54074

4th International Conference and Expo on **Coal Supply Chain & Technology**

Biswa Bangla Convention Centre, Kolkata

Expo: 12-13 Sep, 2024 | **Conference:** 13 Sep, 2024

Modernisation of Coal Supply Chain

Souvenir

SUPPORTED BY



Ministry of Coal Ministry of Mines Ministry of Steel Ministry of Power Ministry of Micro, Small and Medium Enterprises Ministry of Environment, Forest & Climate Change **Ministry of Earth Science** Niti Aayog, Govt. of India

























































LEADING THE LIGHT,YEARS AHEAD OF TIMES

Jindal Power Limited (JPL) is amongst India's leading Mega Power Plants built with state – of – the – art technology and consisting of Coal Mines of 28.55 MTPA, Coal Washeris of 11.55 MTPA, Pipe Conveyor and Transmission Lines. India's first Private Sector Entity to set up an Integrated Mega Power Plant of 1000 MW capacity at Tamnar, Chhattisgarh

JPL is one of the largest power producers in India with an installed power generation capacity of 4300 MW that caters to the need of country's power 24x7.

JPL is truly taking a giant leap forward for the country and strengthening the vigor of Make in India each passing day.



Jindal Power Limited | CIN No. - U04010CT1995PLC008985 | Corporate Office: Jindal Centre, Tower – B, Plot No. 2, Sector – 32, Gunagram 122 001, Haryana. | T: +91 124 6612000 | F: +91 124 661 2225 | E: Info@jindalpower.com | W; www.jindalpower.com Registered Office: Tamnar – 496 107, District Raigarh, Chhattlisgarh.

The Lignite Giant now Ignites the Nation with Clean & Green Energy...



To reap the benefits of the renewable energy revolution, as a part of the National Solar Mission, Government of India has set a target to achieve 1,75,000 MW of Solar Power. NLCIL has an ambitious plan to establish 6031 MW of renewable energy projects including 200 MW Wind Power Projects in Tamilnadu and various states. Presently, the Company has a total renewable energy capacity of 1421 MW which includes 1370 MW of Solar Power Plants and 51 MW Wind Power Plant. NLCIL is the first CPSE to cross 1 GW capacity in solar power generation and became the member of International Solar Alliance (ISA)

Renewable Energy Projects under operation

- 141 MW Solar Power Projects (SPP) including Roof top solar project at Neyveli. A 10 MW Solar Power Project in Neyveli, under Mini Smart City Scheme is under construction.
- 1209 MW Solar Power Projects at Tirunelveli, Virudhunagar, Ramanathapuram and Thoothukudi Districts of Tamilnadu.
- 200 KW, R&D Pilot Scale Floating SPP in Neyveli New Thermal Power Project's Raw Water Reservoir.
- 20 MW SPP, integrated with 8 MWHr Battery Energy Storage System at South Andaman Island. This is the largest battery bank in India for catering the variation in solar insolation.

 51 MW (34 x 1.5 MW) Wind Power Project at Tenkasi District in Tamilnadu.

Renewable Energy Projects under consideration

- A JV Company, "Coal Lignite Urja Vikas Pvt Limited" is incorporated on 10.11.2020 with Coal India Limited for establishing 3000 MW Solar Power Projects at various parts of the country.
- On 15-06-2023 NLCIL has incorporated a wholly owned subsidiary Company (NLC India Renewables Limited)
- An MoU was signed with Assam Power Distribution Company on 09-08-2022 to develop 1000 MW Solar Power Project in the State of Assam. Another MoU was signed with Grid Corporation of Odisha (GRIDCO) on 01.12.2022 for developing Renewable Energy and Green Hydrogen Projects in Odisha.
- Won bid for 660 MW Solar Power Projects, floated by Solar Energy Corporation of India (SECI) and Indian Renewable Energy Development Agency (IREDA)









NLC India Limited

'Navratna' - Government of India Enterprise

Registered Office: 135, EVR Periyar High Road,

Kilpauk, Chennai - 600 010.

Corporate Office: Block-1, Neyveli - 607 801,

Cuddalore District, Tamil Nadu, India. Website: www.nlcindia.in



INDIAN COAL FORUM



A National Think-Tank devoted to Coal Industry – Indian and Global.

- Serves as voice of Coal at National and International Fora.
- · Contributes to formulation of India's Coal Policy.
- Facilitates working of Indian Coal Companies with Government of India and State Governments.
- Helps coal consumers in all matters related to coal
- Collaborates with Industry bodies like MGMI, TERI, CII, FICCI, ASSOCHAM and International Bodies like Future Coal, UNDP, World Energy Council etc.
- Promotes Professionalism and fellow feeling among all people connected with coal

Join INDIAN COAL FORUM - Be a part of Future Energy Management

MEMSBERSHIP BENEFITS:

- 1. Access to exclusive Fora and Discussion groups
- 2. Invitations to industry events and networking opportunities
- Avail discounts on conferences, seminars and workshops
- 4. Get regular updates on trends and developments on coal
- 5. Get platform to showcase your work and achievements

HELPS YOU:

- 1. Network with industry leaders
- 2. Stay informed about Energy scenario
- 3. Influence Policy Formulation
- 4. Personal Professional Development
- 5. Availing collaborating opportunities

Membership open to individual/ Organisation connected with Coal

TOGETHER, LET US POWER THE FUTURE OF ENERGY IN INDIA

 $\textbf{Contact us at -} indiancoal forum 97 @gmail.com \mid \textbf{Call us on -} + 91\ 93542\ 28024$

Visit Our Website - www.indiancoalforum.in

INDIAN COAL FORUM

Presents

CLI 2024

4th International Conference and Expo on Coal Supply Chain & Technology

Biswa Bangla Convention Centre, Kolkata

Expo: 12-13 Sep, 2024 | **Conference:** 13 Sep, 2024

ORGANISERS





ARE THANKFUL TO ALL PARTICIPANTS

FOR THEIR OVERWHELMING SUPPORT

AND ARE GRATEFUL TO

SUPPORTERS



- Ministry of Coal
- Ministry of Steel
- Ministry of Micro, Small and Medium Enterprises
- Ministry of Earth Science

- Ministry of Mines
- Ministry of Power
- . Ministry of Environment, Forest & Climate Change
- · Niti Aayog, Govt. of India

PLATINUM PARTNER









GOLD PARTNER



SILVER PARTNER



















SESSION PARTNER



SUPPORTING ASSOCIATION















The Earth is our Workplace.

We Preserve and Protect it.

(Going Green since 1958)

More than 6 decades of Responsible Mining and Sustainability

- > One of the best performing Public Sector Enterprises of India
- > The single largest producer of iron ore in the country
- > Sole producer of Diamonds in India
- > All Projects are accredited with IMS Standards comprising of ISO 9001 2015, ISO 14001 2015, ISO 45001 2018, and SA 8000 2014
- > Internal Safety Audits conducted routinely for ensuring Safety in Mines and Plants
- > Bringing socio-economic tansformation through innovative and impactful CSR initiatives in the less developed regions of the country

NMDC re-dedicates itself with a fresh zeal and renewed enthusiasm, energy and strategy to achieve greater heights in delivering value for all its stakeholders.

NMDC Limited

(A Government of India Enterprise)
Khanij Bhavan, 10-3-311/A, Castle Hills,
Masab Tank, Hyderabad -500 028, Telangana, India
CIN: L13100TG1958GO1001674

f ♥ @ in □ /nmdclimited | ⊕ www.nmdc.co.in

Responsible Mining

CLI 2024

CONTENTS

Sl.No.	Particulars	Page No.
I.	Messages	07
II.	About the Coal Log India 2024	25
III.	Programme	28
IV.	Committees	31
V.	Coal Log India 2023 - Retrospect	33
VI.	Recommendations	35
VII.	Glimpses of Last Event	39
VIII.	Industry Articles	43
IX.	Speaker's Profile	61
Х.	Company Profile (Exhibitors)	77
XI.	Advertisements	90

S. K. Samanta & Co. (P) Ltd.

(An ISO 9001:2015 Company)

An Infrastructural Engineering Company

Corporate Office:

2/5, Sarat Bose Road, Kolkata 700 020 Phone: +91 33 6637 4090, 2454 4090, Fax: +91 33 2454 4094 E-mail: kol@sksl.in

Specialists in Turnkey Construction of:

- Material Handling Plants
- Heavy Industrial Workshop Complexes
- Earthwork by Heavy Machineries
- Booster Pumping Stations

- Electrical Sub-stations
- Cross Country Water Conveying Systems
- Water & Waste Treatment Plants
- Roads, Bridges & Dams

Serving the Nation for last 75 years



We Practice Innovative Technology & Quality For Achieving Total Customer Satisfaction

पंकज अग्रवाल, भा,प्र.से. सचिव Pankaj Agarwal, I.A.S. Secretary





भारत सरकार विद्युत मंत्रालय श्रम शक्ति भवन, नई दिल्ली-110001

Government of India Ministry of Power Shram Shakti Bhawan, New Delhi - 110001 Tele: 23710271/23711316

> Fax: 23721487 E-mail: secy-power@nic.in



Message

I am very happy to learn that Indian Coal Forum, a Think-Tank consisting of leading Experts on Coal are organizing an International Conference & Expo on the theme "Modernization of Coal Supply Chain" at Kolkata on 12-13 September 2024.

- Coal forms the bedrock of our country's Energy security and is likely to remain so in the
 foreseeable future. India is also endowed with huge coal resource of the order of 380 Billion Tons and it is
 normally expected that with such a high resource base the country should produce enough coal for meeting
 its requirement.
- 3. The steps taken by Government of India and Indian Coal industry have brought the growth rate in coal production to +10% over last 3 years and the current year follows the same trend. We can therefore hope that going forward, we would become self-sufficient in matters of at least Power grade Coal in next 2-3 years but production by itself will not be enough. It is equally important that we build up the logistics capacity to reach the coal to the consumers.
- 4. It is in this context that this international event will be of great relevance in as much as it will be attended by top Coal and logistics Professionals and it will lead to preparation of an implementable road map for reaching that coal to the consumers in an efficient, economical and environment-friendly manner.

I wish the conference a great success.

Yours sincerely

(Pankaj Agarwal)

Shri U. Kumar Former CMD (NCL & SECL) Executive President, Indian Coal Forum





विस्मिता तेज, भा.रा.सं. अपर सर्विव Vismita Tej, IRS Additional Secretary





भारत सरकार
GOVERNMENT OF INDIA
कोयला मंत्रालय
MINISTRY OF COAL
शास्त्री भवन, नई दिल्ली
SHASTRI BHAWAN, NEW DELHI
Ph.: 011-23384224
E-mail: vismita.tej@gov.in



Message

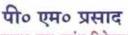
I am very happy to learn that Indian Coal Forum is organizing an International Conference & Expo with the theme "Modernization of Coal Supply Chain" at Kolkata on 12-13 September 2024.

Right since the time Industrialization started in our country, coal has been the primary source of Commercial Energy. Even today, it accounts for close to 50% of our Commercial Energy needs and close to 75% of Power Generation depends on Coal. It makes sense since coal is the only fossil-fuel of which we have been blessed with large resources – about 375 Billion Tons. Over last 3 years, growth in coal production has picked up to +10 % level and hopefully within the next 2-3 years, we would be surplus in the production of coal.

We should also look beyond production and take care of the transportation needs of coal. To achieve, this while we have to improve and add to Rail Infrastructure in the coal bearing areas, we should also utilize other modes of transportation like Belt-Conveyors, Riverine and Sea-routes.

I am sure that deliberations at the conference which will be attended by top coal and transport Professionals would enable preparation of an implementable road-map for coal reaching the consumers efficiently, economically and in an environment-friendly manner.

Smt. Vismita T



अध्यक्ष-सह-प्रबंध निदेशक

P. M. Prasad

Chairman-Cum-Managing Director



कोल इण्डिया लिमिटेड COAL INDIA LIMITED

(A MAHARATNA COMPANY)
A Govt. of India Enterprise
"COAL BHAWAN"
Premises No. 04 MAR, Plot No. AF-III
Action Area - 1A, New Town, Rajarhat
Kolkata - 700 163



Message

It is important to align the increasing coal production in India with an efficient evacuation infrastructure to transport higher quantities of coal in a seamless manner. This ensures minimizing delivery delays, efficient management of resources, and reduction of operational costs. This holistic approach also safeguards every aspect of the logistics chain contributing to overall operational efficacy.

Rail is the preferred mode of coal transportation and Coal India is strengthening its rail evacuation logistics through setting up major rail lines in Odisha, Chattisgargh and Jharkhand, the three States, from where more than two-thirds of its production is expected in future. CIL is also doubling and tripling the lines where required, constructing rail sidings and coal handling plants at mines with Rapid Loading Systems under First Mile Connectivity projects. While these efforts increase the evacuation capacity, alternative modes also need to be explored especially waterways where there is potential. In a boost to coal supply chain, the Government also has identified 38 priority rail projects under coal logistics plan. This will further improve rail connectivity and enhance the efficiency of coal transportation.

I appreciate the efforts of Indian Coal Forum for their initiative in organizing a contextual two day International Conference and Expo on 'Modernization of Coal Supply Chain' at Kolkata on 12-13 September 2024. With an august gathering of professionals and experts in the related field I am sure the seminar will identify improvement areas in the coal supply chain for practical implementation.

My Best Wishes for the success of the Conference and Expo.

PMPrasad 04/09

Kolkata 4/9/2024

मिलिन्द देऊस्कर महाप्रबंधक

Milind Deouskar GENERAL MANAGER





पूर्व रेलवे महाप्रबंधक कार्यालय 17, नेताजी सुभाष रोड, कोलकाता- 700 001 EASTERN RAILWAY Office of General Manager 17, Netaji Subhash Road,

Kolkata- 700 001

12th August, 2024

Message

I am very happy to learn that the Indian Coal Forum, which is a Think-Tank devoted to the cause of Coal in India, is organizing an International Seminar/Expo – CLI 2024 on the theme "Modernization of Coal Supply Chain" at Kolkata on 12 -13 September, 2024.

Coal has been the backbone of our Nation's Energy Infrastructure as it meets more than 50% of our commercial energy needs and fuels close to 75% of power generation.

Eastern Railways play a pivotal role in ensuring seamless transportation of this vital resource and reaching coal to the consumers. It serves the heart of coal resources in the country-the most important coalfields located in Jharkhand, West Bengal and Odisha and caters to the needs of major Power Plants & Industries. It has undertaken an ambitious programme for covering the developing and to-be-developed coalfields through Dedicated Freight Corridors and adopting advanced technologies of real-time monitoring and management of the rail system which is aimed at enhancing the sustainability and reliability of coal transportation system in India.

Eastern Railway is proud of its association with the coal industry and going forward, it is moving with confidence that it will be an effective partner with Coal Industry in augmenting coal production for meeting the ever-increasing energy requirement of our nation.

I wish the event and the organizers a grand success.

(Milind Deouskar)

General Manager

Phone: 020 24000 (Rly), +91 33 22307596, FAX: +91 33 2210 7340, e-mail: gm@er.railnet.gov.in



प्रसन्न कुमार मोटूपल्ली अध्यक्ष एवं प्रबंध निदेशक Prasanna Kumar Motupalli Chairman and Managing Director







एनएलसी इंडिया लिमिटेड भारत सरकार का नवररन उद्यम NLC INDIA LIMITED

निगमित कार्यालय/Corporate Office नेयवेली /Neyveli - 607 801 तमिलनाडु /Tamilnadu दूरमाष /Phone: 04142-252280 फैक्स /Fax: 04142-252543

ई-मेल/E-mail : cmd@nlcindia.in

Message

I am happy to know that Indian Coal Forum, is organizing CLI 2024, and International Conference & Expo on the theme "Modernization of Coal Supply Chain" at Kolkata on 12-13 September 2024. It is encouraging that, this Forum has been organizing Conferences and Workshops, submitting the recommendations based on the deliberations to the appropriate forum in line with evolving issues and challenges.

India's coal production including lignite has crossed I BT mark and moving ahead to match with growing energy demand. While augmenting the production, dispatch also attracts equal attention which use to be bottleneck in connecting the source to consumption. Govt. is, taking lot of innovative steps towards addressing this issue like, First Mile Connectivity, and Integrated Infrastructure Plan, etc., considering this the conference theme and deliberations are expected to gain importance.

NLCIL, following balanced approach towards, the energy mix, and have the vision of reaching 104 MTPA Mining Capacity and 20+ GW power Generation Capacity, which is around 2-fold increase in Mining Capacity, 3-fold increase in Thermal Power Generation and 8-fold increase Renewable Energy Generation. As these capacity additions necessitates, suitable coal dispatch infrastructure development at the matching phase, in addition to the efforts in development of FMC systems and Automated Evacuation system, this conference deliberation would also expect to play encouraging role in navigating these challenges successfully. India is likely to account for 25% of global energy demand growth over the next two decades and expected to double its power capacity to 900 GW by 2030. Considering current trend, India's energy sector continued to be fuelled by coal sector with predominant share in the energy mix.

In this context, the deliberation in conference would open up many innovative alternatives to coal sector, for Modernising the Coal Supply Chain, adopting Best Practices and undertaking related R&D for making the Energy Industry Sustainable.

I wish the participants and organizing committee, a great success.

(Prasanna Kumar Motupalli)

καιαπησ

पंजीकृत कार्यालय : नं. 135, ईवीआर पेरियार हाई रोड कीलपॉक, घेन्नै-600010. Regd. Office : No. 135, EVR Periyar High Road, Kilpauk, Chennai-600010. CIN : L93090TN1956GO1003507 वेंबसाइट/Website : www.nlcindia.in

Debashish Nanda

Director (Business Development) Coal India Limited



Message

It is with great pleasure and deep admiration, that I extend my best wishes to Indian Coal Forum on the occasion of the CLI 2024 event at Kolkata. This gathering represents not only the culmination of dedicated efforts but is also a significant step forward in shaping the future of India's coal and energy sectors.

As the Indian Coal Forum continues to play a pivotal role in advancing sustainable and innovative practices within the industry, may this event be a beacon of knowledge, collaboration, and progress! May it inspire all participants to contribute meaningfully to the nation's energy security and environmental stewardship!

Wishing the event a great success.

With warm regards

Debasish Nanda
Director (Business Development)
Coal India Limited.

Dr. B Veera Reddy

Director (Technical) Coal India Limited



Message

I am glad to learn that the Indian Coal Forum is organizing a two days International Conference & Expo on the theme "Modernization of Coal Supply Chain" at Kolkata from the 12th to 13th September 2024.

Coal has been the pillar of energy infrastructure for a very long time. While the world is moving towards renewables, studies have shown that coal will continue to be the dominant source of energy for the next couple of decades in India. However this is also leading to challenges of the logistics of supplying the mined coal to the consumers.

Coal India has already addressed this challenge by investing in First Mile Connectivity Projects and Rail evacuation Infrastructure Projects. The theme of this Conference is tailored to suggest the way forward to achieve this goal. It will offer a platform for experts from all over the country to share their experiences and views.

I take this opportunity to extend my best wishes for the success of the Conference and am sure that the outcome will be fruitful and would serve the coal sector as a whole.

> Dr B Veera Reddy Director (Technical) Coal India Limited.

मनोज कुमार अध्यक्ष-सह-प्रबंध निदेशक

Manoj Kumar Chairman-cum-Managing Director



सेन्टल माईन प्लानिंग एण्ड डिजाइन इन्सटीच्यट लिमिटेड ্কোল হাতিয়আ নিমিইত কী এনুক্পী কমলী / এনের মন্তন্য কা তে বাকি ব্যক্তম। স্বান্তব্যানা থেকা, কাকি হাত্ত, হাঁৰী - ৪২4 ৩২।, স্বাহৰ্ষত (খাবে) Central Mine Planning & Design Institute Limited Gordwara Place, Karke Road, Ranchi - 834 031 , Ihaikhand (INDIA) (A Subsidiary of Coal India Limited / Govt. of India Public Sector Undertaking) Corporate Identity Number (CIN): U14292JH1975GOI001223

An ISO 9001: 2015 & ISO 37001: 2016 Certified Company



Message

It is heartening to note that the Indian Coal Forum is going to organize an International Conference & Expo on the theme "Modernization of Coal Supply Chain" at Kolkata on 12-13 September, 2024. The publication of a souvenir during the occasion is inspiring & praiseworthy and serve as a goodwill of memories.

Indian Coal Forum has been serving the Coal industry since 1997 by organizing National / International Conferences, Seminar and Workshops etc. The theme of the upcoming conference is topical interest considering the level of production and demand of coal at the future. Modernization of supply chain is crucial to address the issues like environmental concerns, resource optimization, safety risks, etc., so that to ensure a more sustainable and reliable supply of coal. On this note, I am sure that the Conference and Expo will provide tremendous opportunities for high level deliberations and exchange of knowledge for all the participants for the betterment of the industry.

I wish the Conference and Expo a Grand Success.

Best Regards,

(Manoj Kumar) Chairman-cum-Managing Director





फोन नम्बर / Phone No. : +91 651 2230001 & 2230002 फेक्स नम्बर / Fax No. : +91 651 2230003, 2231447 वेब साईट / Website Address : www.ompdi.oo.in ई मेल : <u>omd.cmpdi@coalindia.in</u>

Michelle Manook

CEO FutureCoal



Message

FutureCoal is honoured to once again partner and participate in the prestigious Coal Log India 2024 Conference.

In light of ongoing global energy challenges-including fuel supply shortages, transportation disruptions, price volatility, and geopolitical uncertainties-the timing of this Conference and the crucial discussions it will foster are more important than ever.

India stands proudly at the forefront of the global coal industry, a reality reflected in FutureCoal's deep and enduring engagement here. As coal's indispensable role in energy security, economic development, and emissions reduction becomes more widely acknowledged, our commitment to India has grown even stronger.

This year's theme, "Modernization of the Coal Supply Chain," aligns directly with our mission and Sustainable Coal Stewardship philosophy. Securing coal's future in a sustainable global economy demands embracing innovation and modern practices. As we progress with advanced coal emissions abatement technologies and explore beyond-combustion commercial opportunities, modernising the supply chain will be crucial.

We extend our deepest appreciation to the Indian Coal Forum for its exemplary work in hosting Coal Log India 2024. We wish all participants and attendees a truly transformative and enriching experience.

Best wishes,

Michelle Manook

Amit Kiran Deb, IAS (Retd)

Former Chief Secretary Government of West Bengal



Message

I am happy to get the opportunity of associating myself with Indian Coal Forum – a think-tank engaged in developing the best practices in the areas of production, distribution, supply and transport of coal in India. In order to achieve this objective, the Forum has been organizing workshops and conferences on a regular basis and making viable recommendations on issues relevant and important for coal.

Coal has always been the principal source of commercial energy for mankind. Since it is the only fossil fuel having a large resource base in India, it accounts for more than 50% of commercial energy needs of the country and close to 75% of power generation depends on coal.

However, we have not been producing enough coal for our needs thereby requiring us to depend on imports to a large extent. The combined efforts of the Government and coal industry for augmenting production have, of late, started yielding results and it is expected that within the next couple of years, we may be able to dispense with the need for imports, at least of power grade coal.

Coal being a bulk commodity, along with its enhanced production, careful planning and building of proper infrastructure will be required for its transport. It is in this context that this seminar and the deliberations held in this august forum by planners, domain experts and those involved in coal supply chain become so crucial.

I am confident that the participants in this seminar will be able to prepare an implementable road map for building a robust coal supply chain so that the country's needs for coal are met efficiently, adequately and in an environmentally friendly manner.

I convey my best wishes to the organizers and wish the seminar success.

Amit Kiran Deb



INDIAN COAL FORUM

(Registered under Societies Registration Act 1860 - Regd No. S/30956 of 1997)

Alok Perti, IAS (Retd) **Chairman**, ICF
Former Secretary, Ministry of Coal



Message

The Indian Coal Forum is organizing the 4th COAL LOG INDIA (CLI) conference on 13th September 2024 at Kolkata on the theme - "Modernization of Coal Supply Chain". As chairman of India Coal Forum I feel privileged to be part of the organizing group and extremely happy to be participating in this important event.

Indian Coal Forum, right since its inception in 1997 has been working as a Think-Tank for Indian Coal Industry and has made significant contribution to the industry in matters of Technology, Policies and Management.

The country is fortunate to have a huge reserve of about 380 billion tons of coal. Coal has been the main source of energy and hence a prime driver of economic growth in the country. While adequate reserves are available the production of coal is still short of the country's requirement. Things are, however, looking up and it is very satisfying to record an annual growth rate of +10% in coal production over the last three years. We are hoping that consistent efforts being made by all coal producing companies will ensure that this high growth rate is maintained even in the current year.

Producing coal is one part of the story and ensuring that it reaches the consumers in the fastest and safest way is equally relevant. Equally important is to ensure that the transportation costs are minimized. It is in this context that this conference is being organized..

As the theme suggests, the focus of the conference is the Supply Chain and its modernization. The participants in the conference will be the top Coal and Transport Professionals and their deliberations at the conference will be directed at close examination of every element of Coal Supply Chain, identification of weaknesses there in and deciding upon ways to address them.

We are therefore certain that it would be possible to prepare an implementable Road-map for reaching the coal to the consumers efficiently, economically and in an environment-friendly manner. I am hopeful that we in Indian Coal Forum will be able to evolve suitable solutions through this conference.

I wish the conference all success.

Alok Perti

7, Paschimi Marq, Vasant Vihar, New Delhi - 110057 (India) • Tel: +91-11-26143758 • E-mail : indiancoalforum97@gmail.com



INDIAN COAL FORUM

(Registered under Societies Registration Act 1860 - Regd No. S/30956 of 1997)

Dr. M P Narayanan Co-Chairman, ICFFormer Chairman, Coal India Ltd.



Message

Indian Coal Forum, right since the time it was launched in 1997 has been working on multidimensional improvements in Indian Coal Sector. In the past it has contributed to adoption of new technologies and improvement in production, productivity and safety in the Indian Coal Mines.

With the huge coal resource-base that the country possesses close to 380 Billion Tons, it is expected that Indian Coal Industry should produce enough coal for meeting the county's requirement in full. This task has not been achieved so far but very effective progress has been made in this matter by achieving a sustained growth rate of +10% over last 3 years and it is very satisfying that this growth rate is being maintained in the current year also.

But then, this growth in production will become meaningful only if it is ensured that Coal reaches the consumer as per his requirement. It is for identifying ways and means for achieving this objective that we are organizing this seminar - the 4th edition of Coal Log India 2024 at Kolkata on the 12-13 September 2024 with the theme "Modernization of Coal Supply Chain".

We hope to provide a platform to Planners of Coal Supply Chain so that areas which are deficient in the coal- chain are identified and an implementable road-map is prepared for addressing them for reaching coal to the consumers in an efficient, economical and environment-friendly manner.

I wish the conference all success and I hope that its recommendations will receive due attention from the planners and policymakers.

- Dr. M P Narayanan

7, Paschimi Marg, Vasant Vihar, New Delhi - 110057 (India) • Tel: +91-11-26143758 • E-mail : indiancoalforum97@gmail.com



INDIAN COAL FORUM

(Registered under Societies Registration Act 1860 - Regd No. S/30956 of 1997)

S K Chowdhary President, ICF Former Chairman, Coal India Ltd.



Message

Indian Coal Forum which was conceptualized and launched in 1997 was designed to work as a Think-Tank for identifying ways & means for bringing about improvements in various aspects of Coal Industry in India covering Technology, Management System, Production, Productivity, Safety, Logistics and various other issues related with coal.

It is very satisfying that over last 3 years the growth rate in production has picked up and has been maintained at plus 10% per annum and this has given the Indian Coal Industry the confidence that going forward, it will achieve the production level which will meet the country's requirement in full.

But then, the transport of coal would also require the same type of attention that production has received. We have to ensure that the coal that is produced and is moved to consumer efficiently, economically and in an environment-friendly manner.

No doubt, Rail is the optimal system for coal transportation and it will continue to remain so but for taking care of increased in coal production, it has to expand its footprint in developing and to-be-developed coalfields in a big way.

I am confident that the deliberations at the Conference will go into these issues, identify the areas where improvement is required and enable preparation of implementable road-map for bringing about these improvements.

S K Chowdhary

7, Paschimi Marg, Vasant Vihar, New Delhi - 110057 (India) • Tel: +91-11-26143758 • E-mail : indiancoalforum97@gmail.com



INDIAN COAL FORUM

(Registered under Societies Registration Act 1860 - Regd No. S/30956 of 1997)

U Kumar

Executive President, ICF
Former CMD, South Eastern Coalfields Ltd.
& Northern Coalfields Ltd.



Message

We take great pleasure in offering to Coal Producers, Coal Consumers and all those associated with Coal Supply Chain in any manner, an International Conference & Expo on Coal with the theme "Modernization of Coal Supply Chain" at Kolkata on 12-13 September 2024.

Right since the time Indian Coal Forum was launched in 1997, this Tank-Think on Coal consisting of top Coal Professionals and Civil Servants who have been associated with Coal, has tried to contribute to growth and well-being of Indian Coal Industry by organizing Seminars/Workshops and making representations to Ministry of Coal on issues which have become relevant to the coal industry at different times.

It is very satisfying that the Indian coal industry has broken the ceiling of annual growth rate in production of about 5% by achieving and sustaining this rate of +10% over last 3 years, the growth trend for the current year also being similar. At this rate, we are very confident that going forward, the Indian Coal Industry would meet the country's coal requirement of at least Power Grade Coal in full. But then, for this growth in production becoming meaningful, the entire supply chain particularly the coal transport infrastructure has also to grow to match the production growth and to ensure that Coal reaches the consumers as per their needs and it is precisely to attend to this task that we are organizing this International Conference on Coal Supply Chain.

We expect top Coal Professionals and the Supply Chain Planners to attend this Conference and we hope to provide a platform to them to have intensive deliberations so that they evolve a consensus on different aspects of coal supply chain on which improvements are to be made and maintained and the manner in which these are to be carried out.

We do hope that on the basis of these deliberations, an implementable road-map will be prepared for ensuring that coal reaches the consumers in an efficient, economical and environment-friendly manner.

U. Kumar

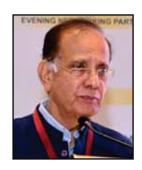
7, Paschimi Marg, Vasant Vihar, New Delhi - 110057 (India) • Tel: +91-11-26143758 • E-mail : indiancoalforum97@gmail.com



INDIAN COAL FORUM

(Registered under Societies Registration Act 1860 - Regd No. S/30956 of 1997)

N N Gautam Secretary General, ICF Former Advisor (Projects) Ministry of Coal



Message

It is with great pleasure and enthusiasm that I welcome you all to the upcoming International Conference & Expo on theme "Modernisation of the Coal Supply Chain" scheduled on 12-13 September 2024 at Kolkata.

This event is a testament to our collective commitment to addressing the challenges and opportunities within the coal supply chain. Modernizing our processes is not just about keeping pace with technological advancements; it is about ensuring the sustainability and efficiency of our operations in a rapidly changing world. The insights and expertise that each of you brings to this event are invaluable as we work together to shape the future of the coal industry.

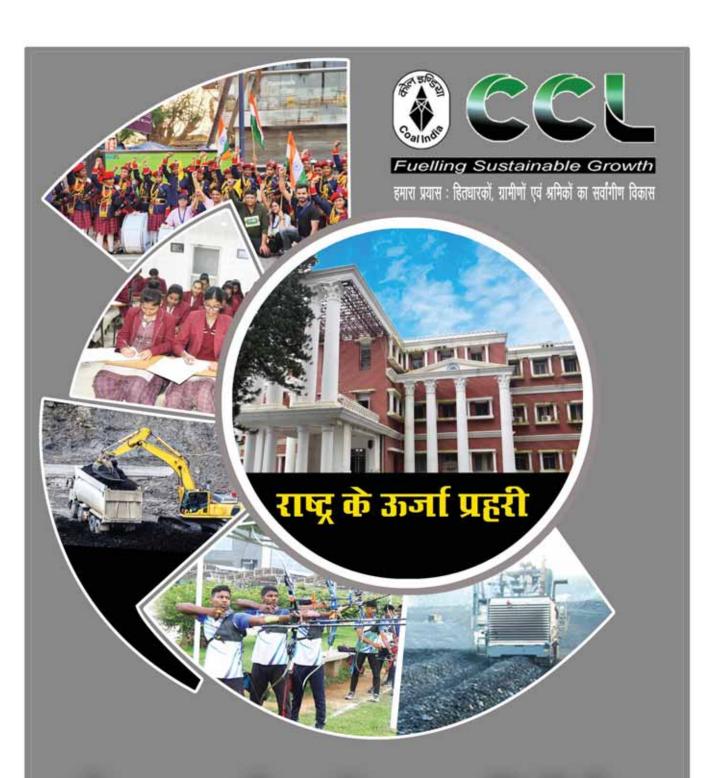
India is developing and fast rising economy that will need very fast high growth of energy. Coal is the only available and dependable indigenous fuel source that the country has. Where as the Coal production in now keeping pace with rising demand, we have to put in place matching evacuation infrastructure so that the coal reaches from source to the consumer fast and in time.

Thus this event also holds significant importance as we navigate the challenges and opportunities within the coal industry, particularly in the context of evolving national energy needs and technological advancements. It is through such initiatives that we can collectively explore innovative strategies, share insights, and build collaborations that will drive the industry forward to achieve national goals.

I would like to express my deepest gratitude to the Organizing Committee, our Esteemed Speakers, and all Participants for your dedication and support. Your involvement is crucial to the success of this Event, and I am confident that our discussions will lead to meaningful outcomes and actionable strategies.

I wish the Conference great success.

N N Gautam



सेन्ट्रल कोलफील्ड्स लिमिटेड

(भारत सरकार का एक उपक्रम / कोल इण्डिया लिमिटेड की एक अनुषंगी कम्पनी)

दरभंगा हाउस, राँची - 834001 (झारखण्ड)











Engineering Perfection



LEADING INDIA IN HEAVY EQUIPMENT SERVICES







...EMPOWERING INDIA'S UNDERGROUND COAL MINES



Coal Log India 2024

Theme: "Modernisation of the Coal Supply Chain"

September 12-13, 2024 • Kolkata

About Coal Industry

Right since the industrial revolution and till about few years back, Coal has been the primary source of Commercial Energy across the world. On account of the major role that Coal Combustion has played towards climate change and global warming, developed world has been trying to cut down on Coal consumption themselves and are also trying to persuade other countries to adopt the same route. Therefore, a global campaign has been launched for generating Power from Renewables and giving up on Coal.

India, as a responsible global citizen has also undertaken a massive programme for generating Power from Renewables but unlike developed countries it will not be able to move away from Coal from a long time. In fact, while country's coal consumption today is about Billion tons, going forward, it will increase systematically and substantially and will reach a level of +1.5 Billion Tons by 2040.

India has massive Coal resources – of the order of 350 Billion Tons but these resources are not spread evenly throughout the country. It is states like Jharkhand, Odisha, Chhattisgarh, Madhya Pradesh, Maharashtra and West Bengal which have bulk of the Coal resources. On the other hand, since the country depends on Coal for 75% of its Power Generation Coal is used throughout the country and it has to move from Coal-rich states to Coal-deficit states. Coal being bulk commodity huge expenses are therefore incurred on a continuous basis in movement of Coal and bulk.

Road Transport is also accounts for large scale of movement of Coal. Though, this transport system is basically unscientific, expensive and anti-environment, even then it is only next to the Railways in matters of the Coal transport. Waterways can be an effective transport system for Coal in our country but this mode did not receive due attention and it is only now consideration is being given to utilize in a bigger way. The type of increase in Coal production and consumption in the county that has been projected will play havoc with environment in case the things move in BAU (Business As Usual Manner). Simultaneously with increase in coal production and consumption effective measures have also to be taken for making the entire coal chain greener and more environment-friendly.

About Coal Log India 2024 (CLI 2024)

It is in the light of this developing situation that Indian Coal Forum which has been actively involved on working out ways & means for improving the Indian Coal Industry has selected the theme "Modernization of Coal Supply Chain" for its 4th Edition of CLI 2024 which is being organized at Kolkata on 12-13 September 2024.

The focus of the conference will not be abandonment of Coal but its transformation through adoption of clean Coal Technologies and innovative Supply Chain Solutions. Central to the success of CLI 2024 will be the gathering of diverse stakeholders from across the national and International Coal Industry

with Delegates and Participants from Mining Companies including Captive/Commercial Coal Block Operators, Power Companies and other bulk Coal Consumers and Coal carriers to state mining and minerals Departments., for whom, this event will serve as a convergence point. A wide array of issues including Government Policies, Future Plans, Safety Measures and Cutting-Edge technologies will be discussed at the conference and the Industry Leaders will share their thoughts with the participants.

To that extent, CLI 2024 is designed as a platform for collaboration, innovation and actionable insights.

Organisers

Indian Coal Forum (ICF)



The event is being organized by INDIAN COAL FORUM which is a non-profit, non-Government Organization structured like a premier Think Tank in the country on issues relating to Coal, which was set-up and registered under Societies Registration Act 1860 in 1997 by a Group of Senior Coal Professionals with the objective of

highlighting the every-increasing role of Coal in the growth of National economy as the prime source of Commercial Energy in the country and working towards achievement of long range national objectives in all aspects of planning, development, efficient production and utilization of coal including promotion of Environment-friendly clean coal technologies and mine safety.

Towards achievement of these objectives, the Forum has been inter-acting with the Indian Coal Industry both in Public and Private Sectors and with Coal Producers, Coal Consumers and Government Agencies connected with Coal. It has also been organising Seminars, Conferences, Webinars and Workshops from time to time on topical issues concerning Coal.

Aims & Objectives of the Forum

The principal aims and objectives of ICF are as follows:

- To act as 'National Think Tank' of all aspects of Coal Industry.
- To serve as 'Voice' of Coal at National and International forums on issues related to Indian Coal Industry.
- To make suggestions in framing of India's Coal Policy within legal framework and Coal Development Plans.
- To act as facilitator for the Public and Private Sector Coal Companies, Government of India, State
 Governments and other Agencies for working together for achieving long range objectives in all
 aspects of Planning, Development, Safety, Efficient Production and Utilization of Coal including
 promotion of environmental friendly clean coal technologies
- To remain in regular touch with the Coal and Associated Industries, Technical and Research Institutes, Management Development and Statutory Organisations and Trade Unions for exchange of ideas, collection and dissemination of information for mutual benefit and for improvement in the curriculum of educational institutions to match the needs of the Coal Industry.

• To collaborate with national bodies like MGMI, TERI, CIMFR, CII, FICCI, ASSOCHAM etc. and International bodies like World Coal Association, World Coal Institute, UNDP, World Bank, Asian Development Bank, UNIDO, World Energy Council, Professional Bodies with similar objectives in all major Coal producing countries and NRIs to help the Indian Coal Industry.

 To further dedication, fellow- feeling and professionalism amongst all people connected with Coal Industry by promoting ethical vision, to inculcate system development with emphasis on value based approach.

Business Media Links (BML)



Business Media Links (BML) is a growth driven company which conceptualizes, creates and organises conferences, B2B meetings and exhibitions. It provides the highest level of service with its core team having over 3 decades of experience in organizing conferences and exhibitions and it has conducted more than 100 trade to world. It has been successfully organizing established trade conferences like COAL.

shows across the world. It has been successfully organizing established trade conferences like COAL LOG INDIA, SSTS, CCTS, National Coal Conclave & Exhibition etc.

BML also offer third party exhibition & conference management, design and organization. Its experienced creative and production team plan and design the event from concept to delivery and creates platforms for industries and specialist markets connects to buyers and sellers to enhance economical trade & innovate.

PROGRAMME 3

08.30 – 9.30 Hrs : *Registration*

9.30 - 10.15 Hrs : **INAUGURAL SESSION**

Compere & : Shri N N Gautam, Secy General - ICF &

Session Coordinator Former Advisor, Ministry of Coal

Welcome Speech : Shri Alok Perti, IAS, Chairman -ICF & Former Secretary (Coal)

Introduction of Theme: Shri U. Kumar, Exec. President - ICF & Former CMD, SECL & NCL

Special Address : Ms Michelle Manook, CEO, Future Coal

Guest of Honour : Shri Milind Deouskar, GM, Eastern Railway

Chief Guest : **Shri P M Prasad**, Chairman, Coal India Ltd.

Vote of Thanks : Shri N N Gautam, Secy General - ICF & Former Advisor, Ministry of

Coal

10.15 - 10.45 Hrs : Tea Break

10.45 -12.15 Hrs : **SESSION: TECHNICAL SESSION - 1**

Coal Transportation by Rail - Modernisation

Session Coordinator : Shri S K Grover, Former GM, NTPC Ltd.

: Shri Alok Perti, IAS, Chairman -ICF & Former Secretary (Coal)

Co- Chairman : Dr. P S Mishra, CMD, SECL

Speakers : • Shri Avinash Mishra, IRTS, ED (Coal), Ministry of Railways

• Shri Praveen Kumar, MD, Dedicated Freight Corridor

Corporation of India Limited

• Shri S K Das, ED (Infrastructure & Logistics), SAIL

Shri Sudharsan Prasad, GM, CMPDI

Questions & Answers

12.15 -13.45 Hrs : SESSION: TECHNICAL SESSION - 2

Modernisation - Other Means of Transportation

Session Coordinator : Shri P S Upadhyaya, Former Director, NMDC Ltd.

Chairman : Shri Sabyasachi Hajara, Former CMD, The Shipping Corporation of

India

Co- Chairman : Shri Samiran Dutta, CMD, BCCL & ECL

Speakers

• Shri Amalesh Maity, Head – Strategic Business & Institutional Sales, Volvo Trucks India

• Shri A K Mehera, Dy. Chairman – HDC, Syama Prasad Mookerjee Port

• Shri Anil Kumar, AHS, Inland Water Authority of India

• Shri Abhinav Sengupta, Associate Director, PwC

Questions & Answers

13.45 - 14.45 *Hrs* : Networking Lunch

14.45 -16.15 Hrs : SESSION: TECHNICAL SESSION - 3

Projection - Transportation Related Issues

Session Coordinator : Shri M N Jha, Treasurer - ICF & Former CMD, CMPDI & SECL

Chairman : Shri Debashis Sen, IAS, Former Addl. Chief Secretary, West Bengal &

CMD, WBHIDCO

Co-Chairman : **Shri M Prasanna Kumar**, CMD, NLC India

Speakers : • Shri Ratnesh Rai, MD, Q&A Testing Laboratories

• Shri Udnur Gangadhar, Head- MSS, Digital & Innovation, SGS

India

• Shri Indranil Roy, Director, Mining, Materials Handling and

Processing, TKIL Industries

• Ms Helen Gibson, General Manager, Underground Soft Rock,

India, Komatsu

Questions & Answers

16.15– 16.45 Hrs : Tea Break

16.45 -18.15 Hrs : **PANEL DISCUSSION**

Session Coordinator : Shri P R Mandal, Former Advisor, Ministry of Coal

: Shri Partha S Bhattacharyya, Chairman, Peerless Group & Former

Chairman, Coal India Ltd.

Panellists : • Shri Debasish Nanda, Director (Business Development), Coal

India Ltd.

• Shri Rajendra Ingale, Head - Coal Mining, Adani Enterprises Ltd.

• Shri Dipankar Banerjee, CEO & Director, Gainwell Engineering

Pvt. Ltd.

Shri Partha Mazumder, Former Regional Executive Director, NTPC

18.15 -18.30 Hrs : VALEDICTORY SESSION

Session Coordinator: Shri N N Gautam, Secy General -ICF & Former Advisor, Ministry of

Coal

Chief Guest : Shri A K Deb, IAS, Former Chief Secretary, West Bengal

18.30 -18.40 Hrs : Event Closing Remarks & Recommendation

19.00 - 20.30 Hrs : Networking Cocktail



Patrons

Shri Alok Perti Chairman, ICF & Former Secretary (Coal) Shri Anil Razdan Former Secretary (Power)

Shri C. Balakrishnan Former Secretary (Coal)

Dr. M P Narayanan Co- Chairman, ICF &

Shri S K Chowdhary President, ICF & Former CMD, Coal India Ltd Former CMD, Coal India Ltd

Chairman

Shri P M Prasad Chairman Coal India Ltd

Convener

Shri U. Kumar Exec. President, ICF & Former CMD, SECL & NCL

Co-Convener

Shri Partha S Bhattacharyya Chairman, Peerless Group & Former CMD, Coal India Ltd

Shri N N Gautam Secy General, ICF & Former Advisor, Ministry of Coal

Members

Shri Milind K Deouskar GM. Eastern Railways

Shri M. Prasanna Kumar CMD NLC India Ltd.

> Dr. B. Veera Reddy Director (T) CIL

> > Dr. P S Mishra CMD SECL

Shri Nilendu Kumar Singh

CMD CCL

Shri Naveen Jindal Chairman **JSPL**

Shri Anil K Jha Former CMD CIL

Shri Shantanu Roy CMD BEML Ltd.

Shri Debasish Nanda Director (BD) CIL

> Shri B Sairam CMD NCL

Shri Sajjan Jindal Chairman JSW Group

Shri Ashish Bhandari MD & CEO Thermax Ltd.

Shri Amitava Mukherjee CMD NMDC Ltd.

> Shri N Balram, IRS CMD SCCL

Shri Mukesh Choudhary Director (Marketing) CIL

Shri Manoj Kumar

CMD **CMPDI** Shri Satish Pai

MD Hindalco Ltd.

Shri Sunil Chaturvedi Group Chairman Gainwell

Ms Michelle Manook CEO **Future Coal**

Shri Gurdeep Singh CMD

NTPC Ltd

Shri Uday A Kaole CMD MCL

Shri Jai Prakash Dwivedi CMD WCL

> **Shri Samiran Datta** CMD BCCL & ECL

Shri Vivek Bhatia Managing Director & CEO TKIL Industries



Chairman

Dr. B. Veera ReddyDirector (Technical)
Coal India Ltd.

Co-Chairman

Shri U. Kumar Exec. President, ICF & Former CMD, SECL & NCL

Convener

Shri N N Gautam Secy General, ICF & Former Advisor, Ministry of Coal

Co-Convener

Shri Kapil Dhagat EVP Jindal Power & Steel

Members

Shri Sabyasachi Hajara	Shri Ashok Mehta	Shri P R Mandal	Shri V K Sehgal
Former CMD	Former CMD	Former Advisor	Former CMD
SCI	BCCL	Ministry of Coal	SECL
Shri M N Jha	Shri Alok Lalit Kumar	Shri Rajesh Kumar Gupta	Shri Amalesh Maity
Treasurer- ICF &	ED (Coordination) &	Sr. President (Head Mining &	Head (Strategic Business Development,
Former CMD, CMPDI & SECL	TS to Chairman, CIL	Minerals), Hindalco Industries	PSU & IS), Volvo Trucks
Shri S K Grover	Shri P S Upadhyaya	Shri Bhimsen	Shri Ajit Kumar Chowdhary
Former GM	Former Director	HOD	Former Director
NTPC	NMDC	CIL Delhi	WCL
Shri Surojit Samanta	Dr. Peeyush Kumar	Shri Pankaj Satija	Ms Nandini Chakravarty
MD	MD	Executive In Charge	MD
SK Samanta & Co.(P) Ltd.	BCGCL	Tata Steel	Mine Line Pvt. Ltd.
Chri Avichak Agarwala	Ms Ruchika Jha	Ms Helen Gibson	Shri Vivek Mishra
Shri Avishek Agarwala CEO	Co-Founder	GM	AVP
AMPL		*****	Mahadhan Agritech Ltd.
AIVIPL	WIM India	Komatsu Mining	Manadhan Agricen Liu.
	Shri Mehar Kuchimanchi	Shri Amares Kumar	
	Director (Natural Resources,	President (Mining)	
	Minerals) SGS India	Dilip Buildcon Ltd.	

Coal Log India 2023 - Retrospect

Indian Coal Forum, forum is an entity created with the objective of promoting the Indian Coal Industry through Technological and Management Intervention. It was launched in 1997 as a Non-Profit technical organization primarily to act as a Think-Tank. It has organized several activities including both National and International Conferences and Seminars which enabled it to provide valuable inputs to the Government in Policy formulation.

The Forum started the "Coal Log India" series of Conferences by organizing a major Conference titled - Coal Log India 2021, Coal Log India 2022, Coal Log India 2023 (CLI 2023) in Kolkata.

The 3rd edition of CLI 2023 which was held at Kolkata on 14-15 September 2023 was a tremendous success with participation of close to 200 top coal professionals and representatives from coal consumers, coal traders and various other organizations associated with coal. Apart from the Inaugural Session, the conference consisted in two technical sessions with Panel discussion by domain experts and finally a Valedictory session.

Few Distinguished Speakers at CLI 2023:

- Shri P M Prasad, Chairman, Coal India Ltd. (Chief Guest)
- Ms Michelle Manook, CEO, Future Coal (Formerly World Coal Association)
- Shri Anil Razdan, Former Secretary, Ministry of Power
- Shri Alok Perti, Former Secretary, Ministry of Coal
- Shri Partha S Bhattacharyya, Chairman, Peerless Group & Former CMD, Coal India Ltd
- Shri Sunil Chaturvedi, Group Chairman, Gainwell
- Shri Rabi Chowdhury, MD (Generation), CESC Ltd. & MD, Haldia Energy Ltd.
- Shri Nirmal Chandra Jha, Former CMD, Coal India Ltd
- Shri U Kumar, Former CMD, NCL & SECL
- Shri M N Jha, Former CMD, CMPDI & SECL
- Shri R P Ritolia, Former CMD, CCL
- Shri T K Nag, Former CMD, NCL
- Shri AK Debnath, Former CMD, CMPDI
- Shri N N Gautam, Former Advisor, Ministry of Coal
- Shri S N Tiwary, Former Director (Marketing), Coal India Ltd
- Shri PS Upadhyaya, Former Director, NMDC Ltd.
- Shri Balasaheb, Darade, MD, New Era Cleantech

• Dr. Peeyush Kumar, OSD Clean Coal Technologies, Ministry of Coal

- Shri Sanjay Pande, GM (FGD), NTPC Ltd.
- Shri C Jayadev, GM (Environment), Coal India Ltd.
- Shri Kapil Dhagat, BU Head, EVP Coal, Jindal Steel & Power
- Shri Kirtiraj Jilkar, EVP, Thermax Limited
- Shri S K Grover, Former GM, NTPC Ltd.
- Shri Arnab Sinha, Founder & Chief Scientist, Novonanmek Material Sciences Pvt. Ltd.
- Shri Deepak Jindal, Sr. Manager, NTPC Ltd.

Major Participants at CLI 2023

Coal India Ltd., Central Coalfields Ltd., CMPDI, Eastern Coalfields Ltd., Mahanadi Coalfields Ltd., Northern Coalfields Ltd., South Eastern Coalfields Ltd., Western Coalfields Ltd., AKA Logistics, Ambey Mining, Bidaal, Bureau Veritas India, Chainflux, Coal Sale Co., CESC Ltd., Dilip Buildcon, Eastman Crusher Company, Easyinfra Techno, Gainwell Commosales, Garuda UAV Soft Solutions, Haldia Energy, Hindalco Industries, Indian Institute of Metals, Inspectorate Griffith India, Jindal Power Ltd., Jindal Steel & Power, Joy Global, Karam Chand Thapar & Bros (Coal Sales) Ltd., Komatsu Mining Corp., Locate 365, Mahadhan Agritech, Mine Line Pvt. Ltd., Mine Excellence, Mining Outcome Services- Australia, Ministry of Coal, Mitra S.K, My Value Pack Retail, NLC India, New Era Cleantech, NMDC Ltd., Novonanmek Material Sciences, NTPC Ltd., Orbit Technologies, S K Samanta & Co. (P) Ltd., SGS India, Skylark Drones, Smartchem Technologies, Steel & Metallurgy, Thermax Ltd., Volvo Trucks India, Wandx Solutions, Women in Mining India, World Coal Association and many more...

The recommendations that emerged from the Conference constitute a challenge for all those concerned with Coal Logistics have been thoroughly prepared and shared with Stake holders and Policy makers. The same has been placed here for the reference.

Coal Log India 2023

International Conference on "Coal Supply Chain & Technology" and Expo

Recommendations

The International Conference on "Role of Coal – Transition to Net Zero" and Expo were organized by Indian Coal Form (ICF) on 14th & 15th September, 2023 at Biswa Bangla Convention Centre, New Town, Kolkata. ICF is a Think Tank consisting of senior eminent Professionals and Administrators of the Coal sector that has been working for growth and scientific development of Indian Coal Industry for last 25 Years.

The Hon'ble Governor of West Bengal had kindly consented to inaugurate the Conference but for some unavoidable reasons he could not attend and had communicated his regrets. The Conference was inaugurated by Shri P M Prasad, Chairman, Coal India Limited. Keynote address in the inaugural session was delivered by Ms. Michelle Manook, CEO of the World Coal Association. Apart from the Inaugural Session, there were two Technical Sessions, a Panel Discussion and a Special address by Shri Anil Razdan, IAS (Retd.), Former Secretary (Power), Government of India.

The Conference was attended by over 200 delegates, several of whom were experts from the Coal, Power, Steel and Environment sector. In the technical sessions ten (10) very topical and currently relevant presentations of high quality were delivered by experts. During the panel discussion which was chaired by Shri Partha S. Bhattacharyya, Former CMD, Coal India Ltd., technical experts made very incisive analysis of various coal-related issues particularly those having an impact on environment.

Based on the deliberations at the Conference, recommendations as under have been framed, which will be sent to policy makers and opinion leaders in the country for their consideration and further appropriate action.

1. Coal and Net Zero Emission

The majority of experts attending the conference were of the view that coal which is the dominant fuel for power generation today will continue to remain so even in the foreseeable future. Simultaneously it was also noted that most experts were of the view that we cannot close our eyes to the huge GHG emission caused by direct burning of large quantities of coal for power generation. It was unanimously agreed that such technologies should be deployed in use of coal as a fuel in thermal power which would lead to lowering of GHG emissions while producing more usable electric power.

It is therefore recommended that all coal used for power generation should be washed to reduce its Ash content and HELE technologies should be deployed for power generation so that GHG Emissions are brought down to the minimum.

2. Carbon Capture and Storage and Utilization (CCSU):

The experts were of the view that one of the most promising and practical solutions lies in deploying CCSU technologies in reducing the carbon footprint. It was therefore recommended that focused

attention should be paid towards development of CCSU technology and encourage all coal based thermal power plants to deploy these technologies to ensure maximum removal of carbon dioxide produced in burning the coal.

3. Coal Gasification

Majority of the subject experts attending were of the firm view that Coal Gasification with in-built Carbon capture facility should be encouraged and incentivized so that its product the Syngas which is a cleaner fuel can be used for Power Generation with highly reduced GHG emissions. Syngas can also be used for production of chemicals which can be used directly or as feedstock for production of fertilizers, ammonium nitrate etc. In order to encourage coal gasification the following was recommended:

- Special provisions to be made in the budget of Central government to ensure adequate availability funds for Research and Development in the field of Coal Gasification.
- Creation of Land Bank for ensuring ready availability of land for setting up of Gasification Plants in close proximity of the source of coal (coal mine).
- Allocation of long term Coal linkage with the provision of mine specific allocation.
- Waiver of GST compensation cess of Rs. 400/- per ton of coal.
- Providing subsidy on Rail freight.
- Tax holiday for a reasonable period.
- Subsidy to viability gap in establishment of the Gasification Plant.

4. Underground Gasification

India has huge Coal deposits which, for a multiplicity of reasons cannot be exploited through conventional mining methods. These deposits can be gainfully exploited undertaking underground Coal Gasification.

It is therefore recommended that at least two deep-seated Coal Blocks be selected for underground coal gasification. Further in order to attract overseas companies who have successfully deployed suitable technologies for underground gasification both the tender conditions and operating conditions be made conducive to ensure smooth operations.

Further to encourage the best companies to come forward we recommend that government may consider awarding one contract on nomination basis to the company which is judged to be the best in the world.

5. Migration to Hydrogen

Hydrogen has been considered an important alternate source of energy for the future. While availability of time and financial resources may be a constraint in respect of production of Green Hydrogen, production of coal-based Blue Hydrogen could be more economically produced. The

adequate availability of coal in India therefore tends to make production of coal based Hydrogen the preferred choice.

It is therefore recommended that since the country is blessed with huge coal reserves government should promote production of coal-based blue hydrogen to make the country one of the largest producers of Hydrogen.

It was noted that some important baby steps have already been taken in this direction by Indian Companies like NTPC, BHEL, Thermax, EIL, NLC and CIL. It is further recommended that government should support these initiatives for upgrading them to start commercial scale production of Hydrogen.

6. Mining Process

It was appreciated that more than 90% of coal in India is produced from open cost mines and mining process as such does not add to emission except in the form of Exhaust gases from HEMM. It is however recommended that Coal Mines should be encouraged and incentivized to:

- Reduce the emission intensity of coal mining by substituting Electricity for Diesel for operating the HEMMs.
- Implement FMC projects for all major coal mining projects.
- Mined out land to be reclaimed at the earliest possible with Tree Plantation on scientific basis so as to create "Carbon Sinks".
- Explore to evolve Dust Suppression measures best-suited to the local conditions.

7. Thrust on Underground Mining

At present only about 6% of coal produced is from underground mines. Since more than 40% of Indian Coal Resources are amenable to exploitation only through U/G mining it is recommended that higher priority be accorded to underground mining. Further U/G mining is environmentally more friendly and chances of quality deterioration is also minimized.

8. Direct Air Capture of CO₂

Capturing Carbon Dioxide (CO₂) directly from the atmosphere and sequestering it for long period is a more recent technology and require further development for wide scale commercial use.

It is recommended that Indian Scientists and Researchers should work on advancement of this technology, which would be a great help in capturing the CO_{ν} which escapes into the atmosphere despite all efforts to capture it.

9. Coal Washing:

Indian Coal inherently has high percentage of ash because of the fact that its formation is arising out of drifting of the continental shelf. Direct burning of low grade Coal having high ash content in thermal power plants results in release of huge quantities of GHG into the atmosphere. Washing of coal can

reduce the ash content, increase calorific value and ensure proper sizing and therefore to sell coal in usable condition washing is a practice widely followed in most coal producing countries. It has been established that use of washed coal in thermal power plants is not only financially beneficial but also highly environment friendly. It was noted that starting from terminal years of last century, substantial progress was made towards washing of power grade coal. Unfortunately, this advantage has been lost because of withdrawal of Govt. Orders, which had made use of washed coal for power generation mandatory.

There was a unanimous view that the Govt. Circular withdrawing mandatory washing of coal be withdrawn/ amended to ensure that only washed coal of better quality is used in thermal power plants. Since new plants and replacement of obsolete plants would have to be only by super critical and ultra super-critical ones, which would operate efficiently only with better quality coal, it was also felt that by way of further progress in this matter, it should be mandated that all Coal used for power generation should be washed to bring down the ash not to more than 34%.

GLIMPSE OF LAST EVENT - CLI 2023

Inaugural Session



Lighting of Lamp by Dignitaries

L to R: Sh. NN Gautam, Secy General - ICF;
Ms Michelle Manook, CEO, Future Coal (Formerly WCA);
Sh. P M Prasad, Chairman, Coal India Ltd. (Chief Guest);
Sh. Alok Perti, Chairman- ICF;
Dr. M P Narayanan, Co-Chairman- ICF;
Sh. U. Kumar, Exec. President - ICF



Address by the Chief Guest Sh. P M Prasad, Chairman, Coal India

CLT 2023

Special Address by Sh. Anil Razdan, Former Secretary (Power)



Technical Session - 1



 $L\ to\ R$: Sh. PS Upadhyaya, GC Member-ICF;

Sh. C Jayadev, GM (Env), CIL;

Sh. R P Ritolia, Former CMD, CCL;

Sh. Rabi Chowdhury, MD (Generation), CESC Ltd;

Sh. Sanjay Pande, GM, NTPC Ltd;

Sh. Arnab Sinha, Founder, Novonanmek Material Sciences

E Technical Session - 2

L to R: Sh. S K Grover, GC Member - ICF; Sh. Bala Saheb Darade, MD, New Era Cleantech; Sh. T K Nag, Former CMD, NCL; Sh. AK Debnath, Former CMD, CMPDI; Sh. Kapil Dhagat, Head BU, JSPL; Sh. Kiritraj Jilkar, EVP, Thermax Ltd.; Sh. Deepak Jindal, Sr. Mgr., NTPC Ltd.



Panel Discussion



L to R : Sh. M N Jha, Treasurer- ICF;

Sh. Partha S Bhattacharyya, Former CMD, CIL;

Sh. N C Jha, Former CMD, CIL;

Sh. Alok Perti, Chairman, ICF;

Sh. S N Tiwary, Former Director (Mktg), CIL;

Dr. Peeyush Kumar, OSD, Clean Coal Technologies, Ministry of Coal;

Sh. Sunil Chaturvedi, Group Chairman, Gainwell



A View of the Audience



CLI 2024 Expo















I LIGHT UP PEOPLE'S LIVES

THAT'S JUST ONE OF THE PERKS OF **BEING AN NTPCian**

깪행









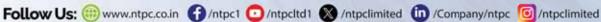












Industry Articles

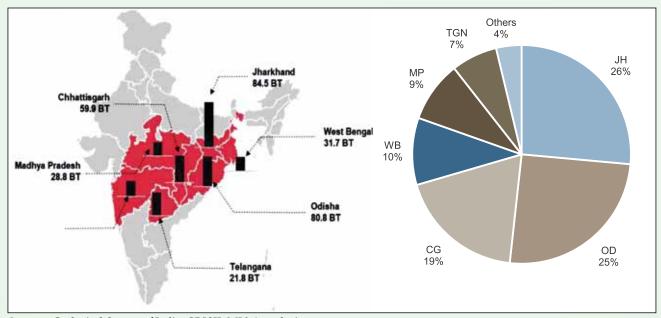
Coal Logistics Optimisation - Challenges and Solutions

- Satnam Singh*, Manish Singla**

1. Introduction

1.1 Resources of coal

Coal is an abundant fossil fuel found across the globe with total proved reserves (as of 2020) estimated at over 1,074 BT 1 . The country currently stands fifth in terms of total world coal reserves, accounting for more than 14% of the total reserves at ~149 BT. Further, it has the third largest identified resources of coal ~319 BT 2 . Other countries with large resources include the United States (US), Russia, Australia, China, and Indonesia. India currently stands fifth in terms of total world coal reserves, accounting for 10% of the total reserves at ~111 BT.



Source: Geological Survey of India, CRISIL MI&A analysis

Figure 1: Coal resources distribution in India OState-wise

1.2 Production of coal

India is the second largest producer of coal in the world (next to China). It has the majority of coal production in the eastern and central parts of India, while it is consumed all over the country. Out of total 997 MT of coal being produced in India during fiscal 2024 [~774 MT by Coal India Limited (CIL),

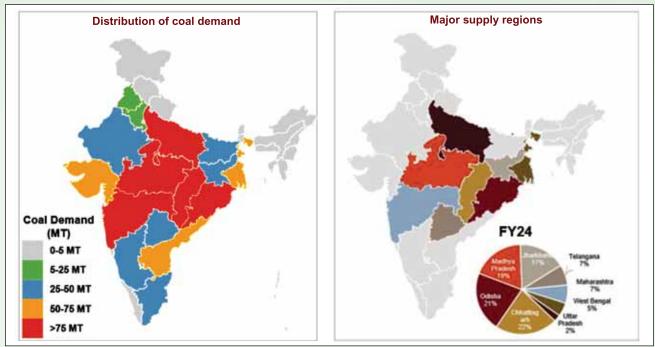
^{*}Director, Energy & Commodities, CRISIL Limited, Consulting.

^{**}Practice Leader & Associate Director, Energy & Commodities, CRISIL Limited, Consulting.

^{1.} Source: BP (2024) Statistical Review of World Energy

^{2.} Geological Resources of Indian Coal' (as on April 1, 2017), prepared by the Geological Survey of India

~70 MT by Singareni Collieries Company Limited (SCCL) and ~153 MT by captive blocks and others]. The production in different regions i.e. ~468 MT was produced in the eastern region, ~434 MT in the western, ~73 MT in ~the southern region, and ~23 MT in the northern region, while it was consumed all over the country, because of consumption in power (utilities), captive power plants (CPPs), steel, cement, brick kilns, paper, and others. Due to different regional production and consumption imbalances (as shown in the figure), transportation of coal is required over long distances and in bulk.

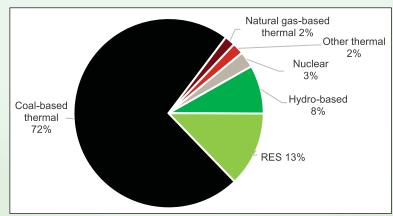


Source: CRISIL MI&A analysis

Figure 2: Regional distribution of demand and supply of coal in India Distribution of coal demand Major supply regions

1.3 Importance of coal for India

Coal is predominantly used in power, cement and steel sectors. Given limited resources of oil and gas, coal plays a significant role in India from the standpoint of energy security. It is the country's most abundant non-renewable fuel. Coal-based thermal power plants continue to dominate electricity generation in India, accounting for ~72% in fiscal 2024³ despite the less than 50% installed capacity in India. It is an important



Source: CEA, CRISIL MI&A Analysis

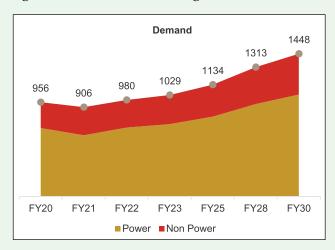
Figure 3: Power generation mix of India

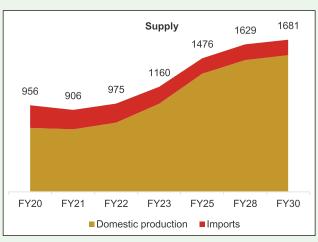
^{3.} Source: CEA

contributor to the economy, too, as coal mining and power generation are two of the largest industries in the country, accounting for around 10% of the country's industrial production. They directly and indirectly employ around 3.6 million people. Power and heat generation account for over two-thirds (67%) of coal consumption, followed by iron and steel production (almost 20%), cement (around 5%), and other industries such as fertilisers, pulp and paper, non-ferrous metals, and chemicals (the balance 8%).

1.4 Coal demand and supply in India by 2030

The share of coal in the total energy supply is expected to remain at 50% of the total basket, even post 2040. It is projected that the coal production in the country will increase by $\sim 55\%$ to 1550 MT in fiscal 2030 compared with ~ 997 MT in fiscal 2024 (as raw coal production). Further, the overall coal demand in the country is expected to rise 28% from 1117 MT in fiscal 2022 to 1,681 MT in fiscal 2030. Thus, the total coal to be transported will grow nearly one and a quarter times in the next six years. Hence, the logistics of coal must be strengthened to ensure efficient transportation of coal.



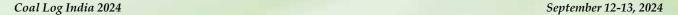


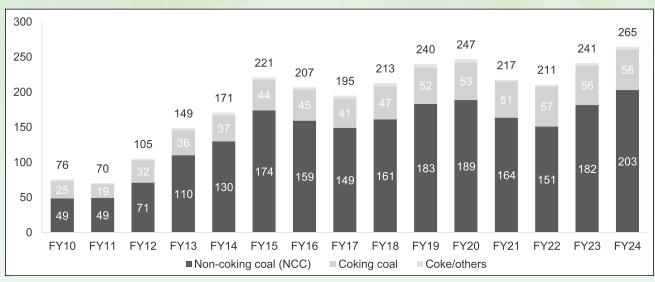
Source: Ministry of coal (MoC)

Figure 4: Overall coal demand and supply forecast

On the imports front, coal is imported in India due to four major reasons. The first reason is that low-ash coking coal required for steelmaking is not available in India, and so it needs to be imported. Majority of metallurgical coal is imported from Australia. The second reason is that there are some coal-fired power plants, located along the coast, that are designed to use imported coal and the quality of domestic coal is not suitable for those plants. The third reason is that some power plants blend domestic coal with imported coal to achieve a better quality, increase efficiency and reduce pollutant emissions. Additionally, the fourth reason for the import of coal in India is to meet the demand-supply gap. India fs imports majority of its thermal coal from Indonesia (59%), South Africa (10%), Australia (10%) and Russia (9%). Other major suppliers are the United States, Mozambique, Russia, and Canada.

Total coal imports in India have been on an average 226 MT during fiscals 2015 to 2024. The demand and supply of coal in India is projected to increase to manifold by 2030 and hence requirement to transport will also be proportionally high. The next section explains the major modes of transports in India, their challenges and expected solutions.





Source: Coal directory, CRISIL MI&A analysis

Figure 5: Coal imports by India

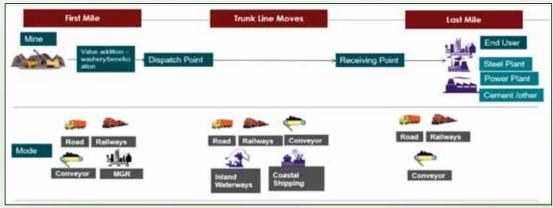
2 Coal logistics in India: Overview

The coal logistics in India involve first-mile connectivity, trunk-line connectivity and last-mile connectivity. Further, different modes of transportation are being used in each connectivity phase depending upon mine to mine and end-use plant to end-use plant basis.

First-mile connectivity involves movement of coal from mine to nearby washery or coal handling plant for value addition. Subsequent to that, coal is moved to the despatch point, which can be a railway siding, port or inland waterways terminal using road, conveyor, merry-go-round (MGR) train and rail.

The trunk-line connectivity involves movement from despatch point to the end receiving point. This movement of coal can take place through road, railways, conveyor, inland waterways, and coastal shipping.

The last-mile connectivity involves movement of coal from receiving point to the end user that can be steel/power/cement/other plants. This movement of coal can take place through road, railways or conveyor.

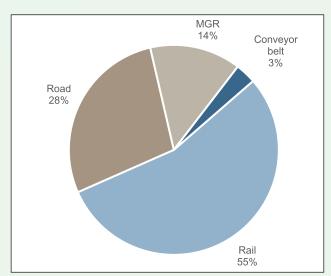


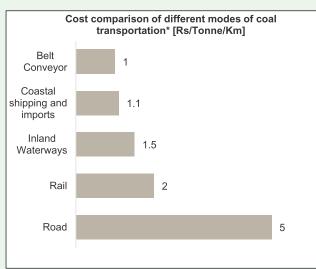
Source: Draft coal logistics policy, Ministry of Coal

Figure 6: Coal logistics chain

2.1 Mode-wise breakup

Domestic movement of coal takes place through railways, roads, merry-go-round (MGR) systems, conveyor belts and the rail-cum-sea route. In FY 24, CIL and SCCL combined accounted for ~85% of the total coal despatch in the country. Rest of the demand was met either through imports or private mines. Out of the total despatch of ~435 MT was done through rail, 183 MT was through road, 111 MT was through merry-go-round (MGR) systems and 10 MT was through conveyor-belt systems. Dispatch through rail and MGR increased in fiscal 2024 compared with fiscal 2023 by 7.4% and 3.4%, respectively; however dispatches through roads and conveyor-belt systems were on a decline in fiscal 2024, compared with fiscal 2023 by 22.4% and 7.0%, respectively. Further, a small quantity of coal was also transported through inland waterways of India. The cost of coal transportation via different modes are different. A belt conveyor is the cheapest mode of coal transportation, while road transportation is the costliest (comparison in the graph below).





*Cost of road transportation is considered as short distance of less than 100Km considering two-way fare is charged by transporter. This may vary from state to state and location to location depending upon many other factors as well.

Source: Indian Railways, Inland Waterways, CRISIL MI&A Analysis Rail

Figure 7 : Mode wise despatches of raw coal FY23 (percentages)

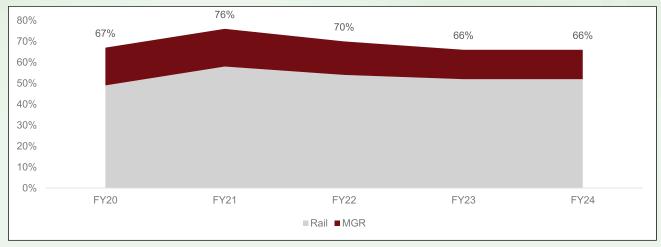
3 Mode-wise breakup - future projections

3.1 Rail transportation

Rail's share in total coal transport is the largest and for Railways too, coal transportation is the largest market segment. Coal consists of about 45% to 50% of Indian Railways' total freight business. Railways carried 788 MT of coal in fiscal 2024 (including imported coal), which is about 8.7% higher than that in fiscal 2023. In fiscal 2024, about 50% of railways total freight cargo was coal. Out of the 788 MT, 656 MT was supplied to thermal power plants and remaining to other sectors. About 87% of coal that is transported by railways comes from CIL/SCCL/others, while the rest is imported. Movement of coal

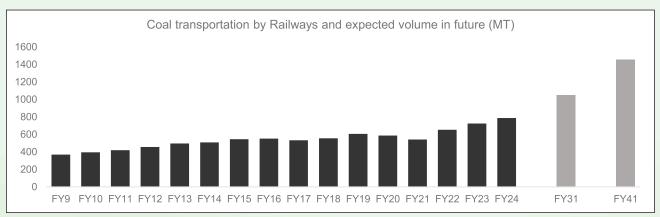
through railways has been continuously increasing and it is projected to reach 1050 MT by 2031 and 1455 MT by 2041 by national rail plan. This is a growth of about 33% in fiscal 2030 and about 85% by fiscal 2041, compared with actual freight of fiscal 2024.

In fiscal 2024, the total share of railways (including MGR systems) in transportation of coal from CIL was 66%. The overall share of railway transportation (including MGR systems) has been on an average 73%, since the last decade with a standard deviation of 5%.



Source: Ministry of Coal

Figure 8: Percentage share of railways in coal transportation from CIL



Source: National Rail Plan, 2020

Figure 9: Railway freight growth trends

In line with the increasing demand, to ensure efficient logistics of coal, major expansion plans are proposed by Indian Railways to strengthen their network. There are a total of 26 ongoing projects across six major coal producing states. The total cost of these projects are about Rs 66,827 crore. The total length of the network for all the projects is about 4,167 km, with a combined capacity of 1,222 MTPA. Among the ongoing projects, the highest investment of about Rs 44,457 crore is in Jharkhand to construct a rail network, spanning 2,268 km.

Table 1: Summary of ongoing first-mile and feeder-route projects

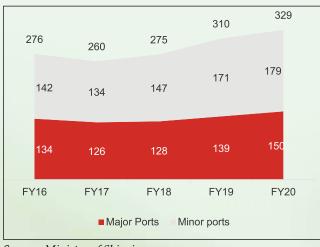
State	No. of rail projects	Total cost (INR crores)	Total length (km)	Capacity (MTPA)
Telangana	3	2,993	257	39
Odisha	6	9,410	630	545
Jharkhand	10	44,457	2,268	311
Maharashtra	1	640	234	25
Chhattisgarh	4	7,040	473	216
Madhya Pradesh	2	2,287	305	86
Total	26	66,827	4,167	1,222

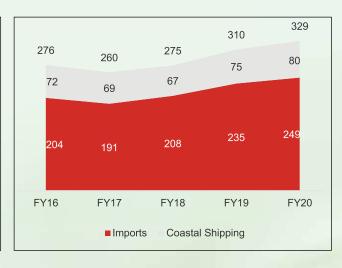
Source: Draft National Coal Logistic Plan, Ministry of Coal

As per the draft coal evacuation plan of Ministry of Coal, an additional investment of about more than Rs. 4,780 crore is required to construct a rail network of more than 380 km, with an additional capacity expansion of about 226 MTPA. The timely commissioning of the on-going projects is required to feed the increasing coal demand of the nation.

3.2 Shipping

This mode of transportation handles all the imported coal and domestic coal transported through coastal shipping, which involves transporting goods from one port to other within the same country. Shipping is environment friendly and the transportation costs are also lower. The total coal traffic (imports, exports, and coastal shipping) handled across the ports of the country has been on a rise in the recent years. The total coal traffic increased 27% in fiscal 2020 compared with fiscal 2017. Coal traffic handled at minor ports increased 34% in fiscal 2020 compared with fiscal 2017, whereas that at major ports increased 19%. Further, imports rose 30% and coastal shipping increased 17% during the same period.

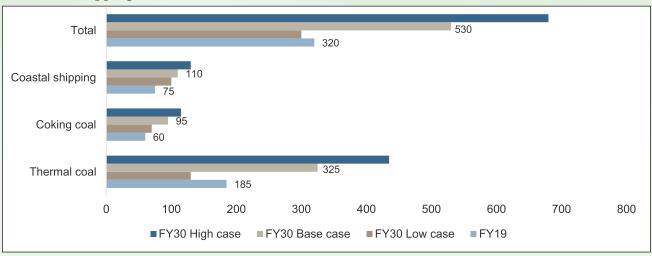




Source: Ministry of Shipping

Figure 10: Port-wise and type-wise total coal traffic (MT)

The Ministry of Coal expects total coal imports to fall due to a rise in domestic production; however, coastal shipping is expected to increase. The import of thermal coal is expected to decline; however, that of coking coal is expected to rise. The Maritime India Vision 2030 of the Ministry of Ports, Shipping and Waterways has outlined low, base and high cases of traffic summary of thermal coal, coking coal and coastal shipping. These forecasts are summarised below.



Source: Maritime India vision, 2030

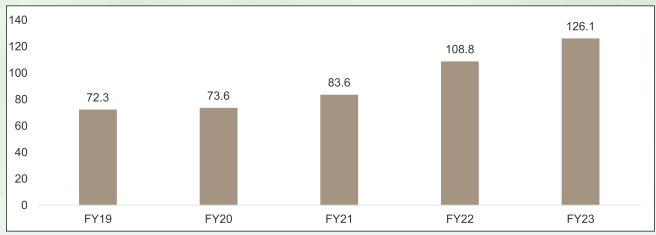
Figure 11: Coal traffic forecast summary for 2030 (MT)

3.3 Inland waterways

India has about 14,500 km of navigable waterways consisting of rivers, canals, backwaters, creeks, etc. Inland water transport (IWT) moves about 55 million tonne of cargo annually. From 2015-16 to 2021-22, the cargo transported by inland waterways has increased from 41 MMTPA to 109 MMTPA, representing a growth of 2.7 times. A total of 111 waterways have been notified under the National Waterways Act of 2016. National Waterways 1 to 5 are critical for bulk movement of cargo. Among these, only National Waterways 1, 4, and 5 are important for coal transportation as they are near coalfields. National Waterways 1 stretches from Allahabad in Uttar Pradesh to Sagar Island near Haldia in West Bengal. Raniganj coalfield lies in this area. National Waterways 1 can be used to transport coal to end-use plants, which are near, but due to multiple handling issues, the transportation cost is not very competitive compared with other modes. National Waterways 4 and 5 are in the vicinity of Godavari Coalfields, Talcher and IB Valley Coalfields, respectively. Both these waterways are still in a developmental phase and can be tapped for transportation of bulk commodities, including coal, once they are operationalised in the next four to five years. For inland waterways to be feasible evacuation routes, both the coal mine and the end-use plant must be close to the terminals.

The traffic on national waterways has been continuously increasing in the past few years. In terms of tonne km (movement of one tonne of cargo over a distance of one km) there was a increase by 9.36% in fiscal 2023 from fiscal 2022. In terms of tonnage, Goa, Maharashtra, Gujarat, Sunderbans & Icchamati accounted for 2.3%, 50.1%, 21.9%, 4.3% and 1.19% respectively of the total cargo volume in 2022-23. Out of the 126.1 MT of cargo transported in fiscal 2023, iron ore accounted for 34%, coal and coke for 31%, fly ash

for 8%, limestone for 4%, and steel for 3%. The remaining 3% mainly included sand, stone chips, cement, etc. Thus, about 39 MT of coal and coke were transported using inland water transport in fiscal 2023.



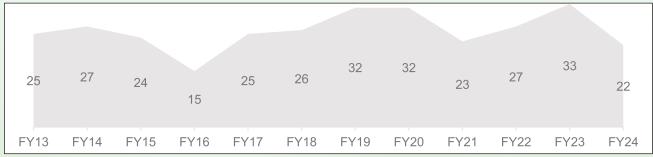
Source: Ministry of Shipping, Inland Waterways Authority of India (IWAI)

Figure 12: Total traffic movement on national waterways (in MT)

There are 11 power plants (belonging to NTPC⁴, BSPGCL⁵, WBPDCL⁶, CESC⁷) in the vicinity of NW-1 (within 10 km) in Bihar, Jharkhand and West Bengal. About 0.3-0.4 MTPA of imported coal has been consumed by these power plants over the last two to three years. So, NW-1 can be used to transport this coal. Coal demand of 1.00-1.25 MTPA exists in the cement industry in the North-East and 20-25% of this demand is met by imported coal coming from Haldia. Thus, the possibility of supplying coal to cement manufacturers in the region using coastal + IWT routes exists.

3.4 Roads and conveyor transportation

Road transportation is the most flexible mode of transportation and does not require huge capital costs; however, the operating cost of road transportation is the highest among all the different modes. The share of road transportation in coal evacuation from Coal India Limited (CIL) has been about 26% on average in the last decade. This share has been about 22% in fiscal 2024.



Source: Ministry of Coal

Figure 13: Percentage share of roads in coal transportation from CIL

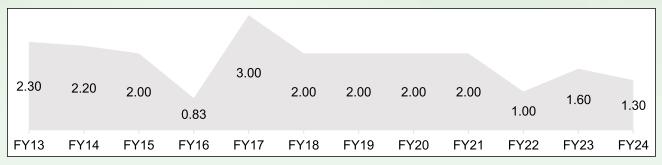
^{4.} NTPC- NTPC Ltd.

^{5.} BSPGCL-Bihar State Power Generation Company Ltd.

^{6.} WBPDCL- West Bengal Power Development Corporation Ltd.

^{7.} CESC- Calcutta Electric Supply Corporation Ltd.

Conveyor systems can be used for first and last mile connectivity in coal transportation. Conveyors can be deployed in difficult terrain more easily than trucks or rail systems. They are a continuous mode of transportation, so their efficiency is higher compared with cyclical modes such as trucks and rail. Conveyors have a very low operating cost, are environment friendly, and highly efficient. They should be deployed wherever it is economical to use them. The share of belt conveyors/ropeways in coal evacuation from CIL has been about 1.93% on average in the last decade. This share was about 1.3% in fiscal year 2024.



Source: Ministry of Coal

Figure 14: Percentage share of conveyors/ropeways in coal transportation from CIL

The following chapter covers the major challenges and recommendations to improve the overall logistics infrastructure in India.

4. Challenges and recommendations

4.1 *Cost*

Transportation cost is a major component in the landed cost of coal at end use plants. For example, it accounts for 25-35% of the cost of power produced by a plant located ~1,000 km from the mine it sources coal from⁸. For a plant located almost 2,000 km from the coal field, the share of logistics costs is more than 50% of the landed coal cost. Further, coal accounts for the highest revenue realisation among all commodities transported by railways. As per the annual statistical statement of Indian Railways for 2022-23, the cost of hauling a goods unit by Indian railways was Rs 1.20 per tonne per km, and the revenue realisation for all commodities was Rs 1.10 per tonne per km; however, the revenue realisation from coal was Rs 1.99 per tonne per km. Thus, the markup on average cost of transportation of coal is more than 50%. Due to these high costs, domestic coal has become more expensive than imported coal in many cases, especially for power plants located near coastal regions, thereby affecting coastal infrastructure as well as foreign exchange outflows. The cost of road transport is already high compared with railways as road caters to short distance requirements, the coal carrying capacity of trucks in India is low, the cost of diesel is high, and there are no dedicated high-capacity roads for coal/mineral transportation, etc. Hence, the cost of coal transportation is a huge burden on end use plants, especially for those not located near coal fields.

^{8.} Source: CRIS Analysis

The solutions to make coal logistics economically feasible and ensure domestic coal is cost competitive versus imported coal for coastal thermal power plants/end use plants are as follows:

- High-capacity railway wagons and dedicated freight corridors to be developed to carry a high
 load of coal from coal fields to end use plants. This will reduce the cost based on economies of
 scale.
- Use of the hub-and-spoke model i.e. two or more mines in close vicinity sharing common infrastructure for first mile connectivity will help reduce costs, but this needs to be planned as part of the mine allocation process only. A common railway siding can be constructed and used by two to three mines close to each other through the SPV mode.
- The need for highways/dedicated roads for mineral transportation using high-capacity trucks, especially within 50km of mines or up to rail sidings should be evaluated.
- The rail-sea-rail route can be evaluated and made cost competitive if railway freight charges are optimised. This mode can be deployed for costal thermal plants. Rail-national waterways-rail routes also have similar potential, and these must be evaluated further.
- Integration with Smart weighbridge to collect coal dispatch details at entry and exit points.
- Integration with Silo weighing device to collect coal dispatch details when MGR is the mode of transport.
- Volume scanning of coal at exit points
- Volume scanning of coal moving through conveyors
- Volume scanning solution for volume information of coal in stockyards
- Tracking of vehicles wagons carrying coal when the means of transport is roadways
- Integrating with pre-existing vehicle tracking systems to track coal movement through roadways
- Integrating with FOIS of Indian railways to track coal movement through railway.

4.2 Availability

A few mines are not able to increase their output due to limited means for coal evacuation. As per estimates, ongoing railway projects in Jharkhand, Chhattisgarh and Odisha can potentially evacuate more than 300MT from coal fields of Central Coalfields Limited (CCL), South Eastern Coalfields Limited (SECL) and Mahanadi Coalfields Limited (MCL). Availability of haul roads is a major concern for private mines being developed and end use plants become unviable due to high capex, opex and landed cost of coal. Also, as the volume of coal to be transported is projected to double in the next eight to ten years, the existing logistics infrastructure must be ramped up to handle increased volumes. A few recommendations to improve the logistics infrastructure are given below:

^{9.} Refer supply demand projections in the introduction part.

• The railway network needs to be developed further to enhance coal evacuation. A few critical projects¹⁰ identified in the national coal evacuation policy need to be deployed at the earliest.

- The government should build a partnership with mining companies where it provides requisite clearances and mining companies provide the necessary capital. SPVs for rail projects need to be developed through equity shareholding from private companies with the remaining finances raised from the market. A toll policy can be formulated to ensure SPV road projects are financially viable.
- Faster clearances need to be provided to fast track belt conveyor projects
- Inland waterways should be developed, especially NW-1 to cater to high-capacity coal transportation.

4.3 *Time*

Transportation time is a major bottleneck for coal logistics. Wagon turnaround times have become an issue for transportation through railways. Wagon turnaround refers to the average time taken for a wagon to complete its typical loaded trip and become available for loading again. Oversized coal shipments increase wagon turnaround time, resulting in higher freight costs via demurrage. A few suggestions to improve the time taken for coal transportation are given below:

- The Railways Information System (RIS) needs to plan for coal transportation in the future based on historical, seasonal and rainy season trends. It has to accordingly start advance booking of wagons with surcharges as well as penalty clauses for non-availability of wagons.
- The rapid load system should be developed for all mining projects with a capacity of more than 10MTPA on a priority basis. Technologies such as the automated truck loading system (ATLS) can help reduce wagon turnaround time. ATLS is an automatic truck loading and unloading system that facilitates automatic insertion and removal of minerals into/from trucks with minimal operator intervention.
- Increasing the average speed of wagons can also reduce the turnaround time. New wagon designs can be considered using lightweight aluminium body. It can increase the throughput from 68 tonne/wagon to 80 tonne/wagon.
- For transportation through waterways, the turnaround time depends on loading/unloading and shipping time. Proper planning at ports and coal dedicated docks can help address this issue.

^{10.} Refer Annexure 2.

5 Annexures:

5.1 Annexure 1 - List of ongoing first mile and feeder route projects to coal fields

State	Coalfield EPC agency	Project name	Project cost (Rs crore)	Length in km	Target date of commissioning	Capacity MTPA
Telangana	Godavari Collieries SER	Bhadrachalam – Sattupalli NL	928	56	2/1/2022 Forest clearance and LA are critical issues	5
		Balharshah Belampalli 3rd line		201	Mar-24	17
		Belampalli Kazipeth 3rd line	2065 azipeth		Mar-24	17
	Talcher ECoR	Jarapada Budhapank 3rd & 4th line with a flyover at Talcher	810	101	March 2024, forest clearance and LA are critical issues	130
	ECoR	Budhapank Rajatgarh Salegaon 3rd & 4th line	- 111/2 186 INA		130	
	ECoR	Sambalpur-Jarapada doubling incl Talcher Angul A super critical project	1539	174	Mar-22	65
Odisha	JV	Angul Balram line	145	13	December 21.	25
	SECR	3rd and 4th line between Jharsuguda and Bilaspur	line 1974 206 Dec-23		130	
	Deposit/SE Railway	Jharsuguda-BarpaliSardega rail link	3770	50.3	bulb - March 2026, double line	25 and will be extended
Jharkhand	North Karanpura ECR	Koderma Tilliya NL	300	65	30 km completed March 2022	23

State	Coalfield EPC agency	Project name	Project cost (Rs crore)	Length in km	Target date of commissioning	Capacity MTPA
	ECR	Gaya Kiul Doubling	1200	124	20 km completed March 2023	
	ECR	Kiul Tal Rajendrapul additional bridge and doubling	893	14		
	ECR	Barkakana Muri double line	870	58		43
	ECR	Tori Shivpuri railway line 3rd line/doubling commissioned	895	44.37	22-Nov	25 (long route)
	IRCON	Shivpur Kathautia line	1799.64	49.09	The project will be commissioned in 3 years after FC	25*
	Karanpura ECR	DFC- Dadri to Sonenagar & extension up to Koderma	30358	1318	2023	120
	RVNL	Third line between Barkakhana- Garwaha Road- Sonenagar	3406	291	24-Mar	25*
	Rajmahal Rampur Hat Nalhati (l Coalfield 3 rd line		210	14		25*
	Auranga	Barkakana-Sonenagar 3rd line	4525	291	March 2024	25*
Maharashtra	Wardha Valley CR	Wardha Ballarshah 3rd line	640	234	Mar-24	25*
Chhattisgarh		Raigarh-Champa 4 th line	2070	206	3 rd line completed; 4 th line March 2024	43*

State	Coalfield EPC agency	Project name	Project cost (Rs crore)	Length in km	Target date of commissioning	Capacity MTPA
	Mand Raigarh SECR	Champa-Naila 4 th line				43*
	JV	Kharsia-Korichapar Dharamjaigarh		132	Kharsia Gharghoda Dharamjaigarh commissioned. Ghargoda- Gare Palma spur and 3 feeder routes will be commissioned by September 2021	65
	Korba, Gevra Coalfield	East-West rail corridor -Gevra Road-Pendra Road line	4970.11	135	23-Mar	65
Madhya Pradesh	Singrauli Coalfield	Doubling from Singrauli to Shaktinagar via Karaila Road	529	45	23-Mar	43*
	IRCON	Doubling Singrauli Madhaiya- Katni	1758	260	Mar-23	43*

Source: Draft National Coal Logistic Plan, Ministry of coal

5.2 Annexure 2 - New projects required for efficient evacuation of coal

State	Coalfield	Project name	Project cost (Rs crore)	Length in	МТРА
Telangana	Godavari Collieries	Karepalli-Bhadrachalam Road doubling	600	39	40*
Jharkhand	North Karanpura	Muri Chandil double line	1005	67	43*
	Rajmahal	Khana Sainthia 3rd line	1065	71	25*
		Nalhati Gumani 3rd line	870	58	25*
Chhattisgarh	South Eastern Coalfield Ltd.	Bilaspur Raipur 4 th line/ DFC	1237	82.5	43*
Odisha	Talcher Coalfield	Outer coal corridor	To be estimated	60 approx.	50*

Source: Draft National Coal Logistic Plan, Ministry of coal.

About CRISIL Limited



CRISIL is a leading, agile and innovative global analytics company driven by its mission of making markets function better.

An S&P Global Company

It is India's foremost provider of ratings, data, research, analytics and solutions, with a strong track record of growth, culture of innovation and

global footprint.

It has delivered independent opinions, actionable insights, and efficient solutions to over 100,000 customers.

It is majority owned by S&P Global Inc, a leading provider of transparent and independent ratings, benchmarks, analytics and data to the capital and commodity markets worldwide.

About CRISIL Market Intelligence & Analytics

CRISIL Market Intelligence & Analytics, a division of CRISIL, provides independent research, consulting, risk solutions, and data & analytics. Our informed insights and opinions on the economy, industry, capital markets and companies drive impactful decisions for clients across diverse sectors and geographies.

Our strong benchmarking capabilities, granular grasp of sectors, proprietary analytical frameworks and risk management solutions backed by deep understanding of technology integration, make us the partner of choice for public & private organisations, multi-lateral agencies, investors and governments for over three decades

CRISIL Privacy

CRISIL respects your privacy. We may use your contact information, such as your name, address, and email id to fulfil your request and service your account and to provide you with additional information from CRISIL. For further information on CRISIL's privacy policy please visit www.crisil.com/privacy.

Contact us

Satnam Singh

Director, Energy & Commodities, CRISIL Limited, Consulting, Plot No. 46, Sector 44, Gurgaon (Hr) 122003

Email: satnam.singh@crisil.com

Manish Singla

Practice Leader & Associate Director, Energy & Commodities, CRISIL Limited, Consulting, Plot No 46, Sector 44, Gurgaon (Hr) 122003

Email: manish.singla@crisil.com

Mob: +91 999 009 2828

Disclaimer

This Report is prepared by CRISIL MI&A, a division of CRISIL Limited ("CRISIL"). By viewing, using or accessing this Report you ("user") agree and accept as follows: (i) While CRISIL uses reasonable care in preparing this Report based on the information obtained from sources it considers reliable ("Data"), CRISIL does not guarantee the accuracy, adequacy, completeness, authenticity or timeliness of the Data / Report and is not responsible for any errors or omissions or for the results obtained from the use of the Data/Report (ii) This Report is not a recommendation or investment advice. CRISIL especially states that it has no financial liability whatsoever to the subscribers/ users/ transmitters/ distributors of this Report. CRISIL MI&A operates independently of, and does not have access to information obtained by CRISIL Ratings Limited, which may, in their regular operations, obtain information of a confidential nature. The views expressed in this Report are that of CRISIL MI&A and not of CRISIL Ratings Limited; (iii) The user takes full responsibility for any use of the Report and CRISIL does not accept any liability whatsoever (and expressly excludes all liability) arising from or relating to the use of any part of the Data/Report by the user; (iv) The user will always use the Report 'AS IS' in its entirety and unless the user is specifically permitted by CRISIL in writing the user shall not in any manner: (a) copy, transmit, combine with other information, recompile, publish, reproduce or segregate any part or portion of the Report. The contents of this report are intellectual property and information of CRISIL. Altering or copying of the contents or distributing the report without attribution the source to CRISIL is strictly prohibited and violation will attract legal action.; (b) use the CRISIL brand name, logo or any other CRISIL intellectual property rights in relation to or in respect of the Report or in any manner that identifies or indicates that CRISIL is the author, developer, publisher or owner of the Report or that CRISIL has released the Report. The report is for use within the jurisdiction of India only. Nothing in this report is to be construed as CRISIL providing, or intending to provide, any services in other jurisdictions where CRISIL does not have the necessary permissions and/or registration to carry out its business activities. The user will be solely responsible for ensuring compliance for use of the report, or part thereof, outside India.



A MINI RATNA COMPANY

CATERING TO THE COAL DEMANDS OF A BILLION

EXCAVATING POSSIBILITIES, EMBELLISHING LIVES.

- Futuristic Technology
 Eco-friendly Empowering Lives



South Eastern Coalfields Limited

(A Mini Ratna Company)

SECL Bhawan, Seepat Road, Bilaspur (C.G) 495006



👩 @southeasterncoalfields 🕟 secl_cil 💿 SECL Media 📵 www.secl-cil.in







Speakers Profile



Shri PM Prasad Chairman, Coal India Limited

Shri P M Prasad took charge as Chairman as Coal India Ltd. on 1st July 2023. Prior to assuming charge as Chairman of CIL, Shri Prasad was serving as CMD in Central Coalfields Limited. He is a mining engineer from Osmania University. He did M. Tech in 'Open-Cast Mining' from Indian School of Mines (IIT-ISM), Dhanbad. He also has a

degree in law from Nagpur University.

Shri Prasad began his career as an executive trainee with Western Coalfields Limited (WCL), a subsidiary of Coal India Limited (CIL) in 1984. In 1994-95, he was instrumental in reopening of DRC mine, WCL which was affected by underground fire. For this remarkable job, he was given the 'Best Mines Manager' award by Secretary Coal, Ministry of Coal and Chairman, Coal India Ltd.

As General Manager in MCL, he was responsible for successful opening and operations of 'Kaniha Opencast Project' in 2010. In May 2015 he joined NTPC as Executive Director (Coal Mining) and In March 2016, he took charge as Executive Director cum Head of Project, Pakri Barwadih. His tenure saw the commissioning of Greenfield project of Pakri Barwadih OC (20 MTY).

In February, 2018 he joined Northern Coalfields Limited (NCL) as Director Technical (P&P) where he was responsible for the operations of five areas of the company along with key departments like Corporate Planning, Civil Engineering, Railway Siding, Environment & Forest, etc. Under his leadership, NCL was awarded at the World Environmental Conference in June 2018 for outstanding work in environment conservation.

He became CMD, Bharat Coking Coal Limited (BCCL) in August 2019. Under very challenging conditions, he led from the front with commitment, vigor and dedication.

Shri Prasad is renowned for his interpersonal skills and is a firm believer in teamwork. Under his guidance Coal India is destined to attain new milestones and scale new heights.



Shri Milind K Deouskar General Manager, Eastern Railway

Shri Milind K Deouskar is General Manager of Eastern Railway Since January 2024. Prior to this, Shri Deouskar was Secretary of Railway Board.

Shri Milind Deouskar is an officer of Indian Railway Management Service and originally belongs to Indian Railway Stores Service (1987 batch). He has handled very important executive and management positions on Indian Railways at different places like Kalyan, Jhansi, Bhusawal, ICF etc. He worked as Additional Divisional Railway Manager and Divisional Railway Manager, Pune Division. He has also served as Principal Chief Materials Manager at Integral Coach Factory (ICF), Chennai and as Chief Materials Manager on Central Railway besides being Chief Materials Manager on Konkan Railway Corporation Ltd also.

He has undergone multiple trainings such as Advanced Management from INSEAD, Singapore/Malaysia and undergone Workshop on Strategic Management issues from Indian School of Business, Hyderabad.

He is a Mechanical Engineer and an alumnus of Maulana Azad College of Technology (now NIT) Bhopal.

He has immense interest in sports & cultural activities and always patronized development of such activities.

Shri Milind Deouskar is the recipient of National level Railway Award from Hon'ble Railway Minister in the year 2003 for outstanding achievements.



Ms Michelle Manook CEO, Future Coal

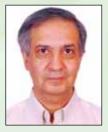
Ms Michelle Manook is Chief Executive of Future Coal (formerly known as the World Coal Association). She has held the role since July 2019.

Previously, she held the position of Head of Strategy, Government, and Communications for Europe, Asia, and Africa at the multinational company, Orica.

Her career spans over 25 years in senior roles in the energy, oil and gas and mining industries in both developed and developing markets. She has also held non-executive director positions in energy and healthcare sectors and early in her career, worked in policy and public affairs for The Government of Western Australia.

Throughout 2022 and 2023, Michelle achieved significant recognition on the global stage. She was honoured as one of the 100 Global Inspirational Women in Mining (WIM100) and acknowledged by the Mining Journal for two consecutive years as one of the 50 most influential figures in the mining sector.

She holds a Bachelor of Arts in Psychology and a Post Graduate qualification both gained at The University of Western Australia.



Shri Alok Perti, IAS (Retd.)
Chairman-ICF & Former Secretary (Coal)

Shri Alok Perti is Former Secretary, Ministry of Coal, Govt. of India. He is an IAS of 1977 batch (Assam-Meghalaya cadre), and has worked in the Ministry of Coal, Health and Welfare, Ministry of Defence etc at centre as well various departments in Govt. of Assam.

He was on the board of several Defence PSUs as official director when is worked as Joint Secretary in Ministry of Defence. He was also official director on the board of Coal India Ltd. and NLC when he was serving in the Ministry of Coal. He has also been a non-official part time Independent Director on the Board of Coal India Limited and various other companies,

Shri Perti holds a bachelor's degree in science and a master's degree in physics from the University of Allahabad and also completed a master's course in Social Planning and Policy in Developing Countries from the London School of Economics, UK. He was also a member secretary to the Kelkar Committee set up by the Ministry of Defence to suggest modifications to defence acquisitions, WHO consultant for conducting study and validation of National Immunization Programme in Bhutan and also served as a consultant to UNICEF to develop a material management systems for supply in Myanmar.



Shri U. Kumar Exec. President - ICF & Former CMD, SECL & NCL

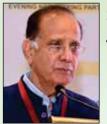
After Graduating from the prestigious Indian School of Mines, Dhanbad in Mining Engineering in 1958, he joined National Coal Development Corporation (NCDC) and rose to the rank of Dy. Chief Mining Engineer when NCDC was merged into Coal India Ltd. Moving forward and working as General Manager and Chief General

Manager, he was appointed Director (Tech) in CMPDI and then CCL. Where from he moved as CMD to NCL, Singrauli and then to SECL, Bilaspur.

After his superannuation in 1997, he worked for two Private Sector Mining Companies and worked in Essel Mining & Industries Ltd. of Aditya Birla Group as Advisor (Coal) from 2006 - 2022.

He has served as Vice-Chairman, Standing Committee of Ministry of Coal under MMDR Act for 6 years and Director, World Coal Institute; Member, Central Pollution Control Board, Government of India; National President, Mining Geological & Metallurgical Institute of India; President, All India Public Sector Sports Control Board and on Board of Governors, Indian Institute of Coal Management (IICL).

He has received several awards like Indira Priyadarshini Vriksha Mitra Award, Government of India; D.D. Thacker Gold Medal from MGMI; Distinguished Alumnus Award from Indian School of Mines and Engineer of the Year Award by Institution of Engineers and authored large no. of papers on various aspects of Coal mining.



Shri N N Gautam Secy General -ICF & Former Advisor, Ministry of Coal

• Graduated BSc. (Hons.), Mining from Indian School of Mines, Dhanbad in 1962.

- Worked 30 years in Bengal Coal Co., a British company & Coal India Ltd. in deep underground mechanized mines and large mechanized open cast mines.
- Worked as Director (Technical)/ Advisor (Projects) in Ministry of Coal, Government of India.
- Worked as Advisor UNDP/GEF-GoI "CBM Recovery and Commercial Utilisation Project" costing 100 crs. CBM from Vertical wells at Moonidih mine of BCCL was recovered and 1 MW power was generated.
- Past Positions held: Vice President, Mining Metallurgical Geological Institute (MGMI); Past President, MGMI Delhi Chapter; Advisor, ACB (India) Ltd.
- Currently Advisor, JSPL; Chairman, Coal Group of India Energy Forum an NGO of Energy Experts; Secretary General, Indian Coal Forum - an NGO of Coal Experts; Secretary General, IIT (ISM) Alumni Association - Delhi Chapter; Secretary General, Coal Producers Association; Special Secretary (Events), MGMI-DC.
- Distinguished Alumnus Award from Indian School of Mines Dhanbad.
- Life Time Achievement Award of Energy and Environment Foundation.
- Presented over 50 technical papers in International & National Journals and seminars.



Dr. Prem Sagar Mishra CMD, SECL

Dr. Prem Sagar Mishra is Chairman-Cum-Managing Director of South Eastern Coalfields Limited. He completed his B. Tech (Mining) from Indian School of Mines, Dhanbad in the year 1987 and obtained First Class Certificate of Competency in the year 1990. He has obtained a Post Graduate Diploma in Business Law from the West

Bengal National University of Juridical Sciences (NUJS), Kolkata. He has worked in different capacities in ECL, CCL and BCCL. He has also served as Director (Production & Planning) of Orissa Minerals Development Company Limited. He has attended Advanced Management Programme held at IIM, Calcutta, University of St. Gallen, Switzerland and Essec Business School Paris, France in 2014. He was also a part of CIL delegation to Istanbul (Turkey) for attending World Mining Congress 2011. He has also attended Management Training Programme at Administrative Staff College, Hyderabad and Advanced Management Programmes conducted by IICM at LBSNAA, Mussoorie.



Dr. Avinash Kumar Mishra, IRTS

ED - Coal & Traffic Transportation (Steel), Railway Board

Dr. Avinash Kumar Mishra, IRTS is Executive Director, Traffic Transportation (Steel), Railway Board. He also look after the duties of the post of Executive Director (Coal), Railway Board.

He started working as Medical Practioner, then worked as, public health professional for two years in Delhi. Subsequently entered into Indian Civil Services, and deputed as Transport Manager for 1400-4400 Crore earning divisions of Eastern Railway for 16 years at four locations in Bengal, HR Manager for 5000 to 8000 staff divisions. He also worked as, Chief Transportation Planning Manager at North Central Railways.

He is a MBBS from NMCH, Patna and Executive Management course from IIM, Lucknow.



Shri Praveen Kumar

MD, Dedicated Freight Corridor Corporation of India Limited (DFCCIL)

Shri Praveen Kumar, belongs to 1989 batch of Indian Railway Service of Engineers (IRSE). With over three decades of exemplary service, Shri Kumar has established himself as a visionary leader in the realm of mega Railway Infrastructure projects.

His experience spans the entire project lifecycle, from conceptualization to commissioning. Shri Kumar has expertise in international tendering, procurement and dealing with multi-lateral funding agencies, including the Japan International Cooperation Agency (JICA) and the World Bank.

Shri Kumar has been involved with Dedicated Freight Corridors for more than a decade and handled complex challenges related to land acquisition, project execution and procurement. He has been instrumental in commissioning critical Rewari-Dadri section of DFC which is the links WDFC with EDFC. His ability to resolve intricate contractual issues in Engineering, Procurement, and Construction (EPC) contracts through amicable means has earned him widespread respect in the industry.

Shri Kumar has authored two authoritative books on railway engineering displaying his technical prowess and commitment to knowledge-sharing.

Shri Praveen Kumar has completed his Bachelors and Masters degree in Civil Engineering from IIT, Roorkee. He has also done Post Graduate Diploma in Public Policy and Management from MDI, Gurgaon.



Shri Subhash Kumar Das ED (Infrastructure & Logistics), SAIL

Shri Das is a seasoned professional with a rich background. He brings extensive experience from Durgapur Steel Plant, specializing in steel plant maintenance and operations including captive power generation, lime calcination, BOF steelmaking, and more.

As Executive Director of Environment Management at SAIL, he led initiatives promoting sustainable operations and ESG principles.

Heading SAIL's Logistics and Infrastructure, he excels in maritime business, port management, rail logistics, and cost optimization for efficient supply chain management.

He also shares his expertise in advanced management and technical areas related to steel plant operations and sustainable supply chains.

He is B. Tech from BIT Mesra and M. Tech from NIT, Durgapur. Also received IIM-(Durgapur) Metallurgist Day Award and KALINGA Best Environment Engineer Award 2023.



He Joined Coal India as JET E&M in 1991 and worked as E & M Executive in Western Coal Fields Ltd, Nagpur from 1991 to 2008 in various Open cast and Underground

Mines for operation and maintenance of Coal Handling Plant and dewatering of mine. He also worked in Vigilance Department of WCL from 2008 to 2012.

From 2012 to 2020, worked in CMPDI, Nagpur for Planning and designing of Coal Evacuation system, Dewatering of Mines, HEMM workshop etc. 2020 onwards, he is working in CMPDI HQ, Ranchi for Coal Evacuation planning and designing for all subsidiary of CIL and SCCL.

He is done his B Tech (Mechanical) in 1990 from BCE, Bhagalpur (Bihar).



Shri Sabyasachi Hajara Former CMD, The Shipping Corporation of India Ltd.

Shri Sabyasachi Hajara is former CMD, The Shipping Corporation of India Ltd. (SCI) (2005-2012). During his tenure, the turnover of SCI increased substantially and the increase in the Gross asset value was twofold and SCI also received the status of 'Navratna' by Govt of India in 2008.

Shri Hajara passed out from IIM Calcutta and joined SCI in 1973. Since then he worked in SCI in various key positions, like General Manager, Project Leader, Director (P & A) etc.

He is also on the Board of Directors of several companies like Adani Petronet Port Project Ltd, L&T Shipbuilding, Doehle Danautic India, ICL Shipping, Dubai, Dolphin Offshore Shipping, IIM Shillong etc.

At the India Shipping Summit 2007, he was conferred the "Innovator of The Year" award. The SHIPPING & MARINE 2008, supported by CHEMTECH Foundation, has conferred the "Business Leader of the Year Award – for Shipping" to him. Also at the Sailors Today Award ceremony on 21.04.12, he was conferred with prestigious "Life-Time Achievement award" for his outstanding contributions to the Shipping Industry for last four decades. At the 3rd All India Maritime and Logistics Awards (MALA) 2012, he was conferred the "Global Indian & Maritime Personality of the Year". Lastly he was also conferred honorary fellowship/honorary membership by the Institute of Marine Engineers and the Company of Master Mariners' respectively.



Shri Samiran Dutta CMD, Bharat Coking Coal Ltd & Eastern Coalfields Ltd.

Shri Samiran Dutta is an associate member of the Institute of Chartered Accountants of India. He joined Coal Industry in August, 1988 in Bharat Coking Coal Limited, Dhanbad and then was transferred to Coal India Limited, Kolkata in April 1990 and where he served in different capacities. He was promoted to the post of General

Manager (Finance) in January 2018. Shri Dutta took over the charge of Director (Finance) in BCCL in 2019. In addition, he was also given the responsibility of the additional charge of Director (Finance) in Eastern Coalfields Limited, Sanctoria. He was also been entrusted with the additional charge of Director (Finance) Coal India Limited from July - Dec 2021. He also served as Commissioner, CMPFO for a brief period from February - April 2022.

Considering his vast experience in Coal Industry, Shri Dutta has been bestowed with the charge of CMD of Bharat Coking Coal Ltd from Dec 2021. He is also holding additional Charge of CMD, Eastern Coalfields Ltd.



Shri A.K. Mehera

Former Deputy Chairman, Syama Prasad Mookerjee Port, Kolkata

Shri A.K. Mehera is the Former Deputy Chairman of the Haldia Dock Complex under Syama Prasad Mookerjee Port, Kolkata & Cochin Port Authority. He has 32 years of experience in the Port sector and is a civil engineer by profession. He graduated from

Bengal Engineering College in 1986 and has done his Master's degree in civil engineering from Jadavpur University in 1989.

Shri Mehera's major roles in the port sector:

- 1992: Joined the Port sector as Manager (Environment) in Kolkata Port Trust.
- 2003–2011: Held additional charge of the Estate Division at Kolkata Port Trust.
- 2006–2015: Chief Engineer in Kolkata Port Trust.
- 2015–2020: Chief Engineer in Visakhapatnam Port Trust.
- February August 2020: as Deputy Chairman, Cochin Port Trust.
- August 2020 July 2024: as Deputy Chairman, Syama Prasad Mookerjee Port (formerly Kolkata Port Trust).



Shri Amalesh Maity

Head - Strategic Business & Institutional Sales, Volvo Trucks India

Shri Amalesh Maity is a mechanical engineer having more than 34 years of industry experience in construction, mining, material handling and automobiles. Worked in reputed organizations like Larsen & Toubro Ltd, Escorts Construction Equipment, Voltas and Volvo Trucks India.

Presently, Head of Strategic Business Development of Volvo Trucks India; working on special application projects of national importance with PSUs and Institutions like CIL, ISRO, VRDE, DRDO, ONGC, Indian Navy, L&T Defense etc.



Shri Abhinav Sengupta Associate Director, PwC

Shri Abhinav Sengupta is an MBA in Energy & Infrastructure & B. Tech in Mining having over 13 years of experience in Mining & Mineral Sector and has acquired strong industry exposure in areas of Strategic/Risk Advisory, Due-Diligence, Financial Appraisal, Feasibility Studies, Business Process Consulting and Strategic

Procurement. With strong domain knowledge of Energy & Infrastructure; brings in skills of Techno-Economic Studies, Financial Modelling, Business Development, Data-analytics, Market Research, Business Intelligence, ERP Implementation and Report Writing.

He is currently working with PwC India as Manager in management consulting of Mining & Metals and has previously worked in organizations like TATA Consulting Engineers, Wipro Technologies, aXYkno Capital and Dilip Buildcon Ltd. He has also completed an Executive Diploma in Business Valuation from the Institute of Cost Accountant of India (ICMAI) in 2020. He has written more than 300+ one page articles and has few publications in international journal. He recently won Black Gold 2023 Media Award from Government of Kuzbass, Russia for his paper on Sustainable Growth of Indian Coal Industry.



Shri Debashis Sen, IAS (Retd.)
Former Addl. Chief Secretary, West Bengal & Former CMD, WBHIDCO

Shri Debasish Sen is a public servant, a civil servant, an IAS officer. He understands governance and cities. He believes in innovation-on-the-go. He can communicate with stakeholders, trying to empathize with their pains and aspirations. He is tech savvy and is focused on bringing the digital wave to the street.

He has been a leader in transforming a vacant green-field land mass into a Smart Green City. For over a decade, he has been, the CEO (MD/CMD) of a public undertaking that is focused on developing a 7,000 acre satellite township of Kolkata. Every day, he has been injecting innovative interventions in the realm of e-Governance, stakeholder consultation, Senior Citizen care, inclusive growth, sustainable development, use of Blockchain technology for issue of Birth and Death Certificates, use of Artificial Intelligence for road monitoring, Cloud based IoT tech for controlling street lights and many more.

With over 35 years of experience in the Indian Administrative Service, Shri Sen is a seasoned administrator with expertise and experience across diverse fields including, smart city, public finance, e-Governance, G2B/G2C service delivery, public infrastructure, ease of doing business, electoral reforms, sustainable development, startup ecosystem, investment facilitation and more. He has held senior administrative posts ranging from Addl. Chief Secretary, Chief Electoral Officer, Chairmanships of multiple development authorities among others. He has been the driving force behind some landmark initiatives of the Government of West Bengal in the Urban Development and IT sectors. He has been trained at the Harvard University (Conflict Negotiation) and IMF Institute (Public Finance).



Shri M. Prasanna Kumar CMD, NLC India Limited

Shri M. Prasanna Kumar, assumed the charge as the Chairman and Managing Director of NLC India Limited (NLCIL) in January 2023.

Prior to assuming charge as CMD in NLCIL, Shri Kumar served as Managing Director of Prestigious Gujarat State Electricity Corporation Ltd. (GSECL), for 2020 - 2023.

Prior to joining GSECL, he was an Executive Director, heading vertical of NTPC (Corporate Fuel Management). Shri Kumar has an illustrious career spanning over 34 years in the Power sector and Coal and with his hard work commitment and dedication had reached the top position of CMD of NLC India Ltd.

He also held the prestigious post of Chairman, Western Region Power Committee, WRPC, Mumbai for Seven Western States for the year 2021-22 and Director of CNUPL (CIL NTPC Urja Pvt. Ltd.) and also as the Joint Managing Director of MGCL (MahaGuj Collieries Limited).

Shri Kumar is born and brought up in the State of Andhra Pradesh and Telengana. He is a Gold Medallist in Mechanical Engineer from Andhra/Nagarjuna University. He also holds managerial qualifications viz MBA in four specializations, Operations Management, Marketing Management Financial Management and Human Resources Management. He is also topper of Energy Auditor Examination of Bureau of Energy Efficiency, GOI and also Certified Level-D Exam holder of International Project Management Association (IPMA).



Shri Ratnesh Rai *Managing Director, QA Testing Laboratories Private Limited*

He is heading as a Managing Director of QA Testing Laboratory. Ratnesh Rai is a Bachelor in Technology and Masters in Business Administration, having vast experience in the Field of Inspection and quality control of Coal at different

Subsidiaries of Coal India Limited, in 2018 he started QA Testing Laboratory to identify different characteristics in coal and quality of coal through unbiased testing providing accurate, exact and timely results to more than 300 customers, With having testing capacity of 400 samples per day and experience of more than seven years in coal and coke testing facilities in three different locations in India. He is Qualified Lead Auditor for integrated quality management system such as ISO 9001, ISO 14001, ISO 45001 and ISO 17025 with audit experience of more than 500 organizations.

Shri Gangadhar Udnur Head-MSS, Digital & Innovation, SGS India

Shri Gangadhar Udnur is a mechanical engineer & MBA graduate by education. He's currently heading Mechanical Sampling Business in SGS, since over a decade.

In his last 18+ years' journey, he has provided unique & innovative solutions for coal sampling and digitization of supply chain processes to several coal users within India and overseas.

He had been invited to several countries to provide customized solutions, deliver training and presentations at conferences.

He is also a member of TIC ILAC Working Group on 'Accreditation of Sampling'.



Shri Indranil Roy
Director Mining, Materials Handling & Processing Business
TKIL Industries Pvt. Ltd

Shri Indranil Roy is a highly experienced engineering professional with a remarkable 38-year career in the industry. His extensive background includes nearly three decades with Larsen & Toubro (L&T) and subsequent roles at TKIL Industries Pvt.

Ltd. (formerly known as thyssenkrupp Industries India.)

Throughout his career, Indranil has demonstrated exceptional proficiency in design, engineering, and project management. His expertise spans materials handling, water and utility systems, electrical instrumentation, civil, and structural engineering.

Currently, Indranil leads the Mining, Materials Handling & Processing divisions at TKIL Industries. Under his stewardship, these divisions have seen significant growth and success. His leadership and hands-on approach have been pivotal in driving advancements and operational excellence in these sectors.

Indranil's career is characterized by his ability to tackle intricate engineering challenges and effectively manage large-scale projects. His strategic vision and commitment to excellence continue to influence and shape the industries in which he works.



Ms Helen Gibson General Manager, Underground Soft Rock, India, Komatsu

Ms Helen Gibson is General Manager for Komatsu's underground soft rock business in India, based out of Kolkata. Helen has a Master's in Mining Engineering from Camborne School of Mines in the UK and is also a qualified Human Resources professional, having spent her early career in Human Resource and Learning &

Development.

During her time with Komatsu, Helen has progressed through various roles within longwall and room & pillar, gaining international experience in Technical Training, Joy Smart Services, relationship management and strategy. Helen joined Komatsu in 2011 and has been closely associated with India since 2016, before taking her current role as General Manager, Underground Soft Rock in May 2022. Helen is driven to leverage her global experience in India, passionate about working closely and collaborating with customers to solve problems and implement strategies to achieve production performance comparable to leading underground coal mines around the world.

Helen also volunteers with Women in Mining India to further contribute to empowering women in their careers in the mining industry.



Shri Partha S Bhattacharyya Chairman, Peerless Group & Former CMD, Coal India Ltd.

Shri Partha S Bhattacharyya joined Coal India Ltd as Management Trainee in 1977, rose to become Chairman in 2006 and retired in Feb 2011. He steered CIL through Miniratna in 2007, Navratna in 2008 and finally Maharatna in 2011 - a unique feat by

any PSU CMD.

In 2010, he spearheaded the Initial Public Offer (IPO) of 10% of CIL's equity. It met with resounding success and became a landmark event. The IPO is still the largest in India so far.

He is also credited with turnaround of BCCL in 2005-06 as well as introduction of coal sale by e-auction in 2004-05.

He authored "When Coal Turned Gold", published by Penguin in Aug 2018. The Foreword to the book was written by Shri Pranab Mukherjee, Former President of India.

Shri Bhattacharyya is currently the Chairman of Peerless Group and Director on the Board of several companies in India and abroad.



Shri Debasish Nanda

Director (Business Development), Coal India Ltd.

Shri Debasish Nanda is Director (Business Development) in Coal India Limited. Prior to this, he was working as Executive Director (Gas) in Indian Oil Corporation. He is also Chairman, Bharat Coal Gasification & Chemicals Ltd. and Part-Time Official Director in the Board of Bharat Coking Coal Limited since 2022.

A graduate in mechanical engineering from UCE Burla, Sambalpur University, Shri Nanda is a Post Graduate in Production Engineering from REC Rourkela and has to his credit a Masters in International Business from IIFT, New Delhi.

Shri Nanda joined Indian Oil Corporation in 1988 as a Management Trainee in the Marketing Division and spent 11 years in marketing of Servo lubricants. Thereafter, he moved to Business Development Group in 1999. Shri Nanda headed the 'Natural Gas' business of Indian Oil which had a turnover of over Rs. 20,000 crores. He developed many robust strategies for increasing the penetration of Indian Oil in the natural gas business. He has also handled various diverse positions for liaising with MoP&NG, PNGRB and other Industry bodies. He has chaired the US-India Energy Task Force, headed the work on pipeline RLNG exports to Bangladesh & Sri Lanka and was accorded status of aggregator of HP-HT domestic gas for urea plants.



Shri Rajendra Ingale Business Head - India Coal Mining, Adani Group

Shri Rajendra Ingale is a Mechanical Engineer with MBA (Finance).

- Currently holding position of Business Head India Coal Mining, Adani Group.
- Heading operations and development of more than 20 coal blocks across India having estimated PRC of about 150 MTPA.
- Vast experience of about 30 years in mining, power and logistic sector in leadership positions with domain expertise in Business Development, Contract Administration, Techno-commercial, Strategy and Planning functions.
- Instrumental in establishment of India Coal mining business of Adani group during last two decades, achieving Numero Uno position as MDO in Coal Mining Sector.
- Played significant role in planning and execution of one of the largest private sector railway siding in India (75 km) at Sarguja District, Chhattisgarh.



Shri Dipankar Banerjee

CEO & Director, Gainwell Engineering Pvt. Ltd.

Currently working as Whole Time Director & CEO, Gainwell Engineering Pvt Ltd. Responsible for complete operations of Mining Business – Financial, Operational, Customer Relationships and Capability Development. As one highly engaged team, Gainwell Mining Business seek to grow our sustainable share of Market Leadership

by providing innovative Mining Solutions with the best value to life cycle customers, supported by our best-in-class product support capability and network.

Has extensive experience of Construction & Mining Equipment Industry in India. Has worked with Larsen & Toubro Limited from 1991 to 2012 at various positions and was Heading their Mining Equipment Business from 2007 to 2012. Pioneered the concept of Life Cycle Costing for Mining Equipment in India. Joined Gainwell (erstwhile TIPL) during the year 2012.

A Mechanical Engineer by profession from Bengal Engineering College, Calcutta. Also done Executive MBA Program from S P Jain Institute of Management, Mumbai. Participated in Global Leadership Development Program for Senior Leadership at Stephen M. Ross School of Business, University of Michigan. Also attended Management Development Programs at McKinsey Leadership Institute, Singapore. Member of CII – Mining Business Committee and FCCI – Mining Business Council.



Shri Partha Mazumder
Former Regional Executive Director NTPC (Coal Mining)

In his illustrious career spanning more than 38 years, Shri Mazumder has served NTPC, a Maharatna Company, in various departments like Operation & Maintenance, Fuel Management, Technical Services at different Power Projects/Stations, and also in the Corporate Business Development, Consultancy

Wing and Coal Mining.

Shri Mazumder joined NTPC in the year 1985 as an Engineering Executive Trainee after graduating in Mechanical Engineering from Jadavpur University, Kolkata. He also holds a PG Certificate in Business Management from XLRI Jamshedpur. He is a certified Level D in Project Management from IPMA (International Project Management Association). Shri Mazumder has held prominent positions as Head of Coal Mining, Business Development, and Consultancy Wing at Corporate Centre. He also headed Pakri-Barwadih, Talaipalli, Chatti-Bariatu and Kerandari Coal Mining projects.

He is also a nominated Director in NTPC Mining Limited, a wholly owned subsidiary of NTPC; CIL-NTPC Urja Private Limited, a 50:50 Joint Venture Company of NTPC with Coal India Ltd. And Anushakti Vidhyut Nigam Limited, a JV between Nuclear Power Corporation of India Ltd. and NTPC Limited.

A veteran in the power sector and coal mining sector, Shri Partha Mazumder brings with him rich experience along with dynamic leadership qualities. Prior to this assignment Shri Mazumder was the Regional Executive Director NTPC (Coal Mining) at Ranchi.



Shri Amit Kiran Deb, IAS (Retd.)
Former Chief Secretary, Govt. of West Bengal

Shri Amit Kiran Deb is the Chairman, Skipper Ltd. He is the Indian Administrative Service (IAS) of 1971 batch of West Bengal cadre. Thereafter he served the Governments of West Bengal and Tripura as well as the Union Government in various capacities.

Shri Amit Kiran Deb holds a Master's Degree in Political Science from Allahabad University.

During his long career, he held several important positions and postings such as Commissioner-cum-Secretary, Education & Social Welfare Departments, Government of Tripura, Joint Secretary, Cabinet Secretariat and Joint Secretary, Department of Electronics, Government of India.

He represented Government of India in the GATT negotiations in Services in Geneva. He served as Home Secretary and then Chief Secretary to Government of West Bengal before his retirement.



Shri Anil Kumar *AHS, Inland Waterways Authority of India*

Shri Anil Kumar is Hydrographic professional, Topper in the hydrographic Civilian Course conducted by National Institute of Hydrography, Goa in 1998 and 2007 with Civil Engineering background.

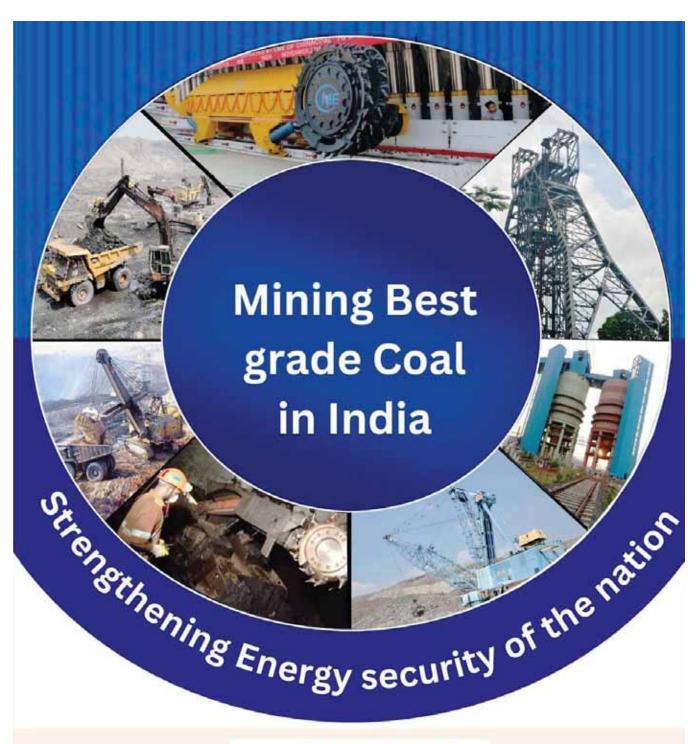
Presently looking after the hydrographic survey activities of National Waterways (NW)

- National Waterway no:1 (River Ganga Haldia to Kahalgaon for 690 km)
- NW-44 (River Ichamati for 63.38 km)
- NW-86 (River Rupnarayan-35 km)
- NW-97 (Sunderland Waterway -201 km)
- Indian Portion of IBP route 5 & 5 (River Ganga/Padma)

He is Nodal officer for looking after the works related to Indo-Bangladesh Protocol route(IBP) under Protocol on Inland Water Transit and Trade (PIWT&T) of India between India and Bangladesh. Nominated member of the Standing Committee Meeting and Shipping Secretary level talks between India and Bangladesh from 2018 onwards

Represented/representing as Joint Technical Member from India for undertaking feasibility and hydrographic survey activities on Protocol routes in Bangladesh Waters.

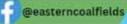
Worked as Assistant Project Manager on behalf of IWAI for Kaladan Multimodal Project for hydrographic related part for connecting Sitwee port in Myanmar





A Subsidiary of Coal India Limited & A Govt. of India Undertaking













Company Profile (Exhibitors)

Adani

Adani Corporate House, Shantigram, Near Vaishnodevi Circle, SG Highway, Ahmedabad 382421, Gujarat T: +91-79-26565555

W: www.adani.com



Adani Group is a diversified organisation in India comprising 10 publicly traded companies. It has created a world class transport and utility infrastructure portfolio that has a pan-India presence. Adani Group is headquartered in Ahmedabad, in the state of Gujarat, India. Over the years, Adani Group has positioned itself to be the market leader in its transport logistics and energy utility portfolio businesses focusing on large scale infrastructure development in India with O & M practices benchmarked to global standards. With four IG rated businesses, it is the only Infrastructure Investment Grade issuer in India.

Adani owes its success and leadership position to its core philosophy of 'Nation Building' driven by 'Growth with Goodness' - a guiding principle for sustainable growth. Adani is committed to increase its ESG footprint by realigning its businesses with emphasis on climate protection and increasing community outreach through its CSR programme based on the principles of sustainability, diversity and shared values.



Coal India Ltd.

Coal Bhawan, Premise No-04 MAR, Plot No-AF-III, Action Area-1A, Newtown, Rajarhat, Kolkata 700156 T: +91-33-33-71104107/23246545

W: www.coalindia.in



Coal India Ltd. (CIL) the state-owned coal mining corporate came into being in November 1975. With a modest production of 79 Million Tonnes (MTs) at the year of its inception CIL, today is the single largest coal producer in the world and one of the largest corporate employer with manpower of 228,861 (as on 1st April, 2024). CIL functions through its subsidiaries in 84 mining areas spread over eight (8) states of India. Coal India Ltd. has 313 mines (as of 1st April 2024) of which 131 are underground, 168 opencast, and 14 mixed mines and also manages other establishments like workshops, hospitals, and so on. CIL has 21 training Institutes and 76 Vocational Training Centres. Indian Institute of Coal Management (IICM) as a state-of-the-art Management Training 'Centre of Excellence' – the largest Corporate Training Institute in India - operates under CIL and conducts multi-disciplinary programmes.

CIL is a Maharatna company - a privileged status conferred by the Government of India to select stateowned enterprises in order to empower them to expand their operations and emerge as global giants. The select club has only ten members out of more than three hundred Central Public Sector Enterprises in the country.

The mines in Assam i.e. North Eastern Coalfields (NEC) are managed directly by CIL.



Coal Producers Association

B-319, Ansal Chamber – 1, Bhikaji Cama Place, New Delhi 110066

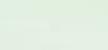
T: +91 11 41574943

E:cpaindia1@gmail.com

W: www.cpaindia.co.in

Contact Person: Mr. Sudhir Kumar Barar, Treasure

Coal Producers Association (CPA) is a unique collective platform to interact among themselves, with other stake holders like Coal Consumers, mining equipment manufacturer, with concerned Government agencies, Policy makers in particularly to improve the coal production, man and machine productivity, improve working and living status of work force, improve financial and other efficiencies of Coal mining activities and last but not the least keeping abreast with the latest developments in Mining Technology / advancements reached through Research and Development work around the world.





Deepak Fertilisers and Petrochemicals Corp. Ltd.

Sai Hira, Survey No. 93, Mundhwa, Pune 411036

T: +91 95034 97379

E: sayali.patil@dfpcl.com

W: www.dfpcl.com

Contact Person: Ms Sayali Patil, Sr. Manager - Branding



Deepak Mining Solutions Ltd., a 100% subsidiary of Deepak Fertilizers and Petrochemicals Corp. Ltd., is a market leader in the manufacturing of Technical Ammonium Nitrate. At Deepak Mining Solutions, we are committed to providing not only best-in-class products but also innovative solutions tailored to meet the unique challenges of the mining industry. Our comprehensive services include scientific studies, mine productivity improvement, blast nuisance control, and customized solutions for complex mining challenges.

Sustainability lies at the heart of our operations. By leveraging our expertise and advanced technology, we are uniquely positioned to develop safer, more sustainable solutions. As a leading global manufacturer of Ammonium Nitrate and a specialist in comprehensive blasting solutions, we are dedicated to delivering top-quality products and services. Our skilled professionals, equipped with cutting-edge software and equipment, ensure optimal results in planning and execution, managing the entire supply chain and addressing the specific needs of each mining operation.



Dodge Industrial India Pvt. Ltd.

Casablanca Unit No 1 and 21st Floor Sangam Press Road, Opp. Karishma Complex, Kothrud, Pune 411038 Maharashtra

T: +91 9766342483

E: BChaudhari@dodgeindustrial.com

W: www.dodgeindustrial.com

Contact Person: Mr. Bhanudas Chaudhari, President, Local Divisional Manager

At Dodge our mission is to reliably equip our customers with the safest, highest quality mechanical power transmission solutions to achieve their strategic goals. We don't just make products; we provide expert solutions to Customers.

Our Global product offerings are: Mounted Bearings, Enclosed Gearings, Mechanical Drives, Couplings, & Conveyor Components and IIoT Technologies.

Dodge CST Drive is a two-in-one gearbox that combines a planetary gear reducer with a multi- plate clutch system in the output side and is controlled by a PLC.

Advantages of CST Drive include:

- It delivers just enough torque to the pulleys so that the conveyor always starts in a preset time under any loading condition. The conveyor will face peak tensions rarely and only when needed. This greatly enhances life of all the conveyor components.
- It reduces belt stretch and take up travel.
- Excellent load sharing amongst multiple drives in belt conveyors.
- The hydro-viscous clutch at low-speed-end absorbs load shocks and therefore protects the motor, bearings, gearbox from the transient forces of the conveyor system. This inherent torque-limiting feature of the clutch arrangement protects the components in the conveyor system from overload.
- Mechanical CST Drives have a proven long service life.



Eastern Coalfields Ltd.

Sanctoria, Post: Dishergarh

Dist.: West Bardhaman 713333 West Bengal

T: +91 341 2520052-53

ECL was founded in 1975 after the nationalization of coal mines in India. It is a subsidiary of Coal India Limited and is fully owned by the Government of India. It operates coal mines in the states of Jharkhand and West Bengal. ECL's headquarters are in Sanctoria, West Bengal.

ECL has achieved several milestones recently, including:

- The Rajmahal OCP exceeded its target by 0.38 million tons for the first time.
- The Sonepur Bazari OCP exceeded its target by 1.1 million tons for the first time.
- The Jhanjra underground mine achieved its target of 3.5 million tons for the first time.
- ECL received an "Excellent" grading in Corporate Governance for 2018-19.

ECL has developed the Gunjan Ecological Park, which covers 19.5 hectares and includes a 5 hectare water body. ECL is also developing an Eco park in Andal, West Bengal.

Fleetx Technologies Pvt. Ltd.

320, 3rd Floor, Tower A, Vatika Business Park Sector 49 Gurugram, Haryana 122018

M: +91 9329774998

E: ssatish.vishvakarma@fleetx.io

W: www.fleetx.io

Contact Person: Mr. Satish Vishvakarma, Vice President (Enterprise)

Fleetx: AI-Powered Solutions for Comprehensive Logistics Management in Steel, Coal, Cement, and Metal Mining Industries.

Fleetx is at the forefront of delivering advanced logistics solutions tailored for the steel, coal, cement, and metal mining industries. Our proprietary AI-based technology offers unparalleled visibility and control over the movement of critical materials, ensuring efficiency and security across your supply chain. Fleetx's complete TMS solution includes lane bidding, truck indenting, real-time tracking, ePOD (Electronic Proof of Delivery), and freight bill verification, streamlining every aspect of logistics management. In addition, we provide advanced solutions for the management of mining machines, enabling seamless operation, monitoring, and maintenance. Our dashcam solutions further enhance safety and compliance by offering detailed insights into driver behavior and road conditions. By preventing theft, reducing pilferage, and optimizing logistics operations, Fleetx empowers businesses in the steel, coal, cement, and metal mining sectors with actionable intelligence and operational excellence. Trusted by industry leaders, Fleetx is revolutionizing logistics with innovative, secure, and reliable technology. Join the Fleetx community and transform your logistics operations today.

Gainwell Commosales Private Limited

Godrej Waterside, Tower II, 7th floor, Block DP, Sector V, Salt Lake, Kolkata 700091 T: +91-33-66122601

E: dipankar.banerjee@gainwellindia.com

W: www.gainwellindia.com

Contact Person: Mr. Dipankar Banerjee, CEO & Whole Time Director - GEPL

Gainwell Commosales Private Limited (Formerly Tractors India Private Limited) has been a proud partner of Caterpillar in India for over eight decades, operating out of East & Dry North India as well as in Bhutan and in Nepal through the wholly owned subsidiary Tractors Nepal Private Limited (TNPL). Gainwell has been engaged in supporting the growth of infrastructure in India through a comprehensive and technologically advanced product line of Caterpillar in Construction, Mining and Energy; Transportation sectors. In its endeavor to provide turnkey 'Solutions for Growth' to its customers in the infrastructure and mining space, Gainwell has nurtured close and mutually rewarding relationships with multiple global OEMs. Gainwell has expanded its presence in Railways, Defence, Oil and Gas and underground mining sectors in recent years and has established itself as a manufacturer of high-end machines for global markets. Providing end-to-end and full-spectrum maintenance services to customers across various sectors and with state- of-the-art facilities spread across India, Gainwell's highly skilled and trained service team delivers unparalleled support to help customers build a new India.



GAINWELL®



Jindal Power Ltd.

Jindal Centre, 12, Bhikaiji Cama Place, New Delhi 110 066 T: +91 11 2618 8340-50 E: om.prakash@jindalpower.com

W: www.jindalpower.com

Contact Person: Mr. Om Prakash, CEO-Mining Business, Jindal Power Limited

Jindal Power Limited (JPL) is a leading Indian power company with a diverse energy portfolio encompassing thermal and renewable sources. With an impressive installed capacity of 4300 MW, JPL has been instrumental in meeting the nation's growing power demand. JPL's energy portfolio includes 3400 MW at Tamnar, Chhattisgarh and 600 MW at Simhapuri Andhra Pradesh & 300 MW at Shirpur, Maharashtra. To cater to coal requirements, JPL also emerged as a key player in the Coal Mining business and has 3 coal mines having peak-rated capacity of around 30 MTPA. JPL strives for innovative and sustainable practices in business and is a trailblazer in community development and welfare initiatives.



Knowteq Equipcare LLP

Tarakpur, Near ECL Hospital, Kajora Gram, Andal, Dist-West Burdwan, Asansol 713321 West Bengal T: +91-9830425555

E:sarup.agarwal@equipcare.in

Contact Person: Sarup Agarwal, Director

Knowteq Equipcare LLP is a premium service provider in the space of heavy duty equipment maintenance and servicing. We help clients in maximising their equipment's lifetime through optimum servicing and preventive care. We are a brand independent service provider, covering multiple equipment brands under a common platform.

Our state of the art facility in Durgapur is a one stop hub of solutions for our clients in construction and mining equipment industries. Patronage of notable clients like Ambey Mining, Tata Hitachi Construction Machinery, Suchita Millennium Projects reaffirm the faith and value in our service offerings.

We partner with various OEM brands like Castrol, Gates, Volvo, Wirtgen, Dozco etc along with strategic global OPS to provide the highest quality in both products and services to our clients. Over the past 4 years our team of experts have delivered innovative solutions and products like workshop on wheels, service vans, complete overhauls, RC and many more such services in the field of equipment maintenance.





Mine Line Pvt. Ltd.

23 Indrani Park, Kolkata 700033

T: +91 9674294029 (Mr. Supriyo Dutta); +91 8420027082 (Ms Mili Biswas)

E: supriyo@mineline.in; mdsecretary@mineline.in

W: www.minelineindia.com

Mine Line Pvt. Ltd. was established in 1977 by an eminent mining engineer Sri Biren Mukerjee. Mine Line has pioneered the design, manufacturing and installation of flameproof equipment over 45 years. Mine Line has established itself as the market leaders in electricals for mining, both surface as well as underground.

The company collaborated with European firms such as SAIT of France, Bartec Sicherheits Schaltanlagen GmbH, Germany and Becker Warkop, Poland holding joint ventures and technology transfer.

The latest achievement is a Load Center with built-in microprocessor based self-diagnostic automation system with integrated protection, control of data acquisition software visible on a colour monitor/industrial computer. The entire data from the operating machines for either a longwall or a CM project can be monitored, controlled, altered, and processed from front cover of the load center. The data can be taken to surface seamlessly through fiber optic cables.

Mine Line has 150 employees including over 40 engineers from several disciplines. Operates over five service centers on pan India basis. It has an exhaustive range of products and holds over 50 DGMS approvals. The Company is capable of complete mine planning and execution of electrical packages on a turnkey basis for underground mechanized mines.

NLC India Ltd.

Block -1, Neyveli 607801, Cuddalore District, Tamilnadu W: www.nlcindia.in

For more than six glorious decades, NLC India Ltd has been a forerunner amongst the Public Sector Enterprises in the country in the energy sector, contributing to a lion's share in lignite production and significant share in thermal and renewable energy generation.

The Company was incorporated in 1956. NLCIL is a Navratna Government of India Enterprise, under the administrative control of Ministry of Coal. Today, the company has set its footprints in PAN India mode in the states of TamilNadu, Rajasthan, Uttar Pradesh, Odisha, Jharkhand, Gujarat and Andaman & Nicobar Islands.

A pioneer among the Public Sector Undertakings in energy sector, NLCIL operates 3 opencast Lignite Mines of total installed capacity 28 Million Tonnes Per Annum (MTPA) at Neyveli, one opencast Lignite Mine at Barsingsar in Rajasthan with an installed capacity of 2.10 MTPA and an open cast coal mine at Talabira in Odisha with an installed capacity of 20 MTPA.

The Company is also operating 4 Lignite based pit-head Thermal Power Stations with an aggregate capacity of 3390 Mega Watt (MW) at Neyveli and one 250 MW Lignite based Thermal Power Station (BTPS) at Barsingsar, Rajasthan. A 1000 MW Coal based Thermal Power Station is also in operation at Thoothukudi, Tamil Nadu through its subsidiary company, NLC Tamilnadu Power Limited (NTPL), a Joint Venture between NLCIL and TANGEDCO.

NLCIL has also forayed into renewable energy sector. Presently, the Company is operating 1380 MW of Solar Power Plants in various Districts of Tamilnadu and Andaman & Nicobar Islands and 51 MW Wind Power Plant in Tirunelyeli district of Tamilnadu.



NTPC Ltd.

NTPC Coal Mining Headquarters, Ranchi, Jharkhand

T: +91 9437118720/8249461818

E: akbehera@ntpc.co.in

W: www.ntpc.co.in

Contact Person: Mr. Amit Kumar Behera, Senior Manager (Corporate Communications)

NML (və2) və2)

NTPC - About the Company

NTPC is India's largest energy conglomerate with roots planted way back in 1975 to accelerate power development in India. Since then, it has established itself as the dominant power major with presence in the entire value chain of the power generation business with total installed capacity of 76,294 MW spread over thermal along with hydro, nuclear and renewable energy sources to reduce its GHG emissions. The company has further diversified into the fields of consultancy, power trading, training of power professionals, rural electrification, ash utilisation and coal mining.

Present installed capacity of NTPC Group is 76,294 (including 17126 MW through JVs and Subsidiaries) comprising of 52 NTPC stations (27 coal based, 7 gas based, 1 hydro, 1 small hydro & 16 solar PV) and 42 JV/ subsidiaries (9 coal based, 4 gas based, 8 hydro, 1 small hydro, 16 solar PV and 4 wind).

NML - A Growth Story

NTPC has incorporated its 100% wholly owned subsidiary namely, NTPC Mining Limited (NML) for developing focused competency in mining business and expansion of mining vertical. On 17.08.2023, NTPC Ltd has entered into a Business Transfer Agreement (BTA) with NML for hiving off its coal business.

NML as on date has 7 coal blocks to its kitty namely, Pakri-Barwadih, Chatti-Bariatu & Chatti-Bariatu CB (South), Kerandari, Badam and North-Dhadu (Eastern part) in Jharkhand, Dulanga in Odisha and Talaipalli in Chhattisgarh with a combined production potential of more than 74 million tonnes per annum.

NML has delivered a stellar performance in FY 23-24 by producing 34.39 Million Tonnes of coal with YoY growth of 48%. Targeted production for FY 24-25 is 40 Million Tonnes against which production till Aug'24 stood at 15.96 Million Tonnes with YoY growth of 17.95% over the same period of last year.

This outstanding performance reflects NTPC mining's relentless commitment towards enhancing the coal production from its captive mines contributing to NTPC's fuel security and ensuring efficient supply to meet the nation's energy needs.

Further, NML has already ventured into commercial mining and has won its first commercial coal mine, North Dhadu (Eastern Part) during 7th tranche of auction for commercial coal mines. This has brought NML, one step closer to achieve its targeted production potential of 100 million tonnes per annum.

To achieve sustained growth in coal production, NTPC has implemented a range of strategies and technologies. These include the adoption of rigorous safety measures, improved mine planning, equipment automation, workforce training and implementation of continuous monitoring and analysis systems. These initiatives have played a vital role in optimizing operations, enhancing productivity and ensuring the safety of the workforce.

QA Testing Laboratories Pvt Ltd

B-76, Sector 64, Noida, Uttar Pradesh 201301

T: +91-9873649004

E: ratnesh.rai@qatestinglaboratories.com

W: www.qatestinglaboratories.com

Contact Person: Mr. Ratnesh Rai, Managing Director



QA Testing Laboratories is a third party NABL/BIS/ILAC approved, coal and coke, water, environment testing laboratory. We have fully functional laboratory in Noida, Korba, Dehradun and Lucknow. We are equipped with latest & Advanced testing Equipment's and Facilities with Experienced & Competent Person Performing Each Test Parameters. We are Implementing Laboratory Information Management System (LIMS) within the Organization to Insure Integrity and Confidentiality of Customers and Services, we are also Implementing Integrated Management System (ISO 9001:2015, ISO 14001:2015, ISO 45001:2017 & ISO/IEC 17025:2017) to maintain a Standardized Process for Internal Quality Assurance and guarantee that each test results are objective and free from any influence, guidance or control of interested parties.



SK Samanta & Co. (P) Ltd.

2/5 Sarat Bose Road, Kolkata-700020

T: +91-33 66374090 E: kol@sksl.in

W: www.sksl.co.in



S.K. Samanta & Co. (P) Ltd., better known as SKSL, an ISO 9001-2008 Company Started civil construction contracts as a proprietary / partnership firm has been in the business of executing EPC Contracts ever since its incorporation in 1982 in a wide arena of projects pertaining to Central and State Governments, Public Sector Companies, Railways, Power Plants, Steel Plant, Mines, Roads, Bridges etc.

The Company is equipped with latest construction plants and machineries commensurate with the requirement for handling large turnkey projects. It has a team of highly qualified and experienced engineers and other personnel including administrative support staff. Our association with various renowned professional consultants of the country is an added strength and hormonal compliments to internal professional strength for adoption of the latest technology.

SKSL is committed to form a seamless partnership with its customers, so that their requirements become its challenge.

SKSL's quest for excellence is achieved by its innovative engineering practices and quality execution of its projects, on time, within budget, by its high performance team, which is adopted for each project.



Scrum Systems Pvt Ltd

501/C3, Soudamini Commercial Complex 101/1, Bhusari Colony, Paud Road, Pune – 411038

T: +91-7028025346 / 9324312153

E: saching@scrum-system.com

W: www.scrum-system.com

Contact Person: Mr Sachin Gandhe, Director - Sales



Scrum Systems Pvt Ltd is a leader in Compliance & Safety Training Automation, delivering cutting-edge solutions across industries such as Mining, Steel, IT, Pharmaceuticals, Food & Beverages, Power, and Refinery. Our consistent innovation focuses on enterprise product development, security, and systems software, making us not just service providers but partners in our clients' technological journeys.

Rooted in continuous learning, mutual respect, and relentless innovation, our mission is driven by visionary leadership and a commitment to mentoring employees. With branches in Pune, Mumbai, Bangalore, Delhi, Kolkata and Hyderabad we offer top-tier service across India.

Inspired by the rugby formation "scrum," we've embraced agile management practices, earning us a reputation as a customer-centric and tech-driven company. One of our flagship offerings is the Dedicated Miners Safety Training Delivery System on a flexible Kiosk platform with "Generative Artificial Intelligence Content Development in Local Languages". This specialized solution addresses the unique safety challenges in the mining industry, helping companies understand and implement mining safety requirements, meet occupational health and safety (OHS) obligations, ensure thorough training, adhere to safety standards, and enhance overall risk management.

Through our Miners Safety Training Solution, we are shaping a safer, more compliant mining industry. Scrum Systems Pvt Ltd remains committed to being a trusted partner in compliance and safety, delivering solutions that make a tangible difference in the industries we serve. Our Training Solution enables mining companies to:

- Understand and implement mining safety requirements effectively.
- Identify and meet occupational health and safety (OHS) obligations.
- Ensure that staff receives thorough and compliant mining safety training.
- Adhere to relevant safety standards with confidence.
- Enhance overall safety and risk management within their operations.



SGS

SGS House, 4B, A S Marg, Vikhroli (W), Mumbai-400083 T: +91-9160224666 E: abhishek.pattnaik@sgs.com

W: www.sgs.com



Contact Person: Mr. Abhishek Pattnaik, National Manager-Business Development, Natural Resources

SGS is the world's leading testing, inspection and certification company. We are recognized as the global benchmark for sustainability, quality and integrity. We leverage the latest technologies to deliver precise and reliable data across the supply chain, from inspection and testing to risk management. Our comprehensive solutions help reduce supply chain risks, ensuring the quality and quantity of mineral and metal products as they move to market. We also support our clients in optimizing operating costs and boosting plant productivity through tailored optimization processes.

Below are some relevant services we offer as part of our mineral services portfolio:

- 1. Sampling & analysis services
 - Inspection and sampling services from pit to port.
 - Stationery stockpile sampling, size & chemical analysis at mines/railway siding.
 - Volumetric assessment -Draft surveys, hatch cleanliness surveys, hose tests, bunker surveys at port.
 - Discharging & loading supervision of vessels.
 - Shipment sampling & analysis.
- 2. Onsite laboratory set up, operations & maintenance.
- 3. Mechanical sampling system
- 4. Laboratory technical audits
- 5. Core logging, core splitting and chemical analysis
- 6. Metallurgical/Beneficiation test work bench scale & pilot scale; simulation & modelling
- 7. Engineering Studies (Preliminary Economic Assessment, Pre-Feasibility, Feasibility, Detailed Project Report)
- 8. Engineering, Procurement & Construction Management (EPCM)
- 9. Beneficiation plant design & supply
- 10. Plant & process audit survey



Volvo Trucks India, VE Commercial Vehicles Ltd.

VOLVO

Yalachahally, Taverekere Post, Hosakote, Bengaluru 562122, Karnataka

T: +91 8558868765, E: gbansal@volvo.in

W: www.vecv.in

Contact Person: Mr. Gaurav Bansal, National Sales Manager

Volvo Trucks India is a Division of VE Commercial Vehicles Ltd. which carry out sales & Commercial Vehicles Ltd. which carry out sales

Volvo trucks supply heavy duty premium trucks for both on-road and off-road applications. Over 9000+ trucks are working in India in various applications like Coal mining, Mineral Mining, Cement, Construction & Infra projects (viz, Road, Irrigation, Quarry etc), Long Haul/ E-commerce, Over Dimension Cargo (ODC), Institutional Sales like Govt. Institution (ISRO, BARC etc.) Quasi Defense/ Defense labs (VRDE, DRDO etc.), Fire & Rescue, Oil & Energy segment etc.

Volvo provides complete solution to customers including product recommendation, project costing, alternate fuel solutions, innovative transport models, Customized Aftermarket support Agreement, Funding support & Services. Volvo has > 200 service touch points across India to ensure high uptime & Service support.



Notes	

See you again

at

5th Edition Coal Log India 2025

Coal Logistic & Supply Chain International Conference & Expo

September 2025, Kolkata

ORGANISERS





For details, contact

sk@coallogindia.com colloagindia@gmail.com

www.coallogindia.com

Minerals & Metal Commodities

Trusted Independent. Committed.

A comprehensive range of mineral and metals expertise

Mineral and metal commodities shape the world around us: from our transport systems, to the buildings we live in, to the mobile phones that we carry with us everywhere we go. Societies around the world therefore depend upon the smooth supply of mineral and metal commodities.

But the global supply chain is becoming increasingly complex to navigate, and you can't be present at each stage of your global supply chain to reduce risk by verifying the quality and quantity of what you've bought or sold.

That's where SGS comes in.

Whatever the mineral or metal commodity, wherever the location our trusted experts will help you trade globally with confidence.

For more information about our services, contact us at:













Risk Management Market Intelligence



nspection

PROUD of our past, FOCUSED on our future





SANGITA SALES PVT. LTD.



SANGITA SALES PVT. LTD.

Corporate Office:

Plot no. 289, Chikhli Industrial Area, Elaware Road, Kalamna Road, Nagpur, Maharashtra-440035

www.sangitacoal.com

P: +91 712 2683105/06/07 | F: +91 712 2683108 E: sales@sangitacoal.com

OUR CLIENTELE

































































Coal Producers Association

CPA is the voice of India's coal producers, playing a pivotal role in supporting and protecting the interests of coal-producing companies.

CPA is dedicated to enhancing coal production, advancing mining technologies, and improving the quality of life for our workforce. We are committed to addressing the challenges faced by the coal sector, from statutory clearances to land acquisition and transportation issues. Our mission includes regular engagement with government bodies, policymakers, and industry stakeholders, ensuring that the coal industry operates efficiently and sustainably.

Who We Represent

- Coal & Lignite Block Holders (Commercial, Captive, or Government Allocation)
- Private & Public Sector Companies involved in mining or coal reserve exploration
- Joint Ventures in coal and lignite mining
- Consultants, Research Organizations, and MDOs (Mine Developer and Operators)

As a member of CPA, you'll gain access to a wealth of resources, industry expertise, and networking opportunities to drive the future of coal production in India. Together, we can ensure a robust and sustainable energy future for our nation.

For information and membership please contact or write to

Secretory General

Coal Producers Association

B-319, Ansal Chamber -1, Bhikaji Cama Place, New Delhi 110066 **Tel:** +91 11 41574943, 98105 05749

Email: cpaindia1@gmail.com, Website: www.cpaindia.co.in

JOIN CPA TODAY!





TOTAL MINING SOLUTIONS

One stop solution

India's one of the largest consultancy organization with over 47 years of experience as in-house consultant to Coal India Limited is diversifying its activities to other mine owners.

An ISO 9001:2015 & 37001:2016 Certified Mini-Ratna Company with Headquarters at Ranchi and 7 strategically located Regional Institutes to provide door-step services.

Recipient of the SCOPE Meritorious Award from President of India for R&D initiatives in the Coal Sector.

Facilitated production augmentation of CIL from 79 Mt in 1975-76 to 773.64 Mt in 2023-24.

Offers full range of services in the sphere of resource exploration, mining, beneficiation and development of mine from concept to commissioning including environmental, geomatics and specialized services including Blasting, NDT, CBM/CMM & Coal Gasification, etc.

Expertise under one roof

- Integrated Exploration services
- · Preparation of Master Plans of Coalfields
- Project Planning & Design including concept to commissioning to closure for coal & minerals.
- · Engineering Services including Planning for Infrastructure Development
- Coal Beneficiation

081140

- Preparation of EIA/EMP.
- Environment Monitoring and Mine Closure Planning
- · Remote sensing surveillance and monitoring
- Drone/UAV based survey and mapping services
- Hydrogeological services
- · Project Management Consultancy services for Civil construction supervision, Solar Power Projects, etc.
- Lab services viz. Coal characterization, Washability of Coal, Mine Air, Water & Soil quality, Physico-Mechanical properties of rocks, CBM related studies, etc.
- · Specialized Services in the field of Blasting, Ventilation, Support Design, NDT, Clean Coal Technology like CBM, CMM & Coal



CENTRAL MINE PLANNING AND DESIGN INSTITUTE LIMITED



(A Subsidiary of Coal India Limited) Gondwana Place, Kanke Road, Ranchi 834 031 (Jharkhand) INDIA

Tel: +91 651 2230116/2230483 Fax: +91 651 2232249/2231447 Email: gmbd.cmpdi@coalindia.in

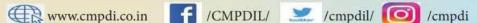




























DILIP BUILDCON LIMITED INFRASTRUCTURE & BEYOND

























DBL-Pachhwara Coal Mine Private Limited MDO for Coal production of 07MTPA









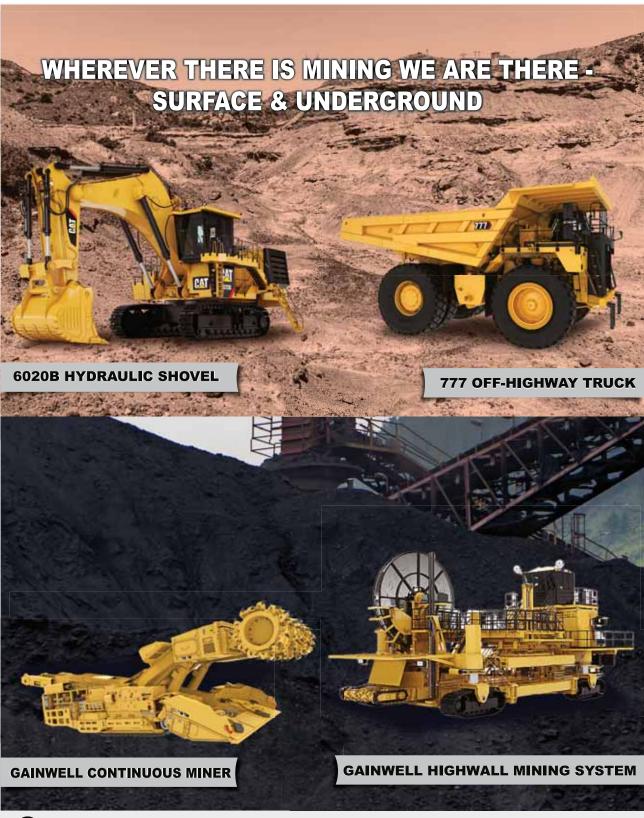
DILIP BUILDCON LTD.



WE MAKE IT HAPPEN

We connect people, are friends with nature, and turn the wheels of the future. We love, we care, we respect. We give wings to every dream and light up a million smiles. We know it takes each one of us to build a nation, and anything can be achieved if we come together as one.







www.gainwellindia.com



marketing@gainwellindia.com



1800 419 3356









पर्यावरण की सुरक्षा का संकटप

इस संकल्प ने हमारे मन मानस में गहरी जड़ पकड़ ली है



कोल इंडिया लिमिटेड-विश्व की सबसे बड़ी कोयला उत्पादक कंपनी