the production targets, Coal India needs to step up to double digit growth rate from that of around 9% achieved during FY 2015-2016. During the first four months of FY 2016-2017, Coal India's production growth was more than 6 million tonnes over the same period last year. To sustain the growth momentum in its production and off-take in the future, Coal India has formulated multi-pronged strategies viz. Critical Railway Links- Collaboration with State Government & Railways; Technology Development and Role of Human Resources (HR). Other Improvement Areas identified include *inter-alia* Coal Washing; System Improvements; Green Initiatives; Safety; Corporate Social Responsibility; and Corporate Governance. Statedly, Coal India's vision is to ensure that there is no shortage of coal in the Country and to make the Country self-reliant in coal. Coal India envisions to move ahead as a modern, professional, consumer friendly and successful corporate entity committed to national development goals.

The Singareni Collieries Company Limited (SCCL)

1.10 The Singareni Collieries Company Limited (SCCL) is a joint venture of Government of Telangana and the Government of India with equity participation in the ratio of 51:49 respectively. SCCL is having 10128 MT of proved reserves in the Pranahita – Godavari Valley. SCCL is presently operating 16 Opencast Mines and 30 Underground Mines in the four districts of Telangana with manpower of 56,886. Naini coal block in the Angul district of Odisha was allotted to SCCL in August 2015 for which pre-mining activities are in progress. Penagaddppa coal block located in the Bhadradri District of Telangana State is allotted to SCCL on 15th December, 2016. Further, the 95th Annual Report & Accounts (2015-16) of Singareni Collieries Company Limited (SCCL) indicated that the year 2015-16 has achieved growth in all fronts. 15% growth rate in production and 16% growth rate has been achieved in sales which are far above the growth rate achieved in Indian coal industry. The Coal Production in 2015-16 at 60.38 Million Tonnes as compared to that of 52.54 MT in 2014-15 registering a growth of 14.92%. The Financial Performance of the Company in the year 2015-16 in terms of Net Profit after Tax stands at Rs. 1066.13 crore compared to Rs. 490.44 crore in the year 2014-15 indicating considerable growth of almost double.

NLC India Limited (NLCIL)

1.11 NLC India Limited, a “Navratna” company with its registered office at Chennai and corporate office at Neyveli in Tamilnadu is a pioneer among the public sector undertakings in the energy sector. NLC India Ltd. operates

- Three opencast lignite mines of total capacity of 28.5 MTPA at Neyveli and one open cast lignite mine of capacity 2.1 MTPA at Barsingsar, Rajasthan.
- Four Thermal Power Stations with a total installed capacity of 2990 MW at Neyveli and one Thermal Power Station at Barsingsar, Rajasthan with an installed capacity of 250 MW.
- 51 MW Wind Power project in Kazahaneerkulam, Tirunelveli District, Tamil Nadu 29 WTGs (1.5 MWx29) with a capacity of 43.5 MW have been commissioned till November, 2016.
- A coal based thermal power project at Tuticorin, Tamil Nadu with two units of 500 MW capacity each through NLC Tamil Nadu Power Limited (NTPL), a joint venture between NLC and TANGEDCO (equity participation in the ratio of 89:11) has been commissioned.
- The total power generating capacity of NLC India Ltd. As on November, 2016 is 4293.5 MW.

The three Thermal Power Stations (TPPs) and the three Mines at Neyveli are certified with ISO 14001 (Environment Management System), ISO 9001 (Quality Management System) and OHSAS 18001 (Occupational Health and Safety Management System). NLCIL's growth is sustained and its contribution to India's Social and economic development is significant.

With regard to the performance of Neyveli Lignite Corporation India Ltd., while Lignite Production achieved 102.94% of the target for the period April, 2016 to January, 2017, the gross power generation was 17251.02 MU against a target of Rs. 17597.19 MU achieving 98.03% of the target.

Coal Controller’s Organisation

1.12 The Coal Controller’s Organisation (CCO) is a subordinate Office of Ministry of Coal, having its headquarters at Kolkata and field offices at Dhanbad, Ranchi, Bilaspur, Nagpur, Sambalpur, Kothagudem and Asansol. Each field office is headed by one GM/DGM level executive supported by other technical officials. Apart from carrying out inspections for ascertaining quality in selected mines, the field officers also carry out regular inspections to ensure compliance with specific orders relating to coal and resolving statutory complaints. Besides looking after quality surveillance noted above, field officers are also entrusted with field assignments associated with CCDA

assistance under Coal Mine (Conservation and Development) Rules 1975 (as amended in 2011); opening/ re-opening permission of seams of mines under Colliery Control Rules 2004 and coordination with the coal companies. In addition, four Officers-on-Special Duty are posted in the Coal Controller's Organisation, Kolkata for coordinating the field offices. This office also looks after the coal mines under NEC command area and renders assistance to Coal Controller on various issues. The office of Coal Controller has a statistical wing consisting of two ISS officers and other supporting staff which is responsible for collection, compilation and publication of coal statistics on regular basis. CCO is the major source of coal statistics in Government of India. The CCO is also supported by a Director, Deputy Director, Deputy Assistant Coal Controller and other Officials who assist the CCO in collection of stowing excise Duty and other technical and administrative works. OSDs and Deputy Assistant Coal Controllers play an important role in monitoring of Captive Coal Blocks, Opening of Escrow Accounts, dealing with Court Cases, monitoring of the collection of stowing excise duty, CCDA, quality surveillance, works related to Commissioner of Payment, etc.

1.13 The Coal Controller's Organisation discharges various statutory functions derived from the following statutes:

- (i) The Colliery Control Rules, 2004.
- (ii) The Coal Mines (Conservation & Development) Act, 1974 and The Coal Mines (Conservation & Development) Rules, 1975 (amended in 2011)
- (iii) The Collection of Statistics Act, 2008 and the Collection of Statistics (Central) Rules, 2011.
- (iv) The Coal Bearing Areas (Acquisition & Development) Act, 1957 (20 of 1957) etc.

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

- (a) Monitoring of Coal Blocks (Vested and Alloted) the progress of development of Captive coal/lignite blocks
- (b) Monitoring of washeries
- (c) Follow up of submission of mine closure plan and act as the exclusive representative of Government of India for signing up Escrow account agreement with different coal/lignite companies

1.14 A brief description of Coal Controller's Organisation's performance during the period 1st April, 2016 to 31st December, 2016 highlighted in the Annual Report include *inter-alia* Grant of Permission for opening and re-opening of coal mines (18 Coal/Lignite Mines); Disposal of cases under

Section 8 of the Coal Bearing Areas (Acquisition and Development) Act, 1957 (10 notifications) ; Coal samples collected & analyzed (837); statutory complaint received & settled (8); Collection of Excise Duty (Rs. 460.155 crore); Collection, Compilation and Publication of Coal Statistics (Coal Directory 2014-15 and Provisional Coal Statistics, 2015-16 have already been published in 2016-17. Work of Coal Directory 2014-15 is under progress); Monitoring and progress of Coal Blocks ; Compliance of Mine Closure Plan and Escrow Account agreement; etc. 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/ISM regarding complete safety zone fencing, expenditure incurred for protective and reclamation works and opening a fixed deposit Escrow Account with any scheduled bank for depositing annual mine closure cost as per approved mine closure plan with Coal Controller as an exclusive beneficiary under the provision of MOC's guidelines for preparation of mine closure plan dated 7.1.2013.

The status of opening and deposition of annual closure cost to Escrow Account up to 31.12.2016 during 2016-17:

Sl. No.	No. of Tripartite Escrow Agreement signed with CCO up to 31.12.2016	No. of Mines for which Escrow A/c has been signed	Amount deposited to the Escrow Account for the period 2016-17 (till Dec., 2016) (Rs./- in crore)	Total Amount deposited to the Escrow Account since starting to till 31.12.2016 (Rs./- in crore)
1	500	525	855.31	5252.52

Besides, the CCO also work as Commissioner of Payments in pursuance of the Coking Coal Mines (Nationalization) Act, 1972 and the Coal Mines (Nationalization) Act, 1973 for the purpose of disbursement of amounts to settle the liabilities of the ex-owners of coal mines nationalized in 1972-73. With residual work including of colliery-accounts yet to close as on 31.12.2016 standing at 39 and 84 respectively and amount left for disbursement as on 31.12.2016 standing at Rs. 386.21 lakh and Rs. 833.43 lakh respectively under the aforesaid two Acts of 1972 and 1973.

Coal Mines Provident Fund Organization (CMPFO)

1.15 The Coal Mines Provident Fund Organization, an Autonomous body, established under the Coal Mines Provident Fund and Miscellaneous Provisions Act, 1948, 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 representatives of the Central and State Governments, employers and employees. The headquarters of CMPFO is at Dhanbad and its 24 Regional Kolkata has been transferred to the office of Coal Controller. At present, the Coal Controller is functioning as ex-officio Commissioner of Payments. 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. The payments made for the year 2015-16 and 2016-17 (up to December, 2016) are given as under:-

Year	Amount disbursed in Rs.
2015-16	82,39,39,830/-
2016-17 (up to December, 2016)	912,08,42,669/-

Besides, the CMPFO also administers the Coal Mines Provident Fund Scheme; Coal Mines Deposit Linked Insurance Scheme; and Coal Mines Pension Scheme, 1998.

1.16 Oral evidence of the representatives of the Ministry of Coal and Coal PSUs was taken during the sitting of the Committee held on 23rd February, 2017. During the oral evidence, the Ministry highlighted their thrust areas viz. safety, quality, environment and new technology to further enhance their overall performance as well as that of the Coal PSUs. The Committee were also apprised that a Vision Document and a Roadmap towards achievement of the targeted coal production of 1 Billion Tonnes by 2019-20 was under preparation. Besides analyzing the detailed Demands for Grants (2017-18) of the Ministry of Coal, the Committee in the present Report have examined various issues related to implementation of various schemes/plans/programmes by the Ministry of Coal and other PSUs/Organizations under its administrative control. In the context of the Demands for Grants 2017-18, the detailed analysis alongwith observations/recommendations of the Committee on various issues have been given in the succeeding chapters of the Report.

CHAPTER – II

ANALYSIS OF DEMANDS FOR GRANTS (2017-18)

A. SUMMARY OF DEMANDS FOR GRANTS 2017-18

The Demands for Grants (2017-18) of the Ministry of Coal reflect a Scheme provision of Rs.685.10 crore and a Non Scheme provision of Rs. 60.10 crore totalling to Rs. 745.10 crore as Gross Budgetary Support to meet the demands of the Secretariat, Coal Controller's Organization, Nominated Authority and the CMPS scheme. A provision of Rs. 700.00 crore has been made for Acquisition of Coal Bearing Areas for which the amount is deposited by CIL in advance to Govt. The same is released back to CIL for payment of compensation. In addition to the gross budgetary support reflected in the Demands for Grants, all the three Public Sector Companies of the Ministry of Coal implement their Capital Investment Plans amounting to Rs. 18503.67crore from their Internal and Extra Budgetary Resources (IEBRs) without Budgetary Support from Government of India. The allocations earmarked for Central Schemes/projects being implemented by PSUs for the year **2017-18** are indicated hereunder:-

(A) SCHEMES /PROGRAMMES BEING IMPLEMENTED WITH GROSS BUDGETARY SUPPORT.					
	Name of Scheme/ programme		2017-18 (BUDGET)		
(Rs in crore)					
	Revenue	SCHEME	NON-SCHEME	TOTAL	
1	Secretariat - Economic Services	0.00	23.50	23.50	
	LABOUR AND EMPLOYMENT				
	COAL MINES LABOUR WELFARE				
2	Contribution to Coal Mines Pension Scheme	0.00	23.00	23.00	
	COAL AND LIGNITE				
3.	Conservation Safety and Infrastructure Development in Coal Mines	Conservation and Safety in Coal Mines	200.00	0.00	200.00
		Development of Transportation Infrastructure in coalfields areas	299.50	0.00	299.50
		Environmental Measures and	0.50	0.00	0.50

		Subsidence Control			
4	Research & Development Programme		10.00	0.00	10.00
5	Exploration and Detailed Drilling	Regional Exploration	60.00	0.00	60.00
		Detailed Drilling	115.00	0.00	115.00
6	Coal Controller		0.00	10.10	10.10
7	Nominated Authority		0.00	3.50	3.50
	Total Coal and Lignite		685.00	13.60	698.60
	Total (Revenue)		685.00	60.10	745.10
	CAPITAL				
	EXPENDITURE ON ACQUISITION OF COAL BEARING AREAS FROM CBA ACQUISITION FUND				
8	Acquisition of Coal Bearing Areas		0.00	700.00	700.00
9	Deduct Expenditure met from C.B.A. Acquisition Fund		0.00	-700.00	-700.00
	Total (Capital)		0.00	0.00	0.00
	Total (Revenue+Capital)		685.00	60.10	745.10

The Scheme component of Rs. 685.00 crore includes mandatory provision of Rs. 18.55 crore towards North Eastern Areas under the schemes of Research & Development (Rs. 1 crore), Regional Exploration (Rs. 6 crore), Detailed Drilling (Rs. 11.50 crore) & Environmental Measures and Subsidence Control (Rs. 0.05 crore).

B. INVESTMENT IN PUBLIC ENTERPRISES FROM INTERNAL AND EXTRA BUDGETARY RESOURCES (IEBRs)				
(Rs in crore)				
		BUDGET SUPPORT	IEBR	TOTAL
10	Coal India Limited	0.00	7955.55	7955.55
11	Singareni Collieries Company Ltd.	0.00	1600.00	1600.00
12	NLC India Limited (Mines)	0.00	344.75	344.75
13	NLC India Limited (Power)	0.00	8603.37	8603.37
14	NLC India Limited (Total)	0.00	8948.12	8948.12
15	TOTAL (Investment in PEs on Coal and Lignite)	0.00	18158.92	18158.92
16	<u>Total (Investment in PEs on Power)</u>	0.00	344.75	344.75

17	Total (B) (Plan Investment in Public Enterprises of MOC)	0.00	18503.67	18503.67
18	TOTAL PLAN OUTLAY (MOC) (A+B)	685.00	18503.67	19188.67

B. ANALYSIS OF DEMANDS FOR GRANTS (PLAN) FOR THE LAST THREE YEARS

2.2 The allocations for Schemes, Projects/ Programmes for the year 2017-18 are analyzed with reference to allocations / actual utilizations in previous years as hereunder:

I- SCHEMES /PROGRAMMES BEING IMPLEMENTED WITH GROSS BUDGETARY SUPPORT.

Actual Expenditure and Outlay (Rupees in crore)

Name of the scheme and percentage increase over the previous year	Actual 2013-14	Actual 2014-15	Actual 2015-16	RE 2016-17	BE 2017-18
(i) Research and Development Projects	11.65	17.95	18.00	10.00	10.00
Percentage increase over previous year	2.19	54.08	0.28	-50.61	0
(ii) Promotional (Regional) Exploration	64.00	58.82	105.05	50.00	60.00
Percentage increase over previous year	236.84	-8.09	78.60	-56.52	20
(iii) Detailed Drilling in Non CIL Blocks	184.50	135.71	151.20	89.50	115.00
Percentage increase over previous year	-8.02	-26.44	11.41	-46.72	28.49
(iv) Environmental Measures and Subsidence Control (EMSC)	0.05	0.00	0	0.50	0.50
Percentage increase over previous year	100	0	0	0	0
(v) Conservation and Safety in Coal Mines	185.00	185.00	170.00	170.00	200.00
Percentage increase over previous year	55.45	0.00	-8.10	0	150
(vi) Development of Transport Infrastructure	76.06	75.00	75.00	180.00	299.50

Percentage increase over previous year	90.15	0.00	0	140	327.85
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II. INVESTMENT IN PUBLIC ENTERPRISES FROM THEIR OWN INTERNAL AND EXTRA BUDGETARY RESOURCES (IEBRs) -PLAN

(Rupees in crore)

Name of PSUs	Actual 2013-14	Actual 2014-15	Actual 2015-16	RE 2016-17	BE 2017-18
CIL	4329.86	5173.49	6123.03	7765	7955.55
% increases over last year	48.52	19.48	18.35	14.19	2.45
NLCIL	1817.32	1969.76	1666.04	9437.96	8948.12
% increases over last year	-0.57	7.73	-15.42	219.74	-5.19
SCCL	2455.45	2809.00	2820.22	2300	1600
% increases over last year	19.94	8.41	0.40	-18.45	-30.43

C. PHYSICAL TARGETS AND FINANCIAL REQUIREMENTS

(i) Coal India Limited and Singareni Collieries Company Limited

2.3 The physical targets (relating to the Coal Production, dispatches, OMS and Profit / Loss) and achievements of CIL and SCCL for the last three years are given as under:

(Rupees in crore)

Particulars	Coal India Limited				
	2014-15 Actual	2015-16 Actual	2016-17 Target/BE	2016-17 Actual Upto Dec,16	2016-17 Target/BE (Provisional)
Production(MT)	494.24	538.75	598.61	377.77	661.70
Dispatch(MT)	489.38	534.50	598.61	391.78	661.70
OMS (Tonnes)	6.20	6.95	7.46	7.01	7.50
Capital Exp./Outlay (Rs. Crores)	5173.49	6123.03	7765.00	4266.69	7955.55

(Rupees in crore)

Particulars	Singareni Collieries Co. Ltd.				
	2014-15 Actual	2015-16 Actual	2016-17 Target/BE	2016-17 Actual Upto Dec,16	2017-18 Target/BE (Provisional)
Production(MT)	52.54	60.38	58.00	42.43	60.00
Dispatch(MT)	52.66	58.69	57.94	57.95	59.95
OMS (Tonnes)	4.21	4.74	4.93	4.43	5.19
Capital Exp. /Outlay (Rs. Crores)	2809.00	2820.22	2300.00	1472.64	1600.00

NLC India Limited

The Physical targets for 2014-15 (Actual), 2015-16 (Actual), BE2016-17, and actual upto Dec, 2016& BE-2017-18are given below.-

(Rupees in crore)

Particulars	2014-15 Actual	2015-16 Actual	2016-17 Target/RE	2016-17 Actual Upto Dec,16	2017-18 Target/BE (Provisional)
Lignite Production in MT	26.54	25.45	26.80	18.00	26.49
Power Generation Gross in MU	19729.13	19182.21	20514.77	15333.75	21637.00

The financial analysis of 2014-15 (Actuals), 2015-16 (Actuals), BE 2016-17, actuals upto Dec, 2016 and BE-2017-18 are given below.-

(Rs. in Crores)

Sector	2014-15 Actual	2015-16 Actual	2016-17 Target/R E	2016-17 Actual Upto Dec,16	2017-18 Target/BE (Provisional)
Lignite /Coal Sector	85.97	217.19	233.24	168.57	344.75
Power Sector	1883.79	1448.85	9204.72	2237.80	8603.37
Total	1969.76	1666.04	9437.96	2406.37	8948.12

Central Sector Schemes

The physical targets and explanation of financial requirement in respect of the Central Sector Schemes are as follows:

		Rs. in crore		
Schemes	Physical Targets and explanation of financial requirement	2016-17		BE 2017-18
		BE	RE	
Detailed Drilling in Non CIL Blocks	The target of drilling for 2016-17 was 3.48 lakh meters & that for 2017-18 is 2.00 lakh meters for which the proposed outlay is needed.	89.50	89.50	115.00
Regional/Promotional Exploration	The target of drilling for 2016-17 was 1.75 lakh meters and that for 2017-18 is 0.75 lakh meters for which the proposed outlay is required.	50.00	50.00	60.00
Research and Development/S&T.	Out of 18 on-going projects during 2016-17, 06 project have been completed. 5 new projects are to be undertaken during 2017-18.	10.00	10.00	10.00
Environmental Measures and Subsidence Control.	All the EMSC schemes have been merged in the Master Plan dealing with Fire, Subsidence, Rehabilitation and Diversion of surface infrastructure in Jharia and Raniganj coalfields within the leasehold of BCCL and ECL sanctioned by the Govt. in Aug, 2009 at an investment of Rs. 9657.61 crores spread over a period of 10 years. This is being funded partly by the internal resources of CIL and partly from the amount collected by the levying of stowing Excise	0.50	0.50	0.50

		Duty under the CM(C&D) Act, 1974.			
Conservation and Safety of Coal mines.		To reimburse partially stowing/protective works to ensure enhanced coal production and subsidence control, under the provision of Coal Mines Conservation & Development Act.	80.00	170.00	200.00
Development of Transportation Infrastructure in Coalfield Areas		To reimburse partially development of transport infrastructure in coalfield areas to facilitate coal/sand transportation, under the provisions of the Coal Mines Conservation & Development Act.	70.00	180.00	299.50

2.4 During the oral evidence of the representatives of the Ministry of Coal and Coal PSUs, the Ministry in during their Powerpoint Presentation highlighted the following data pertaining to the Detailed Demands for Grants for the years 2015-16, 2016-17 and 2017-18 as under :-

Rs. In crore								
	2015-16			2016-17				2017-18
	BE	RE	Exp.	BE	RE	Expenditure (as on 21 st Feb. 2017)	% of Exp. w.r.t BE	BE
PLAN	551	551	520.40	300	500	265.34	88.45	745.10#
NON PLAN	55	52.30	49.48	61	56.36	46.31	75.92	
Total	606	603.30	569.88	361	556.36	311.65	86.33	
Note : The RE provision will be fully utilized after getting approval of the Parliament through 3 rd batch of supplementary grant. # Includes Scheme component- Rs. 685 crore & Non-Scheme Component - Rs. 60.10 crore								

CHAPTER III

IMPLEMENTATION OF CENTRAL SECTOR SCHEMES

CENTRAL SECTOR SCHEMES

The Ministry of Coal in their Background Note highlighted the Outlay of the following six Central Schemes:

- (i) Research and Development Projects
- (ii) Provisional (Regional) Exploration
- (iii) Detailed Drilling in Non CIL Blocks
- (iv) Conservation and Safety in Coal Mines
- (v) Environmental Measures and Subsidence Control (EMSC)
- (vi) Development of Transport Infrastructure in Coalfields Areas

3.2 Asked about the physical targets of financial requirement in respect of the above schemes, the Ministry of Coal informed the Committee as follows:

Rs. in crore				
Schemes	Physical Targets and explanation of financial requirement	2016-17		BE 2017-18
		BE	RE	
Detailed Drilling in Non CIL Blocks	The target of drilling for 2016-17 was 3.48 lakh meters & that for 2017-18 is 2.00 lakh meters for which the proposed outlay is needed.	89.50	89.50	115.00
Regional/Promotional Exploration	The target of drilling for 2016-17 was 1.75 lakh meters and that for 2017-18 is 0.75 lakh meters for which the proposed outlay is required.	50.00	50.00	60.00
Research and Development/ S&T.	Out of 18 on-going projects during 2016-17, 06 project have been completed. 5 new projects are to be undertaken during 2017-18.	10.00	10.00	10.00
Environmental Measures and Subsidence Control.	All the EMSC schemes have been merged in the Master Plan dealing with Fire, Subsidence, Rehabilitation and	0.50	0.50	0.50

		Diversion of surface infrastructure in Jharia and Raniganj coalfields within the leasehold of BCCL and ECL sanctioned by the Govt. in Aug, 2009 at an investment of Rs. 9657.61 crores spread over a period of 10 years. This is being funded partly by the internal resources of CIL and partly from the amount collected by the levying of stowing Excise Duty under the CM(C&D) Act, 1974.			
Conservation and safety of Coal mines.		To reimburse partially stowing/protective works to ensure enhanced coal production and subsidence control, under the provision of Coal Mines Conservation & Development Act.	80.00	170.00	200.00
Development of transportation infrastructure in coalfield areas		To reimburse partially development of transport infrastructure in coalfield areas to facilitate coal/sand transportation, under the provisions of the Coal Mines Conservation & Development Act.	70.00	180.00	299.50

3.3 The Committee was also apprised of the status of utilization of funds allocated for various schemes as follows:

(Rs. in crore)

S. No.	Name of the Scheme	XII Plan Approved outlay 2012-17 (approved)	2014-15 Actual	2015-16		2016-17		Remarks
				BE	Actual	RE	Actual Upto Dec, 16	
1.	Research and Development	100.00	17.95	20.25	18.00	10.00	7.00	100% utilization under the Scheme during FY 2015-16, except the NER component
2.	Promotional /Regional Exploration	456.00	58.82	115.00	105.05	50.00	45.00	100% utilization under the

	(i) Financial Outlay							Scheme during FY 2015-16, except the NER component
	(ii) Drilling (in lakh meters)	9.95	1.39	1.75	1.12	1.75	0.74	Reason for not achieving the targets during 2014-15 was due to non-availability of forest clearance and adverse Law & Order conditions prevailing in some areas
3.	Detailed Drilling in Non-CIL Blocks (i) Financial Outlay	975.00	135.71	168.00	151.20	89.50	63.34	100% utilization under the Scheme during FY 2015-16, except the NER component
	(ii) Drilling (in lakh meters)	19.03	2.82	4.82	2.55	3.48	1.79	Reason for not achieving the targets during 2015-16 was due to non-availability of forest clearance and adverse Law & Order conditions prevailing in some areas
4.	Environmental Measures and Subsidence Control (EMSC)	1663.60	0.00	0.50	0.00	0.50	0.00	Jharia Raniganj Master Plan was approved with an estimated cost of Rs. 9657.61 crore in the year 2009 with an annual outlay of Rs. 977 crore for

								a period of ten years. Coal India Limited has to first spend Rs. 350 crore from its internal resources and the same amount will be funded from GBS. CIL is not able to spend its share of Rs. 350 crore, hence there is nil expenditure.
5.	Conservation and Safety in Coal Mines	820.00	185.00	170.00	170.00	170.00	80.00	100% utilization during FY 2015-16 .
6.	Development of Transportation Infrastructure in Coalfields	600.00	75.00	75.00	75.00	180.00	70.00	100% utilization during FY 2015-16.

The Plan Expenditure of Rs. 265.34 crores upto Dec, 2016 is about 88.45% of BE 2016-17. Details as follows:

- Funds allocated under the Schemes of Conservation and Safety in Coal Mines & Development of Transport Infrastructure in Coalfields fully utilized.
- Expenditure under the scheme of 'Regional Exploration' is Rs. 45 crores against BE of Rs. 50.00 crores showing 90% utilization.
- Expenditure under the scheme of 'Detailed Drilling' is Rs. 63.34 crores against BE of Rs. 89.50 crores showing 70.77% utilization.
- Expenditure under the scheme of 'Research & Development' is Rs. 7.00 crores against BE of Rs. 10 crores showing 70% utilization.

3.4 The Physical Targets and financial requirements for Schemes for the year 2016-17 and targets projected for 2017-18 and achievements against these are given as hereunder:

(Rs. in crores)

Schemes	Physical Targets and explanation of financial requirement	2016-17		BE 2017-18	
		BE	RE	Projected	Approved
(i)Research and Development/ S&T. This scheme supports Coal S&T for application oriented research projects.	Out of 18 on-going projects during 2016-17, 06 project have been completed. 5 new projects are to be undertaken during 2017-18.	10.00	10.00	25.00	10.00
(ii)Regional/Promotional Exploration	The target of drilling for 2016-17 was 1.75 lakh meters and that for 2017-18 is 0.75 lakh meters for which the proposed outlay is required.	50.00	50.00	135.91	60.00
(iii)Detailed Drilling in Non CIL Blocks	The target of drilling for 2016-17 was 3.48 lakh meters &that for 2017-18 is 2.00 lakh meters for which the proposed outlay is needed.	89.50	89.50	224.39	115.00
(iv)Environmental Measures and Subsidence Control. This scheme is aimed at addressing environ-mental issues in the Coalfields at Raniganj and Jharia.	All the EMSC schemes have been merged in the Master Plan dealing with Fire, Subsidence, Rehabilitation and Diversion of surface infrastructure in Jharia and Raniganj coalfields within the leasehold of BCCL and ECL sanctioned by the Govt. in Aug, 2009 at an investment of Rs. 9657.61 crores spread over a period of 10 years. This is being funded partly by the internal resources of CIL and partly from the amount collected by the levying of stowing Excise Duty under the CM(C&D) Act, 1974.	0.50	0.50	0.50	0.50
(v)Conservation and safety in coal mines	To reimburse partially stowing/protective works to ensure enhanced coal production and subsidence control, under the provision of Coal Mines Conservation & Development Act.	80.00	170.00	250.00	200.00
(vi)Development	To reimburse partially	70.00	180.00	250.00	299.50

of transportation infrastructure in coalfield areas	development of transport infrastructure in coalfield areas to facilitate coal/sand transportation, under the provisions of the Coal Mines Conservation & Development Act.				
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3.5 The representatives of the Ministry of Coal in their visual presentation during the oral evidence on the subject held on 23.2.2017 submitted the following data on Central Schemes pertaining the allocation of funds as well as their utilization in the previous financial year 2016-17 vis-a-vis the Demands for Grants at the BE stage of 2017-18:-

Central Sector Schemes

(Figures in crores)							
Sl. No.	Schemes		2016-17				2017-18
			BE	RE	Exp. (as on 21 st Feb. 2017)	% of Exp. w.r.t BE	BE
1	Research & Development		10	10	7	70	10
2	Exploration of Coal and Lignite	Regional Exploration	50	50	45	90	60
3		Detailed Drilling	89.50	89.50	63.34	70.77	115
4	Conservation Safety and Infrastructure Development in Coal Mines	Environmental Measures and Subsidence Control	0.50	0.50	--	0	0.50
5		Conservation & Safety in coal mines	80	170*	80	100	200
6		Dev. Of Transport Infrastructure in coalfield Areas	70	180*	70	100	299.50
7	Total		300	500	265.34	88.45	685
* The RE provision will be fully utilized after getting the funds through 3 rd batch of supplementary grant.							

REVIEW OF SCHEMES

A. Research and Development Projects

Status of research projects under S&T

3.6 Research and development (R&D) projects are covered under 4 thematic areas viz. improvement in production, productivity & safety in coal mines, coal beneficiation & utilization, and protection of environment & ecology. The R&D activity in coal sector is 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 NLC, Directors of concerned CSIR laboratories, representatives of Department of S&T, NITI Aayog and educational institutions, amongst others. The main function of SSRC is to plan, programmes, budget and oversee the implementations of research projects and seek review the R&D work. The SSRC is assisted by a Technical sub-committee headed by CMD, CMPDI. The committee deals with research proposals related to coal exploration, mining, mine safety, coal beneficiation & utilisation and also the project proposals on mine environment and reclamation. 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, Research & Development processing of proposals for Government approval, preparation of budget estimates, disbursement of fund, monitoring the progress of implementation of the projects, etc. A total no. of 390 S&T projects were taken up (till 31.12.2016) and 320 S&T projects completed (till 31.12.2016).

Physical performance

During 2016-17, six project has been completed. The status of coal S&T projects during 2016-17 is as under:

Projects on-going as on 1.4.2016	18
Projects approved by SSRC during 2016-17	Nil (5 projects have been recommended by the Technical Sub-Committee of SSRC for consideration of SSRC)
Projects completed during 2016-17 (till 31.12.2016)	6
Projects on-going as on 31.12.2016	12

Financial status Budget provision vis-à-vis actual fund disbursement of S&T projects during the period is given below:

(Rs.in Crore)

2015-16		2016-17		
RE	Actual	RE	Actual	Provisional
18.00	17.59	11.00 (yet to be approved)	4.92	6.08

Status of research and development projects undertaken by CIL

Since beginning, 78 CIL, R&D projects have been taken up (till 31.12.2016) out of which 61 projects have been completed.

Status of CIL R&D Board Projects during 2016-17 is as follows:

(i)	Projects on-going as on 1.4.2016	-	10
(ii)	Projects sanctioned during 2016-17	-	05
(iii)	Projects completed during 2016-17 (till 31.12.16)	-	02
(iv)	Projects on-going as on 31.12.2016	-	13

* Considered by R&D Board of CIL

3.7 Following Coal S&T projects were completed during 2015-16 viz. Development of tele robotics and remote operation technology for underground coal mines; Development of Indigenous catalyst through pilot scale studies of Coal-to-Liquid (CIL) conversion technology; Enhancing life of de-watering pipes in coal/lignite mines by prevention of erosion-corrosion with nano-crystalline surface engineering treatments; Blast design and fragmentation control – key to productivity; and Design and development of truck mounted mobile coal sampler for instant coal ash and moisture analyser at site from railway wagon/truck; Optimization of various parameters of lab scale Coal Winnowing System (Phase-II). Similarly, the Annual Report (2016-17 of the M/o Coal) highlighted major R&D projects completed during 2015-16 viz. To find a methodology of safe liquidation in thick seams of Raniganj Coalfield: Design & development and show-casing demonstrative trials at Khottadih Colliery, ECL; and Development of guidelines to predict distance between toe of the shovel-dumper dump and that of dragline dump with consideration of safety and economical design of both shovel-dumper dump and dragline dump.

Financial status Budget provision vis-à-vis actual fund disbursements CIL R&D projects during the period are given below:

(In Crore)

2015-16		2016-17		
RE	Actual	RE	Actual (till 31.12.2016)	Provisional (01.01.2017 to 31.03.2017)
14.00	4.88	50.00 (yet to be	13.17	36.83

		approved)		
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3.8 The amount earmarked (BE, RE) and released in previous three years and during 2016-17 (including North East component- 10%) is given below:

Year	Financial (in Rs. crore)			Reasons for variation in BE, RE and actual expenditure
	BE	RE	Actual expenditure	
2013-14	13.00	13.00	11.65	No variation in BE & RE.
2014-15	20.00	20.00	17.95	
2015-16	20.25	20.25	18.00	
2016-17	10.00	10.00	7.00* (Upto 10-02-2017)	No variation in BE & RE . The fund is likely to be utilized.

There is 100% utilization except the NER component during 2013-16.

3.9 The actual expenditure on Research and Development during 2014-15 was Rs. 17.95 crore. During 2015-16, against BE of Rs. 20.25 crore, the actuals were Rs. 18.00 crore. The amount allocated for R&D during 2016-17 is Rs. 10.00 crore and actuals upto December, 2016 is Rs. 7.00 crore. The amount allocated for R&D at BE stage during 2017-18 remained stagnant at Rs. 10.00 crore only, whereas the projected outlay at the BE stage was Rs. 25.00 crore. On being asked as to why there was reduction in the funds outlay from Rs. 20.00 crore to only Rs. 10.00 crore during 2015-16 and whether the funds allocated under R&D for 2017-18 were sufficient for implementing the R&D Schemes by Ministry of Coal, the Ministry of Coal in its written reply stated that during 2014-15, an expenditure of Rs.17.95 crore was incurred against RE provision of Rs. 20.00 crore. Against the outlay of Rs.20.25 crore in 2015-16, a demand of Rs. 22.55 cr. was made for S&T Scheme for 2016-17. However funds only to the tune of Rs. 10.00 cr. were provided. The funds allocated under R&D for 2017-18 (Rs.10.00 crore) may not be sufficient for implementing S&T projects of Ministry of Coal and enhancement of funds will be sought at RE stage. During evidence, the Secretary M/o Coal was candid enough to admit that though the provision of Rs. 10 crore for R&D works in Coal sector is very low, yet there is no shortage of funds for R&D.

3.10 On being asked to furnish company/organization wise funds allocated and utilized for R& D activities during the last 3 years and 2016-17 and whether such activities have resulted in tangible returns by way of enhanced production and turnover or profit of the company/subsidiary, the Ministry of

Coal in its written reply stated that the Research fund was for total Coal Sector projects and not allocated specific to coal companies. Research projects under S&T Grant of Ministry of Coal (MoC) were presently being implemented by National Research and Academic Institutions related to coal and allied industries with active participation of coal and lignite producing companies. While funds were generally being disbursed to the different implementing agencies for execution of research projects these research projects were being implemented in the mines of Coal India Limited (CIL), Singareni Collieries Company Limited (SCCL) and NLC India Limited (NLCIL). It was further stated that most of the research projects have yielded considerable benefits, resulting in operational improvement, safer working conditions, better resource recovery and protection of the environment and ecology. Also, some of the research projects directly / indirectly, to some extent, would enhance the production and also safety in coal mines.

3.11 The Ministry of Coal in their presentation on the subject during the oral evidence held on 23.02.2017 further highlighted that other R&D Projects also adopted or being taken up by the Ministry include *inter-alia* Application of Space Technologies for monitoring reclamation of mined out areas (already adopted); Satellite based thermal infra red survey for monitoring coal mine fires adopted. Satellite based monitoring of regional air quality; Differential Interferometry Synthetic Aperture Radar (DInSAR) for subsidence monitoring; Carbon capture and storage with inter-sectoral participation; etc.

3.12 On being asked to give details of new projects which were proposed to be undertaken during 2017-18 for R&D alongwith estimated cost, targeted schedule of completion and their present status, the Ministry of Coal in their written reply stated that the following five new R&D projects have been recommended by the Technical sub-committee of SSRC for consideration of the SSRC to be taken up after approval of Standing Scientific Research Committee (SSRC) during 2017-18:

- (i) Indigenous development of early warning radar system for predicting failures/slope instabilities in open cast mines - Society for Applied Microwave Electronics Engineering & Research (SAMEER), Mumbai, Armament Research & Development Establishment (ARDE), Pune, Centre of Studies in Resources Engineering (CSRE), IIT, Mumbai, CMPDI, Ranchi and NCL, Singrauli.
- (ii) Forecasting and control of surface and groundwater quality due to coal mining using remote sensing and GIS - ISM, Dhanbad & BCCL, Dhanbad

(iii) Hybrid PRESRIX process for simultaneous remediation of acid mine drainage and recovery of individual metal sulfides - IIT, Roorkee, SCCL, Kothagudem & NEC, Margherita

(iv) Design of water network to optimize water consumption in coal washeries for removal of impurities from coal - IIT, Roorkee, CMPDI, Ranchi & CCL, Ranchi

(v) Electronification of ground water control and conveyor systems in mines – NLC India Ltd., Neyveli and NITT, Tamil Nadu

3.13 On being asked as to what steps have been taken or proposed to be taken by CMPDIL to ensure timely completion of various ongoing and new projects under R&D, the Ministry in their written reply stated that steps being followed for timely completion of various on-going and new projects under R&D include monitoring of the progress of Coal R&D projects by CMPDI and review by the Technical Sub-committee of Standing Scientific Research Committee (SSRC) as well as the SSRC headed by Secretary (Coal). Implementing agencies submit quarterly progress reports of the projects to CMPDI which, after examination, were placed before Technical Sub-committee and SSRC. Besides periodic visits to the implementing institutes were undertaken by CMPDI officials to monitor the progress of these projects and necessary assistance extended to them.

B. Promotional (Regional) Exploration in Coal and Lignite

Promotional Exploration

3.14 Geological Survey of India (GSI), Mineral Exploration Corporation Limited (MECL), State Governments and CMPDI are coordinating Promotional Exploration in XII plan under the Ministry of Coal's Plan scheme "Promotional Exploration for Coal & Lignite". The summary of Promotional Drilling carried out in coal & lignite during the period 2012-13, 2013-14, 2014-15, 2015-16, 2016-17 (anticipated) and target for 2017-18 is given below:

(Drilling in Metres)

Command Area	2012-13 Actual	2013-14 Actual	2014-15 Actual	2015-16 Actual	2016-17 Anticipated	2017-18 Proposed BE
Drilling in CIL Command Area	36725	53633	67144	52086	45700	85000
Drilling in SCCL Command Area	8899	9553	3575	0	2500	5000
Drilling in Lignite Area	67687	68774	68777	60258	53000	85000

Total	113312	131959	139496	112344	101200	175000
Growth%	20.94	16.46	5.71	-19.46	-9.92	72.92

3.15 The amount earmarked (BE, RE) and released in previous three years and during 2016-17 (including North East - 10% and Tribal Sub-Plan component - 8.2%) is given below:

Year	Financial (in Rs. crore)			Reasons for variation in BE & RE and actual expenditure
	BE	RE	Actual expenditure	
2013-14	50.00	70.00	64.00	Lesser fund was allocated at BE stage against the demand. So it was increased at RE stage.
2014-15	63.00	63.00	58.82	No variation in BE & RE.
2015-16	115.00	115.00	105.05	
2016-17	50.00	50.00	45.00 (Upto 10-02-2017)	No variation in BE & RE. The fund is likely to be utilised.

There is 100% utilization except the NER component during 2015-16.

3.16 It was seen that RE of Rs. 50.00 crore in the year 2016-17 were made for a drilling target of 1.75 Lakh meters for Regional/Promotional Exploration. The drilling target set for year 2017-18 had been reduced to 0.75 Lakh meters. However, the BE for the year 2017-18 stood increased at Rs. 60.00 crore. On being asked to explain why the drilling target had been greatly reduced by as much as 1 lakh meters for the year 2017-18 (BE) as compared to that of last year, the Ministry of Coal in its written reply stated that a target of 1.75 lakh meter of Promotional (regional) drilling along with associated studies was kept for BE 2016-17 and a demand of Rs.132.73 crore was placed for the above work. However, Rs.45.00 crore (ex-NE) only has been provided in BE/RE. This would enable funding of about 0.60 lakh m of drilling. For 2017-18, the BE provisions of Rs.75 crore will enable about 0.75 lakh m of drilling. However, a drilling target of 1.0 lakh m in RE 2016-17 and 1.75 lakh m in 2017-18 had been kept in the Annual Plan in anticipation of availability of fund.

3.17 On being asked as to whether this reduced drilling target would affect the overall target set for coal production, the Ministry replied that the GR/PR for future coal blocks to be taken in production in recent time were ready. However, in the long run, reduced drilling would imply lesser number of regionally explored blocks leading to availability of lesser blocks for detailed exploration.

C. Detailed Exploration in non-CIL Blocks

Detailed Drilling in Non-CIL Blocks

3.18 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 MoC's Plan scheme 'Detailed Drilling in Non-CIL Blocks'.

The details of actual drilling in Non-CIL/Captive mining blocks during the period 2012-13, 2013-14, 2014-15, 2015-16, 2016-17 (anticipated) and target for 2017-18 is given below:

(Drilling in Metre)						
Agency	2012-13 Actual	2013-14 Actual	2014-15 Actual	2015-16 Actual	2016-17 Anticipated	2017-18 Proposed BE
1. CMPDI (Departmental)	77458	93742	61427	55769	41050	92000
2. Outsourcing by CMPDI	150250	144159	220972	231502	240093	254000
Total	227708	237901	282399	287271	281143	346000

3.19 CMPDI has improved its capacity of drilling during the XI & XII plan period. As against the achievement of 2.09 lakh metre in 2007-08, CMPDI has achieved drilling of 4.98 lakh metre in 2011-12, 5.63 lakh metre in 2012-13, 6.97 lakh metre in 2013-14, 8.28 lakh metre in 2014-15, 9.94 lakh metre in 2015-16 and expected about 10.63 lakh metre in 2016-17 (7% Growth) through Departmental resources and outsourcing. For capacity expansion through modernization of departmental drills, 39 new mechanical drills & 19 Hi-tech 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 six years. To meet the increased work load, recruitment has been made 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 staff have also been inducted for exploration work. Under outsourcing, the work of 75 blocks involving 30.23 lakh metre of drilling was awarded through tendering since 2008-09. Out of which drilling has been concluded in 36 blocks. Due to local (law & order) problems, work could not start in 3 blocks and stopped in 8 running blocks. Due to non-availability of forest clearance work was stopped in 15 blocks. During 2016-17, a total of about 6.52 lakh metre (11% Growth) is likely to be drilled through outsourcing, out of which 3.77 lakh metre drilling would be done through tendering & 2.75 lakh metre through MoU with MECL.

Drilling Performance in 2016-17:

CMPDI deployed its departmental resources for detailed exploration of CIL/Non-CIL blocks whereas State Government of Odisha deployed resources in CIL blocks only. In addition, nine other contractual agencies have also deployed resources for detailed drilling/exploration in CIL/Non-CIL blocks. A total of 140 to 160 drills were deployed in 2016-17 out of which 64 were departmental drills.

Apart from the above, CMPDI continued the technical supervision of Promotional Exploration work undertaken by MECL in coal sector (CIL & SCCL areas) in 6 blocks and DGM, Nagaland in 1 block. Promotional Exploration work was undertaken by MECL in lignite sector in 10 blocks and by GSI in 1 block. A total of 1.01 lakh metre of Promotional drilling is likely to be carried out in coal (0.48 lakh metre) & lignite (0.53 lakh metre) during 2016-17.

In 2016-17, CMPDI and its contractual agencies took up exploratory drilling in 112 blocks/mines of 22 coalfields situated in 7 States. Out of 112 blocks/mines, departmental drills of CMPDI took up exploratory drilling in 50 blocks/mines whereas contractual agencies drilled in 61 blocks/mines.

3.20 In 2016-17, CMPDI is likely to achieve its departmental and overall drilling targets by 103% and 97% respectively. The overall performance in detailed drilling is expected to be better than previous year. Non availability of permission to explore in forest areas & local problems (law & order) have affected the performance of outsourced drilling. GSI has not taken up the promotional exploration in coal, MECL could not achieve the targets of Promotional drilling in coal sector due to forest problems & less deployment of drills and CMPDI could not take up promotional drilling due to its priority in detailed drilling.

Geological Reports

In 2016-17, 14 Geological Reports are likely to be prepared on the basis of detailed exploration conducted in previous years. In addition, 8 Revised Geological Reports are also expected to be prepared. The prepared Geological Reports are likely to prove about **4.5 Billion** Tonnes of additional coal resources under Measured (Proven) category.

Coal Resources

Inventory of Geological Resources of coal in India

As a result of exploration carried out to the maximum depth of 1200m by the GSI, CMPDI, SCCL and MECL, a cumulative total of 308.802 Billion tonnes of geological resources of coal have so far been estimated in the Country as on 1.4.2016.

3.21 The amount earmarked (BE, RE) and released by MoC in previous three years and during 2016-17 - (including North East -10% and Tribal Sub-Plan component- 8.2%) is given below:

Year	Financial (in Rs. crore)			Reasons for variation in BE , RE and actual expenditure
	BE	RE	Actual expenditure	
2013-14	175.00	205.00	184.50	The lesser fund allocated in BE was increased at RE stage to enable refund of Rs. 35.00 crore loan taken from CIL by CMPDIL.
2014-15	205.00	155.00	135.71	The targets of drilling were reduced at RE stage (from 4.11 to 2.87 lakh m) due to forest and law & order problems resulting in lesser allocation of fund at RE stage.
2015-16	168.00	168.00	151.20	No variation in BE & RE.
2016-17	89.50	89.50	63.34 (Upto 10-02-17)	No variation in BE & RE. The fund is likely to be utilised

There is 100% utilization except the NER component during 2013-16.

3.22 Provision had been made for detailed drilling in the non-CIL coal mining blocks so that geological reports generated may help prospective investors in taking investment decisions regarding coal mining and reduction of time for preparation of mining plan. This is expected to promote private investment in the coal mining industry. The scheme was implemented by CMPDIL with the help of GSI, MECL and some private institutions. In the budget 2017-18 [BE], the allocation for detailed drilling Rs. 115.00 crore as compared to RE of Rs. 89.50 crore during 2016-17 showing an increase. On being asked as to whether the outlay would be sufficient for achieving the drilling target set at 2.00 lakh meters for 2017-18 the Ministry replied that the target of drilling for 2017-18 was set at 3.28 lakh meters. The provision made in the BE at Rs.115 crore would be sufficient for achieving 2 lakh

meters and balance requirement would be covered either under the NMET fund or additional demand will be raised at the time of RE.

3.23 On being asked as to what were the targets for detailed drilling during 2016-17 and whether these targets have been achieved, the Ministry replied that a target of 2.81 lakh meter of detailed drilling in Non-CIL blocks had been set for the year 2016-17 RE. The actual achievement was about 2.19 lakh meter upto January, 2017 and RE target was likely to be achieved.

3.24 The reason cited for non-achievement of targets for drilling during the year 2014-15 was due to non-availability of forest clearance and adverse Law and Order conditions prevailing in some areas. The same reasons have again been cited for 2015-16 also. On being asked to state whether any tangible solution to tackle these issues has since been worked out and whether these issues were being addressed to at the level of Inter-ministry or whether concerned State Governments are also being consulted especially on the issues concerning Law and Order the Ministry in their written reply stated that from 2014-15 onwards, exploration proposals seeking forest clearance were being submitted online. Subsequently, on the basis of the presentation made to Forest Advisory Council of MoEF & CC on 16.2.2016 by CMPDIL, it was considered to simplify the procedures for according FC for exploration proposals. The Ministry of Environment, Forest and Climate Change had considered to simplify the procedures for according forest clearance for exploration blocks upto 10% crown density at DFO level and from 10-40% at MoEFCC level. However, the notification was yet to be issued by MOEF&CC. For addressing the law and order issue, State authorities were approached seeking their intervention by both CMPDIL and Ministry of Coal at different points in time. However, progress had not been as desired.

3.25 On being asked to provide details regarding action taken plan on detailed drilling to be undertaken during 2017-18 and beyond, the Ministry stated that a total of 3.28 lakh meter of detailed drilling in Non-CIL blocks had been programmed in 2017-18. Block-wise action plan for 2017-18 & beyond 2017-18 was under finalization.

3.26 On being asked to state other hurdles besides, environment and forest clearance and adverse Law and Order conditions being faced in carrying out detailed drilling alongwith the measures undertaken by the Ministry to address the same, it was stated that besides environment and forest clearance and adverse law & order conditions, there are limited suitable outsourced exploration agencies in the country. Even after 11 round of Global Tenders, no party abroad participated in tenders. On the issue of problem relating to law and order, Secretary, Coal while deposing, had assured the Committee that they will take up the matter at all levels

including PMO, respective Chief Ministers of State and concerned State administration to ensure that amicable solution is arrived at.

3.27 On being asked to state whether any drilling was carried out by CMPDIL in non-CIL/captive coal blocks during the last 3 years and during 2016-17 and what were the targets fixed and actual achievement of the same, the Ministry stated that the above mentioned detailed drilling was carried out in Non-CIL/Captive Mining Blocks through the fund provided by Ministry of Coal. The targets and achievement of previous three years given in table below:

Year	RE (lakh metre)	Actual (lakh metre)
2013-14	2.43	2.38
2014-15	2.87	2.82
2015-16	3.20	2.87
2016-17	2.81	2.19 Upto Jan'17

The non-achievement of drilling target was due to non-availability of forest clearance and adverse law & order condition at many places, particularly in 2015-16.

3.28 On being asked to furnish details of the measures taken by CMPDIL for improving the drilling capacity during the last 3 years the Ministry stated in their written reply stated that CMPDI had procured 24 new drills during April, 2013 to January, 2017(Including 15 hi-Tech drills), for improving the drilling capacity during last three years. The total drill deployment had been increased from 53 in 2012-13 to 64 in 2016-17. Other drills had been deployed as replacement of existing old drills. CMPDI had also procured 28 trucks, 17 jeeps & 4 pumps to improve existing machineries, during the period. The total capital investment for above procurement was about Rs.60 crore in 2013-16. The quantum of drilling by CMPDI departmentally had increased from 3.25 lakh meter (2013-14) to 4.08 lakh meter (2015-16) during last three years. Apart from above, CMPDI had also expanded the capacity through outsourcing of exploration/drilling work. The quantum of overall drilling through outsourcing had increased from 3.71 lakh meter (2013-14) to 5.86 lakh meter (2015-16) during last three years. CMPDI had entered in a new MoU with MECL to take up about 3-4 lakh m of drilling per year.

D. Environment Measures and Subsidence Control (EMSC)

3.29 The amount earmarked (BE, RE) and released in previous three years and during 2016-17 (including North East component-10%) is given below:

Year	Financial (in Rs. crore)			Reasons for variation in BE, RE and actual expenditure
	BE	RE	Actual expenditure	
2013-14	1.00	0.45	0.05	As per the tenets of the Master Plan for Jharia and Raniganj, CIL has to first spend from its own resources. Additional funds if any are to be made available from the budget. Accordingly only nominal provision has been made under the scheme from the Ministry's budget. The expenditure in all these years has been less than CIL's mandatory contribution of Rs. 350.00 crores every year due to land acquisition problems. Hence there was no requirement of additional funds from the Ministry's budget resulting in Nil or near-nil expenditure under the scheme.

The amount earmarked (BE, RE) and released in previous three years and during 2016-17 (including North East component-10%) is given below:

Year	Financial (in Rs. crore)		
	BE	RE	Actual expenditure
2013-14	1.00	0.45	0.05
2014-15	0.45	0.45	0.00
2015-16	0.5	0.5	0
2016-17	0.5	0.5	0 (Upto 10-02-2017)

3.30 All the EMSC schemes have been merged in the Master Plan dealing with Fire, Subsidence, Rehabilitation and Diversion of surface infrastructure in Jharia and Raniganj coalfields within the leasehold of BCCL and ECL sanctioned by the Govt. in Aug, 2009 at an investment of Rs. 9657.61crores spread over a period of 10 years. This was being funded partly by the internal resources of CIL and partly from the amount collected by the levying of stowing Excise Duty under the CM(C&D) Act, 1974. Against the Budget Estimates of Rs. 0.50 crore, during 2016-17 for EMSC, the RE also stood at 0.50 crore. The budget allocation for 2017-18 had also proposed the same amount for Rs. 0.50 crore. On being asked as to whether was the budget

allocation for 2017-18 sufficient for meeting the responsibility towards environmental measures and subsidence control including Jharia and Raniganj areas, the Ministry stated in their written reply that as per the Master Plan for Jharia and Raniganj, CIL had to first spend from its own resources. Additional funds, if any were to be made available from the budget. Accordingly, only nominal provision has been made under the scheme from the Ministry's budget during the last three financial years. The expenditure in all these years had been less than CIL's mandatory contribution of Rs. 350.00 crores every year due to land acquisition problems. Hence, there was no requirement of additional funds from the Ministry's budget resulting in Nil or near-nil provision under the scheme.

3.31. On being asked to furnish a detailed note on the delay in implementation of the scheme and the steps taken by the Government to complete it in a time bound manner the Ministry stated that due to unscientific mining in the past, Jharia Coalfield and Raniganj Coalfields located in the Dhanbad District of Jharkhand and the Burdwan District of West Bengal respectively had been facing the problems of fire, land subsidence and rehabilitation of affected persons. In order to address these issues the Government had approved a Master Plan for dealing with fire, subsidence and rehabilitation of affected persons and planning and survey for diversion of surface infrastructure within the leasehold areas of Bharat Coking Coal Limited (BCCL) in Jharia Coalfields and Eastern Coalfields Limited (ECL) Raniganj Coalfields. For implementation of the Master Plan of 12th August, 2009, Govt has approved an outlay of Rs. 9773.84 crores (Rs. 7112.11 crores for Jharia Coalfield (JCF) and Rs. 2661.73 crores for Raniganj Coalfields (RCF) including Rs. 116.23 crores sanctioned earlier for various Environmental Measures and Subsidence Control (EMSC) Schemes. In order to expedite and monitor the progress of implementation of Master Plan a High Powered Central Committee (HPCC) has been constituted under the chairmanship of Secretary (Coal) with DGMS, representatives of Ministry of Railways, Govt of West Bengal and Govt of Jharkhand, CMDs of BCCL, ECL and CMPDIL, D(T), CIL, Adviser (P), MoC and D(T), MoC . This Committee held 14 meetings including the one held on 13.2.2017.

3.32 On the status of Jharia Master Plan, Ministry summarised their point wise submissions as under:-

Dealing with Fire: Liquidation of 10 active fire areas had been completed as a result of which, there was reduction in surface area affected by fires from 17.32 sq.km.(1986) to 9 sq.km. (2006). Further, as per the National Remote Sensing Centre (NRSC) study 2014, the fire area had reduced to 2.18 sq. km in BCCL lease hold area. In the meeting of HPCC held on 13.2.2017, BCCL had been directed to prepare an Action Plan to evacuate

persons on priority basis from this fire affected areas and extinguish the fire in a year's time.

Rehabilitation: This involves rehabilitation of both BCCL and non-BCCL families.

BCCL families - Requirement of houses was 15852; against which construction of 6416 houses has been completed and 9436 are at various stages of construction. 3044 families have already been shifted to new houses. However, BCCL had been directed to review the requirement of construction of new houses keeping in view the retirement of employees and the available housing stock.

Non BCCL Families – As per the demographic surveys 121323 families (against the provision of 54159 families in Master Plan) were required to be rehabilitated of which 29444 were Legal Title Holders (LTH) and 91879 families were non-Legal Title Holders. In the meeting of HPCC held on 13.2.2017, State Govt of Jharkhand was requested to review the no. of non-Legal Title Holders, keeping in view the cut off dates of August 2004 and the census of 2001 and 2011. Out of construction of 3360 houses for non-LTH families 2130 families had been shifted. In addition to this, construction of about 3000 houses will be completed by October 2017, and about 4000 houses by February 2018. JRDA was advised to immediately take up the construction of 27000 houses at the earliest for which the land acquisition is complete. Regarding diversion of Dhanbad-Chandrapura railway line from the unstable area, it was proposed to constitute a Committee under DGMS with representatives from railways, CMPDIL, CIMFR, BCCL and JRDA to examine and recommend actions to be taken by Railways for the safety of the railway track.

3.33 On the status of Raniganj Master Plan, Ministry summarised their point wise submission as under:-

Dealing with Fire: All the seven identified surface fires have been doused by blanketing with thick layers of earth to save the life and properties of the inhabitants.

Rehabilitation:

ECL families

There are 03 nos. locations with only ECL quarters. All 3 locations namely Jote Janki – Site, Amritnagar - Site and Ratibati 3, 4 and 7 no. Pit - Site have been vacated.

Non ECL Families

Out of 141 total nos. of declared unstable locations, demographic Survey work had been completed by ADDA at 126 locations. Further, 10 locations having no habitation and 3 with ECL families. Locations survey could not be completed due to public agitation at 02 locations and there were no LTH in 43 locations. Total no. of households surveyed were 44598 with 7285 (14.09%) LTH. Verification and checking of valuation was under progress at ADDA and it will be published in phases immediately after completion. In first phase, Housing Board will construct 8608 flats comprising of 5 mouzas in 3 blocks to rehabilitate people residing in the most vulnerable locations. Inhabitants of Harishpur village are to be rehabilitated under this scheme. e-Tendering for construction of 10 no towers (16 Flats per building per tower) was floated on 23.11.2016 but due to non-participation of bidder it was cancelled. Again tender was floated on 21.12.2016. The said tender had been opened on 25.01.2017 and work will be awarded very shortly on receipt of administrative approval.

E. Conservation and Safety in Coal Mines

Coal Conservation

3.34 Conservation of coal is an important area, particularly when the 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 of recovery by this technology is around 80% to 90%. Presently, this technology dominates the coal industry contributing about 93% of Country's coal production. Further, whenever feasible, the developed pillars of underground mines are being extracted through opencast operations. Introduction of new technologies like longwall method, short-wall method, blasting gallery technology, high-wall mining and continuous miner technology have resulted in increased the percentage of extraction in underground (UG) mining. With the improvement in roof support technology with mechanized bolting with resin capsules it has been now been possible to maintain wider gallery span and extract seams under bad roof conditions more efficiently resulting in improved conservation of coal. The Ministry of Coal governs the Coal Mines (Conservation & Development) Act 1974 for conservation of coal and development of mine areas through coal Controller Organization. A stowing excise duty of Rs. 10/-

per tonne is collected on coal production/despatch and coal companies are extended assistance for undertaking conservation measures.

Sand Stowing

3.35 Sand stowing in underground mines is yet another effective means of coal conservation, which is widely used 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 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, and crushed overburden material etc for stowing 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 where it is costlier to transport sand from distant river sources.

3.36 The amount earmarked (BE, RE) and released in previous three years and during 2016-17 (including Tribal Sub-Plan component- 8.2% is given below:

Year	Financial (in Rs. crore)			Reasons for variation in BE, RE and actual expenditure
	BE	RE	Actual expenditure	
2013-14	160.00	185.00	185.00	
2014-15	185.00	185.00	185.00	
2015-16	170.00	170.00	170.00	
2016-17	80.00	170.00	80.00 (Upto 10-02-2017)	The allocation was increased in RE 2016-17 to clear pending claims approved by the CCDA Committee. Full utilization will be made this year after getting the funds through 3 rd batch of supplementary grant.

3.37 As per the RE for the conservation and safety of coal mines for the year 2016-17, it stands at Rs. 170 crore. The BE for year 2016-17 however, stood increased to Rs. 200 crore. On being asked to give details of activities undertaken under this scheme during 2016-17 and those proposed to be initiated in 2017-18 under the schemes, the Ministry in their written reply stated that activities undertaken under this scheme during 2016-17 and those proposed to be initiated in 2017-18 include Stowing & protective work; Protective works in underground mines; Installation of man riding system; Commissioning of Tele monitoring system.

3.38 On being asked as to what changes were expected under this scheme due to increased allocation in the BE 2017-18, the Ministry replied that the scheme was as per the provisions of Coal Mines Conservation and Development Act 1974 and no change can be made under the scheme without changing the provisions of the Act. As on 31.12.2016, there was spillover of Rs. 91.70 Cr. in Conservation and Safety Head. Due to increase in allocation in BE 2017-18, it was expected that the committed expenditure will be made up including the spill over.

F. Development of Transport Infrastructure under CCDA.

(A.R. , Pg-83-84)

Conservation and Development of Transport Infrastructure Railway Infrastructure Projects

3.39 In order to achieve the planned growth in production and evacuation in future, CIL has undertaken the following major Railway Infrastructure Projects. These railway infra-projects are being implemented by either Indian Railways or JV companies formed with IRCON representing Railways, subsidiary company (representing CIL) and concerned State Government. Presently there are three major Rail Infrastructure Projects.

- 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, Ranchi, Jharkhand.
- Execution of Shivpur-Kathotia section, with a length of 49.085 Km is now being undertaken by newly formed JV company named Jharkhand Central Railway Limited (JCRL) with CCL, IRCON and State Government of Jharkhand, as its partners.
- South Eastern Railways, Kolkata is executing the Jharsuguda-Barapalli-Sardega Railway Infrastructure Project with a length of about 52.412 Km for Ib valley coalfields of MCL situated in Sundargarh district, Odisha.

To cater the evacuation of coal of Mand-Raigarh and Korba-Gevra coalfields of SECL, the following two Railway Corridors have been identified for construction:

- East Rail Corridor is being executed by Chhattisgarh East Rail Ltd.(CERL), a JV company formed by SECL, IRCON and State Government of Chhattisgarh, in two phases.
 - Phase 1: Kharsia – Dharamjaygarh with Spur to Gare-Palma and three feeder lines of about 132 Km.

- Phase 2: Dharamjaygarh- Korba with a length of about 67 Km.
- East-West Rail Corridor (Gevra Road to Pendra) via Dipka, Katghora, Sendurgarh and Pasan with a length of about 135 Km, Urga – Kusmunda of about 16 Km and Feeder Lines of about 35Km is being executed by Chhattisgarh East-West Rail Ltd.(CEWRL), a JV company formed by SECL, IRCON and State Government of Chhattisgarh.

On being pointed out that to evacuate Coal from mines of WCL, BCCL, CCL, there is an urgent need to execute rail link between Ambikapur (Chirimiri) - Barvadesh which may also be an important link between Eastern and Western part of the country. The Secretary, Coal has submitted that they will examine viability and importance of the line and take immediate action.

3.40 The amount earmarked (BE, RE) and released in previous three years and during 2016-17 was given below:

Year	Financial (in Rs. crore)			Reasons for variation in BE, RE and actual expenditure
	BE	RE	Actual expenditure	
2013-14	50.00	75.00	76.06	
2014-15	75.00	75.00	75.00	
2015-16	75.00	75.00	75.00	
2016-17	70.00	180.00	70.00 (Upto 10-02-2017)	The allocation was increased in RE 2016-17 to clear pending claims approved by the CCDA Committee. Full utilization will be made this year after getting the funds through 3 rd batch of supplementary grant.

G. Lumpsum Provision for North Eastern Region Areas

3.41 The Scheme component of Rs. 685.00 crore in the Budget outlays for the Ministry of Coal includes mandatory provision of Rs. 18.55 crore towards North Eastern Areas under the schemes of Research & Development (Rs. 1 crore), Regional Exploration (Rs. 6 crore), Detailed Drilling (Rs. 11.50 crore) & Environmental Measures and Subsidence Control (Rs. 0.05 crore).

3.42 A mandatory provision of Rs. 18.55 crore towards North Eastern Areas under the Schemes of Research and Development (Rs. 1 crore), Regional Exploration (Rs. 6 crore), Detailed Drilling (Rs. 11.50 crore) and EMSC (Rs. 0.05 crore) has been made in BE for the year 2017-18 which saw a meager increase in the outlay as compared to the BE for the year 2016-17 which stood at Rs. 15 crore. On being asked as to whether the BE of Rs. 15.00 crore during 2016-17 have been fully utilized, the Ministry replied that an amount of Rs.0.762 crores had been paid during 2016-17 (Upto Jan'17) for the work done in NE region under the scheme of Promotional (regional) Exploration. No expenditure has been incurred under the scheme of Detailed Drilling in Non-CIL blocks.

3.43 On being asked as to what concrete initiatives have been taken to ensure the optimum utilization of funds allocated for the year 2017-18, the Ministry stated that regarding promotional exploration in NE Region, DGM(Nagaland) & DGM(Assam) have undertaken regional coal exploration under Central Sector Scheme of Promotional Exploration. Under this scheme, 1 drill rig was sanctioned to both the agencies. DGM(Nagaland) has purchased the rig but DGM(Assam) is facing constraints and still under process of procurement. About 421 m have been drilled by DGM(Nagaland) in 2016-17(April'16-Jan'17). MoC had approved outsourcing of drilling-surveying and Geophysical activities in NE region. The same had been communicated to GSI, MECL & all state governments. Reminder has also been sent to all stakeholders in NE region for expediting outsourcing activities for utilization of fund. A meeting was held between CMPDI and DGM Meghalaya where the State Government had been offered to take project under promotional scheme, either through departmental capacity or outsourcing. CMPDI had also communicated that fund could be provided for procurement of drilling rigs. Still no proposal have been received from any State Govts. MECL had also been advised to deploy rigs for coal exploration in NE region but till date they have not deployed any rig. Under Promotional (Regional) Exploration programme, DGM-Nagaland and DGM-Assam have taken up the work. In spite of difficult terrain conditions etc., the DGM-Nagaland has completed drilling in one coal block. The second block has also been taken up. However, the Directorate of Geology & Mining (DGM) of Govt. of Assam could not proceed further after initial work due to adverse law & order conditions in area of operation.

CHAPTER IV

FINANCIAL AND PHYSICAL PERFORMANCE OF COAL PSUs

The Ministry of Coal in their Background Note on DFG (2017-18) furnished the Physical Targets and financial requirements during 2016-2017 and 2017-18 and explanation of financial requirements of Coal PSUs as under:

Public Sector Undertakings

(i) Coal India Limited and Singareni Collieries Company Limited

The physical targets (relating to the Coal Production, dispatches, OMS and Profit / Loss) and achievements of CIL and SCCL for the last three years are given as under:

Particulars	Coal India Limited				
	2014-15 Actual	2015-16 Actual	2016-17 Target/BE	2016-17 Actual Upto Dec,16	2016-17 Target/BE (Provisional)
Production(MT)	494.24	538.75	598.61	377.77	661.70
Dispatch(MT)	489.38	534.50	598.61	391.78	661.70
OMS (Tonnes)	6.20	6.95	7.46	7.01	7.50
Capital Exp. /Outlay (Rs. Crores)	5173.49	6123.03	7765.00	4266.69	7955.55

Particulars	Singareni Collieries Co. Ltd.				
	2014-15 Actual	2015-16 Actual	2016-17 Target/BE	2016-17 Actual Upto Dec,16	2017-18 Target/BE (Provisional)
Production (MT)	52.54	60.38	58.00	42.43	60.00
Dispatch (MT)	52.66	58.69	57.94	57.95	59.95
OMS (Tonnes)	4.21	4.74	4.93	4.43	5.19
Capital Exp. /Outlay (Rs. Crores)	2809.00	2820.2 2	2300.00	1472.64	1600.00

NLC India Limited

The Physical targets for 2014-15 (Actual), 2015-16 (Actual), BE2016-17, and actual upto Dec, 2016 & BE-2017-18 are given below.-

Particulars	2014-15 Actual	2015-16 Actual	2016-17 Target/RE	2016-17 Actual Upto Dec,16	2017-18 Target/BE (Provisional)
Lignite Production in MT	26.54	25.45	26.80	18.00	26.49
Power Generation Gross in MU	19729.13	19182.21	20514.77	15333.75	21637.00

The financial analysis of 2014-15 (Actuals), 2015-16 (Actuals), BE 2016-17, actuals upto Dec, 2016 and BE-2017-18 are given below.-

(Rs. in Crores)					
Sector	2014-15 Actual	2015-16 Actual	2016-17 Target/RE	2016-17 Actual Upto Dec,16	2017-18 Target/BE (Provisional)
Lignite /Coal Sector	85.97	217.19	233.24	168.57	344.75
Power Sector	1883.79	1448.85	9204.72	2237.80	8603.37
Total	1969.76	1666.04	9437.96	2406.37	8948.12

4.2 The Background Note furnished by the Ministry of Coal highlighted the break-up of Schemes/Projects as included in the Annual Plan 2017-18 for CIL, SCCL & NLC respectively as follows:-

GROUP-WISE CAPITAL EXPENDITURE & OUTLAY PLAN				
(Rupees in Crore)				
GROUP/ COMPANY	15-16 Act	16-17 BE	16-17 RE	17-18 BE
Coal India Limited (CIL)				
Existing Mines & Completed Projects	1544.24	1421.72	1316.45	1294.70
On Going Projects	3525.84	3494.18	3160.45	3741.73
Future Projects	5.68	205.17	20.72	99.93
TOTAL MINING	5075.76	5121.07	4497.63	5136.36
Non Mining	772.96	2131.93	2816.37	2052.63
(CMPDIL/CIL(HQ)/DCC/IICM/R&D)	74.25	162.00	101.00	416.55
Master Action Plan(Jharia & Ranigunj Fire)	200.06	350.00	350.00	350.00
TOTAL CIL	6123.03	7765.00	7765.00	7955.55

Singareni Collieries Co. Ltd. (SCCL)	2015-16 Actual	BE 2016-17	RE 2016-17	BE 2017-18
Existing & Completed	435.52	698.88	496.28	694.48
Ongoing Projects	523.57	616.88	772.41	895.52
Total Mining	977.08	1315.7 6	1268.69	1600.0 0
Total Non Mining *	*1843.14	*984.24	*1031.31	0
Grand Total	2820.22	2300.0 0	2300.00	1600.0 0

* includes provisions for 2X600MW Singareni Thermal Power Plant.

NLC India Limited (NLCIL)

The break-up of plan outlay for BE&RE 2016-17 and BE 2017-18 is given below:

(Rs. in crores)

Outlay	Actual 2015-16	BE 2016-17	RE 2016-17	BE 2017-18
NLC Projects	1385.69	5037.09	2537.96	3798.12
JV Projects	280.35	1241.83	6900.00	5150.00
Total	1666.04	6278.92	9437.96	8948.12

Out of the total outlay of Rs. 8948.12 crores for BE 2017-18, a sum of Rs 2460.00 Crore (both Coal and Power) is earmarked for the following projects under implementation. This allocation is about 27.49% of the total outlay for BE 2017-18.

(Rs. in Crores)

Coal Sector	
Area expansion of Mine-I & Expansion of Mine-IA	150.00
Bithnok Mines Project	10.00
Hadla Mines Project-1.90 MT	50.00
Total Coal Sector	210.00
Power Sector	
NNTPS	700.00
Bithnok Power Project	275.00
Barsingsar Extension TPS	275.00
Total Power	1250.00
Total Coal & Power	1460.00
JV NUPPL	1000.00
Total projects under implementation	2460.00

Provision for New Projects.

(Rs. in Crores)

Particular	BE 2017-18
Coal Sector	134.75
Power Sector	2153.37

Coal & Power Sector	2288.12
JV New Power Asset Acquisition	4000.00*
Total New Projects	6288.12

*Subject to GOI approval

Provision for recently completed projects

(Rs. in Crores)

Particular	BE 2017-18
Power Sector	50.00
JV – NTPL	150.00
Total recently completed projects	200.00

The details of the Physical targets for Lignite production and Power Generation by NLC India Limited during 2016-17 and 2017-18 are as under:

	2016-17	2017-18
Lignite (MT)	26.80	26.49
Power (MU)	21567.76	21637.00

4.3 On being asked to furnish a detailed note on the funds allocated during current Five Year Plan, amount actually spent, targets fixed for various activities vis-à-vis actual achievements and the reasons for not achieving the targets the Ministry of Coal submitted the following details:-

Reply: The details of Capital Outlay XII Plan proposals 2013-14 to 2015-16 (Actual), 2016-17 (BE&RE), Actual upto Dec, 16 and 2017-18 (BE) are as under:

(Rs. in crores)

Schemes	XII Plan 2012-17	2013-14 Actual	2014-15 Actual	2015-16 Actual	2016-17 BE	2016-17 RE	Actual upto Dec 16	2017-18 BE
CIL	25400.00	4329.86	5173.49	6123.03	7765.00	7765.00	4266.69	7955.55
SCCL	10350.00	2455.45	2809	2820.22	2300.00	2300.00	1472.64	1600.00
NLC-Mines	2510.70	71.94	85.97	217.19	415.52	233.24	168.57	344.75
Power	26728.40	1745.38	1883.79	1448.85	5863.40	9204.72	2237.80	8603.37
Total NLC	29239.10	1817.32	1969.76	1666.04	6278.92	9437.96	2432.08	8948.12
Sub Total	64989.10	8602.63	9952.25	10609.29	16343.92	19502.96	8171.41	18503.67
Research & Development (S&T)	100.00	11.65	17.95	18.00	10.00	10.00	7.00	10.00
Regional Exploration	456.00	64.00	58.82	105.05	50.00	50.00	45.00	60.00
Detailed Drilling	975.00	184.50	135.71	151.20	89.50	89.50	63.34	115.00
EMSC	1663.60	0.05	0.00	0.00	0.50	0.50	0.00	0.50

Conservation and safety in coal mines	820.00	185.00	185.00	170.00	80.00	170.00	80.00	200.00
Dev. Of Transportation Infra. In coalfield areas	600.00	76.06	75.00	75.00	70.00	180.00	70.00	299.50
Coal Controller	1.25	0.18	0.15	1.00	Provision shifted to Non-Plan/Non Scheme from FY 2016-17			
Information Technology	-	1.25	1.24	1.25				
Sub Total Schemes	4615.85	522.69	473.87	521.50	300.00	500.00	265.34	685.00
Grand Total	69604.95	9125.33	10426.12	11130.79	16643.92	20002.96	8436.75	19188.67

4.4 On being asked to state the amount earmarked during previous two Annual Plans, the amount spent and the achievements made against the targets (both physical and financial) fixed for various activities the Ministry of Coal submitted the following details the amount earmarked during previous two Annual Plans, the amount spent and the achievements are as under:-

(Rs.in Crores)									
Company	2014-15			2015-16			2016-17		
	BE	Actual	% of achievement	BE	Actual	% of achievement	BE	Actual Upto Dec,16	% of achievement
CIL	5225	5173.49	99.01	5990.5	6123.03	102.21	7765	4266.69	54.95
SCCL	3850	2809	72.96	2390	2820.22	118.00	2300	1472.64	64.02

Physical targets during previous two Annual Plans and achievements.

The coal production targets & achievements of CIL & SCCL during FY 2014-15, 2015-16, 2016-17 and the target for 2017-18 are as follows

(in million tonnes)							
Company	2014-15 BE	2014-15 Actual	2015-16 BE	2015-16 Actual	2016-17 BE	2016-17 Actual Upto Dec, 16	2017-18 BE
CIL	507.00	494.23	550.00	538.75	598.61	377.77	661.70
SCCL	55.00	52.54	56.00	60.38	58.00	42.43	60.00

NLC India Limited

The physical performance is as under:-

Year		Lignite (LT)	Power (Gross) (MU)
2014-15	Target (BE)	256.00	20285.00
	Actuals	265.43	19729.13
	Achievement (%)	103.68	97.23
2015-16	Target	256.66	20944.52
	Actuals	254.51	19182.21
	Achievement (%)	99.16	91.59
2016-17	Target (BE)	268.00	21567.76
2016-17 Upto Dec 2016	Target	175.05	15537.22
	Actuals	180.04	15333.75
	Achievement (%)	102.85	98.69
2017-18	Target (BE)	264.90	21637.00

Financial performance of NLC is as under:-

(Rs. in Crore)

Year		Coal Sector	Power Sector	Total
2014-15	Target (BE)	272.00	2664.00	2936.00
	Actual	85.97	1883.79	1969.76
	Achievement (%)	31.61	70.71	67.08
2015-16	Target (BE)	731	3474	4205
	Actuals	271.19	1448.85	1666.04
	Achievement (%)	37.10	41.70	39.62
2016-17 (Upto Dec 2016)	Target (RE)	233.24	9204.24	9437.96
	Actuals	168.57	2237.80	2406.37
	Achievement (%)	72.27	24.31	25.50

4.5 On being asked to furnish details of pre-budget Memorandum submitted by PSUs/ Ministry and follow up action taken thereon by the Government, the Ministry of Coal submitted the following information:-

Details of Outlay of the Public Sector Undertakings and Central Sector Schemes approved by Finance Ministry for the year 2017-18 are as under

	(Rs. in Crore)
A. <u>Capital Section (IEBR)</u>	<u>BE 2017-18</u>
▪ Coal India Limited	7955.55
▪ NLC India Limited	8948.12
▪ Singareni Collieries Company Ltd.	1600.00
Total (A)	18503.67
B. Revenue Section (Budgetary Support)	
▪ Research & Development	10.00
▪ Regional Exploration	60.00
▪ Environmental Measures and	
Subsidence Control	0.50
▪ Detailed Drilling	115.00
▪ Conservation & Safety in Coal Mines	200.00
▪ Development of Transportation	299.50
Infrastructure in coalfield areas	
Total (B)	685.00
Total (A+B)	19188.67

Coal India Limited (CIL)

Coal India Limited (CIL) is an organized State owned coal mining corporate which was established 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, the holding Company with headquarters in Kolkata, is headed by a Chairman. He is assisted by four Functional Directors, namely, Director (Technical), Director (Personnel and Industrial Relations), Director (Finance) and Director (Marketing). Each Subsidiary Company of CIL has its Board of Directors headed by a Chairman-cum-Managing Director. In addition, there are four functional Directors in each of the seven

production companies. Another subsidiary company is Central Mine Planning & Design Institute Limited (CMPDIL). In addition, part-time or nominee Directors on the Board of CIL and its Subsidiary companies are appointed in accordance with the Articles of Association of the Company and Government guidelines prescribed in this regard from time to time.

CIL's Strategic Relevance

- Produce around 84% of India's overall Coal production.
- In India where approximately 55% of primary commercial energy is coal dependent, CIL alone meets to the tune of 40% of primary commercial energy requirement.
- Commands nearly 74% of the Indian coal market.
- Feeds 98 out of 101 coal based thermal power plants in India.
- Accounts for 76% of total thermal power generating capacity of the utility sector.
- Supplies coal at prices discounted to international prices.
- Insulates Indian coal consumers against price volatility.
- Make the end user industry globally competitive.

Milestones in 2015-16:

- In 2015-16, CIL for the first time crossed the threshold of Half-a-Billion tonne mark in coal production & off-take setting the stage for a high growth in the ensuing years.
- For the first time, coal inventory at coal fired power stations as on 31st March 2016 had coal stock with around more than 39 Million Tonnes accounting for 28 days stock. CIL had a coal stock of about 58 Mt at the end of March 2016.
- Not a single utility was in critical or supercritical condition for want of coal. There was a decline in coal import resulting in substantial Forex saving.
- Emphasis was given for improved customer friendliness. The drive to despatch (-) 100 mm sized coal to Power (U) is operational since 1st January 2016.
- Third Party Joint Sampling under the supervision of CIMFR, an autonomous Government body has been introduced since Jan 2016.

- For the first time CIL's Gross Sales have exceeds Rs. 100000.00 crore, etc.

Besides other activities, includes Transformational HR Initiatives in CIL; Organizational Culture Building initiatives; Continuous Improvement and Knowledge Management initiatives; Performance Management initiatives.

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 has mining capacity of 30.6 MTPA and power generating capacity, as on November 2016, is 4293.5 MW. All the Mines and the Power Stations of NLC India Limited have received **ISO Certification** for Quality Management System, Environmental Management System, and Occupational Health & Safety Management System.

- **Authorised Capital:**

The authorized capital of NLC is Rs. 2000 Crore and paid up equity is Rs. 1677.71 Crore. The investment by Govt. of India as on 31.12.2016 is as under:

(Rs. In Crore)

Equity - GOI Portion:	1509.94
Loan from GOI - (including accrued interest)	Nil

- **Production Performance (NLC):**

Overburden removal, lignite production, gross power generation and its export during the year 2016-17 up to the end of December, 2016 and provisional for the period January 2017 to March 2017 are indicated given in the table below:-

Product	Unit	BE 2016-17	Target(Apr-Dec.,2016)	Actual(Apr-December 2016)	Jan. 2017 – March 2017 (Prov)
Overburden	MM ³	161.00	118.07	149.29	11.71
Lignite	MT	26.80	17.51	18.00	8.80
Power Gross	MU	21567.76	15537.22	15333.75	6234.01
Power	MU	18329.69	13191.49	12880.80	5448.89

Export					
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Singareni Collieries Company Limited

The Singareni Collieries Company Limited is a State level enterprise of Government of Telangana and the Central Government, in which Government of Telangana and Government of India hold the equity capital in the ratio of 51:49, respectively. SCCL is contributing around 9.6 % of the total all India production.

- **Coal Production:**

Production target for the year 2016-17 is 58.00 MT. Production achieved up to December 2016 is 42.43 Million tonnes.

(In million tonnes)

Target 2016-17	Target 2016-17 (April-December 2016)	Actual 2016-17 (April-December, 2016)
58.00	41.89 MT	42.43 MT

Development activities in North Eastern Region

In the North Eastern Region, Coal India Limited has its mining activities mainly in Makum Coalfields of Assam. At present 4 (Nos) of mines are in operation, these are Tirap, Tikak, Ledo (OCP) and Tipong. Out of these Tirap, Tikak and Ledo (OCP) are opencast Mines while Tipong is an Underground mine. In North Eastern Coalfields there are 5 (five) major outsourcing patches in the open cast Mines, these are Tirap (East), Tirap (West), Tikak (East), Tikak (OCM) and Ledo (OCP). NEC's entire coal production of open cast mine is outsourced. Ledo (OCP) was started in the F.Y 2008-09. The coal production of Last 4 (Four) years has been shown in the following table I. Due to delay in tendering process, non-finalization of new contract and imposition of Sec 22 (3) of Mines Act in OC Mines the production came down to 6.05 Lakh tonnes, 6.63 Lakh tonnes, 7.79 Lakh tonnes and 4.86 Lakh tonnes during the period of the F.Y 2012-13 to 2015-16.

(Figure in Lakh Tonnes)

Year	2012-13	2013-14	2014-15	2015-16	2016-17 Prov.
Coal Production of NEC	6.05	6.63	7.79	4.86	6.50

In the year 2016-17, it has been expected to achieve 6.50 Lakh tonnes. During this year 2016-17 out of 5 (five) patches, only 3 (three) patches had produced coal during the month of April'16 and May'16. From June'16 to August'16, only 1(one) patch have produced coal, from September'16 to October'16, 2(Two) patches have produced coal, and during the month of November'16, 3 (Three) patches have produced coal. During the month of December'16, 4(Four) patches have produced coal at North Eastern Coal fields. This was due to non-finalization of out sourcing contract. As on date tender for only 1(one) patch of Opencast mine is yet to be finalized. Tender has already been opened and tender Committee recommendation is being scrutinized. The imposition of Sec.22(3) also affected the coal production at Tirap and Tikak opencast mine at NEC.

Performance of NEC during Last five years:

Though NEC was incurring heavy losses barring a few years in the past, it has started earning overall profitability however,UG collieries are still increasing Losses since 2005-06.

NEC'S PRODUCTION PROGRAMME

In NEC, at present there are altogether four (4) Nos existing working mines. Out of 4 mines, 3 Nos are opencast mines and 1 No is underground mine. During the Financial year 2016-17, it is anticipated to produce 6.50 Lakh tonnes of coal.

NEC has identified 6 (Six) Nos. of New Projects, which are at various-stages of construction due to clearances awaited from MoEF and other statutory bodies.

4.6 On being asked to furnish give details of physical targets set for 2017-18 by CIL and its subsidiaries its subsidiaries, the Ministry furnished the following reply:- Production target of CIL and for 2017-18 is as under:-

Company	2017-18 (MT)
	Target
ECL	51.70
BCCL	41.00
CCL	80.00
NCL	90.00
WCL	50.00
SECL	161.00
MCL	187.00
NEC	1.00
CIL	661.70

4.7 On being asked as to what steps have been taken by CIL to ensure full utilization of budgeted outlays of Rs. 7955.55 crore during 2017-18, the Ministry of Coal stated that the Material budget for all concerned departments was under preparation to expedite the process of procurement; Shopping list for procurement of equipment was under preparation and process of taking approval was in progress; Mine development activities had been identified and under conceptualization for implementation; Survey-off for different equipment had been expedited; and Activities related to land acquisition, railway siding, civil works have also been expedited.

4.8 During 2017-18, the Coal Production target for CIL has been set for 661.70 MT. However, the actual production up to December, 2016 for 2016-17 stands at 377.77 MT as against the BE (2016-17) target of 598.61 MT. In this context, the Ministry was asked to state whether the target set for coal Production from CIL during the year 2016-17 would be achieved by the end of the financial year. The Ministry thereupon furnished the following replied that during the year 2016-17, out of the targets set for production of coal by CIL of 598.61 MT (BE), CIL has produced 458.62 MT of coal till 13th February, 2017 compared to 448.48 MT achieved during the same period last year with a growth rate of 2.3%. Thus during this period CIL has been able to achieve 91% of its corresponding target. It is expected that 573 MT Coal will be produced by CIL during 2016-17. The targeted production will not be achieved largely on account of the fact that the demand did not grow at the pace at which the production was envisaged to grow resulting in accumulation of stock at the pit heads. The vendible stock as on 13.02.2017 was 50.89 MT as compared to 44.08 MT as on 13.02.2016.

4.9 On being asked as to what additional initiatives were being taken to ensure that the targeted coal production for 2017-18 were achieved, the Ministry stated that the Government seeks to increase the domestic production of Coal to the extent possible by facilitating environmental clearances expeditiously, pursuing with State Government for help in expediting land acquisition and coordinated effort with Railways for movement of coal. The additional initiatives taken by CIL to ensure the targeted coal production for 2017-18 include mechanization and modernization of all new mines; Efforts being made by all the subsidiaries for obtaining EC/FC within the scheduled time frame so that projects to start production in time; and Regular meetings with Railway Authorities for faster progress of Railway infrastructure projects. It was further submitted that as regards, SCCL against Rs.496.28 crore during 2016-17 (RE) for existing mines and completed projects, an increased provision of Rs. 694.48 crore had been made for 2017-18. Investment in ongoing projects of SCCL had also been increased to Rs.895.52 crore during 2017-18 as compared to Rs.772.41 crore (RE) during 2016-17.

4.10 On being asked about the additional projects in SCCL for which the additional provisions have been made the Ministry stated that for the year 2017-18, provision has been made for existing and completed mines of Rs. 694.48 crores as against 2016-17 (RE) Rs.496.28 crores due to acquisition of private land and R&R activities and HEMM items for Rs. 90.00 crores in GDK 11 Incline and RG OC III respectively and proposal for construction of 298 Nos. Quarteres 42.50 crores. In the case of on-going projects, provision had been made for Rs. 895.52 crores as against 2016-17 (RE) of Rs. 772.41 crores due to escalated cost over & over the FR provisions due to huge increase in Patta Land , NPV payments in case of Forest land and increase in R&R costs. Example MNG OC, KK OCP

4.11 On being asked as to whether the increased provision for investment plan of SCCL in existing mines and ongoing projects during 2017-18 would be fully utilized, the Ministry stated that SCCL was anticipating of full utilization of the planned capital outlay of Rs. 1600 crores for the year 2017-18. On the hurdles in achieving the targeted production during 2017-18, it was stated that the thrust area of SCCL to achieve the targeted coal production viz. Forest land diversion; Non-forest land acquisition and R&R; Rail and road infrastructure; Modernization of Coal Handling Plants. It was stated that SCCL is regularly following up the proposals related to land acquisitions with the State Govt. and MoEF authorities. Senior officers of SCCL are reviewing regularly the progress of new projects. Accordingly, fund provisions are made for the thrust areas.

NLCIL

The BE of NLC-mines were Rs.415.52 crore during 2016-17. These were revised to Rs.233.24 crore and actual utilization upto December, 2016 were Rs. 168.57 crore. Similarly, for NLC-Power, against BE of Rs.5863.40 crore and RE of Rs. 9204.72 crore, actual (upto December, 2016) were Rs.2237.80 crore. The BE of Rs. 2017-18 for the Company are Rs.8603.37 crore. In this context please state:-

4.12 On being asked to state the reasons that the Company could not utilize the capital outlays both for mining & power sector as targeted during 2016-17. The Reply furnished thereupon is as follows:-

Plan outlay for BE 2016-17, RE 2016-17 and actual for the period April'16 - January 2017 is tabulated below:

(Rs Crore)			
Details	BE 2016-17	RE 2016-17	Actual Apr 16 -Jan 17
Coal Sector	415.52	233.24	198.45

Power Sector	5,863.40	9,204.72	2,624.52
Total (NLCIL Consolidated)	6,278.92	9,437.96	2,822.97

Outlay under Power sector inter alia includes Power Asset Acquisition from Damodar Valley Corporation (DVC).

Following outlay is included under Power Sector towards Power Asset Acquisition:

	(Rs Crore)	
	BE 2016-17	RE 2016-17
Power Asset Acquisition (DVC)	1,500.00	6,000.00

The proposed power asset acquisition from DVC is under GOI approval. If the above said power asset acquisition is excluded, then the progress is plan capex will be as given on next page:

	(Rs Crore)		
Details	BE 2016-17	RE 2016-17	Actual Apr 16 -Jan 17
Coal Sector	415.52	233.24	198.45
Power Sector (excluding DVC)	4,363.40	3,204.72	2,622.86
Total	4,778.92	3,437.96	2,821.31
% of utilisation on BE 2016-17			59%
% of utilisation on RE 2016-17			82%

The company is making all out efforts to achieve the plan capex target. Regarding Power Asset Acquisition from DVC, subject to GOI approval, the outlay will be spent.

4.13 On being asked as to what the lignite production and power generation losses incurred due to lower utilization of plan outlay and how it will adversely affect the future plan of the company, the Ministry stated that there were no losses in the lignite production and power generation on account of lower utilization of plan outlay. Future plan of the company shall not be affected as the company is confident of implementing the projects with suitable strategic planning.

Outstanding Dues

4.14 On being asked to furnish State-wise and utility-wise outstanding dues of Coal India Limited, SCCL and NLC for the last 3 years the Ministry furnished the following reply:-

Year-wise outstanding dues are as follows:

I. CIL

1. 31.03.2013: Rs. 12,335.86 Cr.
2. 31.03.2014: Rs. 10,830.04 Cr.
3. 31.03.2015: Rs. 11,032.20 Cr.
4. 31.03.2016: Rs. 13,683.90 Cr.
5. 31.01.2017: Rs. 14,443.12 Cr.

The outstanding dues of CIL as on 31.01.2017 are 14.46 % of the annual sale of coal to all Sectors.

Recoveries made against outstanding dues during last three years are indicated as increase/ decrease over opening balances.

II. NLC India Limited

Rs. Crore

SEB Dues as on 31.03.2014	Power Bills>60 days	Power Bills<60 days	Power Bills	Surcharge	Total	Realisation during the year	Total realizable (i.e. opening + bills raised)	% of closing balance w.r.t. Total realizable
TAMILNADU	419.59	485.19	904.78	426.64	1,331.42	4,276.78	5,608.20	23.74%
KARNATAKA	74.33	131.51	205.84	99.96	305.8	768.51	1,074.31	28.46%
KERALA	31.72	72.66	104.38	35.59	139.97	523.94	663.91	21.08%
ANDHRA Unified	117.83	63.21	181.04	57.07	238.11	764.65	1,002.76	23.75%
TELANGANA	0.00	0.00	0.00	0.00	0.00	0	0.00	#DIV/0!
PUDUCHERRY	69.83	4.86	74.69	24.16	98.85	234.84	333.69	29.62%
RAJASTHAN	46.13	38.54	84.67	17.26	101.93	486.61	588.54	17.32%
Total	759.43	795.97	1,555.40	660.68	2,216.08	7,055.33	9,271.41	23.90%
SEB Dues as on 31.03.2015	Power Bills>60 days	Power Bills<60 days	Power Bills	Surcharge	Total	Realisation during the year	Total realizable (i.e. opening + bills raised)	% of closing balance w.r.t. Total realizable
TAMILNADU	0.00	622.85	622.85	0.00	622.85	3,245.84	3,868.69	16.10%
KARNATAKA	31.16	165.54	196.70	0.12	196.82	923.32	1,120.14	17.57%

KERALA	60.92	43.80	104.72	41.05	145.77	498.66	644.43	22.62%
ANDHRA	29.03	79.60	108.63	0.50	109.13	312.23	421.36	25.90%
TELANGANA	0.56	95.10	95.66	0.02	95.68	339.56	435.24	21.98%
PUDUCHERRY	69.92	42.91	112.83	0.00	112.83	221.76	334.59	33.72%
RAJASTHAN	80.45	119.18	199.63	29.32	228.95	379.82	608.77	37.61%
Total	272.04	1,168.99	1,441.03	71.00	1,512.03	5,921.19	7,433.22	20.34%
SEB Dues as on 31.03.2016	Power Bills>60 days	Power Bills<60 days	Power Bills	Surcharge	Total	Realisation during the year	Total realizable (i.e. opening + bills raised)	% of closing balance w.r.t. Total realizable
TAMILNADU	105.19	742.76	847.95	2.98	850.93	2,670.74	3,521.67	24.16%
KARNATAKA	56.57	239.45	296.02	0.91	296.93	958.63	1,255.56	23.65%
KERALA	57.99	74.67	132.66	48.06	180.72	560.67	741.39	24.38%
ANDHRA	14.54	75.77	90.31	0.38	90.69	298.70	389.39	23.29%
TELANGANA	59.16	74.39	133.55	0.72	134.27	318.36	452.63	29.66%
PUDUCHERRY	10.22	35.00	45.22	0.00	45.22	331.43	376.65	12.01%
RAJASTHAN	97.64	116.60	214.24	53.72	267.96	419.55	687.51	38.98%
Total	401.31	1,358.64	1,759.95	106.77	1,866.72	5,558.08	7,424.80	25.14%

III. SCCL

Details of outstanding dues –

2013-14					Rs.Crores	
	Opening Balance	BILLS RAISED	Total realizable (i.e. opening + bills raised)	RECEIPTS	Closing Balance	% of closing balance w.r.t. Total realizable
APGENCO	950.5	4211.15	5161.65	4624.45	537.21	10.41%
NTPC	184.17	2836.32	3020.49	2820.37	200.12	6.63%
MAHAGENC O	3.7	210.62	214.32	189.09	25.23	11.77%
KPCL	52.41	644.95	697.36	598.85	98.52	14.13%
	1190.78	7903.04	9093.82	8232.76	861.08	9.47%
2014-15						
	Opening Balance	BILLS RAISED	Total realizable (i.e. opening + bills raised)	RECEIPTS	Closing Balance	% of closing balance w.r.t. Total realizable

APGENCO	537.21	1584.84	2122.05	2091.15	67.7	3.19%
TSGENCO	0	3448.23	3448.23	1486.86	1924.57	55.81%
NTPC	200.12	3643.17	3843.29	3742.82	100.47	2.61%
MAHAGENC O	25.23	489.19	514.42	427.63	86.78	16.87%
KPCL	98.52	857.64	956.16	694.35	261.8	27.38%
	861.08	10023.07	10884.15	8442.81	2441.3 2	22.43%
2015-16						
	Opening Balance	BILLS RAISED	Total realizable (i.e. opening + bills raised)	RECEIPTS	Closing Balance	% of closing balance w.r.t. Total realizable
APGENCO	67.7	2996.35	3064.05	1688.75	1375.3	44.89%
TSGENCO	1924.57	3142.26	5066.83	2766.7	2300.13	45.40%
NTPC	100.47	4497.7	4598.17	4456.03	142.94	3.11%
MAHAGENC O	86.78	993.89	1080.67	1056.77	23.9	2.21%
KPCL	261.8	1935.84	2197.64	1620	577.64	26.28%
	2441.32	13566.0 4	16007.3 6	11588.25	4419.11	27.61%
2016-17						
	Opening Balance	BILLS RAISED	Total realizable (i.e. opening + bills raised)	RECEIPTS	Closing Balance	% of closing balance w.r.t. Total realizable
APGENCO	1375.3	1572.28	2947.58	1187.88	1759.7	59.70%
TSGENCO	2300.13	2914.98	5215.11	2935	2280.11	43.72%
NTPC	142.94	3850.83	3993.77	3824.22	168.75	4.23%
MAHAGENC O	23.9	1131.87	1155.77	963.39	192.38	16.65%
KPCL	577.64	2047.05	2624.69	1656.93	967.76	36.87%
Total	4419.11	11517.0 1	15936.1 2	10567.42	5368.7	33.69%

AMOUNTS OUTSTANDING FROM VARIOUS MAJOR PARTIES FOR COAL SUPPLIES AS ON 31.01.2017

Rs. in Crores

Sl. No.	Name of the Party	Current Dues	Representing No. of Days
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1	APGENCO	1759.70	342
2	TSGENCO	2280.11	239
3	NTPC	168.75	13
4	MSEB	192.38	52
5	KPCL	958.45	143
6	KPCL-Disputed	9.31	
	TOTAL :	5368.70	

Ageing analysis of outstanding amounts from major customers -

Rs. in crores

Sl. No.	Name of the Party	OUTSTANDING FOR				
		More than 3 years	More than 2 years	More than 1 year	More than 60 days & Less than 1 year	Less than 60 days
1	APGENCO	35.39	33.28	869.43	685.95	135.65
2	TSGENCO	38.46	23.23	331.89	1351.84	534.69
3	NTPC		0.78	27.66	28.02	112.29
4	MSEB				-	192.38
5	KPCL	9.31		24.01	389.82	544.62
	TOTAL :	83.16	57.29	1252.99	2455.63	1519.63

4.15 ON being asked about the steps taken by the Ministry/PSUs to recover all their dues in a time bound manner, the Ministry furnished the following reply:-

I. MINISTRY

1. Issued D.O letters from Secretary (Coal) to Chief Secretary of State Governments and to Secretary (Power) on 14.10.2016 and 08.12.2016 to settle the outstanding dues in a time bound manner.

2. The issue of outstanding dues was also raised in Power Minister's Conference held on 16th June, 2016 in Goa and 7th & 8th October, 2016 in Vadodara, Gujarat.

3. The decisions about disputed outstanding dues are taken up in the Alternate Dispute Resolution Mechanism (ADRM) for early resolution.

II. Coal India Limited

The following steps are being taken by CIL to recover dues:

1. The party-wise outstanding dues are being reviewed by the subsidiary companies on time to time basis. The GM(S&M)s of concerned subsidiaries follow-up regularly with concerned parties to realize the outstanding dues.
2. RSOs under S&M Division, CIL also pursue towards realization of outstanding dues.
3. CMDs of the subsidiary companies also communicate with Chairman/ MDs of the defaulting powerhouses/ parties.
4. At CIL level, GM(S&M) also communicate with the major defaulting powerhouses to clear the outstanding dues.
5. Chairman, CIL and Director (Marketing), CIL took up the matter with Chief Secretary of State and Secretary (Energy) of respective defaulting parties so that dues of major defaulting parties are cleared.

III. NLC India Limited

Steps taken by NLCIL to recover all their dues in a time bound manner

1. Rebate Scheme

- To encourage early realisation, company has formulated a special scheme called "Graded Rebate Scheme" which provides for a graded rebate from a maximum of 2% for payment on date of billing to 0% on the 60th day of billing.

2. One time waiver of surcharge settlement

- An MoU for realisation of 50% of surcharge dues was entered into with all the Discoms in 2013-14 / 2014-15 (except Rajasthan Discoms), for one time waiver of 50% of the surcharge dues and revision of Power Purchase Agreements incorporating a payment priority clause. Rajasthan Discoms have also agreed to incorporate payment priority clause with 50% surcharge waiver.

3. NLCIL has entered into Power Sales Agreement with the State Utilities incorporating following payment priority mechanism.

Payment made by any utility shall be appropriated by NLCIL in the following order of priority

- a. Towards late payment surcharge payable if any, as intimated by NLCIL through late payment surcharge bills as per CERC Tariff regulations.
- b. Towards earlier unpaid bill(s) including arrear bills, if any
- c. Towards statutory dues like income tax, other tax, royalty etc., in the current bill(s) and
- d. Towards other charges in current monthly bill.

The existing tripartite agreement (TPA) between MOF, RBI and State Governments expired on 31st October 2016 Ministry of Power has sent fresh TPA for continuation of payment security mechanism for recovery of current over dues of State Power Utilities payable to CPSU beyond 31st October 2016 and execution of TPA is under progress.

IV. SCCL

Regular follow-up is being made for getting the timely payments from the power customers. In addition to the Follow-up in writing, matter is brought to the notice of C&MDs of the respective customers by highest Authority of the company.

4.16 The representatives of the Ministry of Coal and Coal PSUs in their visual presentation highlighted the performance of Coal PSUs during oral evidence held on 23.2.2017 submitted as under:-

CAPEX

(Rs. in crores)									
Name of PSU	2015-16				2016-17				2017-18
	BE	RE	Exp.	% of Exp. w.r.t BE	BE	RE	Exp. (upto Jan. 2017)	% of Exp. w.r.t BE	BE
CIL	5990.50	6600.00	6123.03	102.21	7765	7765	4900.88	63.16	7955.55
NLCIL	4205.00	2963.00	1666.04	39.62	6278.92	9437.96	2822.97	44.96	8948.12

SCCL	2390.00	3550.00	2820.22	118	2300	2300	1435.41	62.41	1600.00
Total	12585.50	13113.00	10609.29	84.29	16343.92	19502.96	9159.26	56.04	18503.67

CHAPTER - V

Coal and Lignite Production - Policy Initiatives and Reform Measures

The Annual Report (206-17) of the Ministry of Coal highlighted Coal Supply Demand and Production as under:-

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 713.39 MT in 2012-13 to 832.39 MT in 2015-16. Demand for coal for 2016-17 was estimated at 884.87 MT against which, actual supply of coal in 2016-17 (Apr-Dec. 2016) was 595.02 MT. The sector wise breakup of actual supply of coal vis-à-vis the demand as estimated at the beginning of 2016-17 is given in the table:-

	Sector	2012-13 Actual	2013-14 Actual	2014-15 Actual	2015-16 Actual (P)	2016-17 Estimated Demand	2016-17 Actual April- Dec. (P)
I.	Coking Coal						
1	Steel / Coke Oven & Cokeries (Indigenous)	16.90	15.49	12.02	12.37	12.51	10.45
2	Steel (Import)	35.56	36.87	43.72	43.51	44.11	27.05
	Sub Total	52.46	52.36	55.74	55.88	56.62	37.50
II.	Non Coking Coal						
3	Power (Utilities)	457.43	438.83	435.44	445.98	598.73	313.92
4	Power (Captive)	55.05	54.42	62.26	62.27	91.11	37.98
5	Cement	22.39	11.94	11.36	8.93	34.37	5.18
6	Sponge Iron/ CDI	20.90	18.49	17.77	7.76	24.05	0.19
7	BRK & Others .including Fertilizer	107.95	163.30	239.57	251.57	80.00	200.25
	Sub Total	662.94	686.98	766.40	776.51	828.25	557.52
	Total Raw Coal	713.39	739.34	822.14	832.39	884.87	595.02
P= Provisional,						Source :Coal Controller	
Organisation							

Coal Supply

5.2 The demand for coal for 2016-17 was estimated to be 884.87 MT, whereas the domestic availability was estimated at 724.71 MT. The gap of 160.16 MT was projected to be met through imports. During the year 2016-17, the actual domestic supply of coal was 466.68 MT during Apr-Dec 2016.

Of this the supply of coal from CIL, SCCL and Others including captive blocks was 391.47 MT, 42.67 MT and 32.54 MT, respectively.

Coal Production

5.3 Actual coal production by CIL, subsidiary-wise, SCCL and others for the period 2013-14 to 2016-17 (April-December 2016) and anticipated production during January- March 2017 is given below.

Company wise production of Coal (in MT)						
Company	2013-14 (Actual)	2014-15 (Actual)	2015-16 (Actual)*	2016-17 Target	2016-17 Actual (Apr-Dec 16.)	2016-17 Estimated prov. Jan17 – March17
ECL	36.05	40.00	40.21	46.94	28.57	18.37
BCCL	32.61	34.51	35.86	37.00	25.77	11.23
CCL	50.02	55.65	61.32	67.00	40.88	26.12
NCL	68.64	72.48	80.22	82.00	59.19	22.81
WCL	39.73	41.15	44.82	48.00	26.76	21.24
SECL	124.26	128.28	135.66	149.67	97.51	52.16
MCL	110.44	121.38	137.90	167.00	98.88	68.12
NEC	0.66	0.78	0.49	1.00	0.26	0.74
CIL	462.41	494.23	536.48 + 2.28 =538.76 #	598.61	377.82	220.79
SCCL	50.47	52.54	60.38	58.00	42.43	15.57
Others	52.89	62.41	40.09	68.10	32.85	35.25
Total	565.77	609.18	639.23	724.71	453.10	271.61
*Provisional # Including Gare Palma IV/2&3 Block's Prod. of 2.28 MT						

Coal Import

5.4 The total import of coal during the period from April to October 2016 was estimated at 116.30 MT. Source wise break up of actual supply is presented for Apr-Dec 2016-17 in the following table along with figures for 2015-16.

(In MT)

Coal Supply and Demand (in MT)				
Source	2015-16 Estimate	2015-16 Actual	2016-17 Estimate	2016-17 Actual Apr-Dec 16
CIL	550.00	534.50*	598.61	391.47
SCCL	56.00	58.60	58.00	42.67

Others	94.00	39.40	68.10	32.54
Total indigenous supply	700.00	632.50	724.71	466.68
Demand projected / Actual supply (Domestic+ Import)	910.00	832.38	884.87	595.51
Import- Estimated / Actual	210.03	199.88	160.16	128.83 (upto Nov. 2016)
Note: Demand is assessed by the Planning Commission at the beginning of each Annual Plan whereas the supply figures are based on actual as realized by the end of the reporting period. * including Gare-palmaiv/2&3.				

Lignite Production and Power Generation

5.5 The NLC India (NLCIL) had a target of 26.80 MT of lignite production and 21567.76 MU of power generation for 2016-17. Against which actual production of lignite was 18 MT and 15333.75 MU of power generation during April-December 2016 and the provisional production of lignite and power generation for the period January to March 2017 is estimated at 8.80 MT and 6234.01 MU, respectively. The details of which are given in the table.

Year	Lignite (MT)	Power Generation (MU)
2012-13 (Actual)	26.23	19902.34
2013-14 (Actual)	26.61	19988.65
2014-15 (Actual)	26.54	19729.13
2015-16 (Actual)*	25.45	19182.21
2016-17 (BE)	26.80	21567.76
2016-17 (RE)	26.80	20515.00
2016-17 (Actual)* (Apr-Dec.16)	18.00	15333.75
2016 -17 Jan 17 - March 17 (Estimated)	8.80	6234.01
2017-18 (BE)	26.49	21637.00
*Provisional.		

Policy Initiatives and Reform Measures

5.6 The Annual Report further highlights measures related to augmenting Production and Efficiency in Coal Sector as under:

Enhanced exploration efforts

The target for detailed drilling in CIL areas in the XII Plan is about 30.20 lakh meters. The actual drilling in CIL blocks during the last four financial years, anticipated drilling during 2016-17 and the target for the financial year 2017-18 are as follows:

(Drilling in Lakh Meter)			
Year	Target	Actual	Growth % w.r.t. Previous year
2012-13	04.07	3.35	23.20
2013-14	05.38	4.59	37.01
2014-15	07.84	5.46	18.95
2015-16	10.18	7.02	28.57
2016-17	07.52	7.72 (Anticipated)	9.97 (Anticipated)
2017-18	8.24	-	-

The shortfalls in target achievement are due to many factors, including law & order problems in many coal block areas, non-availability of Forest clearance, shortage of skilled manpower, and inadequate capacities in the private sector. To offset this, strengthening of CMPDI in the coming years together with a policy prescription for attracting global majors in exploration is being planned. Process of Forest Clearance is being streamlined by MoEF to fast track approvals for exploration proposals.

Renewed policy thrust to increase coal production

Coal India Limited (CIL)

5.7 An exercise has been carried out to prepare a roadmap for achieving a production level of 1BT of coal by the year 2019-20. So far, mines/ projects to produce about 908.10 MT in 2019-20 have been identified and identification of projects for balance capacity to reach 1BT is under way. In 2015-16, the targeted coal production as per Annual Plan document of MoC was 550 MT with 98% achievement. In 2016-17, Annual Plan target of coal production is pegged at 598.61 MT. In 2017-18, the envisaged coal production target is 660.68 MT excluding the production of NEC. The group-wise production during 2015-16 and projection for 2016-17 and 2017-18 are as follows:

[In MT]

CIL	2015-16		2016-17	2017-18
	BE	Act.(Prov.)	AP Tgt.	As per 1 Bt Projection for the year 2019-20
Existing (Mines taken over at the time of nationalisation)	36.61	37.14	37.91	49.86
Completed (Mines reached its maximum capacity)	193.12	231.14	209.54	127.38
Ongoing Projects (Mines yet to reach peak capacity)	317.52	267.69	349.43	437.56
Future Projects	2.75	0.50	1.73	45.89
Gare Palma		2.28		
Total	550	538.75	598.61	660.68

Completion of Projects and expansion of existing projects

Coal India Limited (CIL)

5.8 There are 153 on-going projects at different stages of implementation. Projects costing more than Rs 500 Crore and with capacity of 3 MT/Year and above are reviewed by the Secretary, Ministry of Coal on Quarterly basis. Performance of all projects of Rs. 150 crore and above is monitored by Ministry of Statistics and Programme Implementation (MOSPI). Further, the Ministry monitors on-going projects of CIL through updated information received on its Coal Project Monitoring Portal (CPMP) and also portal at the PMG website of Cabinet Secretariat.

CIL has also identified 64 future projects against 1 BT coal production target by 2019-20. Out of this, 21 projects having capacity of 180.51 MT/Year and capital expenditure of Rs. 28913.08 Crore have so far have been approved.

Measures being taken to increase coal production

5.9 In 2016-17, the targeted coal production from **on-going projects** of CIL was 349.43 MT. (Ref Annual Plan 2016-17 of MoC). In 2017-18, CIL envisages to produce 437.56 MT. (Ref 1 Bt. document of CIL) an increase of 88.13 MT, from the On-going projects. Similarly from **Future projects** there will be an addition of 44.16 MT in 2017-18.

In respect of CIL, major increase in production is envisaged from the on-going & future group of projects, mainly, from four subsidiaries - SECL, MCL, CCL & NCL. Out of 153 on-going projects, clearances are available for 82 projects with a total output capacity of 211.48 MT. In the year 2015-16, 138.25 MT coal has been produced from these 82 projects.

The balance 71 projects, with a total capacity of 412.35 MTY, will require clearances to achieve their planned capacity. However, with part clearances obtained in forest land, these projects have produced 114.85 MT in 2015-16.

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

- High capacity mines are being planned with state-of-the-art mechanization.
- Mines are being modernized for increasing productivity both in underground & opencast mines depending upon geo-mining conditions.
- Improving capacity utilization through efficiency improvement and modernization.
- Ensuring implementation of on-going projects in time bound manner to achieve targeted production as per schedule.
- Capacity augmentation of running projects through special dispensation under the EP Act 2006.
- Effective monitoring & follow up of issues related to projects with related Ministry & State Governments.
- Effective & persistent support from the Ministry of Coal.

Technology development and Modernization of Mines in CIL

A study has been conducted by M/S KPMG for assessment of the need for up gradation of current technology, under practice in CIL mines, including UG mines and, scope for further modernization. They have submitted their report which is under examination for implementation.

Further, CIL/CMPDI is in the process of selection of consultant for specific study on underground mines in view of declining coal production from underground mines of CIL.

Satellite Surveillance for land reclamation

Coal India Limited (CIL)

Reclamation of mined out areas is important for sustainable development. Emphasis is being laid on proper reclamation (both technical and biological) and mine closure. Satellite surveillance for land reclamation is being given the requisite thrust by partnering with the National Remote Sensing Centre at Hyderabad.

Singareni Collieries Company Limited (SCCL):

Ministry of Environment, Forest and Climate Change has stipulated in one of the conditions of Environmental Clearances issued to coal mining projects that "For monitoring land use pattern and for post mining land use, a time series of land use maps based on satellite imagery (on a scale of 1:5000) of the core and buffer zone, from the start of the project until end of mine life shall be prepared once in three years (for any one particular season which is consistent in the time series) and the report submitted to MoEF and its regional office at Bangalore" .

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

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

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

Company	Land Excavated (Ha.)	Land reclaimed (Ha.)
SCCL	4571.35 Ha	1691.11 Ha *(37%)

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

Review of productivity norms

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

review the existing 'Availability' and 'Utilization' norms of HEMM was submitted to CIL in May, 2015.

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

Production of Coal

The physical targets set for Coal Production by CIL in 2017-18 stands at 661.70 MT. In the years 2016-17, out of the targets set for production of coal by CIL of 598.61 MT (BE), the actual production (upto December, 2016) stands at 377.77 MT indicating shortfall in achievement of physical targets set. On being asked to state the reason for the shortfall in achievement of the production target set for the year 2016-17, the Ministry stated that during the year 2016-17, out of the targets set for production of coal by CIL of 598.61 MT (BE), CIL produced 458.62 MT of coal till 13th February, 2017 compared to 448.48 MT achieved during the same period last year with a growth rate of 2.3%. Thus during this period CIL was able to achieve 91% of its corresponding target. It was expected that 573 MT Coal will be produced by CIL during 2016-17. The targeted production will not be achieved largely on account of the fact that the demand did not grow at the pace at which the production was envisaged to grow resulting in accumulation of stock at the pit heads. The vendible stock as on 13.02.2017 was 50.89 MT as compared to 44.08 MT as on 13.02.2016. In respect of SCCL, Coal production target for the year 2016-17 is 58.00 MT. SCCL has produced 48.30 MT upto January 2017 against the target of 47.24 MT with 102% achievement. SCCL is hopeful of achieving the target of 58 MT for the year 2016-17. All efforts were being made to expedite the process of Forest Land Diversion, Non-Forest land acquisition and R&R activities.

5.10 On further being asked as to whether appropriate corrective steps have been put into place to achieve the targets of coal production for the year 2017-18, the Ministry stated that following measures/ steps were being taken by CIL to achieve the target of coal production for the year 2017-18:

1. 185 Higher size HEMM including Electronic Rope Shovel, Dragline, Dumper, Diesel Driven Hydraulic Shovel Hydraulic Power Dozers Etc. have been planned to be deployed in major open cast projects for

maximum extraction of coal economically with due regard to safety, conservation, environment and other aspects.

2. Two more numbers of OC projects with Surface Miners are under approval stage which will contribute in 2017-18.
3. Issues related to law & order are being taken up at all levels by CIL with respective State Governments & Central Government agencies.
4. MoC is regularly corresponding with the concerned State Governments Officials to expedite & facilitate acquisition / possession of land and EC & FC proposals.
5. Necessary action is being taken by CIL for obtaining EC& FC from Central Govt.
6. Three Continuous miner and long wall packages have been envisaged to be commissioned in a few underground mines depending on geo mining conditions.

5.11 Details of CIL/NLC/SCCL projects costing Rs. 100 crore and above that have been delayed alongwith their present status and time and cost over-runs may be furnished. On being asked to state the reasons for delay, the Ministry stated there were 40 delayed projects (CIL-29, NLC-4 and SCCL-7) costing Rs.100 crore and above. The average delay in case of projects of CIL is 4.5 years; in case of NLC 2.18 years and in case of SCCL 4.28 years. The basic reasons for delay are acquisition of both forest and non-forest lands, implementation of R&R, law and order, delay in procurement of equipment, contractual delays etc.

5.12 On being asked as to what is the production target of coal by CIL & its subsidiaries and SCCL during the next five years, the Ministry stated an exercise had been carried out by CIL to prepare a roadmap for achieving a coal production level of 1 Billion Tonnes by the year 2019-20. So far mines/projects to produce about 908.10 MT have been identified and for balance to reach 1 Billion Tonne is underway.

Subsidiary-wise production projections of Coal upto 2019-20 is given below:-

(in million tones)

Company	Subsidiary-wise and Year-wise Production Projections of CIL		
	2017-18	2018-19	2019-20
	Target	Target	Target
ECL	51.70	56.60	62.00
BCCL	41.00	46.00	53.00
CCL	80.00	102.00	133.50
NCL	90.00	99.00	110.00
WCL	50.00	55.00	60.00
SECL	161.00	193.10	239.60

MCL	187.00	222.00	250.00
NEC	1.00	-	-
CIL	661.70	773.70	908.10

It was further stated that the Ministry was preparing a vision document which will contain projections upto 2030.

Coal production projections for SCCL for the next five year:-

Year-wise Production Projections of SCCL (in MT)					
Company	2017-18	2018-19	2019-20	2020-21	2021-22
SCCL	60.00	63.00	65.00	68.00	80.00

5.13 On being asked as to furnish details of the projects identified in this regard and the schedule of coal production from them, the Ministry stated that as per the 1 Bt production programme of CIL the project-wise details have been worked out till 2019-20. Projects for a production of 908 million tonnes have been identified and the balance are under identification.

5.14 On being asked as to whether any specific measures including fast tracking of approvals/clearances have been taken/proposed to be taken to increase coal production to match the demand of coal for domestic sector, the Ministry stated that domestic coal production has increased from about 566 million tonnes in 2013 to 639 million tonnes in 2015-16 and thus demand was being met to a large extent from the domestic production. Also imports were on decline due to increase in production. The various measures that have been taken for enhancement of production include obtaining environmental clearance for enhanced capacity of 35 mty from 25 projects; taking up 42 projects with a production capacity of around 219 mty; enhancement of productivity in terms of output per manshift from 7 tonnes to 7.5 tonnes; enhancement of percentage utilization of HEMM (shovels from 41% to 43%, dumpers from 34% to 36%, dragline from 50% to 52%; modernization of mining operations deploying higher capacity equipment, adoption of mass production technology using continuous miners and power supported longwall technology; continuous pursuasion with concerned State authorities in regard to acquisition of land and related R&R; improving coal evacuation infrastructure matching the level of production; rigorous monitoring of implementation of project both at company level as well as Ministry level through coal projects monitoring portal (CPMP) etc.

5.15 It was reported in the press that the Government will allow commercial mining by private companies this year and the Coal Ministry has identified four blocks that will be bidded out for commercial mining without specifying end-use for the mined coal. In this context Ministry was asked to highlight the details of the proposed policy to allow commercial mining by

private companies and state whether the concerned stakeholders were being consulted on this policy, the Ministry thereupon replied that enabling provisions have been made in the Coal Mines (Special Provisions) Act, 2015 for allocation of coal mines by way of auction and allotment inter alia for sale of coal. The methodology for allotment of coal mines under the provisions of the Coal Mines (Special Provisions) Act, 2015 to Central / State Public Sector Undertakings for sale of coal had already been approved by the Government. The modalities for allocation of coal mines by auction to private companies for commercial mining are under deliberation. The proposed policy for auction of coal mines for commercial mining was under formulation. The approach paper was being prepared in the first instance to consult stakeholders. The proposed approach paper will be placed in the public domain for a specified period of time to solicit public opinion/comments. Under the aforesaid provisions of the Act, 4 coal mines for auction for sale of coal were under consideration in the year 2017-18.

5.16 The representatives of the Ministry of Coal/Coal PSUs during their Coal evidence held on 23.02.2017 submitted the following data to the Committee pertaining to 'All India Coal Production Target and Achievement' ; All India Coal Dispatch/Off take Target and Achievement' and Productivity as under:-

All India Coal Production Target and Achievement

(Fig in MT)

YEAR	Target	Actual	Growth %
2012-13	574.40	556.40	3.04
2013-14	604.55	565.77	1.68
2014-15	630.25	609.18	7.67
2015-16	700.00	639.23	4.93
2016-17	724.71	518.09 (Apr.-Jan 2016-17)	2.1
2017-18*	720.00	-	-

* Target for 2017-18 has been indicated in respect of CIL and SCCL

All India Coal Dispatch/Offtake Target and Achievement (Fig in MT)

YEAR	Target	Actual	Growth%
2012-13	580.30	567.14	5.95
2013-14	614.55	572.06	0.87
2014-15	643.75	603.77	5.54
2015-16	700.00	632.17	4.70
2016-17	724.71	527.46 (Apr.-Jan. 2016-17)	1.7

2017-18*	720.00	-	-
* Target for 2017-18 has been indicated in respect of CIL and SCCL			

- Master Plan approved on 12th August 2009 by Govt. of India;
- Scope of the Master Plan: dealing with fires and subsidence, rehabilitation of persons from the affected area and taking up surveys for diversion of surface infrastructure;
- Estimated investment of Rs.7,112.11 crores for Jharia Coalfields(JCF) and Rs.2661.73 for Ranigunj Coalfields (RCF);
- Fund provision: Partially from IR of CIL and remaining from SED collection under CCDA Act and Technical support by Coal Companies;
- Jharia Rehabilitation and Development Authority (JRDA) - Implementing agency for Jharia Coalfields;
- Asansol Durgapur Development Authority (ADDA) - Implementing agency for Ranigunj Coalfields.

Chapter VI

Safety In Coal Mines

Safety performance of Coal India Limited Coal India Limited

The Annual Report (2016-17) of the Ministry of Coal highlights that CIL has always given highest priority to safety and is ingrained in mission statement of CIL. It is one of the most important components in our overall business strategy of CIL. 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 implementation of 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. CIL has identified work place hazards and associated risks in each mining operation and prepared a Risk Assessment based Safety Management Plan for every mine. CIL always encourage employees' participation at all levels so as to promote a proactive safety culture and improve safety awareness upto grass root level. Various initiatives are taken on continual basis at all levels to translate the vision of "Zero Harm Potential (ZHP)" into a reality.

➤ **Safety Performance of CIL:**

Accident statistics is the indicator of relative status of safety. Over the years the safety standard in mines of CIL has significantly improved as is evidence from the table below:

Comparative Accidents Statistics of CIL of 5 Yearly Average since 1975 are as under:-

Time Period	Av. Fatal Accidents		Av. Serious Accidents		Av. Fatality Rate		Av. Serious Injury Rate	
	Accident	Fatalities	Accident	Injuries	Per Mill. Te	Per 3 Lac Manshifts	Per Mill. Te	Per 3 Lac Manshifts
1975-79	157	196	1224	1278	2.18	0.44	14.24	2.89
1980-84	122	143	1018	1065	1.29	0.30	9.75	2.26
1985-89	133	150	550	571	0.98	0.30	3.70	1.15
1990-94	120	145	525	558	0.694	0.30	2.70	1.19
1995-99	98	124	481	513	0.50	0.29	2.06	1.14

2000-04	68	82	499	526	0.28	0.22	1.80	1.47
2005-09	60	80	328	339	0.22	0.25	0.92	1.04
2010-14	56	62	219	228	0.138	0.23	0.49	0.80
2015-16#	38	47	123	129	0.09	0.19	0.26	0.53

Average of last two years i.e. 2015 & 2016

6.2 According to Ministry of Coal, this improvement in safety is attributed to the following contributing 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.
- Continuous improvement in knowledge, skill and awareness of workforce through imparting quality training and relentless safety awareness drives.
- Constant vigilance round the clock supervision and assistances from various quarters.

As regards Major Activities of the Safety & Rescue Division of CIL; the Committee were informed as under:-

- Inspection of mine to review safety status & follow up action.
- Prima-facie fact-finding enquiries into fatal accidents and major incidences such as mine fire, subsidence, in-rush of water, slope failure, explosion etc.
- Organizing meeting of CIL Safety Board and monitoring recommendations / suggestions made during meeting
- Assisting in organizing the Standing Committee on safety in coal mines and monitoring recommendations / suggestions made during meeting.
- Framing of internal technical circulars / guidelines related to safety issues and monitoring implementation thereof.
- Maintenance of accidents / major incidents statistics database.
- Publication of safety bulletin for disseminating and sharing of knowledge in order to promote safety awareness and inculcate better safety culture.
- Framing reply of different coal mine safety related parliamentary questions 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.

- Monitoring safety related R&D activities in CIL.
- Imparting specialized training by SIMTARS accredited trainers to unit level and Area level executives who are directly engaged in ensuring safety in mine.

Measures taken for improvement of safety in 2016:

6.3 To improve safety standard, CIL and its subsidiaries have vigorously pursued several measures in the year 2016 along with on-going safety related initiatives apart from compliance of statutory requirements for safety, which are given below.

- Internal Safety Organization (ISO): Continuous review of safety status of mines is being done by the multi-disciplinary Internal Safety Organization (ISO).
- Guidelines on corrective measures: After analysis of fatal accidents which occurred at different point of time in 2016, several directives / guidelines on corrective measures to be taken for prevention of recurrence of similar type of accidents in future have been issued by the Safety & Rescue Division of CIL.
- Training for preparation of Risk Assessment based SMP: Executives who have been trained by SIMTARS, Australia are engaged for imparting training and upgrading the knowledge of mine level executives as well as members of safety committee of mine to identify the hazards and evaluate the associated risks in the mines and prepare Risk assessment based Safety Management Plans (SMPs).
- Preparation and Implementation of Risk Assessment based Safety Management Plan (SMP): The risk assessment based Safety Management Plans (SMPs) have been prepared for all mines of CIL and control measures suggested thereof in SMPs are being implemented. It is a continuous ongoing process.
- Standard Operating Procedure (SOP): Risk assessment based site specific Standard Operating Procedures (SOP) are formulated and being implemented for various mining and allied operations.

Adoption of the state-of-the art technology in suitable geo-mining locales

- Adoption of mass production technology in more number of UG mines.
- Deployment of more number of surface miners to eliminate blasting operation in OCPs.
- Deployment of relatively higher capacity HEMM in more number of OCPs.
- Mechanisation of UG drilling.
- Phasing out manual loading in UG mines.

Strata Management

- Scientifically determined Rock Mass Rating (RMR) based Support System.
- Strata Control Cell for monitoring support system.
- Roof bolting by using mechanized Drilling for Roof Bolting.
- Use of Resin capsules in place of Cement capsules.
- Use of modern Strata Monitoring Instruments.
- Imparting quality training to support crews & front-line mine officials.

Monitoring of mine environment:

- Spot detection of mine gases by using Methanometer, CO-detector, Multi-gas detector etc.
- Continuous monitoring of mine environment by installing Environmental Tele Monitoring System (ETMS) & Local Methane Detectors (LMD) etc.
- Regular Mine Air Sampling and Analysis by Gas Chromatograph.
- Personal dust Sampler (PDS).

Mine Ventilation:

- Pressure-Quantity Survey on regular basis.
- Supply of Air quantity maintained by suitable main mechanical ventilator (Surface), Auxiliary Fan & Booster fan (UG).
- Ventilation stoppings.
- Air Crossings.
- Central & Peripheral Ventilation for extensive UG mine.
- Modern gadgets for air measurement.

Water Danger management:

- Conducting check survey to eliminate errors in mine survey.
- Preparation and maintenance of seam-wise water danger plan.

- Preparation and implementation of monsoon preparation plan.
- Adequate pumping facilities & adequate sumps.
- Liaison with the State Meteorological Dept. & Dam Authority, if any.
- Construction of embankments with proper design against water bodies.
- Advance borehole for locating water body.

Safety Training:

- Risk management training.
- Class room audio-visual training at VTCs.
- Initial and refresher training & On-the-Job training as per statute.
- Training on Simulators to dumper operators.
- Skill up-gradation of frontline officials and workmen.
- Behavioural based training
- Family counselling.

Mine Safety Inspection:

6.4 Following inspections are being made in each mine to ensure that all mining operations are carried out in the mine as per the provisions of the relevant statute and safety norms,

- Round the clock supervision of all mining operations by adequate number of competent & statutory supervisors and officers.
- Periodic mine inspection by Head Quarter and area level senior officials.
- Surprise back shift mine inspection by mine and area level officials.
- Regular inspection by workmen inspectors appointed in each mine.
- Monthly mine inspection and meeting of safety committee for each mine.
- Regular mine inspection by officials of Internal Safety Organization
- Periodic mine inspection by High Powered Task Force, Area and Subsidiary level Tri-partite Safety Committee members, etc.

Special drive for accident prevention in OCPs:

- Formulation and implementation of Mine-specific Traffic Rules.
- Code of practices for HEMM operators, maintenance staff & others.
- Preparation and implementation of Risk Assessment based Safety Management Plan (SMP).

- Preparation and implementation of Risk Assessment based Safe Operating Procedures (SOP)s for all opencast mining operations.
- Training of Contractor's workers involved in contractual jobs.
- Training on Simulators to dumper operators.
- Lighting arrangement using tower/ masts.
- Eco-friendly surface miners for blast free mining.
- Dumpers fitted with Proximity Warning Devices, Rear view camera, Audio-Visual Alarm (AVA), automatic fire detection & suppression system.
- Ergonomically designed seats & AC cabins for operators' comfort.
- Wet drilling & water sprinklers for dust suppression.
- Shock Tubes & Electronic Detonators for control of ground vibration & fly rocks.
- GPS based Operator Independent Truck Dispatch System (OITDS) in large OCPs

Emergency Response System:

- Emergency action plans of each mine is being reviewed from time to time
- Mock rehearsals are being adopted for examining the preparedness/efficacy of emergency action plan.
- Demarcating escape routes: An exercise for demarcating escape routes in underground mines, on plans as well as belowground by fluorescent paint, display of the same at the entry to the mine has been done.
- A check list for dealing with emergency has been prepared.
- CIL has prepared a flow chart for sending information regarding crisis / disaster in mines from site of accident to the Ministry of Coal, New Delhi. This is prepared in line with guidelines of crisis management plan of the Ministry of Coal so that quick communication can be sent to all concerned and rescue & recovery & corrective actions are initiated at the earliest.

Rescue Services for Emergency Response System in CIL:

- CIL is maintaining a well established 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)s as per the MRR-1985.

- All RTPs are being periodically retrained 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 on call 24x7.

Safety Monitoring in CIL

6.5 Apart from statutory monitoring by DGMS, the status of safety is being monitored at various levels by the following agencies:

Level	Monitored By
Mine level	1. Workman inspectors: as per Mines Rule-1955. 2. Pit safety committee: constituted as per Mines Rule-1955.
Area level	1. Bipartite/tripartite committee meeting. 2. Safety officers' coordination meeting.
Subsidiary HQ level	1. Bipartite/tripartite committee. 2. Area safety officers' coordination meeting. 3. Inspection by ISO Officials.
CIL HQ: Corporate Level	1. CIL Safety Board. 2. CMDs meet. 3. Co-ordination meeting with ISOs. 4. NDPC meeting.
Ministry of Coal (MOC) / Other Ministerial Level	1. Standing committee on Safety in coal mines. 2. National conference on safety in mines. 3. Various Parliamentary Standing Committees.

Statutory Frame-work for safety in coal mines:

6.6 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 coalmines are regulated by the Mines Act, 1952, the Mine Rules –1955, the Coal Mine Regulation-1957 and several other statutes framed there under. Some of the important statutes related to coal mine safety are as follows:

Sl. No.	Statute
1	The Mines Act -1952
2	The Mines Rules -1955
3	The Coal Mine Regulation -1957
4	The Mines Rescue Rules -1985
5	The Electricity Act- 2003

6	Central Electricity Authority (measures related to safety & supply) Regulations - 2010
7	The Mines Vocational Training Rules -1966
8	The Mines Crèche Rules -1966
9	Indian Explosive Act, 1884
10	The Explosive Rules - 2008
11	Indian Boiler Act, 1923
12	Mines Maternity Benefit Act & Rules -1963
13	The Workmen Compensation Act - 2009
14	The Factories Act - 1948 Chapter -III & IV

Safety Policy of CIL:

6.7 CIL has formulated a safety policy for ensuring safety in mines and implementation of which is closely monitored at several levels.

- 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 for accident prevention work;
- Organize appropriate forums with employees' representatives for Joint consultation 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.

Accident Statistics of NLC - (for last five years):

Year	Fatalities	Serious Injuries
2012-13	4	4
2013-14	1	4
2014-15	1	1
2015-16	3	2
2016-17(up to Dec'16)	Nil	1

Safety Budget & Actual for the year 2016-17

Year	Safety Budget	
	Allocated	Actual upto October 2016
2016-17	₹550.00 Lakhs	About ₹303.00 Lakhs

Safety Measures

6.8 The following safety measures are taken to prevent accident in mines.

- In respect of the above, a working document 'Safety Management Plan' had been brought out and distributed to the operation/ Maintenance areas of NLC India Limited Mines and recommendations are implemented.
- A well laid Emergency Preparedness Plan/ Pre Monsoon Action Plan is being prepared for every mine every year to take care of any emergency situation.
- The Risk Assessment, Occupational Health and Safety Audit for NLC India Limited Mines were carried out in the year 2003, 2007

and 2012 by accredited External Agency. Risk Assessment for NLC India Limited mines was carried out by ISM, Dhanbad in the year 2016.

- NLC India Limited has obtained certification for all the Mines as under and the stipulated norms in the certifications and are being maintained.
 - Quality Management System ISO 9001: 2000.
 - Environment Management System ISO 14001: 2004.
 - Occupational Health and Safety Assessment Series – OSHAS 18001: 1999.
- Area wise responsibility with priority to safety is being enforced at all mine operational/ maintenance Activities for ensuring specific site supervision.
- Neyveli Mines: An Internal Safety Organization (ISO) is headed by CGM/Safety and Multidisciplinary team for each mine consisting of engineers from mining, mechanical & electrical discipline. These teams inspect the mines on daily basis. The suggestions given by the team are implemented then and there. Monthly ISO Safety meeting with all the safety officers of respective mines are held and suggestions given and the implementation are reviewed.
- Safe work practices, for all the important operation/ maintenance of the 'Specialized Mining Equipments' have been formulated/ modelled/ codified and approved by DGMS and the same is being followed in all spheres of activities.
- Daily/ Regular/ Periodical Maintenance check lists for the "Specialized Mining Equipments" had been prepared and enforced for strict compliance.
- Inter Unit Safety Assessments are being carried out for every quarter to assess safety standards maintained as per statute.
- Systematic in-depth Accident Analysis is being done and counselling of near miss/ Serious Accident Victims is being done for accident prevention/ to avert recurrence of accidents.
- Commitment on inculcating Safety Awareness by way of imparting adequate/ need based training with new training modules to all employees and the compulsory training for all categories of employees, including the contract employees before their deployment in shop floor and in their assigned working areas. In addition to the above, work related specific job training / refresher training are also being imparted to all categories of employees.
- Safety Status/ Safety Performance of every activity is being monitored / reviewed under the statutory framework.

- Once in a quarter Safety performance is reviewed and discussed in the Board.
- Continuous monitoring of behavioural sense/ attitude/ commitment of employees towards safety is being done.
- Continual improvement on safety awareness in mines through Public Address System, LED display board (JUMBO SIZE), Display of Safety Boards, etc.
- Week long Safety Week Celebrations are conducted every year to enhance the safety awareness among employees and their families.
- All efforts are taken at NLC India Limited mines to impart the best practices to be followed in mines. NLC India Limited follows the dictum that a "Safe Mine is a Productive Mine". The safe worker/ employee are honoured suitably at Safety Week Celebration function conducted every year grandly by NLC India Limited mines. Workmen/ Employees working in mines are also sent on safety tours to study the working condition/safety methodology followed in other mines. Officers are also sent to seminars.
- Surveillance camera being installed in Specialized Mining Equipments.
- NLC India Limited regularly conducts tripartite meeting and also participates in National conference on safety in mines. In those forums, many recommendations are given for safety compliance which NLC India Limited whole heartedly implements for faithful and committed compliance of those recommendations.

Safety & R&D initiatives:

- The following measures are taken as Safety & R&D initiatives at NLC Mines. The standard of illumination, noise, vibration etc., are studied and monitored with respect to the safe limit of the said parameters on regular basis basis in addition to these set by the expert agency evolved from broad R&D initiatives pertaining to safety maintenance and performance.

Emergency response system:

- The Risk Assessment, Occupational Health and Safety Audit for NLC mines were carried out in the year 2003, 2007 and 2012 by accredited External Agency. Risk Assessment for NLC mines was carried out by ISM, Dhanbad in the year 2016.

Occupational Health services

- All the NLC mines are having First Aid Centres along with well equipped required number of Ambulance Vans.
- In case of any accident / any irregularities in health for the workers / labourers working in the mines, the victims are given First Aid treatment at First Aid Century and then shifted to well equipped General Hospital, located at a distance of about 8 K.M. with more than 375 beds. It is manned by more than 75 highly qualified medical personnel in all branches equipped with all modern facilities & equipment.
- Apart from the above, a well-established “Department of Industrial Hygiene and Occupational Diseases” (DIHOD) is also functioning effectively in NLC. This Department is headed by Chief General Superintendent of Medical Services, who is highly qualified and experienced in Industrial Hygiene and Occupational Diseases. Out of 8, two more Medical Officers having post-graduate qualification in Industrial Hygiene are also working in this Department.
- Well qualified and experienced Para-medical staff also is attached to this division. For the smooth and independent working of the department, a well equipped laboratory also is available.
- Modern equipment like ECG, Audiogram, X-ray etc are provided in this department and all records of the health care system are fully computerized.

Initial medical examination:

In accordance with Rule 29 B of the Mines Rule 1955, all persons are subjected to initial medical examination before employment in mines. The initial medical examination is done at DIHOD, General Hospital, and NLC.

Periodical medical examination:

In accordance with Rule 29 B of the Mines Rule 1955, all persons are subjected to periodical medical examination once in every 5 years and once in 3 years for those who are crossing 45 years of age. The periodical medical examination is done at DIHOD, General Hospital/NLC regularly.

Accident Statistics of SCCL – (for the last five years):

Year	Fatalities	Serious Injuries
2011-12	13	323
2012-13	9	375
2013-14	12	321
2014-15	7	271
2015-16	7	225
2016-17 (upto Dec'16)	10	174

Safety Measures in SCCL:

- Training for trainers is planned with the help of SIMTARS, Australia to improve the knowledge and capability for developing safety management system at par with the International Standards and specialized training in risk management and hazard identification.
- Implementation of Risk Assessment based Safety Management Plans.
- Organising Safety Week, First-aid and Rescue Competitions at Company level.
- Follow up action and preparation of compliance reports in respect of the following:-
 - Recommendations of safety conferences.
 - Recommendations of Standing Committee on safety in coal mines.
 - Tripartite safety review meetings at company level.
- Identification of hazards in all mining operations and associated risks thereof.
- Adoption of the Roof Support System based on geo-technical studies.
- Phasing out conventional mining methods.
- Continuous Miner and Long wall Technologies are being introduced in feasible areas to enhance the safety of workings.
- Introduction of Roof-Bolters for Resin-Capsules bolting.
- Use of Rear-view Cameras and proximity-warning devices in Dumpers in OC cast mines.
- Men transport systems have been introduced in all underground mines.

- Tele Monitoring system for real time monitoring of CH₄ and CO gases in UG mines.
- Analysis of mine Air samples by Gas-Chromatographs.
- Introduction Automatic fire detection and suppression systems (AFD & SS) in all HEMM.
- Safety Audits are being conducted on regular basis by constituting a committees.
- To monitor strata control mine environment activities, each region is provided with strata monitoring cells. The services of scientific institutions like, CIMFR, NIRM etc., are being utilized for designing panels for effective strata management and environmental issues.
- SCCL is contemplating to monitor slope stability by using the latest technology i.e Radar.

Safety Statistics of SCCL during the year 2016 is given below.

Company	Fatal Accidents	Fatalities	Serious Accidents	Serious Injuries	Fatality Rate		Serious Injury Rate	
					Per MT	Per 3 lakh man-shifts	Per MT	Per 3 lakh man-shifts
SCCL: 2016	10	12	216	218	0.20	0.26	3.66	4.65

Note: Figures are subject to reconciliation with DGMS.

6.9 The representatives of the Ministry of Coal/Coal PSUs during their oral evidence before the Committee on 23.02.2017 submitted the following data in their visual presentation on 'Emphasis on Safety'

Fatalities

	CIL	SCCL	NLC
2013-14	59	12	1
2014-15	46	9	1
2015-16	38	7	3
2016-17	56	10	2

Serious Injuries

	CIL	SCCL	NLC
2013-14	200	369	4
2014-15	186	271	1
2015-16	140	225	2
2016-17	118	174	1

Steps taken after the Recent Accident at Rajmahal

- Notwithstanding the recent accident at Rajmahal OCP of ECL on 29.12.2016, safety has been improving over the years;
- However we are not near the international bench marks. We wish to reach the standards of countries like Australia to improve safety;
- Safety audit of all mines forthwith to be completed by 15.04.2017;
- Root cause analysis of all fatal accidents and near miss incidents to avoid recurrence;
- Strengthening of internal safety organizations & Improving rescue services;
- Sensitization of contractual workers on mines Safety;
- Identification of Accident prone mines and addressing the reasons;
- Haul Road maintenance;
- Setting up Strata control cells & Geo-technical Cell in all coal companies;
- Online monitoring system and compliance of previous observations/recommendations;
- Slope monitoring systems;
- Safety management plan based on risk assessment and site specific standard operating procedure (SOP);
- Training of officials on proactive Risk management system by SIMTARS, Australia under the training of trainers concept; Simulator based training to HEMM operators.
- Mandatory Skill up-gradation training for Frontline supervisors;
- Deployment of Tele monitoring system & slope stability radars;

Chapter VII

Initiatives on New Technologies and Information Technology

The Annual Report (2016-17) of the Ministry of Coal highlights achievements made with respect of Information Technology application as under:-

Information Technology

- Technology, especially ICT, has become a major force behind the changing face of the Nation. In the year 2016-17, Ministry of Coal, with active ICT support from NIC, has overcome various challenges and has been successful to deploy efficient digital service solutions, development of e-skills and has crafted a rich IT working environment.
- NIC in Ministry of Coal is well equipped with latest computer systems for delivering and implementing secure multi-platform computer based applications/solutions, database support and 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.
- The official website of Ministry of Coal – <http://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. It 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, RTI disclosures, latest announcements and letters, etc.
- Besides, a website for Minister's office – <http://ujwalbharat.gov.in> is hosted and maintained by the Ministry. The site highlights the initiatives and achievements of Ministry of Coal, Power, NRE and Mines looked after by the Hon'ble Minister.
- **Coal Projects Monitoring Portal** has been successfully implemented in the Ministry. This comprehensive MIS links all stake holders of coal sector – Industry, coal companies, CIL, 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- File** is 100 percent implemented in the Ministry of Coal wef 16.10.2016 .There is no physical file or physical movement in the Ministry now. DSCs are being used to sign and issue official letters. Coal **E-Office modules – e-Leave, e-Tour, KMS** are operational in the Ministry to support e-governance by ushering in more effective and transparent inter and intra-Government processes. VPN support for senior officials has been extended for non NICNET nodes / laptops to ensure nonstop working in e-File and E-office.
- Ministry of Coal has developed a workflow based **Online Coal Clearances Portal** to provide a **single window access** to its investors to submit online applications for **all the permissions / clearances and approvals granted by Ministry of Coal**. The portal has been made ready. This will act as a dashboard for all stakeholders who are involved and interested to obtain clearances for - Coal Mine Lease, Prospecting License, Coal Mine Plan, Land Acquisition under CBA Act and Mine Opening Permission. Coal Clearances portal of Ministry of Coal has been integrated with **e-Nivesh** Portal of Cabinet Secretariat as well.
- NIC has conducted a detailed study to develop a comprehensive integrated MIS to **monitor Coal Blocks and Coal Linkages**. The study has covered analysis of workflow and flow of information among stakeholders for coal blocks and linkages. All requirements have been assessed and the Functional Requirement Study undertaken. Steps have been initiated to design and develop comprehensive CBCL system in a phased manner as per the satisfaction of all the stakeholders.
- **Coal Allocation Monitoring System (CAS)** is developed to monitor the allocation of coal by Coal India Limited (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, designed and hosted on NIC Cloud with various rich features to usher in faster decisions, establish transparency and to connect all distant stakeholders together. The portal was launched by the Hon'ble Minister in the month of March 2016. The system has been enhanced with features of workflow based feedback redressal and provision of raising online demand of coal by SNA in a financial year.

- Some of the main **office automation** software being used in the Ministry for day to day working are: **Biometric Attendance system, SPARROW, E-Visitors, Coal Assurances Monitoring System, Comprehensive DDO for Payroll**, Intracoal Dashboard for payslips, Income Tax and GPF.
- **E-governance applications** that have been implemented in the Ministry are- RTIMIS to manage RTI cases, AVMS for monitoring ACC vacancies, CPGRAMS for public grievances and Parliament Questions and Supplementary MIS.
- **IP based Video Conferencing (VC) facility** has been established in the Ministry in its conference room and in the room of secretary, Ministry of Coal to facilitate the officers to have one to one and multipoint Video Conferencing over internet. Ministry is extensively using this facility to interact with Coal PSUs for meetings, monitoring, presentations and interactions.

7.2 The representatives of the Ministry of Coal during their oral evidence held on 23.2.2017 also highlighted that enhancing use of new technologies as one of the thrust areas of the Ministry. The Committee were apprised that to this end, other R&D Projects adopted by the Ministry include application of Space Technologies for monitoring reclamation of mined out areas; Satellite based thermal infra red survey for monitoring coal mine fires and those to be taken up included Satellite based monitoring of regional air quality; Differential Interferometry Synthetic Aperture Radar (DInSAR) for subsidence monitoring; Carbon capture and storage with inter-sectoral participation; etc.

Chapter VIII

Other Issues

(I) Concept of Land Banks

AS regards the problems faced by the Coal Companies for land acquisition, which is the major factor for delay in implementation of various coal exploration projects, the Coal Secretary during evidence before the Committee submitted that they are considering a new concept of creation of land banks. He informed the Committee that they had given a proposal to the forest departments for taking 6000 Hectares degraded land in the different states for doing advance plantation on the same. As soon as some new mining coal mining projects comes, the deforestation on the same can be accounted for by the afforestation already carried on degraded land. In this way, different land banks for this purpose may be carried out for different coal projects.

(II) Coal Bed Methane

8.2 During the evidence before the Committee, while pointing out that the projects relating to the production of coal bed methane are moving at a very slow pace, the Committee sought to know the response of the Coal Secretary in this regard. The Secretary informed the Committee that CIL is permitted to take up Commercial Exploitation of CBM/CMM from their lease hold areas and two projects, one each in Raniganj and Jharia Coalfields have already been conceived. As per the presentation documents **(PPT Pg. 18)** submitted to the Committee, the status of these projects were viz. assessment of gas resources of Raniganj block has been completed; Jharia block resource assessment to be completed by April 2017; reservoir modelling and TEFR to be completed by May 2017; finalisation of FR by August/October 2017; Obtaining EC by March 2018; and finalisation of Tender document to engage service provider after March 2018.

(III) Mine Water Utilization

8.3 During the oral evidence before the Committee, the representatives of the Ministry of Coal submitted the following data on mine water utilization

Mine Water Utilization

Fig in Lakh Litres/day

Company	Total Mine Water Discharge	Own Use	Present Community water supply				Balance surplus water
			Domestic	Irrigation	Total	Beneficiaries	
CIL	15366.27	5932.41 (38.61%)	1493.56 (9.72%)	1213.36 (7.90%)	2706.93 (17.62%)	About 10.50 lakh	6726.94 (43.78%)
NLC	1685	518.35 (30.76%)	259.17 (15.38%)	907.12 (53.84%)	1178.08 (69.92%)	About 3.00 Lakh	NIL

➤ Target for 2017-18 : CIL - 547.5 Lakh Litres /day;

NLC - 1178 Lakh Litres /day;

➤ The balance surplus water is planned to be utilised completely by 2020 through different schemes.

8.4 In this regard during evidence before the Committee the Coal Secretary further submitted that they are already committing that in respect of all such areas containing mine water, the same would be fully utilized by the year 2020 and any surplus water after mining operation would be given to inhabitants of that area.

(IV) Issues Related to Evacuation of Coal

8.5 In view of the mismatch capacity by rail, MOEF & CC's guidelines restricting movement of 34% ash coal beyond 500 Km distance high freight of coal being transported to far off locations, the CMD CIL, during evidence informed the Committee that setting up of Pit Head Power Projects (PPP) will resolve the logistic evacuation problem being faced. In view of the huge potential in Central Coalfields Limited (CCL) and Mahanadi Coalfields Limited (MCL) more and more Pit Head Power Stations may be setup in these areas so that evacuation of energy through transmission lines can easily take place and the problem of transportation of coal at distance places through road/railways may be avoided. He further stated that this is the Internationally accepted model.

(V) Rationalization of Coal Linkages

8.6 An Inter-Ministerial Task Force has been constituted by MOC in June 2014 to undertake a comprehensive review of existing coal sources and also feasibility for rationalization of these sources with a view to optimize transportation cost. As a part of this exercise, rationalization of sources has been implemented in following steps:

Rationalization Stage	Rationalization Quantity (in MT)	Potential annual savings in Transportation cost (in Rs. Crore)
IMTF – Source rationalization	24.2	1013
IMTF – Swapping of sources	1.3	458
Post – IMTF	15.0	1032
Total	40.5	2503

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

Policy guidelines regarding automatic transfer of coal linkage/LoA granted to the old plants while scrapping and replacing them with new plants have been issued. Under these guidelines, LoA/linkage granted to the old plant shall be automatically transferred to the new plant of super critical capacity. If the capacity of the new super critical plant is higher than the old plant, additional coal may be accorded priority subject to availability of coal. This policy shall be applicable to pre-NCDP plants in public sector only, which have already been granted long term Linkages/LoAs. Automatic transfer of linkages/LoA from the scrapped to a new unit would be permitted outside the State in which the old unit is located for Thermal Power plants in central Sector.

8.7 During oral evidence the Coal Secretary submitted that they are going to ensure sufficient coal stock from which the Government is bring out new policy initiatives so that those interested to setup any Power Plant can be assured of coal supplies.

PART – II

OBSERVATIONS/RECOMMENDATIONS

1. The Committee recognize the pivotal role of Coal, as the most dominant energy fuel meeting around 50% of the country's primary commercial energy needs as compared to that of 30% contribution to the world's requirement. Undoubtedly, its no surprise that 72% of the entire power generated in the Country is coal based and coal remains the answer to the nation's escalating energy demands. The Committee observe that the paramount importance and significance of coal is expected to continue for many years to come due to the abundance of coal reserves, easy availability and affordability. The core objective of the Ministry of Coal is to secure the availability of coal to meet the demand of different sectors of the economy in an eco-friendly and sustainable manner and the overall mission of augmenting production through Government Companies as well as the captive mining route by adopting state-of-art-clean coal technologies; enhancing exploration efforts with thrust on increasing proven resources and developing the necessary infrastructure for evacuation of coal.

In this backdrop, the Committee appreciate that during the period April to December, 2016, the actual coal production was 453.10 MT compared to 445.42 MT during the corresponding period

of 2015-16, showing a growth of 1.7%. The Committee take pride that the Coal India Ltd. (CIL) a 'Maharatna' Company under the Ministry of Coal and the single largest coal producing company in the world has achieved the coal production and off-take exceeding Half-a-Billion Tonne mark, i.e.538.75 MT during the financial year 2015-16 the highest ever incremental increase in a single financial year since the inception of the company in 1975. The Committee, therefore, believe that the CIL is on the right track in its pursuit of one billion tonne production by the year 2019-20. The Committee also note that CIL for the first time had surpassed Rs. 1.0 lakh crore in Gross Sales (Rs. 1,08,150.03 crore) during 2015-16. Similarly in SCCL, the coal production in 2015-16 was 60.38 MT as compared to that of 52.54 MT in 2014-15 registering a growth of 14.92%. The financial performance of the company in the year 2015-16 also indicates net profit after tax at Rs. 1066.13 crore compared to Rs. 490.44 crore in 2015-15. While acknowledging the strategic importance of the Ministry of Coal as well as CIL, the Committee put on record their appreciation for the laudable achievements made by them. The Committee also hope that the Ministry of Coal/Coal PSUs earnestly carry forward the good work done in a sustainable manner to further accelerate the achievement targets of various

multifaceted development Schemes of the Government in a time bound manner.

PLAN OUTLAYS OF MINISTRY OF COAL

2. The Committee note that the total Budgetary Support to the Ministry of Coal for the year 2017-18 (BE) is Rs. 745.10 crore (Scheme - Rs. 685.00 crore and Non-Scheme- Rs. 60.10 crore) against a provision of Rs. 361.00 crore (Plan - Rs. 300.00 crore and Non-Plan - Rs. 61 crore) in the year 2016-17 (BE) indicating more than 100% increase in the total outlay. The Committee also note that a provision of Rs. 700.00 crore has been made for acquisition of Coal Bearing Areas for which the amount has to be deposited by CIL in advance to the Government. The Committee further note that in addition to the gross budgetary support reflected in the Demands for Grants, all these PSUs of Ministry of Coal implement their Capital Investment Plans amounting to Rs. 18503.67 crore from their Internal and Extra Budgetary Resources (IEBRs) without budgetary support from the Government of India. The Committee also note that as recommended by them in their 18th Report on DFG (2016-17) for enhancement of BE of 300 crore at the RE stage, the same was enhanced to Rs. 500.00 crore at the RE stage. The Committee, however, observe that as on 21.2.1017, the total utilization of funds

allocated for the year 2016-17 stands lower at 88.45% of BE and only 53% of RE. (BE/RE 2016-17 - Rs. 300.00/ Rs.500.00 crore; Actual utilization as on 21.02.2017 - Rs. 265.34 crore) as compared to the previous year 2015-16 BE/RE Rs. 551.00 crore; Expenditure-against which the utilization of funds stood at almost 100% in all the Plan Schemes i.e. Rs. 520.40 crore except for the NER component. The Committee were been assured that the increased budget provisions at the Revised Estimates (RE) stage for the year 2016-17 would be fully utilized. The Committee believe that a robust mechanism for ensuring better utilization of funds allocated for various Central Schemes is very important so that such scarce funds are fully utilized. The Committee, therefore, desire that constant and sustained monitoring mechanism be put in place for time bound achievement of both financial and physical targets set for all schemes implemented under the Budgetary support. The Committee may be apprised of the action taken in the matter so that increased budgetary support of Rs. 745.10 crore during 2017-18 is fully utilized.

RESEARCH AND DEVELOPMENT (R&D)

3. The Committee note that Research and Development (R&D) Projects are covered under four thematic areas *viz* improvement in production; productivity and safety in coal mines; coal beneficiation

and utilization; and protection of environment and ecology. Further, Standing Scientific Research Committee under the Chairmanship of Secretary (Coal) is the Apex Body to administer coal related research activities from budgetary Support and Central Mine Planning and Design Institute (CMPDIL) is the nodal agency for coordination of Research Activities in the Coal Sector, which involves identification of 'Thrust Areas' for Research Activities; identification of agencies for research work; processing of proposals for Govt. approval preparation of Budget Estimates; Disbursement of funds; Monitoring of Project Implementation etc. The Committee are happy to note that out of a total of 390 S&T Projects taken up by the Ministry, as on 31.12.2016, 320 S&T Projects have been completed. The Committee are happy to note that in the year 2016-17, as on 31.12.2016, six S&T Projects were completed which included important projects viz. Development of Tele robotics and remote operation technology for underground coal mines; Development of Indigenous catalyst through pilot scale studies of Coal-to-liquid (CTL) conversion technology; Enhancing life of de-watering pipes in coal/lignite mines by prevention of erosion-corrosion with nano-crystalline surface Engineering Treatments; Blast design and fragmentation control- key to productivity; Design and Development of truck mounted mobile coal sampler for instant

coal ash & moisture analyser at site from railway wagon/truck; and Optimization of various parameters of lab scale Coal Winnowing System (Phase-II). The Committee further note that as on 31.12.2016, out of a total of 78 R&D Projects taken up by CIL since its inception, 61 projects were completed. The Committee further note that while 13 R&D Projects were ongoing as on 31.12.2016, 5 new R&D projects were sanctioned in the year 2016-17. The Committee are happy to note that the two R&D Projects competed in the year 2015-16 pertains to two important Projects viz. to find a methodology of safe liquidation in thick seams of Raniganj Coalfields: Design & development and show-casing demonstrative trails at Khottadih Colliery, ECL; and Development of guidelines to predict distance between toe of the shovel-dumper dump and that of dragline dump with consideration of safety and economical design of both shovel-dumper dump and dragline dump. Admittedly, most of the research projects have yielded considerable benefits resulting in operational improvement, safer working conditions, better resource recovery and protection of the environment and ecology. The Committee desire that research projects which directly or indirectly enhance the production as well as safety in Coal Mines should be given priority in their implementation.

4. As regards the allocation of funds for R&D projects, the Committee find that the BE (2017-18) allocated for the entire projects remained stagnant at only Rs. 10.00 crore. In this regard, the Committee observe that while the RE(2015-16) for this scheme was Rs. 20.25 crore, the BE/RE 2016-17 was reduced to Rs. 10.00 crore indicating downward revision of more than half the amount. Even at that time i.e. during the examination of DFG (2016-17) the Committee were apprised that the allocated funds would not be sufficient for implementing S&T projects of the Ministry of Coal and it was recommended by the Committee for allocation of more funds at the RE stage so that the implementation of S&T Projects under the R&D Schemes be not affected for want of funds. Now again, the Ministry has brought it to the notice of the Committee that the funds allocated for 2017-18 (Rs. 10.00 crore at BE stage) would be grossly insufficient for implementing the projects and, therefore, enhancement of funds would be sought at RE stage. Taking note of the candid submission of Secretary, Coal, during evidence before the Committee on 23.02.2017 that there is no dearth of funds for R&D works which are meant for future growth of Coal industry, the Committee strongly recommend for sufficient augmentation of needed funds at the RE stage through budgetary support or funded by Coal companies so that implementation of important S&T as well

as R&D Projects do not suffer on account of lack of funds. The Committee would like to be apprised of the action taken in the matter.

PROMOTIONAL (REGIONAL) EXPLORATION IN COAL AND LIGNITE

5. The Committee note that a Plan Scheme of Ministry of Coal on Promotional Exploration for Coal and Lignite is being implemented by various agencies *viz* (CMPDIL, GSI, MECL and State Governments concerned), with the aim to undertake preliminary drilling to assess availability of Coal in various areas. The Committee observe that against the actual expenditure of Rs.105.05 crores during 2015-16, the BE/RE for 2016-17 was kept at a reduced amount of Rs. 50 crore against a drilling target of 1.75 lakh meters. Then again in 2017-18, the BE has only been kept for Rs. 60 crore which will not be sufficient for achieving the drilling target which has been fixed at 1.75 lakh meter. In this background, the Committee find it appreciable that a drilling target of 1.75 lakh meter in BE 2017-18 had been kept in the Annual Plan in anticipation of availability of funds at the RE stage. The Committee are of the opinion that in the long run, reduced drilling would imply lesser number of regionally explored blocks leading to availability of lesser blocks for detailed exploration. The Committee, therefore, desire that the Ministry may pursue the matter for allocation of adequate funds for achieving the

drilling targets set and they be apprised. The action taken in the matter.

DETAILED EXPLORATION IN NON-CIL BLOCKS

6. The Committee note that the scheme of detailed exploration aimed at bringing coal resources falling in indicated and inferred category into the proven category is taken up under the Ministry of Coal's Plan Scheme of Detailed drilling in the Non-CIL Blocks. The Scheme is carried out through departmental and contractual modes. The Committee note that while the RE for 2016-17 stands at Rs. 89.50 crore, the actual expenditure upto 21.02.2017 was Rs. 63.34 crore and the allocation for the plan at BE stage for 2017-18 stands at Rs.115 crore reflecting an enhanced outlay about 28% of the RE (2016-17) which was also Rs. 89.50 crore. The Committee observe that there was shortfall in the achievements of physical targets set for Detailed Drilling in Non-CIL Blocks in the last three years viz. (2014-15: Target- 2.87 lakh meter; Achievement 2.82 lakh meter; 2015-16: Target 3.20 lakh meter; Achievement 2.87 lakh meter; 2016-17: Target 2.81 lakh meter; Achievement as on Jan. 2017- 2.19 lakh meter). The Committee were apprised that the allocation of Rs. 115.00 crore of BE (2017-18) would be sufficient for a drilling target of 2.00 lakh meter only as against the total target set for detailed drilling of 4.32 lakh meter during the year 2017-18 and balance

requirement would be covered either under the National Mineral Exploration Trust (NMET) fund or additional demand at RE stage. The Committee were apprised that the Non-achievement of drilling targets was due to non-availability of forest clearance and adverse Law and Order condition at many places, particularly in 2015-16. Keeping in view the importance of the scheme vis-a-vis the overall target of enhancing coal production, the Committee desire that the earnest efforts be made by the Ministry to achieve the targets set for detailed drilling in Non-CIL Blocks. To this end, the Committee recommend that additional demand for funds may be made at the RE Stage. The Committee may be apprised of the progress made in the matter.

DRILLING CONSTRAINTS FACED BY CENTRAL MINE PLANNING AND DESIGN INSTITUTE LIMITED (CMPDIL)

7. The Committee note that CMPDIL carries out Detailed Exploration in CIL and Non-CIL Blocks as per strict time lines to bring resources falling in 'indicted' and 'inferred' category into the measured (Proven) category. The Committee find that a cumulative total of 308.802 Billion Tonnes of geological reserves of coal have so far been estimated in the Country as on 1.4.2016. The Committee further find that in the year 2016-17, 14 Geological Reports are likely to be prepared indicating about 4.5 Billion Tonnes of additional

coal resources under Measured (Proven) category. The Committee observe that CMPDIL has achieved drilling of 8.28 lakh meter in 2014-15, 9.94 lakh meter in 2015-16 and about 10.63 lakh meter of drilling is likely to be achieved in 2016-17 indicating a 7% growth through both Departmental resources as well as outsourced resources. Admittedly, in the year 2016-17, CMPDIL is likely to achieve its departmental and overall drilling targets by 103% and 97% respectively. While appreciating the measures being taken up by CMPDIL for improving the drilling capacity during the last three years, the Committee note that the drill deployment has increased from 53 in 2012-13 to 64 in 2016-17 and 24 new drills have been procured during April, 2013 to January, 2017 including 15 Hi-tech Drills. The Committee are also happy to note that the quantum of drilling through outsourcing had increased from 3.71 lakh meter in 2013-14 to 5.86 lakh meter during 2015-16. Moreover, the CMPDIL has also entered a Memorandum of Understanding (MoU) with MECL for 3-4 lakh meter of drilling per year. The Committee are, however, concerned to observe that one of the generic reason cited for non-achievement of targets for drilling over the last few years was non availability of forest clearance and adverse Law and Order condition prevailing in some areas. In this context, the Committee note that Ministry of Environment and Forest (MoEF) is considering

simplification of procedures for according forest clearance for exploration blocks up to 10% lower density at District Forest Officer level and 10-40% at MoEF Climate Change level which is awaiting notification. The Committee therefore recommend that the Ministry of Coal should impress upon the Ministry of Environment and Forest and Climate Change (MOEF & CC) to urgently notify the proposed relaxed guidelines for enabling drilling in forest areas by Governments Companies so that the targets of the detailed coal exploration are achieved within the stipulated time frames. In order to overcome the problems faced in land acquisition and related issues, the Committee desire the Ministry should impress upon the state governments for regular updation of land records and carrying out pre-CSR activities like Skill Development, Health, Education, etc. in the surrounding areas of the upcoming mining projects. The Committee may be apprised of the outcome in the matter.

8. As regards the Law and Order issue, the Ministry have themselves admitted that though State Authorities were being approached for intervention, the desired progress has not been achieved. The Committee acknowledge that the constraints confronted are serious issues which would require high level intervention as well as consultations and deliberations amongst

various Central Ministries, State Government, Other Agencies as well as stake holders involved. The Committee appreciate the initiatives taken up by CMPDIL as well as the Ministry of Coal to bring about needed intervention and breakthrough to overcome the environment and forest and law and order issues by regular monitoring and meetings with the concerned State Chief Ministers and at the highest level in the Union Government. The Committee hope that by these earnest efforts made by all Government as well as Non-Government Agencies involved, constraints cited in achieving the drilling targets would be reached/addressed solution be brought without compromising the interest of environment in view of the interest of those stakeholders involved. The Committee may be apprised of the action taken in the matter.

ENVIRONMENTAL MEASURES AND SUBSIDENCE CONTROL SCHEME

9. The Committee note that the objective of the Environmental Measures and Subsidence Control (EMSC) Scheme is to improve the environmental conditions in the old mined out areas of Jharia and Raniganj coalfields by addressing fire and subsidence problems. The Committee further note that the Major thrust areas in EMSC during XIIth Plan period were control of subsidence in the old, abandoned, waterlogged workings in Raniganj coalfields, control of mine fires

and subsidence in Jharia coalfields besides rehabilitation of persons residing in these areas. All EMSC Schemes have subsequently been merged in a Master Plan dealing with Fire, Subsidence, Rehabilitation and Diversion of surface infrastructure within the leasehold areas of BCCL and ECL sanctioned by the Government in August 2009 at an investment of Rs. 9657.61 crore with an annual outlay of Rs. 977 crore spread over a period of 10 years. As per the tenets of the Master Plan, the CIL needs to first spend from its own resources upto Rs. 350 crore per year and the additional funds required, if any, are to be made available from the Budget. In this regard, the Committee note that CIL has not been able to spend its share of Rs. 350 crore and therefore, the expenditure incurred for the implementation of the Master Plan remained within the contribution of CIL and as such, 'NIL' or near 'NIL' expenditure has been reflected in the Ministry's Budget. In this backdrop, the Committee feel that the budget allocation for 2017-18 of 0.50 crore would be adequate as there was NIL expenditure in 2016-17. As regards the status of implementation of the Jharia Master Plan, the Committee have been apprised that 10 active fire areas have been liquidated resulting in reduction from 17.32 Sq. KM fire area (1986) to only 9 Sq. Km in 2006 which was further reduced to 2.18 Sq. Km. in BCCL lease hold area in 2014. The Committee desire that sincere

efforts should be made to wipe out the fire areas completely. As regards rehabilitation work which would include BCCL and non-BCCL families, the Committee note that out of the requirement of 15852 houses in BCCL areas, 6414 houses have been completed and 3044 families already shifted. As regards, non-BCCL families, out of 121323 families required to be rehabilitated, 29444 are Legal Title holders and 91879 are Non-Legal Title holders. Statedly, during the review meeting of HPCC held on 13.02.2017, State Government of Jharkhand had been requested to review the number of non-legal title holders. As regards the status of Raniganj Master Plan implementation, the Committee note that all seven identified surface fires have been doused blanketing with thick layers of earth. The Committee further note that all three location in ECL quarters have been vacated and in non-ECL areas, out of total 141 declared unstable locations, demographic survey work has been completed at 126 locations. The Committee are concerned to note that constraints cited include inter-alia public agitation; and non availability of bidders for e-Tenders floated for construction of houses under Rehabilitation Scheme. The Committee desire that ground level problems may be sorted out with the help of local/community leaders and beneficiaries so that hindrances faced in achievement of the target set for this scheme may be eliminated.

The Committee also desire that CIL should make earnest efforts to spend its requisite funds towards implementation of the EMSC Scheme in an effective and time bound manner producing some tangible results. The Committee would like to be apprised of the Action Plan of the Government in the matter.

CONSERVATION, SAFETY IN COAL MINES AND DEVELOPMENT OF TRANSPORT INFRASTRUCTURE UNDER CCDA

10. The Committee note that the expenditure incurred by coal companies under the schemes 'Conservation, Safety in Coal Mines' and Development of Transport Infrastructure is partially reimbursed to them by way of excise duty collected under the Coal Mines (Conservation and Development) Act, 1974. Accordingly, budget provisions for the schemes are made taking into account the existing commitment/liability of the preceding financial year. While observing that the Ministry of Coal achieved 100% utilization of funds on both of these Central Sector Schemes i.e. Rs. 80 crore and Rs. 70 crore respectively which represents the RE amounts for 2016-17, the Committee are happy to find that the BE for 2017-18 has enhanced outlay for the schemes compared to that of previous year with allocation of Rs. 200 crore in respect of the scheme 'Conservation and Safety in Coal Mines' and Rs. 299.50 crore in respect of the scheme 'Development of Transport Infrastructure'.

The Committee observe that the Central Sector Scheme 'Development of Transport Infrastructure' in coalfields areas will help in the evacuation of coal from collieries by creation of road/rail infrastructure. The Committee observe that these two schemes are very crucial for development of coal mine infrastructure in the Country. The enhanced budgetary allocation for these two schemes in 2017-18 is, therefore, most welcome and is in the right direction as there was 100% utilization of funds earmarked for these schemes during the past 2 years. Keeping in view the importance of conservation of Coal particularly when the Coal reserves are finite, the Committee observe that the aspect of conservation need to be taken into account right from the planning stage and to ensure strict adherence throughout the implementation stage. To this end, the Committee would desire that the Ministry as well as Coal PSUs should strive for total Mechanized Opencast (OC) Mining; use of latest state-of-the-art Clean Coal Technologies; and increased use of sand storing as effective means of coal conservation. The Committee also note that three major Railway Infrastructure Projects for Development of Transport Infrastructure are being undertaken by CIL viz. Tori-Shivpur new BG Line (44.37 Km); Shivpur-Kathotia Sectors (49.085 Km); and Jharsuguda- Barapalli-Sardega Railway Infrastructure Project (52.412 Km). Notably, two Rail Corridor have

also been identified for construction to cater to evacuation of Mand-Raigarh and Korba-Gevra Coalfields of SECL. The Committee desire that the Ministry make earnest efforts to complete these important projects being undertaken so that the intended benefits from these important Schemes are achieved.

11. Keeping in view that commensurate enhancement in the logistics like coal evacuation facilities is a must for ensuring systematic mining and growth in coal production on sustainable and long term basis, the Committee desire that for ensuring growth in coal sector, enhancement of logistic infrastructure by railways is of paramount importance and related projects require to be expedited so that production shall be in sync with evacuation logistic to avoid wastage. The Committee was assured by the Coal Secretary that Ministry of Coal will also examine Ambikapur (Chirmiri)- Barwadih rail line which will not only reduce distance between the Eastern and Western part of the Country but will also ease out evacuation of coal from the WCL, ECL, BCCL and CCL. The Committee would like to be apprised of the action taken in the matter by the Ministry of Coal.

NORTH EASTERN REGION (NER)

12. The Committee have time and again observed with concern that the North-Eastern Region remains a totally neglected area with the lowest implementation record as exuded by the fact that the budget provisions pertaining to development of NER/Sikkim remain almost totally unutilized year after year. The RE (2015-16) for NER amounting to Rs. 30.60 crore were drastically reduced to Rs. 15.00 crore in BE 2016-17. On non-utilization of funds, the Committee had observed the generic reply of the Ministry of Coal include inter-alia difficult geological characteristics, large forest covers, adverse law and order conditions and land issues, causing hindrances in exploration work. The Committee note that in the BE 2017-18, total outlay amounting to Rs. 18.55 crore for North Eastern Areas saw a meager increase as compared to the 2016-17 BE of Rs. 15 crore. The break-up of the provisions for various schemes for BE 2017-18 were Research and Development (Rs. 1 crore); Regional Exploration (Rs. 6 crore); Detailed Drilling (Rs. 11.50 crore) and EMSC (Rs. 0.05 crore). The Committee note that as was in the preceding years, this year to a meager amount of Rs. 0.762 crore amounting to about 5% of allocated funds have been utilized under the Detailed Drilling in Non-CIL Blocks. Admittedly, procurement for sanctioned Drill Rig in Assam was under process while DGM,

Nagaland has purchased the rig. The Committee are happy to note that despite the difficult terrain. DGM-Nagaland had completed drilling in one Coal Block while taking up the second one, which could not be completed due to adverse Law and Order conditions in the areas. The Committee appreciate the Ministry of Coal decision approving outsourcing of drilling-surveying and Geophysical activities in NER to ensure full utilization of funds. The Committee are, however, concerned to note that no proposal have been received from any State Government and even MECL had not deployed any rig for coal exploration in NE Region. The Committee, therefore, desire that Ministry of Coal should pursue with the State Government for new proposal for coal drilling in the area and also take appropriate steps in coordination and consideration with the concerned agencies to address the problem of Law and Order in the NER which is hampering implementation of various Central Sector Schemes in the Area.

FINANCIAL AND PHYSICAL PERFORMANCE OF COAL PSUs

13. The Committee observe that CIL undoubtedly occupies a strategic relevance in so far as it produces around 84% of the Country's overall coal production and commands nearly 74% of the Indian coal market feeding 98 out of 101 coal based Thermal Power

Plants in India. The Committee are happy to note the milestones achieved by CIL in the year 2015-16 viz. crossing the threshold of half-a-billion tonne mark in Coal Production and off take for the first time; 39 MT coal stock in the coal inventory as on 31.03.2016 for the first time accounting for 28 days stock; not a single utility was in critical/ supercritical emulation for want of coal; Decreasing Coal Import resulting in substantial forex savings; Third Party, Joint Sampling since January, 2016; CIL's Gross Sales exceeded Rs. 100000.00 crore for the first time; etc. The Committee put on record their appreciation for the laudable milestones achieved by CIL trust that CIL continue its endeavour towards high growth in the ensuing years. The Committee find that while the total Plan outlays (BE) 2016-17 of all Coal PSUs stood at Rs.16,343.92 crore the actual expenditure upto December, 2016 was only Rs. 8171.41 crore. The Committee further note that the percentage utilization of outlays upto January, 2017 for all the Coal PSUs viz. CIL, SCCL and NLC vis-a-vis BE 2016-17 stands at 63.16% in respect of CIL (BE Rs. 7765.00 crore; Actual Expenditure - Rs.4900.88 crore) 44.96% in respect of SCCL (BE Rs. 2300.00 crore; Actual Expenditure Rs.1435.41 crore) and 44.96% in respect of NLCIL (BE 6278.92 crore; Actual Expenditure Rs.2822.97) respectively. The Committee also note that in terms of company-wise physical targets set for the Coal PSUs, as

against the target set at BE 2016-17 [CIL- 598.61 MT; SCCL-58 MT and NLCIL 268.00 LT(Lignite) and 21567.76 MU (Power,) the actual achievement of targets upto December, 2016 for CIL, SCCL and NLCIL stood at 377.77 MT, 42.43 MT and 180.04 LT (Lakh Tonne)& 15333.75 MU (Million Unit) indicating percentage achievement of 63.13%, 73.16% and 67.18% & 71.10% respectively. Reasons cited for non achievement of physical targets set include inter-alia adverse geo-mining conditions; Law and Order problem; Evacuation Problems; Delays in getting EC/FC and handing over of forest land; R&R Problem, delay in supply of main equipment; poor performance of outsourced OB removal agencies; non commissioning of new mine areas due to land acquisition and R&R problem etc. Taking note of the reasons cited for non-achievement of targets by Coal/Lignite PSUs the Committee hope that the Ministry of Coal/PSUs would step up efforts towards better performance, so that the Plan outlays are optimally utilized during the year 2017-18 and both the financial and physical targets are achieved.

OUTSTANDING DUES OF COAL PSUs

14. The Committee note that outstanding dues for CIL, NLCIL and SCCL stood at Rs. 14,443.12 crore (as on 31.01.2017) Rs. 1866.72 crore (as on 31.03.2016) and Rs. 5368.70 crore (as on 31.01.2017)

respectively. The Committee apprised that several initiatives are being taken up by Coal PSUs to recover these outstanding dues in a time bound manner viz. through letters and reminders from Secretary (Coal) to Chief Secretary of State Governments concerned; Raising the issue during the Power Ministers Conference ; Resolution through Alternate Dispute Resolution Mechanism; Communication from CMDs of subsidiary companies to Chairman/MDs of defaulting power houses; Formulation of 'Graded Rebate Scheme' in NLCIL; entering into Power Sales Agreement with State utilities incorporating Payment priority Mechanism, Provision for one time waiver surcharge settlement; etc. The Committee while appreciating the initiatives taken up by Coal PSUs to recover huge outstanding dues, however, desire that sustained and concerted efforts should be sustainably made by all Coal PSUs to recover outstanding dues in a time bound manner. The Committee would like to be apprised of the initiatives under taken by the Ministry in this regard.

SAFETY IN COAL MINES

15. The Committee in their 14th Report (16th Lok Sabha) on 'Safety, Health and Education facilities for Inhabitants/Workers in Coal/Lignite Mining Areas" presented to the Parliament on 12.8.2015, had underlined the importance of safety in Coal Mines

taking into consideration that in India, coal mining still remains a highly labour intensive field and coal miners/workers are generally from the poor and illiterate strata of the population. The Committee had observed that despite the best safety precautions and wide utilization of heavy machinery for coal excavation risks are associated with all forms of coal mining. The Committee had desired that the larger goals of higher productivity in coal mining industry is harmonized with the overall sustainable goals of protection and improvement of lives of people working in coal mining areas. The Committee had recommended that the Government should go for a sustainable mining policy with commitment to safety of these miners and desired that the target for achievement of a Zero Harm Potential to be achieved in a time bound manner. The Committee note that the safety standard in Mines of CIL as measured by the accident statistics had significantly improved. For the years 2010-14 and 2014-16, the comparative average fatality rate and serious injuries rate per 3 lakh man shifts showed an improvement standing at 0.23 & 0.19 and 0.80 & 0.53 respectively. The corresponding figures for SCCL stands at 0.26 and 4.65 respectively for the year 2016. Similarly, the fatality rate per million tonne of coal production reduced by 22.2% and that of serious injury rate by 28.9% in 2015 as compared to its previous year. However, the accident statistics of

NLCIL, on the contrary, states that in the year 2015-16, the number of fatal accidents was 3 while that of serious injuries was 1 whereas corresponding figures for the year 2014-15 was 1 and 1 respectively indicating increasing accidents. The Committee have also been apprised of various measures taken for improvement of safety in 2016 viz. continuous review by the Internal Safety Organization (ISO); Drawing up Directions/Guidelines on corrective measures after analysis of fatal accidents for prevention of re-occurrence; Training for preparation and implementation of Risk Assessment based Safety Management Plans (SMPs); Standard Operating Procedure (SOP); Adoption of State-of-the-art Technology suitable to geo-mining locales; Strata Management, Monitoring of Mine Environment; Mine Ventilation; Water Danger Management; Safety Training, Mine Safety Inspection; Special Drive for accident prevention in OCPs; Review of Emergency Response System; etc. The Committee also take note of the Rajmahal OCP Mine Collapse on 29.12.2016 in ECL area in the State of Jharkhand and deeply express their concern at the loss of lives. Taking a serious note of the mine collapse, the Committee feel that heightened efforts are needed to bring down the fatality rate to zero. In the opinion of the Committee, the issue of safety needs to be dealt with as a major thrust area. The Committee, therefore, recommend that not only the

production but also the safety related issues be given serious attention by the top management of the coal producing PSUs. The Committee also recommend for mandatory Skill up-gradation of the workforce training for Frontline supervisors. The Ministry should also carry out a comprehensive study as to how the technology can be best used for preventing the accidents and ultimately raising the safety standards to International Benchmark. The Committee would like to be apprised of the action taken in the matter.

INITIATIVES ON NEW TECHNOLOGIES AND INFORMATION TECHNOLOGY

16. The Committee note that one of the thrust area of coal is the deployment of more and more application of new technologies including Information Technology. The Committee find that the Ministry have already adopted application of Space Technologies for monitoring reclamation of mined out areas and satellite based thermal infrared survey for monitoring coal mine fires. The Committee also note that other new technologies to be taken up in the Ministry as other R&D Projects inter-alia include satellite based monitoring of regional air quality; Differential Interferometry Synthetic Aperture Radar (DInSAR) for Subsidence Monitoring; Carbon Capture and Storage with inter-sectoral participation; etc. In respect of Information Technologies initiatives taken up by the

Ministry of Coal, the Committee observe that with active Information Communication Technology (ICT) support from NIC, a rich IT working environment has been crafted. The major initiatives which have been put in place include inter-alia Online Coal Projects Monitoring Portal ; 100% implementation of E-file w.e.f. 16.10.2016 with absolutely no physical file or physical movement in the Ministry; Coal E-office modules-e Leave, e Tour, etc. made operational; Online Coal Clearance Portal to provide a single window access to investors for all permissions/clearances/approvals granted by the Ministry of Coal which has also been integrated with e-Nivesh Portal of the Cabinet Secretariat; Comprehensive MIS to monitor coal blocks and coal Linkages; Coal Allocation Monitoring System (CAS) with workflow based feedback redressal and provision of raising online demand of coal; SPARROW, E-visitors, Coal Assurance Monitoring System, Comprehensive DDO for Payroll; E-Governance Application; IP based Video Conferencing Facility; etc. The Committee appreciate the laudable initiatives that have been put into place by the Ministry pertaining to adoption of new technologies especially ICT which has become a major force behind the changing face of the Nation. The Committee desire that the Ministry should heighten its efforts towards effective time bound implementation of

all the ongoing initiatives. The Committee would like to be apprised of the action plan of the Ministry in the matter.

NEW POLICY THRUST FOR COAL PRODUCTION

17. The Committee are happy to find that with a renewed policy thrust to increase coal production, the Ministry of Coal/Coal PSUs are preparing a Vision Document and a Roadmap for achieving a production level of 1 BT of coal by the year 2019-20. The Committee find that to this end, the CIL have so far identified coal mines/projects to produce about 908.10 MT in 2019-20 and identification of projects for balance capacity to reach 1 BT was underway with CIL having identified 64 future projects. The Committee are further happy to note that in the year 2015-16, the targeted coal production as per Annual Plan Document of Ministry of Coal was 550 MT with 98% achievement. The Committee note that in respect of CIL, major increase in production is envisaged from mainly from subsidiaries viz. SECL, MECL, CCL and NCL. Admittedly, steps taken by CIL to increase production of coal include inter-alia planning of High Capacity Mines with state-of-the-art mechanization and modernization of mines for increasing productivity both in underground & opencast mines depending upon geo- mining

conditions; Improving capacity utilization through efficiency improvement and modernization; Ensuring implementation of on-going projects in time bound manner to achieve targeted production as per schedule; Capacity augmentation of running projects through special dispensation under the Environment Protection (EP) Act 2006; Effective monitoring & follow up of issues related to projects with related Ministry & State Governments; etc. The Committee also find that there has been a continuous increase in overall consumption of coal over the years with consumption/actual supply (including import) increasing from 713.39 MT in 2012-13 to 832.39 MT in 2015-16. Further, the demand of coal from 2016-17 was estimated to be 884/87 MT whereas the domestic availability was estimated at 724.71 MT and the gap of 160.16 MT was projected to be met through imports. The Committee also find that the actual domestic supply of coal was 466.68 MT during April-December, 2016 out of which supply of coal from CIL, SCCL and Others including Captive Blocks was 391.47 MT, 42.67 MT and 32.54 MT respectively. The Committee, however, observe with concern that there were 40 delayed projects (CIL-29, NLCIL-4 and SCCL-7) costing Rs. 100 crore and above with average delay in case of projects of CIL, NLCIL and SCCL standing at 4.5 years, 2.18 years and 4.28 years respectively. The Committee find that the shortfall in target achievement were

due to many factors viz. Law and Order Problem in many Coal Block Areas; Non-availability of Forest Clearances; Shortage of skilled manpower inadequate capacities in the private sector; delay in implementation of R&R delay in procurement of equipment, contractual delays etc. The Committee find that to offset this, strengthening of CMPDI in the coming years together with a policy prescription for attracting global majors in exploration was being planned and the Procedure of Forest Clearance was also being streamlined by MoEF to fast track approvals for exploration proposals. The Committee further find that the targeted production of 573 MT coal by CIL during 2016-17 could not be achieved due to the fact that the demand did not grow at the pace at which the production was envisaged to grow setting in accumulation of stock at the pitheads. The Committee observe that though the renewed policy thrust of the Ministry for achieving the target act for production of 1 BT by 2019-20 is note worthy, however, top priority should be given to resolve the constraints cited in the implementation of various inter-related schemes/projects. On the issue of addressing the Law and Order Problem, the Committee were apprised that even through State Authorities were approached seeking their intervention by both CMPDIL and the Ministry of Coal at different points of time, desired progress had not been made. The

Committee desire that the issue of Law and Order need to be addressed holistically involving all stakeholders so that a feasible solution in brought about is the near future. The Committee further find that enabling provision has been made in the Coal Mines (Special Provision) Act, 2016 for allocation of coal mines by way of auction and allotment for sale of coal. The Committee were apprised that while the methodology for allotment of coal mines to Central/State PSUs for sale of coal has already been approved by the Government, the modalities for allocation of coal mines by auction to private companies for Commercial Mining were under deliberation. The Committee hope that the new policy changes that were being brought about will be initiated and implemented within a broad time frame so that the laudable target for achievement of coal production to 1 BT by 2019-20 is not only achieved but commensurate demand of coal is also created so as to obviate scope for accumulation of coal stock. The Committee may be apprised of the action taken in the matter.

OTHER ISSUES

(I) CREATION OF LAND BANK FOR COAL MINING PROJECTS

18. The Committee note that one of the major constraints for delay in accelerated implementation of various coal exploration projects

by coal companies relates to problems being faced in land acquisition. The Committee were apprised by the Coal Secretary during evidence that the Ministry is considering a new concept of creation of Land Bank. According to him, advance plantation would be carried out by these coal companies on degraded land and the afforestation thus achieved therein can be accounted for the deforestation on land to be acquisitioned for new coal mining projects. While appreciating the concept of Land Bank, the Committee hope that creation of Land Bank will ease prolonged process of land acquisition and facilitate setting of coal mining projects without any land hurdles. The Committee desire that the Government may consider offering its degraded forest land free of any encumbrances to the Coal Companies of Coal Sector for creation of land bank where they can do advance afforestation against its future coal mining projects. The Committee would like to be apprised of the progress made in this regard.

(II) COAL BED METHANE

19. Considering the multibenefits of clean coal technology projects of coal sector like Coal Bed Methane(CBM)/Coal Mine Methane (CMM) extraction and its use, the Committee recommend that the Government should extend its all possible support to the coal

producing companies through concessions/relaxations in statutory, legal and environmental stipulations for development of such projects which the Committee feel will be beneficial for overall use of the Country including enhancing the safety of underground mines.

(III) MINE WATER UTILIZATION

20. The Committee note that there is an ample scope for utilization of vastly available mine water discharge from different areas of the Coal Companies. The Committee desire that the Government may bring out suitable policy initiatives for treatment of such water reserves in mines for the use of the people settled around coal mines as well as for irrigation purposes. The Committee further desire that the required budget provisions for these activities should be made available by the respective coal companies. The Committee would like to be apprised of the action taken in the matter.

(IV) ISSUES RELATED TO EVACUATION OF COAL

21. While taking note of the mismatch capacity for evacuation of coal by rail and MOEF & CC's guidelines restricting movement of 34% ash coal beyond 500 Km distance, high freight of coal being transported to far off locations, the Committee feel that

development of power projects at Coal Pit Heads may be one of the options for addressing these issues as energy transmission is cheaper than that. The Committee feels coal based chemicals/ gasification plants at the Pit Heads may not only address the issue of energy requirement of the country but also meet the requirement of coal based chemicals like methanol, etc. The Committee, therefore, recommends that the Government should explore the feasibility of implementing such a model in the Country in consultation with all the stakeholders including State Governments. The Committee may be apprised of the action taken in the matter.

(V) RATIONALIZATION OF COAL LINKAGES

22. The Committee notes that the process of allotment of coal linkages through the LoA-FSA route has since been stopped since a long time back. The Committee also notes that some coal based Thermal Power Plants (TPPs) are having Power Purchase Agreements (PPAs) but do not have linkage sources and these TPPs are compelled to source coal through e-auction or imports. The Committee therefore, recommends that the Ministry of Coal should consider rationalization of coal linkages and devise an innovative mechanism to provide coal linkages that may check rise in power tariffs and dependence of the country on coal import. In order to encourage new investments and

to address concerns of investors over coal linkages, the Committee desire that the Ministry of Coal should also consider bringing out a policy in public domain spelling out the objective and transparent modalities of coal linkages for future Greenfield as well as Brownfield Thermal Power Projects.

**New Delhi
09 March, 2017**

**RAKESH SINGH
Chairperson
Standing Committee on Coal and Steel**

ANNEXURE-I

MINUTES OF THE SITTING OF THE STANDING COMMITTEE ON COAL AND STEEL HELD ON 23 FEBRUARY, 2017 IN COMMITTEE ROOM 'C', GROUND FLOOR, PARLIAMENT HOUSE ANNEXE, NEW DELHI.

The Committee sat from 1130 hrs. to 1430 hrs.

PRESENT

Shri Rakesh Singh - **Chairperson**

MEMBERS

LOK SABHA

2. Shri Ajay Nishad
3. Dr. Ravindra Kumar Ray
4. Shri Tamradhwaj Sahu
5. Shri Janardan Singh "Sigriwal"
6. Shri Pashupati Nath Singh
7. Shri Rama Kishore Singh
8. Shri Sunil Kumar Singh
9. Shri Krupal Balaji Tumane

RAJYA SABHA

10. Dr. Pradeep Kumar Balmuchu
11. Shri Ranjib Biswal
12. Shri Md. Nadimul Haque
13. Shri B.K Hariprasad
14. Shri Ram Vichar Netam

SECRETARIAT

1. Shri U.B.S. Negi - Joint Secretary
2. Shri Ajay Kumar Garg - Director
3. Shri Arvind Sharma - Additional Director
4. Ms. Miranda Ingudam - Deputy Secretary

WITNESSES

Ministry of Coal and its PSUs

Sl. No.	Name	Designation
1	Shri Susheel Kumar	Secretary
2	Shri Suresh Kumar	Additional Secretary
3	Smt. Reena Sinha Puri	JS & FA
4	Shri R.P. Gupta	Joint Secretary
5	Shri Vivek Bharadwaj	Joint Secretary
6	Shri Rajesh Kumar Sinha	Joint Secretary
7	Shri V. Peddanna	Joint Secretary
8	Shri Animesh Bharati	Economic Adviser

9	Shri D. N. Prasad	Advisor (Project)
10	Shri Sutirtha Bhattacharya	CMD, CIL
11	Shri Sarat Kumar Acharya	CMD, NLC
12	Shri N. Sridhar	CMD, SCCL
13	Shri A.K. Jha	CMD, MCL
14	Shri T.K. Nag	CMD, NCL
15	Shri B. R. Reddy	CMD, SECL
16	Shri R. R. Mishra	CMD, WCL
17	Shri Gopal Singh	CMD, CCL& BCCL
18	Shri Shekar Saran	CMD, CMPDIL
19	Shri Anjani Kumar	Coal Controller
20	Shri Chandan Kumar Dey	Dir.(Fin.), CIL
21	Shri S.N. Prasad	Dir.(Marketing), CIL
22	Shri R. Mohan Das	Dir.(Pers.), CIL
23	Shri B.K. Panda	Commissioner, CMPFO

2. At the outset, the Chairperson welcomed the Secretary and other representatives of the Ministry of Coal and Coal PSUs to the sitting of the Committee convened in connection with examination of Demands for Grants (2017-18) of the Ministry of Coal and drew their attention to Direction 55 of the Directions by the Speaker, Lok Sabha regarding confidentiality of evidence tendered by witnesses. He stated that with the expanding economy and industrial base of the Country, energy needs have been escalating. In India, Coal remains the most dominant energy fuel in providing energy security to the Country and virtually fuels the power sector, the most crucial element in infrastructural development. He further stated that the performance of the Ministry of Coal and Coal PSUs as well as the various agencies involved in exploration, production and allocation of Coal, therefore, plays a very important and significant role in the endeavour to enhance coal productivity to meet the increasing energy demand. Coming to the Demands for Grants (2017-18) of the Ministry of Coal reflecting a Scheme-Outlay of Rs. 685.00 crore and a Non-Scheme provision of Rs. 60.10 crore amounting to a total outlay of Rs. 745.10 crore, besides keeping a provision of Rs. 700.00 crore for Acquisition of Coal bearing Areas, the Hon'ble Chairperson stated that this year, the Demands for Grants of the Ministry of Coal will also be discussed in the Lok Sabha during the ensuing Budget Session after recess. He desired the representatives to brief the Committee about Plan Outlays vis-a-vis actual utilization by the Ministry and PSUs under its administrative control highlighting major policy changes and achievements during the last three years and in the year 2016-17 elaborating the action plan for the development of coal sector during 2017-18. He also stated that the Committee would also like to be apprised of the current initiatives taken /proposed to be taken by the Ministry for enhancing sustainable production of coal and for achieving the physical and financial targets set for all the Central Sector Schemes being implemented with

Government Budgetary support which he hoped will help the Committee in understanding the various aspects of the Demands for Grants (2017-18) of the Ministry and enable the Committee to come to the right conclusions and present an objective Report to the Parliament.

3. Thereafter, the Secretary, Ministry of Coal briefed the Committee about the Plan Outlays vis-a-vis actual utilization by the Ministry and PSUs under its administrative control and the physical achievements during 2016-17. He also apprised the Committee of the current initiatives taken/proposed to be taken by the Ministry for enhancing sustainable production of coal for achieving the physical and financial targets set for all the Central Sector Schemes being implemented with Government Budgetary support. Thereafter, in a visual presentation, the representatives of the Ministry highlighted the Detailed Demands for Grants for the years 2015-16, 2016-17 and 2017-18 alongwith actual expenditure incurred in the last two years; details of funds allocated and utilized for Plan Schemes; PSU wise Capital Expenditure (CAPEX) for the years 2015-16, 2016-17 and 2017-18; Major Thrust Areas viz. Emphasis on Safety and steps taken after the accident at Rajmahal OCP of ECL on 29.12.2016; Commitment to Environment; Quality Control; Reclamation of Mined out areas; Mine water utilization; Supply of clean Thermal Coal; and supply of clean Coking Coal with target to supply 100% washed Coking Coal by 2020; Clean coal Technologies; Surface Coal Gasification; Underground coal gasification; Development of Coal Bed Methane (CBM)/CMM, etc. The Committee were further apprised of other R&D Projects viz. Application of Space Technologies for monitoring reclamation of mined out areas; Satellite based thermal infra red survey for monitoring coal mine fires; Satellite based monitoring of regional air quality; Differential Interferometer Synthetic Aperture Radar (DInSAR) for subsidence monitoring; Carbon capture and storage with inter-sector participation; etc. The Committee were also apprised that the all India Coal Production Target and Achievement for the year 2017-18 was 720 MT in respect of CIL and SCCL. The Committee was also apprised about the status of implementation of Master Plan for Jharia and Raniganj Coalfields as well as other Major achievements met and other initiatives put in place.

4. The Chairperson and Members then raised queries and sought clarification on various issues viz. Delays in implementation of Projects Vision Document and Roadmap of Coal Production Target of 1 Billion Tonnes; Safety in Coal Mines with particular to Jharkhand Coal Mine Collapse under the Eastern Coalfields Limited (ECL) that occurred around the end of the year 2016; Allocation of Coal Mines for Commercial Mining to Central/State PSUs and Private Companies, Law and Order Problem; the major causes of delays in implementation of Coal Projects and their solution, Domestic Coal Production vis-a-vis imports of Coal; Detailed Drilling in

Non-CIL Blocks, Conservation and Safety in Coal Mines and Development of Transport Infrastructure in Coalfields; Research and Development; CMPDIL; timeframe for 'Study on Underground Coal Mining in CIL-Problems, Potential, Technology, Modernization, Production and Safety; funds availability for undertaking the 5 new R&D Projects recommended by the technical Sub-Committee Standing Scientific Research Committee (SSRC) of the Ministry of Coal, rail network for evacuation of coal, etc.

5. The Chairperson, directed the representatives of the Ministry of Coal to furnish written replies to all the queries raised by him as well as the Members which could not be responded to during the sitting of the Committee within five days. The Secretary, Ministry of Coal assured the Committee that the same would be furnished.

A copy of verbatim proceedings of the sitting of the Committee has been kept on record.

The Committee then adjourned.
(.....)

Annexure-II

MINUTES OF THE SITTING OF THE STANDING COMMITTEE ON COAL AND STEEL HELD ON 9 MARCH 2017 IN CHAIRPERSON'S ROOM NO. 210, SECOND FLOOR, B-BLOCK, PARLIAMENT HOUSE ANNEXE EXT. BUILDING, , NEW DELHI

The Committee sat from 1530 hrs. to 1600 hrs.

PRESENT

Shri Rakesh Singh - Chairperson
Lok Sabha

2. Shri Kalyan Banerjee
3. Shri Nagesh Godam
4. Dr. Banshilal Mahato
5. Shri Kamalbhan Singh Marabi
6. Shrimati Riti Pathak
7. Shrimati Ranjit Ranjan
8. Shri Janardan Singh "Sigriwal"

Rajya Sabha

9. Shri Ali Anwar Ansari
10. Shri Ranvijay Singh Judev
11. Shri Ram Vichar Netam

SECRETARIAT

- | | | |
|-------------------------|---|---------------------|
| 1. Shri U.B.S. Negi | - | Joint Secretary |
| 2. Shri Ajay Kumar Garg | - | Director |
| 3. Shri Arvind Sharma | - | Additional Director |
| 4. Ms. Miranda Ingudam | - | Deputy Secretary |

2. At the outset, Chairperson welcomed the Members to the sitting of the Committee.

3. The Committee thereafter took up for consideration the Draft Report on "Demands for Grants (2017-18)" of the Ministry of Coal.

4. The Committee adopted the Report without any changes/modifications. The Committee then authorized the Chairperson to finalise the Report on the basis of factual verification from the Ministry of Coal and present the same to both the Houses of Parliament.

The Committee then adjourned.