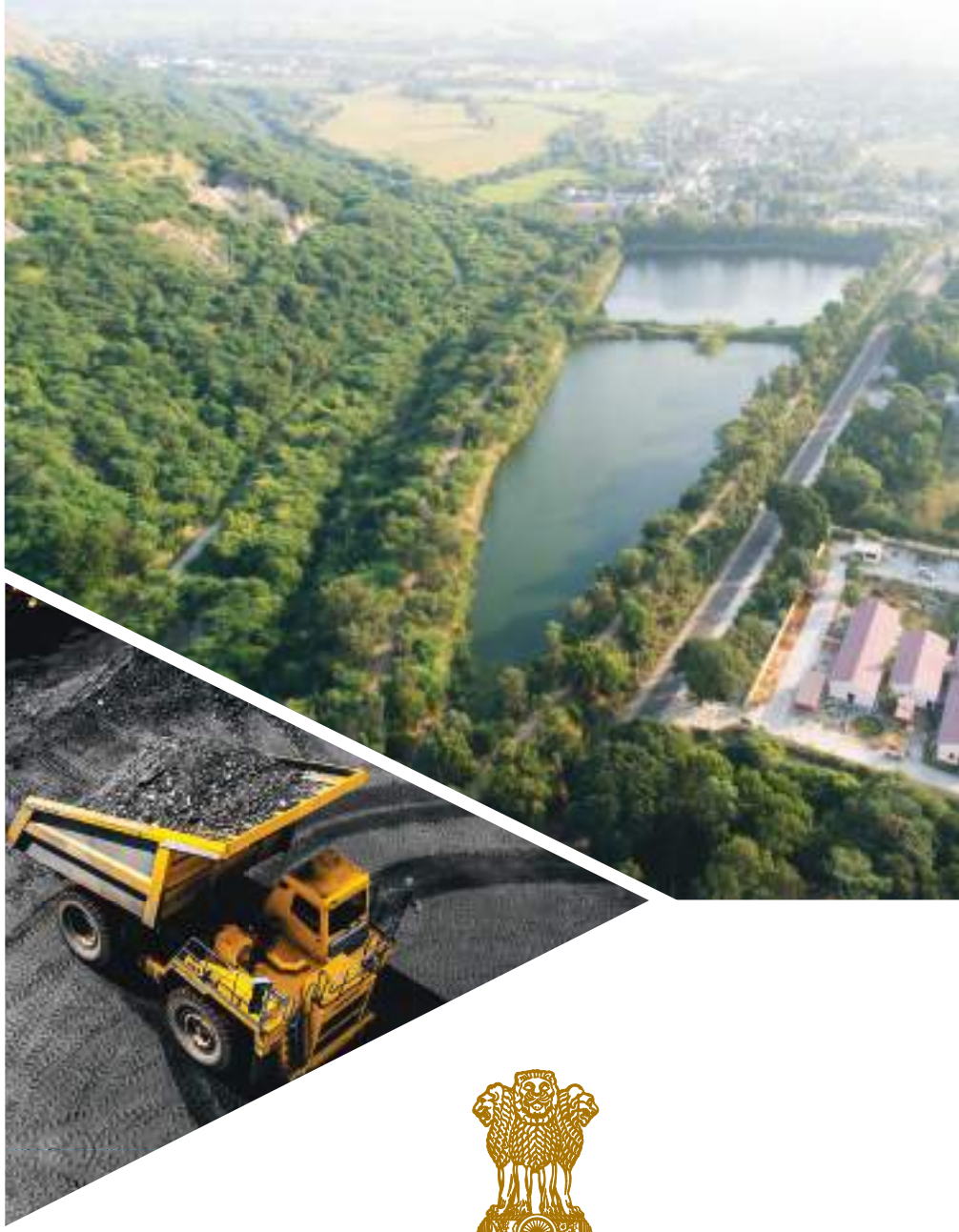

सत्यमेव जयते

Coal Controller Organisation

Ministry of Coal

Government of India

COAL DIRECTORY OF INDIA 2023-24

COAL DIRECTORY OF INDIA
2023-24

GOVERNMENT OF INDIA
MINISTRY OF COAL
COAL CONTROLLER ORGANISATION

COAL DIRECTORY OF INDIA
2023-24

For any query or suggestion please write to:-

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जी. किशन रेड्डी
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G. Kishan Reddy

सत्यमेव जयते

कोयला एवं खान मंत्री
भारत सरकार
नई दिल्ली
MINISTER OF COAL AND MINES
GOVERNMENT OF INDIA
NEW DELHI

Message

Coal remains a key component of India's core industries and will continue to be a major force in driving the country's economic transformation. By striving for a balance between accessibility and affordability, India is setting a global example in energy justice.

As India's energy consumption is expected to rise rapidly to support economic growth, urban expansion, better electricity access, a robust manufacturing sector, and rural electrification, coal stands out as the primary source of energy. Despite the presence of other energy sources such as solar, wind, hydro, and natural gas, coal remains indispensable for power generation in India. In response, the government is intensifying efforts to boost coal production and meet the country's growing demand.

To prevent any coal shortages and to support the broader goal of self-reliance in energy, it is crucial to develop a comprehensive repository detailing the current state of production, dispatch levels, and stock availability. In this context, I commend the Coal Controller Organization for releasing the Coal Directory of India 2023-24. This publication documents the steady progress India has made in the coal and lignite sectors and includes detailed information on reserves, production, dispatch, pit-head closing stock, value, imports, and exports, as well as performance data on captive blocks and washeries.

I believe this publication will be extremely valuable, and I congratulate the Coal Controller organization, Ministry of Coal, various government departments, and all other stakeholders involved for their efforts in bringing this publication to fruition.

Jai Hind!

(**G. Kishan Reddy**)

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सतीश चन्द्र दुबे
Satish Chandra Dubey

सत्यमेव जयते

आज़ादी का अमृत महोत्सव

राज्य मंत्री
कोयला एवं खान
भारत सरकार
MINISTER OF STATE FOR
COAL & MINES
GOVERNMENT OF INDIA

Message

As one of the fastest-growing economies globally, India's energy needs are increasing at a rapid rate. Ranked as the third-largest energy consumer in the world, India is poised to become a significant player in global energy growth, with demand centres increasingly shifting toward Asia.

The "Coal Directory of India 2023-24," published annually by the Coal Controller organisation, continues to offer a detailed overview of the coal and lignite sectors in India. This comprehensive and up-to-date database provides valuable insights into various aspects of India's coal industry, including reserves, exploration, production, dispatch, stock, value, imports, exports, and the performance of captive blocks and washeries.

I would like to acknowledge the exceptional work of the statistics team at the Coal Controller Organisation. Their relentless dedication has been crucial in making this publication possible. Special thanks go to the Coal Controller, and his team for their pivotal role in gathering and organizing the data for this report

(Satish Chandra Dubey)

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सत्यमेव जयते

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MESSAGE

It is with great pleasure that I introduce the Coal Directory of India 2023-24, the premier publication from the Coal Controller Organization for the fiscal year 2024. This report offers an in-depth and detailed overview of the Coal and Lignite sectors in India, drawing on the most accurate and reliable data available.

Coal remains a fundamental and indispensable energy source in India and is expected to retain a significant role in the country's energy landscape for the foreseeable future. Accurate and well-presented data is crucial for effective planning and decision-making in this sector.

This annual report is designed to serve the data needs of researchers, policymakers, and other stakeholders, delivering valuable insights into coal resources, reserves, and the performance of washeries, among other topics.

I extend my heartfelt thanks to the entire team at the Coal Controller Organization, for their dedicated work in producing this essential publication. I also appreciate the contributions of all stakeholders who provided vital data in a timely manner. I trust that this comprehensive repository of data on coal sector will be a valuable resource for all readers and other stakeholders.

(V.L. Kantha Rao) 4/10

New Delhi
Dt.04.10.2024

विस्मिता तेज, भा.रा.से.
अपर सचिव
Vismita Tej, IRS
Additional Secretary

आज़ादी का अमृत महोत्सव

सत्यमेव जयते

भारत सरकार
GOVERNMENT OF INDIA
कोयला मंत्रालय
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Message

I am very happy to note that the much awaited ***"Coal Directory of India, 2023-24,"*** a detailed documentation highlighting the achievements within the country's Coal and Lignite sector, is being published.

Coal has been the primary source of energy in the country. It accounts for close to 50% of our commercial energy needs while close to 75% of power generation depends on Coal. The Ministry of Coal is committed to advancing this sector while ensuring energy security. The concerted efforts of the Ministry of Coal have played a crucial role in reiterating this goal.

The ***"Coal Directory of India, 2023-24"*** is a handy reference for assessing the sector's progress in all areas like reserves, exploration, production, supplies, allocation of coal blocks, imports etc. I am sure this document would support informed decision-making and strategic planning.

I extend my sincere thanks to the Coal Controller's Organization for their dedication in compiling and publishing this valuable resource. I wish the publication a resounding success.

Vismita Tej 30/9/24

(Vismita Tej)
Additional Secretary

रूपिंदर बरार, भा.रा.से.
अपर सचिव
Rupinder Brar, IRS
Additional Secretary

सत्यमेव जयते

भारत सरकार
GOVERNMENT OF INDIA
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Message

Coal plays a crucial role in the economy, acting as a key driver for national growth and development. It remains the primary source of commercial energy in India, representing half of the country's total energy consumption and being the leading fuel for electricity generation due to its reliability compared to other renewable energy sources.

Having precise and high-quality data on Coal and Lignite is essential for effective analysis and informed decision-making. The **"Coal Directory of India 2023-24"** serves as an invaluable resource, offering a thorough overview of the Coal and Lignite sector both in India and globally.

I would like to express my deepest appreciation to the team that compiled and published this document. It stands as the definitive source of important data on the Coal and Lignite sector up to 2023-24, providing the most current and reliable statistics available. I am confident that this document will remain a valuable resource for stakeholders, policymakers, and researchers.

(Rupinder Brar)
Additional Secretary & NA

सजीश कुमार एन
कोयला नियंत्रक
SAJEESH KUMAR N
Coal Controller

सत्यमेव जयते

आज़ादी का अमृत महोत्सव

भारत सरकार
GOVERNMENT OF INDIA
कोयला मंत्रालय
MINISTRY OF COAL
कोयला नियंत्रक का कार्यालय
OFFICE OF THE COAL CONTROLLER

Foreword

Energy plays a crucial role in both national security and economic growth. Recent years have seen significant changes in the coal sector aimed at enhancing energy security, efficiency, and sustainability. Given that coal meets roughly 75% of India's electricity needs, it is vital for the energy sector and policymakers to have access to reliable and affordable coal supply information, especially as the demand for cleaner coal increases. A comprehensive database is essential for devising effective strategies for the coal sector.

The ***"Coal Directory of India 2023-24"*** offers extensive details on coal and lignite production, productivity, deposit concentrations, sectoral dispatches, demand, indigenous supply, pit head stocks, and import/export destinations. This report is valuable to various stakeholders, including central ministries, the coal industry, the power sector, research institutions, and academics. It also includes data on Captive Blocks and Washery Performance. Published annually, this report is part of our commitment under the Collection of Statistics Act, 2008 and its 2017 amendment.

I would like to express my sincere thanks to the Managing Directors of all public and private sector organizations for their cooperation and timely data provision. Special gratitude goes to Hon'ble Minister of Coal & Mines, Hon'ble Minister of State for Coal & Mines, Secretary, Ministry of Coal, and Senior officers for their guidance, and to the officers/staff of the Coal Controller Organization for their exceptional efforts in producing this report.

We welcome any suggestions for improving both the content and presentation of this publication.

New Delhi

(Sajeesh Kumar N.)
Coal Controller

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Young Professional

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Young Professional

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Sawan Prakash
Stenographer

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01. Historical Perspective

Section I

A. Historical Perspective

1.1 Coal Sector in India

1.1.1 Commercial use of coal in India is said to have started about two thousand years ago at places close to coal regions in the eastern part of the country. In 1774, Summer & Heatley applied to M/s. East India Company to raise coal in Raniganj coalfield along the Western Bank of river Damodar. However, coal mining did not receive adequate attention due to its inferior quality as compared to the quality of coal in UK. During this period production from coal mining activities were modest. However, coal mining received a thrust with the setting up of a rail link between Howrah and Raniganj in 1853.

1.1.2 The monopoly of M/s. East India Company was abolished in 1813 and this paved way for rapid inroad of private commercial organizations in coal sector. In 1843, M/s. Bengal Coal Company Limited was registered as a first joint stock company. Steam engines were introduced during this period and demand of coal continued to grow.

1.1.3 Since 1920, a number of commissions & committees made observations on the question of conservation and winning of coal, safety of mines etc. which led to introduction of regulations and controls of the coal industry, in some form or other, in India. All the regulations and controls were directed towards state ownership of the coal mines in the country. Singareni Collieries Company Limited (SCCL) established in 1920 as a public limited company, has the distinction of being the first Government owned Coal Company in the country in 1945. In fact, in 1945, Nizam of Hyderabad bought majority of the shares of the company and brought the company under the State of Hyderabad. From 1945 to 1949, the Hyderabad Construction Company Limited worked as Managing Agent of SCCL. In 1949 this function was entrusted to Industrial Trust Fund by the then Government of Hyderabad. Pursuant to the reorganization of States in 1956, the controlling interest of the company devolved on the Government of Andhra Pradesh. Thus, SCCL became a Government Company under the Companies Act in 1956. SCCL is now a joint undertaking of Government of Telangana and Government of India sharing its equity in 51:49 ratio.

1.1.4 In 1956, National Coal Development Corporation (NCDC) came into existence as a Government of India Undertaking with the collieries owned by the railways as its nucleus. During the sixties, the coal industry passed through a period of cheap availability of oil. The situation, however, took a radical turn in the seventies due to spiraling up of oil prices resulting in hike in coal demand.

1.2 Nationalisation of Coal Mines

1.2.1 Coal mines in India were nationalised in 1972-73 with the objectives of reorganizing and restructuring of coal mines in the back drop of the then existing unsatisfactory mining conditions, violation of mine safety norms, industrial unrest, inadequate capital investments in mine development, reluctance to mechanize the mining, etc. It also aimed at meeting the long-range coal requirements of the country.

1.2.2 The nationalisation was done in two phases, the first with the nationalization of the coking coal mines in 1971-72 and then with the nationalization of the non-coking coal mines in 1973. The Coking Coal Mines (Emergency Provisions) Ordinance was promulgated by the Government of India on 16.10.1971 under which except the captive mines of TISCO and IISCO, the management of all coking coal mines was taken over by the Government. A new company called Bharat Coking Coal Limited was formed as a subsidiary company of Steel Authority of India Limited to manage the taken over mines. These mines were subsequently nationalised w.e.f. 1.5.1972. Later on the management of 711 non-coking coal mines was also taken over by the Government with effect from 31.1.1973 and they were nationalised w.e.f. 1.5.1973 and a new Government Company namely, Coal Mines Authority Limited (CMAL) with headquarters at Calcutta, was set up by the Government in May, 1973 to manage the non-coking coal mines. The CMAL was organised as a unitary structure on divisional pattern with four Divisions, the Central Division, the Eastern Division, the Western Division and the CMPDIL. The mines of erstwhile National Coal Development Corporation were brought under the Central Division of the CMAL. In September, 1975 Coal India Limited (CIL) was formed as a Holding Company with five subsidiaries namely Bharat Coking Coal Limited (BCCL), Central Coalfields Limited (CCL), Eastern Coalfields Limited (ECL), Western Coalfields Limited (WCL) and Central Mine Planning and Design Institute Limited (CMPDIL).

1.2.3 In view of the projected increase in production and investment contemplated for CCL and WCL group of coal mines and in view of their extensive geographical spread resulting in day to day administrative, technical and communication problems etc. two more coal companies,

namely, Northern Coalfields Limited (NCL) with headquarters at Singrauli (Madhya Pradesh) and South Eastern Coalfields Limited (SECL) with headquarters at Bilaspur (Chhattisgarh) were formed w.e.f. 28.11.1985.

1.2.4 Considering the prospects of Orissa Coalfields, being the growth center for the VIII and IX Plan periods, a new coal company was formed bifurcating South Eastern Coalfields Limited (SECL). The new company, Mahanadi Coalfields Limited (MCL) was incorporated on 3rd April, 1992 with its head qquarter at Sambalpur (Orissa) as fully owned subsidiary of Coal India Limited to manage the Talcher and IB-Valley Coalfields in Orissa.

1.2.5 CIL have now 8 subsidiaries viz. Bharat Coking Coal Limited (BCCL), Central Coalfields Limited (CCL), Eastern Coalfields Limited (ECL), Western Coalfields Limited (WCL), South Eastern Coalfields Limited (SECL), Northern Coalfields Limited (NCL), Mahanadi Coalfields Limited (MCL) and Central Mine Planning and Design Institute Limited (CMPDIL). The CMPDIL is an engineering, design and exploration company set up for preparing perspective plan(s), rendering consultancy services and undertaking exploration and drilling work to establish coal reserves in the country and collection of detailed data for preparation of projects for actual mining. The other seven subsidiaries of CIL are coal producing companies.

1.2.6 CIL and its subsidiaries are incorporated under the Companies Act, 1956 and are wholly owned by the Central Government. The coal mines in Assam and its neighbouring areas are controlled directly by CIL under the unit North Eastern Coalfields.

1.3 Captive Coal Mining

1.3.1 Coal Mines (Nationalisation) Act, 1973 already excluded from its purview the captive coal mines of TISCO, IISCO & DVC. Further, considering the need to provide boost to thermal power generation and for creating additional thermal power capacity during VIIIth Five-year Plan, the Government decided to allow private participation in the power sector. The Coal Mines (Nationalisation) Act, 1973 was amended on 9th June 1993 to allow coal mining by both private and public sectors for captive consumption for production of iron and steel, generation of power, washing of coal obtained from a mine and other end use, which would be notified by the Government from time to time. While cement production was allowed as an end use on w.e.f. 05.03.1996, latest amendment on 12.07.2007 made production of Syn-gas obtained from coal gasification and coal liquefaction also as an end use. The restriction of captive mining does not apply to state-owned coal/mineral development undertakings like CIL, SCCL, Neyveli Lignite Corporation (NLC) coal blocks etc. and Mineral Development Corporations of the State Governments.

1.3.2 Till date coal mining is kept under the purview of public sector except captive mining for the approved end use industries viz., iron and steel, power, cement, washing of coal and coal gasification and liquefaction. Role and contribution of private sector captive coal mining, which has been very insignificant till recent past, has now acquired significance. Government further decided in its new mining policy to allow the State Government companies and undertakings to go for coal and lignite mining without the earlier restriction of isolated small pockets only.

1.3.3 The policy of the allotment of Captive Coal Blocks was adopted by the Government of India in the year 1993 and as per this policy by the end of 2013-14, out of total allocated 218 coal blocks, 80 coal blocks were de-allocated. Thus, at the end of 2013-14, 138 coal blocks remained allocated under the category of Captive Coal Block.

Subsequent to the order of the Hon'ble Supreme Court of India, 42 nos. of producing coal blocks [Schedule II coal mines as per the Coal Mines (Special Provisions) Ordinance, 2014 replaced by the Coal Mines (Special Provision) Act, 2015] were allowed to produce coal up to 31.03.2015. Thus total number of blocks stand allocated from 25.09.2014 to 31.03.2015 was 52 [42 + 10 earlier coal blocks].

1.3.4 During the year 2014-15 by virtue of judgment dated 25.08.2014 read with the order dated 24.09.2014 of the Hon'ble Supreme Court of India, out of 218 captive coal blocks, allocation of 204 coal blocks were cancelled except allocation of 12 coal blocks for UMPPs and one coal block each allocated to NTPC and SAIL. Further, allocation of four coal blocks for UMPPs were cancelled in 2015-16. These consisted of Chhatrasal Coal Block, which was cancelled on 07.05.2015; and Meenakshi coal Block, consisting of Meenakshi, Meenakshi B and Dip side of Meenakshi blocks, which was cancelled on 15.12.2015. As on date 10 coal blocks allocated through earlier dispensations stand allocated.

As per Coal Mines (Special Provisions) Act, 2015, allocation of coal mines started by way of Public Auction or on the basis of Competitive Bids for Tariff.

Under the Mines and Minerals (Development and Regulation) (MMDR) Act, coal blocks are being allocated/vested to different companies.

As on 31.03.2024, the number of coal blocks that exist is 159 (Vested/Allotted - 121 + Under MMDR act – 34 + Blocks not cancelled - 4).

1.4 Distribution and Marketing of Coal

1.4.1 A new coal distribution policy (NCDP) has been notified on 18.10.2007 with an objective to meet the demand of coal from consumers of different sectors of the economy, both on short- and long-term basis, in an assured, sustained, transparent and efficient manner with built-in commercial discipline. Apart from meeting the requirement up to a satisfactory level through commercially enforceable Fuel Supply Agreement (FSA), it also provides for dedicated source of supply through State Government nominated agencies, for consumers in small and medium sector, whose annual requirement does not exceed 4200 metric tonnes. E-auction scheme has also been introduced to cater to some demands through e-auction.

1.4.2 Salient features of the New Coal Distribution Policy:

1. Existing classification of core and non-core sector is dispensed with. Each sector/ consumer would be treated on merit keeping in view regulatory provision applicable thereto and coal will be supplied by CIL/SCCL through Fuel Supply agreement (FSA), a legally enforceable buyer-seller coal supply agreement.
2. Requirement of Defence and Railways will be made in full at notified price.
3. While for Power (utilities), including Independent Power Producers/ CPP and Fertilizer Sector, 100% of normative requirement of coal at notified price will be supplied, for other consumers this will be 75%.
4. Supply of coal to steel plants would be based on FSA and pricing would be on import parity pricing.
5. Consumers in small and medium sector, requiring coal less than 4200 tonnes annually will take coal either from state govt. notified agencies/NCCF//NSIC or from CIL/SCCL through FSA. CIL/SCCL will supply coal to the nominated agencies for such distribution.
6. A Standard Operating Procedure (SOP) has been put in place since February 2020 for proportionate reduction of linkage to the coal block allocatees on the basis of requirement of coal being met from allotted coal mines/blocks.
7. New consumers of Power (U) /IPP/CPP/ Fertilizers/ Cement/ DRI plant will be issued Letter of Assurance (LOA), with a validity of 24 months, subject to prevailing norm, recommendation of concerned Ministry and 5% Earnest money deposit. On necessary progress of the plants, consumer may approach to CIL/SCCL for converting LOA into FSA.
8. Existing Standing Linkage Committee would continue to recommend LOA in respect of Power (U)/ IPP /CPP, Cement and Sponge Iron Plants including Steel.

1.5 Import of Coal

1.5.1 Present import policy allows coal to be freely imported under Open General License by the consumers themselves considering their needs. Coking coal is imported by Steel sector and coke manufacturers mainly on availability and quality consideration. Coast based power stations and cement plants are also importing non-coking coal on consideration of transport logistics, commercial prudence. In 2019-2020, international prices of both coking and non-coking coal declined but in the first quarter of the year 2020 they picked up and remained stable. In 2021-22 & 2022-23 the coal import prices have seen a historical rise of 97.19% & 67.66%. In 2023-24, coal imports increased by 9.80%, totaling 260.953 MT. However, total spending on coal decreased by 20.14%.

1.6 Notified Price of Coal

1.6.1 Under the Colliery Control Order, 1945, the Central Government was empowered to fix the prices of coal grade-wise and colliery-wise. As per recommendations of Bureau of Industrial Costs and Prices and the Committee on Integrated Coal Policy, prices of different grades of coal had been subjected to deregulation since 22.03.1996, in a phased manner. The pricing of coal has been fully deregulated after the notification of the Colliery Control Order, 2000 in place of Colliery Control Order, 1945.

B. Concepts, Definitions and Practices

1.7 Coal

Coal is a combustible sedimentary rock formed from ancient vegetation which has been consolidated between other rock strata and transformed by the combined effects of microbial action, pressure and heat over a considerable time period. This process is commonly called 'coalification'. Coal occurs as layers or seams, ranging in thickness from millimeters to many tens of metres. It is composed mostly of carbon (50–98 per cent), hydrogen (3–13 per cent) and oxygen, and smaller amounts of nitrogen, Sulphur and other elements. It also contains water and particles of other inorganic matter. When burnt, coal releases energy as heat which has a variety of uses.

1.8 Classification of Coal

1.8.1 Coal refers to a whole range of combustible sedimentary rock materials spanning over a continuous quality scale. For convenience, this continuous series is often divided into two main categories, namely **Hard Coal** and **Brown Coal**. These are further divided into multiple subcategories as given below.

- **Hard Coal**
- Anthracite
- Bituminous coal
- Coking coal
- Other bituminous coal
- **Brown coal**
- Sub-bituminous coal
- Lignite

1.8.2 In practice, hard coal is calculated as the sum of anthracite and bituminous coals. Anthracite is a high-rank, hard coal used mainly for industrial and residential heating. Bituminous coal is a medium-rank coal used for gasification, industrial coking and heating and residential heating. Bituminous coal that can be used in the production of a coke capable of supporting a blast furnace charge is known as **coking coal**. Other bituminous coal, not included under coking coal, is also commonly known as **thermal coal**. This also includes recovered slurries, middling and other low-grade, higher-rank coal products not further classified by type.

1.8.3 Classifying different types of coal into practical categories for use at an international level is difficult because divisions between coal categories vary between classification systems, both nationally and internationally, based on calorific value, volatile matter content, fixed carbon content, caking and coking properties, or some combination of two or more of these criteria.

1.8.4 Although the relative value of the coals within a particular category depends on the degree of dilution by moisture and ash and contamination by sulphur, chlorine, phosphorous and certain trace elements, these factors do not affect the divisions between categories.

1.8.5 The International Coal Classification of the Economic Commission for Europe (UNECE) recognizes two broad categories of coal:

i) **Hard coal** – Coal of gross calorific value not less than 5700 kcal/kg (23.9 GJ/t) on an ash-free but moist basis and with a mean random reflectance of vitrinite of at least 0.6.

ii) **Brown coal** – Non-agglomerating coal with a gross calorific value less than 5700 kcal/kg (23.9 GJ/t) containing more than 31% volatile matter on a dry mineral matter free basis.

1.8.6 It should be stressed that the above classification system is based on the inherent qualities of the coal in question and not on the final use of the coal. In this way the classification system attempts to be objective and simple to apply.

1.9 Classification of Coal in India

1.9.1 In India coal is broadly classified into two types – Coking and Non-Coking. The former constitutes only a small part of the total coal resources of the country. These two are further subdivided as follows on the basis of certain physical and chemical parameter as per the requirement of the industry.

1.9.2 Coking Coal: Coking coal, when heated in the absence of air, form coherent beads, free from volatiles, with strong and porous mass, called coke. Coking coal has coking properties and is mainly used in steel making and metallurgical industries.

1.9.3 Semi Coking Coal: Semi Coking Coal, when heated in the absence of air, form coherent beads not strong enough to be directly fed into the blast furnace. Such coal is blended with coking coal in adequate proportion to make coke. Clearly, Semi Coking Coal has comparatively fewer coking properties than coking coal. It is mainly used as blendable coal in steel making, merchant coke manufacturing and other metallurgical industries.

1.9.4 Non-Coking Coal: Non-Coking Coal does not have coking properties and is mainly used for power generation. It is also used for cement, fertilizer, glass, ceramic, paper, chemical and brick manufacturing, and for other heating purposes.

1.9.5 Washed Coal: Processing of coal through water separation mechanism to improve the quality of coal by removing denser material (rocks) and high ash produces washed coal which has less ash, higher moisture, better sizing, better consistency, less abrasiveness, etc. The washed coking coal is used in manufacturing of hard coke for steel making. Washed non-coking coal is used mainly for power generation but is also used by cement, sponge iron and other industrial plants.

1.9.6 Middlings and Rejects:

In the process of coal washing, apart from Clean Coal we also get two by-products, namely, Middlings and Rejects. Clean coal has low density whereas rejects have high density. Middlings have intermediate density. Rejects contain high ash, mineral impurities, fraction of raw coal feed, etc. and are used for Fluidized Bed Combustion (FBC) Boilers for power generation, road repairs, briquette (domestic fuel) making, land filling, etc. Middlings are fraction of raw coal feed having values of classificatory parameters between that of clean coals and rejects. It is used for power generation. It is also used by domestic fuel plants, brick manufacturing units, cement plants, industrial plants, etc.

1.9.7 Hard Coke: Solid product obtained from carbonaisation of coal, used mainly in the iron & steel industry.

1.10 Categorisation of Coal in India

1.10.1 In India, **coking coal** has been categorized or graded on the basis of ash content as per following scheme:

Grade	Ash Content
Steel Gr I	Ash content < 15%
Steel Gr II	15%<=Ash content<18%
Washery Gr. I	18%<=Ash content<21%.
Washery Gr. II	21%<=Ash content<24%
Washery Gr. III	24%<=Ash content<28%
Washery Gr. IV	28%<=Ash content<35%
Washery Gr. V	35%<=Ash content<42%
Washery Gr. VI	42%<=Ash content<49%

1.10.2 In India, **semi coking coal** has been categorized or graded on the basis of ash and moisture content as per following scheme:

Grade	Ash + Moisture content
Semi coking Gr. I	less than 19%
Semi coking Gr. II	Between 19% and 24%

1.10.3 In India, **non-coking coal** had been categorized or graded on the basis of Useful Heat Value (UHV) as per following scheme:

Grade	Useful Heat Value
A	UHV.> 6200 KCal/Kg
B	6200 >=UHV(KCal/Kg)>5600
C	5600 >=UHV(KCal/Kg)>4940
D	4940 >=UHV(KCal/Kg)>4200
E	4200 >=UHV(KCal/Kg)>3360
F	3360 >=UHV(KCal/Kg)>2400
G	2400 >=UHV(KCal/Kg)>1300

N.B:

1. "Useful heat value" is defined as:

UHV = 8900- 138 (A + M)

Where UHV = Useful heat value in KCal/kg,

A = Ash content (%).

M = Moisture content (%).

2. In the case of coal having moisture less than 2 percent and volatile content less than 19 percent the useful heat value shall be the value arrived as above reduced by 150 kilo calories per kilogram for each 1 percent reduction in volatile content below 19 percent fraction pro-rata.

3. Both moisture and ash are determined after equilibrating at 60 percent relative humidity and 40 degree C temperature.

4. Ash percentage of coking coals and hard coke shall be determined after air drying as per IS: 1350 - 1959. If the moisture so determined is more than 2 per cent, the determination shall be after equilibrating at 60 percent relative humidity at 40 degree C temperature as per IS: 1350 - 1959.

1.10.4 In order to adopt the best international practices, India decided to switch over from the grading based on Useful Heat Value (UHV) to the grading based on Gross Calorific Value (GCV) and therefore on 16.01.2011 the Ministry of Coal notified the switch over. As per the new system, following nomenclature has been introduced for gradation of **non-coking coal**.

Grades	GCV Range (Kcal/Kg)
G1	GCV exceeding 7000
G2	GCV between 6701 & 7000
G3	GCV between 6401 & 6700
G4	GCV between 6101 & 6400
G5	GCV between 5801 & 6100
G6	GCV between 5501 & 5800

G7	GCV between 5201 &5500
G8	GCV between 4901 & 5200
G9	GCV between 4601 & 4900
G10	GCV between 4301 & 4600
G11	GCV between 4001 & 4300
G12	GCV between 3700 & 4000
G13	GCV between 3400 & 3700
G14	GCV between 3101 & 3400
G15	GCV between 2801 & 3100
G16	GCV between 2501 & 2800
G17	GCV between 2201 & 2500

1.10.5 Based on the GCV ranges of proposed gradation and erstwhile gradation, a concordance table is generated for better understanding. However, it may be noted that this concordance does not depict exact one-to-one relation between the two systems.

Table 5: Concordance Table

Old Grading based on UHV	New Grading based on GCV
A	G1
	G2
	G3
B	G4
	G5
C	G6
D	G7
	G8
E	G9
	G10
F	G11
	G12
G	G13
	G14
Non-coking Coal Ungraded	G15
	G16
	G17

1.11 Some General Concepts

1.11.1 Run-of-Mine (ROM) Coal: The coal delivered from the mine to the Coal Preparation Plant (CPP) is called run-of-mine (ROM) coal. This is the raw material for the CPP and consists of coal, rocks, middlings, minerals and contamination. Contamination is usually introduced by the mining process and may include machine parts, used consumables and parts of ground engaging tools. ROM coal can have a large variability of moisture and particle size.

1.11.2 Opencast Mining: Open-pit mining, open-cut mining or opencast mining is a surface mining technique of extracting rock or minerals from the earth by their removal from an open pit or borrow. This form of mining differs from extractive methods that require tunneling into the earth such as long wall mining. Open-pit mines are used when deposits of commercially useful minerals or rock are found near the surface; that is, where the overburden (surface material covering the valuable deposit) is relatively thin or the material of interest is structurally unsuitable for tunneling (as would be the case for sand, cinder, and gravel). For minerals that occur deep below the surface - where the overburden is thick or the mineral occurs as veins in hard rock - underground mining methods extract the valued material.

1.11.3 Underground Mining of Coal: It refers to a group of underground mining techniques such as Longwall Mining, Room-And-Pillar Mining, etc. used to extract coal from sedimentary ("soft") rocks in which the overlying rock is left in place, and the mineral (coal) is removed through shafts or tunnels.

1.11.4 Stripping Ratio: In mining, stripping ratio or strip ratio refers to the ratio of the volume of overburden (waste materials) required to be handled in order to extract some tonnage of coal. For example, a 3:1 stripping ratio means that mining one tonnes of coal will require mining three tonnes of waste materials. This is a phenomenon related to mainly Opencast (OC) mining which requires removal of overburden prior to extraction of coal. Underground mining operations tend to have lower stripping ratio due to increased selectivity.

1.11.5 Output Per Man Shift (OMS): Productivity means the ratio between input and output and can be interpreted in different ways in different contexts. In case of production of coal, we use Output per Man Shift (OMS). This is defined (in Tonnes) as the ratio of Production (in Million Tonnes) to Manshift (in Millions).

1.11.6 Despatch and Off-take: The term "Despatch" (say, of raw coal) is used in this compilation to mean all the despatch of coal to different sectors but exclude collieries' own consumption (boiler coal used in collieries and supply to employees). On the other hand, "Off-take" means total quantity of raw coal used/ lifted for consumption and naturally includes collieries own consumption. Therefore, Off-take = Despatch + Colliery Consumption.

1.11.7 Change of Stock: Change of Stock means the difference between opening and closing stock of an item.

1.11.8 Pit-Head Stock: The term "Pit-head Closing Stock" of raw coal is used in this compilation to mean all the raw coal stock at pit- head of collieries.

1.11.9 Pit-head Value: Pit-head Value of coal is the value of coal at pit-head of the colliery. It is computed on the basis of base price and therefore it does not involve any cost of loading, transportation from pit-head, Cess, Royalty, GST, etc. This approach is followed by all non-captive coal companies, viz., CIL Subsidiaries, The Singareni Collieries Companies Ltd. (SCCL), Jharkhand State Mineral Development Corporation Ltd. (JSMDCL) and Jammu & Kashmir Mineral Ltd. (JKML).

1.11.9.1 In case of captive collieries, pit-head value of coal depends upon their accounting policy. If the costing of coal is done on no-profit-no-loss basis then pit-head value is calculated accordingly. This practice is found to be followed in captive collieries of public sector units.

1.11.9.2 On the other hand, if the captive colliery is treated as independent commercial unit then pit-head value is calculated on the basis of unit value of realization, which includes cost price and profit/loss per unit but excludes any transportation cost from pit-head, Cess, Royalty, GST, etc. This is particularly followed in private captive colliery which is in contract to supply coal to any priority sector for which captive colliery is permitted (Steel, Iron, Power, Cement, etc.).

1.11.9.3 Even there are private sector collieries being managed by the parent company engaged in manufacturing of Steel and Iron, Power, Cement for which captive collieries are allowed. Due to non-availability of value figures from these companies, pit-head value of coal is determined on the basis of nearest Coal India Subsidiary price rate considering comparable grade and location. Though this may not be a correct price and would not depict a true picture, yet we use it because this is one of the acceptable estimates.

1.11.9.4 While using value data it is to be kept in mind that these data are useful for macro-level study or trend study. However, the quality of coal has been deteriorating over the years, quite inversely proportional to the open cast production share in the total production. Thus, the comparison of unit value over the years would not reflect correct picture of inflation until this deteriorating effect of quality is not considered and that effect is removed.

1.11.9.5 It may be concluded that, in India, unit value (Rs.) of coal in terms per kilo calorie useful heat value has been increasing more rapidly than being exhibited by simple unit value comparison over the years.

1.12 Commodity Classification

1.12.1 For export import data, the 8-digit codes of Indian Trade Classification (based on Harmonized Coding System) have been adopted by DGCI&S in classifying the various grades of coal and coal products. For Coking coal, the only 8-digit code is “27011910” and all other codes of coal are taken as non-coking coal (Mainly pertains to remaining part of 2701, some parts of 2702 & 2703). Similarly, for all items in 2704 group has been taken under coke. The effect of retort carbon is negligible and included under coke.

Highlights

1. Production

In the year 2023-24, the total production of raw coal in India was 997.826 MT whereas it was 893.191 MT in 2022-23. Thus in 2023-24, production of coal increased by 11.71 % in comparison to 2022-23. In the year 2023-24 production of lignite was 42.921 MT against 44.029 MT in 2022-23, thus in 2023-24 lignite production decreased by 2.52% against 2022-23. [Ref: Table 3.1]

The contribution of Public Sector and Private Sector in the production of Raw Coal in 2023-24 was as follows: [Ref: Table 3.11]

Production of Raw Coal in 2023-24 (MT)			
Sector	**Coking**	**Non-Coking**	**Total Coal**
Public	60.897	888.896	**949.793**
Private	5.924	42.109	**48.033**
All India	**66.821**	**931.005**	**997.826**

The production of coking coal in 2023-24 was 66.821 MT whereas it was 60.759 MT in 2022-23, thus registering a positive growth of 9.98%. In 2023-24, the production of non-coking coal was 931.005 MT whereas it was 832.432 MT in 2022-23, showcasing a positive growth of 11.84%. [Ref Table: 3.2].

In 2023-24, the production of washed coal (coking) was 5.397 MT whereas in 2022-23, the quantity was 5.310 MT which increased by 1.64% when compared with the previous year. In 2023-24, production of middling (coking) was 6.193 MT whereas in 2022-23, the quantity was 3.770 MT, hence, an increase of 64.27% was observed. [Ref Table: 3.3]

In 2023-24, Odisha registered the highest coal production of 239.402 MT (23.99%), followed by Chhattisgarh 207.255 MT (20.77%), Jharkhand 191.158 MT (19.16%) and Madhya Pradesh 159.228 MT (15.96%). In 2023-24, Tamil Nadu was the largest producer of lignite and produced 21.580 MT (50.28%) followed by Gujarat 11.326 MT (26.39%) and Rajasthan 10.015 MT (23.33%). [Ref Table: 3.9 & 3.10]

Coal India Limited produced 773.806 MT (77.55%) and SCCL 70.021 MT (7.02%) of coal in 2023-24. In that year, the main producer of lignite was Neyveli Lignite Corporation that produced 23.680 MT (55.17%). [Ref Table: 3.11 & 3.14a]

Like previous years, in 2023-24, Jharkhand produced the maximum coking coal in India, MT which was 99.62% of total coking coal production (66.569 MT). Odisha was the highest non-coking coal producing state, producing 239.402 MT (25.71%) of the total non-coking production of 931.005 MT, followed by Chhattisgarh which produced 207.039 MT (22.24%) and Madhya Pradesh 159.192 MT (17.10%). [Ref Table: 3.13]

In 2023-24, around 96.56% of coal production in India was from Open Cast mines (963.495 MT) and the rest 3.44% was from Underground mines (34.331 MT). [Ref Table: 3.19]. MCL produced the highest quantity of coal from Open Cast mines, 205.643 MT (21.34%) followed by SECL which produced 175.412 MT (18.21%). SECL produced the highest quantity of coal from Underground mines, 11.964 MT (34.85%) followed by ECL which produced 9.183 MT (26.75%). [Ref Table: 3.20]

Overall stripping ratio [stripping ratio is defined as the ratio of overburden removal to coal produced in open cast mining] for the year 2023-24 was 2.93.. The stripping ratio for CIL mines was 2.56, for SCCL mines was 6.51 and for total public companies was 2.90 whereas it was 3.51 for private companies. [Ref Table 3.22]

Productivity (OMS) of Overall in year 2023-24 was 14.99 Tonnes for CIL and 5.41 Tonnes for SCCL. OMS for Open Cast mines was 24.88 Tonnes for CIL and 13.24 Tonnes for SCCL. OMS for Underground mines of CIL was 1.21 Tonnes and for SCCL was 1.19 Tonnes. (OMS is the output measured in tonnes per unit of man-shift) [Ref Table: 3.23].

2. Despatch

In the year 2023-24, despatch of indigenous raw coal was 973.009 MT against 877.369 MT in 2022-23, thus showing a increase of 10.90%. In 2023-24, despatch of lignite was 42.594 MT against 46.822 MT in 2022-23, thus showing a negative growth of 9.03%. [Ref Table: 4.1]

The contribution of Public Sector and Private Sector in the despatch of raw coal in 2023-24 was as follows: [Ref Table: 4.9]

Despatch of Raw Coal in 2023-24 (MT)			
Sector	**Coking**	**Non-coking**	**Total Coal**
Public	58.100	867.864	**925.964**
Private	5.904	41.141	**47.045**
All India	**64.004**	**909.005**	**973.009**

Despatch of coking coal increased to 64.004 MT in 2023-24 from 59.413 MT in 2022-23, thus, showing a positive growth of 7.73% over 2022-23. [Ref: Table 4.2].

In 2023-24, despatch of non-coking coal 909.005 MT whereas it was 817.956 MT in 2022-23, thus showing a positive growth of 11.13% over 2022-23.. [Ref Table: 4.2]

In 2023-24, despatch of washed coal (coking) was 5.370 MT against 5.277 MT in 2022-23, thus increasing by 1.76%. In 2023-24, despatch of middling (coking) was 6.181 MT against 3.860 MT in 2022-23, thus increasing by 60.13%. [Ref Table: 4.3]

In 2023-24 major quantity of coal was despatched from Odisha 231.789 MT (23.82%) followed by Chhattisgarh 201.163 MT (20.67%), Jharkhand 182.304 MT (18.74%), Madhya Pradesh 130.561 MT (13.42%), Telangana 72.351 MT (7.44%) and Maharashtra 70.595 MT (7.26%). [Ref Table: 4.7]

In case of lignite despatch, Tamil Nadu had the highest share of 20.921 MT (49.12%) followed by Gujarat 11.347 MT (26.64%) and Rajasthan 10.326 MT (24.24%) in 2023.24. [Ref Table: 4.8]

Out of the total despatch of raw coal in 2023-24, despatch of CIL was 753.533 MT (77.44%) and SCCL 69.858 MT (7.18%). Among the other PSUs maximum coal was despatched by NTPC 34.219 MT (3.52%). Despatch of coal from private sector was 47.045 MT (4.84%) in which SPL had the largest share of 18.077 MT followed by JPL 6.874 MT. [Ref Table: 4.9]

Power Sector (Utility and Captive) continued to be the largest user of coal In 2023-24, coal despatched to power sector was 859.336 MT compared to 785.396 MT in 2022-23. Coal despatched to steel sector was 17.344 MT in 2023-24 and 13.382 MT in 2022-23. Coal despatched to Sponge Iron sector was 11.965 MT in 2023-24 compared to 8.903 MT in 2022-23. Coal despatched to cement sector was 9.163 MT in 2023-24 compared to 9.309 MT in 2022-23. [Ref Table: 4.20]

3. Pit Head Closing Stock

Pit-head closing stock of raw coal at the end of 2023-24 was 108.746 MT against 84.416 MT in 2022-23. Closing Stock of lignite at the end of 2023-24 was 1.883 MT whereas it was 1.556 MT at the end of 2022-23. [Ref Table: 5.1]. Out of total closing stock at the end of 2023-24, share of public sector was 105.314 MT (96.84%). [Ref Table: 5.7]

At the end of 2023-24, Pit-head closing stock of coking coal was 8.626 MT against 5.810 MT at the end of 2022-23 MT and pit-head closing stock of non-coking coal was 100.120 MT against 78.606 at the end of 2022-23. [Ref Table: 5.2].

4. Import and Export

In 2023-24, total import of coal was 264.531 MT compared to 237.668 MT in 2022-23, thus showing an increase of 11.30%. In 2023-24, import of coking coal was 58.813 MT compared to 56.053 MT in 2022-23, showing a increase of 4.93%. Import of non-coking coal was 205.718 MT in 2023-24 compared to 181.615 MT in 2022-23, depicting a increase of 13.27%. [Ref Table: 8.1]

In 2023-24, coal was mainly imported from countries such as Indonesia (115.711 MT), Australia (44.457 MT), South Africa (28.718 MT), Russia (23.122 MT), U.S.A (22.301 MT) and Singapore (10.091 MT). [Ref Table: 8.3]

In 2023-24, coal was mainly imported through ports such as Krishnapatnam (21.453 MT), Paradip Sea (20.611 MT), Dhamra(Chandbali) (19.594 MT), Visakhapatnam Sea (17.168 MT), Kolkata Sea (16.547 MT), Gangavaram port (16.361 MT), Mundra (15.331 MT), Sez Mundra(13.159 MT) Kandla Sea (12.743 MT),Jaigad (10.846 MT) among others. [Ref Table: 8.5]

In 2023-24, export of coal was 1.545 MT compared to 1.166 MT in 2022-23. Coal was mainly exported to Nepal (1.157 MT), Bangladesh (0.125 MT) and UAE (0.104 MT) among others. [Ref Table: 8.4]

5. Captive, Commercial & Other Coal and Lignite Blocks

In 2023-24, the production of raw coal from captive coal block (includes power and non-regulated sectors as end users) was 129.963 MT, the commercial coal block had contributed 17.722 MT (Including GP IV/2&3) in raw coal production, whereas the other coal blocks in India had produced 6.474 MT. [Ref Table: 3.7]

In 2023-24, Despatch of coal from captive coal blocks was 126.859 MT, the Commercial Coal Blocks had contributed 16.501 MT (Including GP IV/2&3) in raw coal despatch whereas the others coal blocks in India had despatch 6.450 MT. [Ref Table: 4.6]

As on 31.03.2024, the number of coal blocks that exist is 159 (vested/ allotted - 121 + Under MMDR act - 34 + Blocks not cancelled - 4).

The number of lignite blocks that stands allocated as on 31.03.2024, is 25.

6. Geological Coal Reserve

As per Geological Survey of India, geological reserve of coal in India as on 01.04.2024 was 3,89,421 Million Tonnes. The type wise break up of coal reveals that reserve of coking coal (prime, medium and semi-coking) was 36,812 Million Tonnes and non-coking coal was 3,52,608 Million Tonnes. [Ref Table: 2.1]

Total coal extracted since 1950 up to 2023-24 was around ***1,99,66,124*** Thousand Tonnes.

7. Comparison between Provisional and final figures

The following statement shows comparison between Provisional and Final figures of Production and Despatch of Coal and Lignite during last Ten Years.

Year	Item	Production (Qty. in MT)				Despatch (Qty. in MT)			
		Coking Coal	Non Coking Coal	Total Coal	Lignite	Coking Coal	Non Coking Coal	Total Coal	Lignite
2014-15	Provisional	57.451	554.984	**612.435**	48.257	56.614	551.016	**607.63**	46.941
	Actual	57.446	551.733	**609.179**	48.27	56.438	547.334	**603.772**	46.954
	Change(A-P)	-0.01%	-0.59%	**-0.53%**	0.03%	-0.31%	-0.67%	**-0.63%**	**0.03%**
2015-16	Provisional	60.887	578.347	**639.234**	43.843	59.213	572.956	**632.169**	42.212
	Actual	60.887	578.343	**639.23**	43.842	59.213	573.229	**632.442**	42.211
	Change(A-P)	0.00%	0.00%	**0.00%**	0.00%	0.00%	0.05%	**0.04%**	**0.00%**
2016-17	Provisional	61.661	601.131	**662.792**	45.23	59.545	590.774	**650.319**	43.155
	Actual	61.661	596.207	**657.868**	45.23	59.308	586.67	**645.978**	43.155
	Change(A-P)	0.00%	-0.82%	**-0.74%**	0.00%	-0.40%	-0.69%	**-0.67%**	**0.00%**
2017-18	Provisional	40.147	635.253	**675.4**	46.255	45.38	642.451	**687.831**	45.929
	Actual	40.148	635.252	**675.4**	46.644	45.38	644.623	**690.003**	46.317
	Change(A-P)	0.00%	0.00%	**0.00%**	0.84%	0.00%	0.34%	**0.32%**	**0.84%**
2018-19	Provisional	41.132	687.586	**728.718**	44.283	43.318	689.476	**732.794**	45.811
	Actual	41.132	687.586	**728.718**	44.283	43.318	689.476	**732.794**	45.811
	Change(A-P)	0.00%	0.00%	**0.00%**	0.00%	0.00%	0.00%	**0.00%**	**0.00%**
2019-20	Provisional	52.937	677.936	**730.873**	42.103	50.656	656.114	**706.77**	42.267
	Actual	52.936	677.938	**730.874**	42.096	50.656	656.52	**707.176**	42.267
	Change(A-P)	0.00%	0.00%	**0.00%**	-0.02%	0.00%	0.06%	**0.06%**	**0.00%**
2020-21	Provisional	44.787	671.297	**716.084**	36.614	44.001	646.887	**690.888**	37.22
	Actual	44.787	671.296	**716.083**	37.895	44	646.884	**690.884**	38.492
	Change(A-P)	0.00%	0.00%	**0.00%**	3.50%	0.00%	0.00%	**0.00%**	**3.42%**
2021-22	Provisional	51.702	726.488	**778.19**	47.49	54.402	764.595	**818.997**	49.073
	Actual	51.702	726.508	**778.21**	47.492	54.403	764.81	**819.213**	49.074
	Change(A-P)	0.00%	0.00%	**0.00%**	0.00%	0.00%	0.03%	**0.03%**	**0.00%**
2022-23	Provisional	60.760	832.430	**893.190**	44.990	59.413	817.956	**877.369**	46.822
	Actual	60.759	832.432	**893.191**	44.029	59.413	817.956	**877.369**	46.822
	Change(A-P)	0.00%	0.00%	**0.00%**	-2.14%	0.00%	0.00%	**0.00%**	**0.00%**
2023-24	Provisional	66.821	931.007	**997.828**	42.921	64.004	909.011	**973.015**	42.594
	Actual	66.821	931.005	**997.826**	42.921	64.004	909.005	**973.009**	42.594
	Change(A-P)	0.00%	0.00%	**0.00%**	0.00%	0.00%	0.00%	**0.00%**	**0.00%**

N.B: P=Provisional and A=Actual

Table 1.1 : Growth of India's Coal Sector at a Glance

Sl. No.	Item	Unit	2019-20	2020-21	2021-22	2022-23	2023-24
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1	**Reserves (Proved)**						
	(i) Coking Coal	Million Tonnes	20062.740	20169.030	20873.000	22161.750	23064.200
	(ii) Non Coking		143398.100	157009.910	166232.390	177742.060	189142.960
	(iii) Lignite		6787.530	7374.100	7505.590	7511.520	7964.430
2	**Opening Stock**						
	(i) Coal	Million Tonnes	57.640	81.432	109.060	68.901	84.416
	(ii) Lignite		5.672	5.495	4.981	3.389	1.556
3	**Production :**						
	(i) Coal	Million Tonnes	730.874	716.083	778.210	893.191	997.826
	(ii) Lignite		42.096	37.895	47.492	44.029	42.921
	(iii) Coal Products*		42.579	40.475	26.543	27.467	23.997
4	**Despatch :**						
	(i) Coal	Million Tonnes	707.176	690.884	819.213	877.369	973.009
	(ii) Lignite		42.267	38.492	49.074	46.822	42.594
	(iii) Coal Products*		42.224	40.259	27.193	27.200	24.262
5	**Closing Stock**						
	(i) Coal	Million Tonnes	81.432	109.060	69.901	84.416	108.746
	(ii) Lignite		5.495	4.981	3.389	1.556	1.883
6	**Imports**						
	(a) Quantity: Coal	Million Tonnes	248.537	215.251	208.627	237.668	264.531
	Coal Products		4.931	2.457	2.506	3.632	3.959
	Lignite		0.054	0.019	0.011	0.023	0.052
	Total (a)		**253.522**	**217.727**	**211.144**	**241.322**	**268.542**
	(b) Value: Coal	Million Rupees	1527320.55	1160240.54	2287841.24	3835843.76	3102154.51
	Coal Products		120644.85	44688.59	81031.26	135750.18	114746.92
	Lignite		1074.46	409.24	378.12	987.40	1444.89
	Total (a)		**1649039.87**	**1205338.37**	**2369250.62**	**3972581.35**	**3218346.32**
7	**Exports**						
	(a) Quantity: Coal	Million Tonnes	1.030	2.945	1.316	1.166	1.545
	Coal Products		0.022	0.025	0.503	0.034	0.137
	Lignite		0.093	0.187	0.814	0.333	0.002
	Total (a)		**1.144**	**3.158**	**2.633**	**1.534**	**1.685**
	(b) Value: Coal	Million Rupees	5832.07	5736.03	11232.01	15001.45	16434.74
	Coal Products		224.42	311.91	16148.01	702.81	3830.59
	Lignite		2480.98	4778.60	25916.73	14955.62	137.26
	Total (b)		**8537.47**	**10826.55**	**53296.75**	**30659.88**	**20402.59**
8	Unit Value of Coal Imports (gr.)	Rs./Tonne	6145.25	5390.17	10966.19	16139.51	11726.98
9	India's Total Exports	Million Rupees	22198542	29159577	31470215	36215499	36189523
10	India's Total Imports	Million Rupees	33609545	21590432	45727746	57498013	56160424
11	(i) Coal imports as percentage of India's total import	%	4.91%	5.58%	5.18%	6.91%	5.73%
	(ii) Coal exports as percentage of India's total export	%	0.04%	0.04%	0.17%	0.08%	0.06%

* Coal Products include Washed coal and Middlings produced from washeries owned by collieries and integrated steel plant.

Source: DGCI & S, Kolkata /Coal Companies/GSI

Table-1.2 : Total Primary Supply (TPS) of Coal & Lignite : 2014-15 to 2023-24

(Quantity in Million Tonnes)

Year	Fuel type	Production	Imports	Exports	Net Import	Opening Stock	Closing Stock	Stock Change (Opening - Closing)	T P S
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
2014-15	Coal	609.179	217.783	1.238	216.545	55.514	59.389	-3.875	821.849
	Lignite	48.270	0.001	0.003	-0.002	1.860	3.176	-1.316	46.952
	Total	**657.449**	**217.784**	**1.241**	**216.543**	**57.374**	**62.565**	**-5.191**	**868.801**
2015-16	Coal	639.230	203.949	1.575	202.374	59.389	65.361	-5.972	835.632
	Lignite	43.842	0.001	0.001	0.001	3.176	4.809	-1.633	42.210
	Total	**683.072**	**203.950**	**1.576**	**202.375**	**62.565**	**70.170**	**-7.605**	**877.842**
2016-17	Coal	657.868	190.953	1.773	189.180	65.361	76.889	-11.528	835.520
	Lignite	45.230	0.019	0.005	0.014	3.176	6.883	-3.707	41.537
	Total	**703.098**	**190.972**	**1.778**	**189.194**	**68.537**	**83.772**	**-15.235**	**877.057**
2017-18	Coal	675.400	208.249	1.504	206.745	75.952	62.036	13.916	896.061
	Lignite	46.644	0.010	0.004	0.006	6.883	7.210	-0.327	46.323
	Total	**722.044**	**208.259**	**1.508**	**206.751**	**82.835**	**69.246**	**13.589**	**942.384**
2018-19	Coal	728.718	235.348	1.306	234.042	62.036	57.640	4.396	967.156
	Lignite	44.283	0.019	0.079	-0.060	7.210	5.672	1.538	45.761
	Total	**773.001**	**235.367**	**1.385**	**233.982**	**69.246**	**63.312**	**5.934**	**1012.917**
2019-20	Coal	730.874	248.537	1.030	247.507	57.640	81.432	-23.792	954.589
	Lignite	42.096	0.054	0.093	-0.038	5.672	5.495	0.177	42.235
	Total	**772.970**	**248.591**	**1.122**	**247.468**	**63.312**	**86.927**	**-23.615**	**996.823**
2020-21	Coal	716.083	215.251	2.945	212.306	81.432	109.060	-27.628	900.761
	Lignite	37.895	0.019	0.187	-0.169	5.495	4.981	0.514	38.240
	Total	**753.978**	**215.270**	**3.133**	**212.137**	**86.927**	**114.041**	**-27.114**	**939.001**
2021-22	Coal	778.210	208.627	1.316	207.311	109.060	68.901	40.159	1025.680
	Lignite	47.492	0.011	0.814	-0.803	4.981	3.389	1.592	48.281
	Total	**825.702**	**208.638**	**2.129**	**206.509**	**114.041**	**72.290**	**41.751**	**1073.962**
2022-23	Coal	893.191	237.668	1.166	236.502	68.901	84.416	-15.515	1114.178
	Lignite	44.029	0.023	0.333	-0.310	3.389	1.556	1.833	45.552
	Total	**937.220**	**237.691**	**1.499**	**236.192**	**72.290**	**85.972**	**-13.682**	**1159.730**
2023-24	Coal	997.826	264.531	1.545	262.986	84.416	108.746	-24.330	1236.482
	Lignite	42.921	0.052	0.002	0.050	1.556	1.883	-0.327	42.644
	Total	**1040.747**	**264.583**	**1.547**	**263.036**	**85.972**	**110.629**	**-24.657**	**1279.126**

Note: Total Primary Supply is estimated as sum of indegenous production, Net Import & Stock Change.