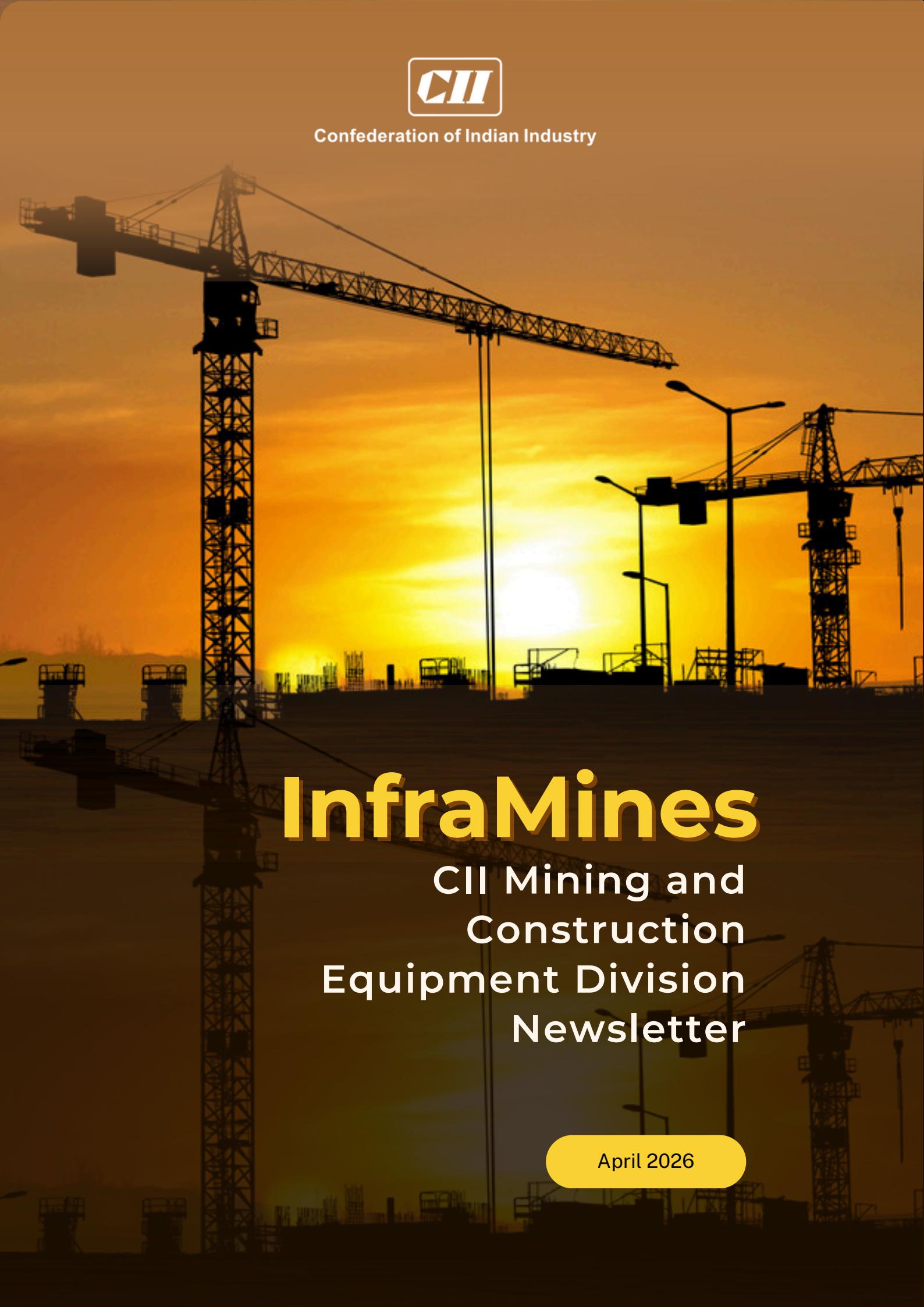
Confederation of Indian Industry



InfraMines

CII Mining and Construction Equipment Division Newsletter

April 2026

Confederation of Indian Industry

Published by Confederation of Indian Industry (CII), 6, Netaji Subhas Road, Kolkata-700001 | T: +91 33 2230 7727 | Web: www.cii.in

Contents

Chairman's Message

Mr Vivek Bhatia
Chairman, CII National Mining and Construction Equipment Division and MD and CEO of TKIL Industries Pvt. Ltd

The Mining and Construction Equipment sector continues to play a pivotal role in supporting India's infrastructure development, mineral security, and industrial growth. As the country accelerates investments in infrastructure, mining, and energy transition, the sector is witnessing significant opportunities to strengthen domestic manufacturing capabilities and enhance global competitiveness.

The recent Union Budget has reaffirmed the Government's strong commitment to infrastructure-led growth. Increased allocations for roads, railways, mining, and urban infrastructure, along with continued focus on capital expenditure, are expected to generate substantial demand for mining and construction equipment across the country. The emphasis on developing critical minerals, strengthening logistics connectivity, and promoting domestic manufacturing further creates new avenues for the sector. These initiatives will not only support the growth of equipment manufacturers but also strengthen India's long-term resource and infrastructure security.

At the same time, the evolving geopolitical landscape and ongoing conflicts in different regions of the world are reshaping global trade and supply chains. Disruptions in energy markets, logistics routes, and the availability of key raw materials are prompting governments and industries to reassess sourcing strategies and build more resilient supply networks. For the mining and construction equipment ecosystem, these developments highlight the importance of strengthening domestic capabilities while also positioning India as a reliable partner in emerging global supply chains.

One of the most significant shifts shaping the future of the sector is the rising strategic importance of critical minerals and rare earth elements. Once considered niche commodities, these resources have now emerged as essential enablers of energy transition technologies, advanced manufacturing, and national security.

Countries across the world are therefore accelerating efforts to diversify supply sources, invest in trusted partnerships, and expand domestic exploration and processing capacity.

In this evolving landscape, the role of the Mining & Construction Equipment Division (MCED) and its member companies becomes particularly significant. As key enablers of infrastructure creation, mineral extraction, and industrial productivity, MCED members contribute directly to India's growth ambitions. At the same time, the Division continues to serve as an important platform for industry dialogue, policy advocacy, and collaboration with the Government on issues affecting the sector.

Going forward, CII MCED will continue to focus on strengthening industry–government engagement, promoting innovation and technology adoption, supporting global market access, and addressing key policy challenges faced by the sector. The Division will also work closely with stakeholders to ensure that India's mining and construction equipment industry remains resilient, competitive, and aligned with the country's long-term development priorities.

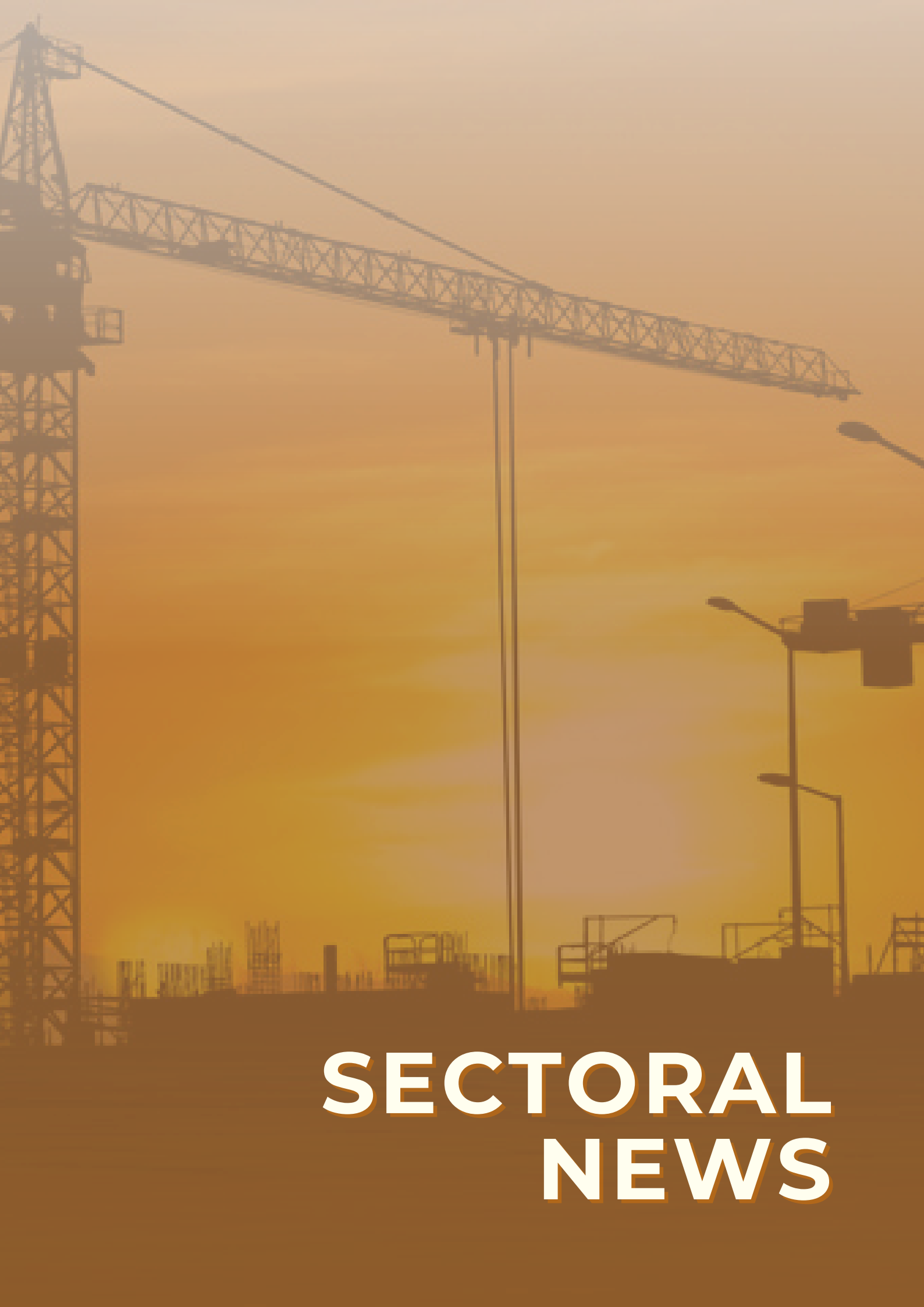
Over the years, the insights, expertise, and commitment of our members have strengthened MCED's role as a credible voice of the industry. I encourage all members to actively contribute to InfraMines by sharing experiences, case studies, innovation stories, and policy perspectives that can help shape the future of this sector.

About MCED

Mining & Construction Equipment Division (MCED) of the Confederation of Indian Industry (CII) has been serving the cause of mechanization and modernization and a vital value-adding link between manufacturers, suppliers and the government. As technology transforms the style and scale of the mining sector, CII MCED plays an important role in promoting an environment for stimulating growth of the sector through continuous engagement with Government & relevant stakeholders and Ease of Doing Business.

The major areas of interventions of the CII MCED are:

- Policy Advocacy for promoting an environment for stimulating growth of the sector through continuous engagement with Government
- Strategize and develop initiatives for improving the competitiveness of the industry by organizing capacity building initiatives, advocate adoption of global best practices
- Strategize and develop initiatives for promoting linkages with other countries to achieve the objective of promoting not only business development but also in the areas of research & development
- Harnessing opportunities to support Self Reliance “Atmanirbhar Bharat”
- Creating opportunities to engage more with the major PSUs and large-scale buyers
- To engage and encourage industry members to emphatically work on Environment, Social and Governance (ESG)



SECTORAL NEWS

Coal, Mining Sector Set for Busy 2026 as Reforms Target Energy Security:

India's coal and mining sector is set for major changes in 2026 as the government introduces reforms aimed at strengthening energy security and supporting the vision of a "Viksit Bharat" by 2047. Key initiatives will focus on simplifying approval processes, improving coal dispatch systems, and strengthening safety protocols to create a more efficient and resilient energy ecosystem. The sector is also expected to undergo a technological shift, with coal companies adopting advanced high-tech mining methods, AI tools, drones, and digital surveillance systems to enhance coal quality while reducing environmental impact. Additionally, two subsidiaries of Coal India Limited—Bharat Coking Coal Limited and Central Mine Planning & Design Institute Limited—are preparing for stock market listings in 2026. The government is also planning to expand coal gasification projects to diversify coal usage beyond power generation and reduce dependence on imported fuels and chemicals.

At the same time, India is encouraging greater private participation by auctioning more coal blocks and creating a level playing field where even state-run companies must compete for mining rights. Despite these ambitions, the sector faced challenges in 2025, including delays in land acquisition, environmental clearances, and weather disruptions, which led to a slight drop in coal production and dispatch and increased reliance on imports. To address broader resource security concerns, the government has launched the National Critical Mineral Mission to boost domestic exploration of minerals such as rare earth elements, potash, and tungsten—resources vital for clean energy technologies, electric mobility, and advanced manufacturing. Industry leaders note that while India aims to strengthen domestic supply chains, imports of critical minerals will likely remain necessary in the short to medium term, even as emerging technologies like green hydrogen begin to shape the future of manufacturing and energy

Source:

https://www.business-standard.com/companies/news/coal-mining-sector-set-for-busy-2026-as-reforms-target-energy-security-125122200325_1.html

TIL Board Approves Acquisition of Majority Stake In Tulip Compression, Marking Its Accelerated Entry Into Clean Energy Manufacturing Ecosystem

TIL Limited has approved the acquisition of a 60% stake in Tulip Compression Private Limited from its affiliate Gainwell Commosales Private Limited, with an option to increase the stake to 74%, subject to shareholder and regulatory approvals. The move marks TIL's entry into the clean energy manufacturing ecosystem and strengthens its product portfolio by adding LNG and hydrogen powerpacks for material handling equipment, along with capabilities in manufacturing cryogenic LNG storage tanks, oil and gas process vessels, and skids. The partnership also allows Tulip Compression to leverage TIL's in-house manufacturing infrastructure, creating operational synergies and strengthening its equipment packaging and assembly business for CNG, LNG, and hydrogen solutions. With over 80 years of engineering expertise and manufacturing facilities in Kamarhati (Kolkata) and Kharagpur,

TIL will support Tulip Compression in localising the production of advanced fabrication assemblies that were previously outsourced, improving quality control and supply reliability. Headquartered in Delhi with manufacturing units in Greater Noida, Tulip Compression has built a strong presence in India's City Gas Distribution sector, delivering over 600 online CNG compressors and developing technologies such as the Composite CNG Dispensing Unit (CCDU), hydrogen compression systems, and the Freespin® Inline Turboexpander in partnership with Sapphire Technologies. The integration is expected to accelerate growth for both companies while expanding their presence in emerging clean energy and cryogenic equipment markets.

Source:
https://equipmenttimes.in/TIL-Board-Approves-Acquisition-of-Majority-Stake-In-Tulip-Compression,-Marking-Its-Accelerated-Entry-Into-Clean-Energy-Manufacturing-Ecosystem

Gulf Oil Lubricants Expands Infrastructure Portfolio with Key OEM Alliances

Gulf Oil Lubricants India Limited has announced strategic partnerships with leading construction equipment manufacturers Action Construction Equipment Limited (ACE), Ammann India, and XCMG to strengthen its presence in India's growing infrastructure and construction sector. The collaborations expand Gulf's portfolio of OEM-approved lubricants designed to improve equipment reliability, uptime, and overall cost efficiency in demanding operating conditions. As part of its extended relationship with ACE, Gulf has introduced new products under the ACE Genuine Oil Range tailored for machinery such as cranes, backhoe loaders, compactors, motor graders, forklifts, tractors, and harvesters. The company has also partnered with Ammann India to become the official lubricants supplier for its entire equipment range, including asphalt mixing plants, pavers, and compaction machinery.

Additionally, Gulf has teamed up with XCMG to introduce XCMG-branded genuine lubricants in India, further reinforcing its strategy of delivering localized, application-specific lubrication solutions for advanced construction equipment. Alongside these partnerships, the company unveiled a next-generation lubricant range that includes fire-resistant hydraulic oil, energy-efficient zinc-free hydraulic oil, CEV-V diesel engine oil, synthetic lubricants, and synthetic gear oil 75W90. Part of the Hinduja Group and Gulf Oil International, Gulf Oil Lubricants India operates manufacturing and R&D facilities in Silvassa and Chennai, maintains partnerships with over 50 OEMs, and exports to more than 25 countries while continuing to support India's infrastructure and mobility ecosystem.

Source:
https://equipmenttimes.in/Gulf-Oil-Lubricants-Expands-Infrastructure-Portfolio-with-Key-OEM-Alliances

India May Pip China in Construction Equipment Sales by 2030: JCB India MD

Sales of construction equipment in the local market declined by about 10% in the first 10 months of 2025 year on year largely due to slowdown in disbursal of payments to small contractors by state governments.
India is set to overtake China to emerge as the second largest market for construction equipment after the US by the turn of this decade.

Source:
https://economictimes.indiatimes.com/industry/indl-goods/svs/construction/india-may-pip-china-in-construction-equipment-sales-by-2030-jcb-india-md/articleshow/125445505.cms?from=mdr

India To Train 5.7 Million Workers in Mining By 2030 To Boost Critical Minerals Push, Cut Import Reliance

India is planning to create a pool of 5.7 million skilled workers in the mining sector by 2030 as the government sharpens focus on indigenous mining of critical minerals for development of clean energy to achieve self-reliance and reduce import dependence on China.

The mines ministry and the Skill Council for Mining Sector (SCMS), under the Ministry of Skill Development and Entrepreneurship, have formed a project steering committee to initiate a skills gap study 2025-30 for the sector across job roles under the National Critical Mineral Mission (NCMM).

Source:
https://economictimes.indiatimes.com/industry/indl-goods/svs/metals-mining/india-to-train-5-7-million-workers-in-mining-by-2030-to-boost-critical-minerals-push-cut-import-reliance/articleshow/125232556.cms?from=mdr

Kubota Eyes India as Its 'Growth Engine'

Japanese multinational farm and construction equipment maker Kubota Corporation plans to turn India into its growth engine under its mid-term business plan 2030, identifying business and projects from the country as one of the key aspects of the strategy.

Under its 2030 mid-term business plan, Kubota which operates in India through joint venture Escorts Kubota Ltd, said it will classify its global business into three categories -- 'growth driver', 'rebuilding the core' and 'structural reform' -- and dynamically reallocate the resources to growth areas.

Under the growth driver, business and projects from India will be one of the pillars along with construction machinery business in North America and lifecycle support business, where there will be selection and concentration of management resources, Kubota said in a presentation.

Source:
https://economictimes.indiatimes.com/industry/indl-goods/svs/engineering/kubota-plans-to-transform-india-into-its-growth-engine-by-2030/articleshow/128297710.cms?from=mdr

Hindustan Zinc Signs MoU With Virginia Tech to Boost Silver Recovery

Hindustan Zinc Limited has signed a memorandum of understanding (MoU) with Virginia Tech to advance research aimed at improving silver recovery across its lead–zinc concentrator operations. The initiative is expected to help improve concentrate quality and enhance operational efficiency at Hindustan Zinc's processing plants.

Under the partnership, researchers at Virginia Tech will work with Hindustan Zinc to examine metallurgical factors that influence flotation selectivity and metal recovery. The study will particularly analyse interactions between reagents, minerals and water that affect process stability and concentrate quality.

Source:
https://economictimes.indiatimes.com/industry/indl-goods/svs/metals-mining/hindustan-zinc-signs-mou-with-virginia-tech-to-boost-silver-recovery/articleshow/129074084.cms

Mining Cooperation Shaping India-Argentine Partnership

Argentina and India are strengthening economic ties. Mining cooperation is a key focus, with Argentina offering a favorable framework for Indian investment in critical minerals. Agreements are already in place for lithium exploration. India is a growing partner for Argentina, with bilateral trade increasing. Future collaborations are expected at events like Bharat Steel 2026.

Source:
https://economictimes.indiatimes.com/industry/indl-goods/svs/metals-mining/mining-cooperation-shaping-india-argentine-partnership/articleshow/128985692.cms

Cabinet May Approve Pacts With Germany, Canada For Critical Minerals Cooperation

India is set to strengthen its strategic partnerships by signing pacts with Germany and Canada. These agreements will focus on critical minerals, vital for clean energy and advanced technologies. The cooperation includes joint exploration, sustainable mining, and supply chain resilience. This move aligns with India's Atmanirbhar Bharat initiative and its Critical Minerals Mission.

Source:
https://economictimes.indiatimes.com/industry/indl-goods/svs/metals-mining/cabinet-may-approve-pacts-with-germany-canada-for-critical-minerals-cooperation/articleshow/128742493.cms

India's TEXMiN, Russia's GIREDMET Ink Pact to Ramp Up Rare Earth, Critical Mineral Technologies

India and Russia are joining forces to advance rare earth and critical mineral technologies. TEXMiN Foundation and GIREDMET will collaborate on mining, extraction, and material development. This partnership aims to boost India's self-reliance in strategic sectors. Joint research will focus on permanent magnets, high-purity metals, and battery recycling.

Source:
https://economictimes.indiatimes.com/industry/indl-goods/svs/metals-mining/indias-texmin-russias-giredmet-ink-pact-to-ramp-up-rare-earth-critical-mineral-technologies/articleshow/128717431.cms

Construction Gear Production Likely To Get ₹16,000 Crore Buildup

The Central Government is working on a ₹14,000–16,000 crore incentive scheme to boost domestic manufacturing of heavy construction equipment such as tunnel-boring machines, cranes and specialised rigs, with the goal of cutting import dependence and saving up to 3 billion dollars in foreign exchange annually. India currently imports nearly half the components used in its mining and construction equipment industry from countries like China, Japan, South Korea and Germany, and large, complex machines are still largely sourced from global OEMs, exposing projects to global supply and price shocks. A production-linked-incentive-style programme is being discussed to raise localisation from below 50% to 70–80% in 5–7 years, which could create a domestic market of about 25 billion dollars a year, even as domestic sales have recently softened despite modest overall industry growth. This push for localisation is framed against India's long-term infrastructure ambitions—expanding ports, highways, metro networks and high-speed rail by 2047 which will require reliable access to advanced construction equipment and a stronger domestic manufacturing base.

Source:
https://infra.economictimes.indiatimes.com/news/construction/16000-crore-incentive-scheme-to-boost-indian-construction-equipment-manufacturing/123776673

Coal India Arm CMPDI to Launch IPO On March 20

The consultancy arm of Coal India, Central Mine Planning and Design Institute (CMPDI), will open its IPO on March 20. The offer for sale of 10.71 crore shares will list on BSE and NSE, with 50% reserved for QIBs and 35% for retail investors. As the issue is entirely an OFS, CMPDI will not receive any proceeds from the offer, and the funds raised will go to the selling shareholders.

Source:
https://economictimes.indiatimes.com/markets/ipos/fpos/coal-india-arm-cmpdi-to-launch-ipo-on-march-20-all-you-need-to-know/articleshow/129549178.cms?utm_source=contentofinterest&utm_medium=text&utm_campaign=cppst

No Road Tax On Factory, Mine Machinery: Supreme Court

The Supreme Court has ruled that heavy industrial and construction machinery like dumpers and excavators, used within factories and mines, are not motor vehicles and thus exempt from road tax. This decision overturns a 2011 Gujarat High Court judgment, clarifying that vehicles designed for closed premises are outside the Motor Vehicles Act's purview.

Source:
https://economictimes.indiatimes.com/industry/indl-goods/svs/cement/no-road-tax-on-factory-mine-machinery-supreme-court/articleshow/126420720.cms?utm_source=contentofinterest&utm_medium=text&utm_campaign=cppst

Indian Mining and Construction Equipment Industry To Report 2-5% Volume Growth In FY26 : ICRA

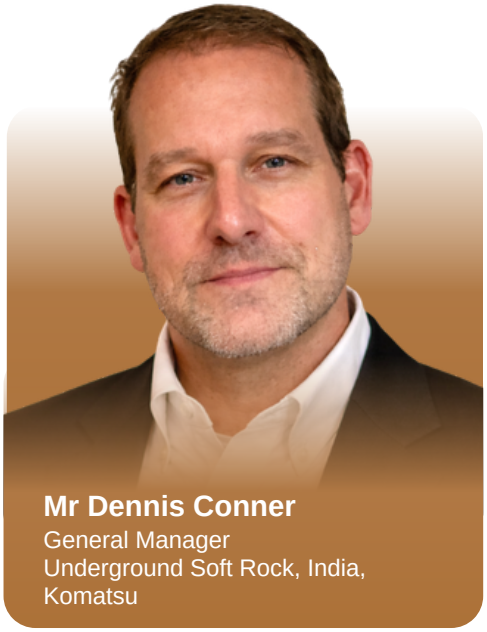
India's mining and construction equipment (MCE) sector is expected to witness modest growth of about 2–5% in FY26, with total volumes estimated at around 1.43–1.47 lakh units, according to ICRA. The subdued outlook is mainly due to weak domestic demand caused by slow project awards, reduced activity in road construction and government schemes like the Jal Jeevan Mission, along with higher costs from the implementation of new CEV-V emission norms that are pressuring manufacturers' margins. The industry also saw a slight

decline in volumes in the first quarter, with domestic sales falling, although strong export growth provided some support. Recovery is expected to depend on increased government infrastructure spending and a pickup in project execution in the second half of FY26.

Source:
https://realty.economictimes.indiatimes.com/news/allied-industries/indian-mining-and-construction-equipment-sector-forecasts-2-5-growth-in-fy26/122572938

EXPERT VOICES

5+ Million Tonnes added: delivering measurable gains underground



Mr Dennis Conner
General Manager
Underground Soft Rock, India,
Komatsu

Komatsu has enabled an additional 5+ million tonnes (MT) of underground coal production capacity in India this fiscal year—strengthening national production capability while delivering measurable gains in productivity, efficiency, safety, and return on capital for our customers.

This milestone is being enabled through the deployment of 10 Joy Continuous Miners across multiple underground operations, eight of which have already been commissioned and are operational, with the remaining two scheduled for commissioning by the end of the current fiscal year. Together, these deployments represent a structured capacity enhancement program translating directly into higher output, improved asset utilization, and more predictable performance.

Each Joy Continuous Miner deployment has been supported by focused site engagement to ensure rapid stabilization, optimized cutting performance, and sustained utilization. The result is clear: higher productivity, improved machine availability, and stronger operational consistency.

Over two decades ago, Joy introduced continuous miner-based room-and-pillar mining in India with the commissioning of the country's first Continuous Miner package at the Anjan Hill mine—laying the foundation for modern mechanized underground mining in the country.

Since then, room-and-pillar mining has evolved significantly—and so has the technology supporting it. Throughout this journey, we have remained committed to advancing underground mining practices while continuously raising benchmarks in safety, productivity, and performance.

Today, that evolution is accelerating through collaboration with customers to unlock full operational value through:

- Continuous Improvement Plans (CIP) tailored to site-specific conditions
- Remote monitoring for real-time equipment health and performance visibility
- Digitized maintenance systems to reduce downtime and improve planning accuracy
- Data-driven operator and maintenance training to enhance capability and consistency
- Performance benchmarking to exceed traditional production norms

This integrated model shifts mines from reactive operations to performance-driven systems—delivering higher availability, lower cost per tonne, and, critically, safer underground working conditions. Remote monitoring, advanced diagnostics, and automation-enabled controls reduce manual exposure at the face, improve hazard visibility, and enable more predictable, risk-managed operations.

Joy Continuous Miners incorporate globally proven smart technologies designed to enhance both productivity and operator safety. By minimizing high-risk interventions and enabling data-led decision-making, these systems position Indian mines to achieve productivity levels aligned with global benchmarks—creating visible gains in output, efficiency, and long-term business performance.

Our long-term commitment is reinforced by the upcoming world-class, Komatsu-standard manufacturing and service facility in Nagpur, scheduled to be fully operational in FY27. The facility underscores our commitment to 'Make in India' by strengthening localized assembly, integration, and value addition for underground and surface mining equipment while building enduring capability within the domestic mining ecosystem—serving both Indian and global markets.

Together, we are not just adding tonnes—we are advancing safer, smarter, globally benchmarked underground mining in support of India's sustainable growth and energy self-reliance.

Germany in Green Mining: Technology Solutions and Opportunities for India

Mr Rajesh Nath
Managing Director
VDMA India

Germany has been at the forefront of developing and implementing technologies for sustainable mining, a concept often referred to as "green mining." While the country has phased out most of its hard coal mining, it has leveraged its historical expertise to become a leader in mining equipment, technology, and services (METS) with a strong focus on environmental sustainability.

Germany's Contributions to Green Mining

Germany's approach to green mining is driven by its national commitment to the "Energiewende" (energy transition) and is centred on the following key areas:

- **Remediation and Restoration:** Germany has a long history of mining, particularly for coal and lignite. This has led to the development of world-class expertise in the remediation and restoration of abandoned mining sites. This includes converting former open-pit mines into new landscapes, such as lakes and forests, and transforming old industrial sites into cultural and business hubs.

- **Technological Innovation:** German companies and research institutions are actively exploring and developing novel technologies to enhance resource extraction efficiency, reduce environmental impacts, and improve worker safety. This includes:

  - **Automation and Digitalization:** The "Mining 4.0" concept, an extension of the "Industry 4.0" initiative, is heavily promoted by German companies. This involves integrating digital technologies like the Internet of Things (IoT), artificial intelligence (AI), machine learning, and data analytics to optimize operations, improve resource use, and reduce environmental impact.

  - **Electrification:** German companies are pioneering the development of zero-emission, battery-electric and autonomous mining vehicles and equipment. This reduces reliance on fossil fuels, lowers carbon emissions, and improves air quality in and around mine sites.

  - **Circular Economy:** Germany is a leader in recycling and waste management. In the mining sector, this translates to developing processes for managing mine waste waste (tailings) and finding ways to reuse or recycle materials, thereby reducing the need for new raw material extraction.

- **Deep Mining Technologies:** With a focus on critical minerals, German research is also exploring advanced technologies for deep underground mining, which can have a lower environmental footprint than open-pit mining.

Evolution:

The evolution of green mining technology is a shift from simply mitigating environmental damage to a more holistic approach that integrates sustainability into every stage of the mining lifecycle. Key trends include:

- **From "Less Bad" to "Positive Impact":** The focus is moving beyond minimizing harm to creating positive environmental and social outcomes, such as through land reclamation and community development projects.
- **Integration of Digital and Physical Worlds:** The use of "digital twins"—virtual models of a mine—allows for real-time monitoring and data-driven decision-making, which optimizes operations, reduces energy consumption, and enhances safety.
- **Circular Economy Principles:** Modern mining technology is increasingly focused on reducing waste and reusing materials. This includes reprocessing mine tailings to recover additional minerals and converting waste into products.
- **Decarbonisation and Renewable Energy:** There is a strong push to replace fossil fuels with renewable energy sources like solar, wind, and geothermal power to operate mining sites and vehicles.

- **Advanced Extraction Methods:** Technologies like bioleaching, which uses microorganisms to extract ores, and in-situ recovery are being explored to reduce surface disruption and the use of harsh chemicals.
- **Research in Sustainable Mining Materials & Bioleaching:** Resource recovery from tailings and mining dumps, including metals like copper and cobalt using advanced scanning and analysis technique
- Innovative bioleaching methods, wherein bacteria are used to extract metals from residues. For instance, lab tests achieved ~91% extraction of cobalt and ~57% of copper from historical tailings.

German activities in the Indian Mining Industry:

Germany is the third-largest destination for India’s engineering exports and the largest in the European Union.

- **Mine Rehabilitation:** India has over 100 abandoned coal mines that pose a serious environmental hazard. German development agencies and companies, like GIZ, are already in talks with India to provide technical and technological support for sustainable mine closure and rehabilitation. This could involve converting old mine pits into pump-storage power plants or developing them for other economic uses like solar parks.

- **Technological Advancement and Efficiency:** German digital and automated mining solutions can help the Indian industry improve operational efficiency, reduce resource consumption, and enhance worker safety.

- **Water Management:** With water scarcity being a critical issue in many parts of India, German expertise in advancedwater management systems for mining operations can help conserve water and prevent contamination of local water bodies.

- **Waste-to-Wealth:** Indian mines can adopt German technologies to process mining waste and tailings, reducing environmental hazards and creating new economic value from previously discarded materials.

- **Just Transition:** Germany's experience in managing the social and economic transition away from coal, including retraining workers and diversifying regional economies, can serve as a valuable model for India as it seeks to reduce its reliance on fossil fuels.

Future Outlook:

The mining and metals sector is responsible for an estimated 4% to 7% of global GHG emissions. This range accounts for various types of emissions, including those from direct operations, power consumption, and the use of the mined products. According to the Climate Change Performance Index (CCPI) 2025, India is ranked 10th among the countries evaluated. With plans to reduce coal dependence by 2030, India’s mining industry is at a pivotal turn.

- India’s mining production is projected to trend around 4.00% in 2026. This forecast indicates a healthy, albeit potentially moderated, growth rate compared to past highs.

- India's total domestic coal production will reach approximately 1.15 billion tonnes (1,150 million tonnes) and iron ore 315-316 million tonnes in FY 26.

- Technologies like in-pit crushing, mine conveyorization, automation, and digitalization can cut costs by 20-30% through real-time data and seamless integration.

- Indian coal has high ash content, requiring extensive washing for beneficiation. Additional policy incentives are needed to boost the number of coal washeries alongside mining expansion.

Providing Impetus to Multi-Mineral Beneficiation: Unlocking India's Next Phase of Responsible Mining Growth

Mr Sourav Sen
President & CEO
Tega McNally Minerals Limited

In India, beneficiation is widespread but largely single-mineral focused—dominated by iron ore and coal washing. True multi-mineral beneficiation, which designs flowsheets to recover multiple payable minerals from the same ore, sand, or tailings, processes far less tonnage but delivers outsized value.

The old "mine more to grow more" mindset is obsolete; we must pivot to "recover more to grow better." Multi-mineral beneficiation drives this shift—unlocking associated minerals and turning waste into wealth. For India, it's a non-negotiable strategy: fortifying resilient value chains, maximizing resource efficiency, and cementing our global edge through sustainability, safety, and uncompromising competitiveness.

1. Government Vision

India's mineral strategy is shifting decisively from "extract and sell" to "secure, process, and add value"—particularly for minerals critical to manufacturing and the energy transition. Sustained public investment in infrastructure, mining, and logistics is already translating into scale across the mining and construction equipment (MCE) ecosystem, projected to grow from USD 16 billion today to nearly USD 45 billion by FY2030 (~19% CAGR). This expansion is expected to contribute over USD 100 billion to the economy and support ~20 million jobs, reflecting the sector's strategic role in India's industrial growth agenda. This shift is most visible in how the Government has reframed the critical minerals agenda as an end-to-end value chain challenge—spanning exploration, mining, beneficiation and processing, and recovery from secondary sources—rather than a mining-only exercise. Two recent policy interventions materially strengthen this direction. The National Critical Mineral Mission (NCMM), with an approved expenditure framework from FY2024–25 to 2030–31, explicitly includes beneficiation and recovery from overburden and tailings, formally bringing secondary resources into the national mineral strategy. In parallel, the MMDR Amendment Act, 2025 enables the inclusion of additional minerals within existing mining leases, with incentive treatment for specified critical and strategic minerals—creating a practical pathway for multi-mineral recovery where ore bodies do not conform to single-mineral boundaries.

What this enables is critical: Policy is no longer neutral to beneficiation. It actively lowers structural barriers for integrated mining and processing models, creating the

conditions for scale, faster capital deployment, and higher recovery per tonne —provided execution at the state level keeps pace with intent.

2.Reserves and the Present Ore Situation

India's mineral endowment remains strong, but the **quality and geometry of what is left** is changing the economics of mining. Across key minerals such as iron ore, bauxite and manganese, a rising share of reserves is **lower-grade, deeper, and more geologically complex,** which makes "dig-and-dispatch" a diminishing strategy. In today's operating reality—tighter specs from downstream users, higher logistics costs, sharper ESG scrutiny, and greater volatility in input quality—**beneficiation is no longer an optional upgrade.** It is becoming the baseline requirement to sustain reliable supply and competitive cost structures.

At the same time, India is sitting on a large, under-utilised resource: **legacy tailings, slimes and mine waste** accumulated over decades. Historically, these streams were written off because recoveries were uneconomic and technology was limited. That assumption is now outdated. Better processing technologies, combined with policy recognition that overburden and tailings can contain recoverable mineral value (including associated and critical minerals) have shifted the conversation from "how much we have" to "how much we can actually recover." In a scenario where demand is rising and high-grade deposits are thinning, the real constraint is not availability—it is **recoverability at scale,** delivered through modern beneficiation flowsheets, disciplined water and energy management, and safe tailings practices.

3.Drivers – Why Faster Mining Is Required

The case for faster mining in India is not ideological. It is demand-led, and it is deadline-driven. Infrastructure build-out, manufacturing growth, and energy system upgrades are all pulling harder on bulk minerals such as iron ore, bauxite, and limestone. At the same time, the energy transition is creating a separate surge in demand for critical minerals embedded in batteries, renewables, and electronics. Mineral supply, therefore, is no longer just an upstream industry concern. It has become a binding input constraint for India's growth and industrial competitiveness. Where import dependence remains high, supply security stops being a procurement issue and becomes a strategic one.

What makes this phase different is time. Delays in mine development no longer stay upstream. They show up immediately tightening steel and cement availability, stretching project schedules, raising financing costs, and increasing execution risk across infrastructure and industry. Globally, mineral-rich economies are responding by compressing approval timelines and aligning mining with processing capacity, logistics corridors, and downstream value addition. If India's timelines remain structurally long, the risk is not theoretical. It is a gradual loss of competitiveness in mineral-based manufacturing and a steady erosion of investor confidence.

The constraint, however, is not the absence of regulation. It is how the system executes. Mining projects still move through environmental, forest, wildlife, and operational approvals in a largely sequential, stop-start manner. Capital efficiency is lost here. Lease modifications, beneficiation permissions, and approvals for secondary recovery often move out of sync, creating uncertainty precisely when speed and scale are needed. What is required is not dilution of regulation, but disciplined execution standardised processes, predictable outcomes, and clock-based implementation, particularly at the state level.

That is how responsible projects move faster, and how performance is judged on timelines as rigorously as on compliance.

4.Enabling Scale Through Regulatory Clarity

Recent reforms have moved the policy intent in the right direction, but the constraint today is execution-grade clarity. The MMDR Amendment Act creates a mechanism to include additional minerals within an existing lease—an important step for multi-mineral recovery. However, the commercial outcome depends on how consistently states translate this intent into defined procedures, documentary requirements, decision timelines, and inter-department sequencing. Where interpretations vary, projects that combine mining with beneficiation and processing get exposed to avoidable uncertainty making capital planning harder and delaying value realisation. The same execution gap is even more visible in secondary recovery from tailings, overburden and legacy dumps. Policy has rightly acknowledged these streams as potential sources of recoverable minerals, including associated and critical minerals.

But converting that recognition into scalable projects requires a clear, standard playbook: eligibility criteria, sampling and testing protocols, approvals for pilots, a transparent path from pilot-to-commercial, and unambiguous treatment under royalties and compliance regimes. Without harmonised, time-bound guidelines, approvals become subjective, project bankability weakens, and investments stall not because industry is unwilling, but because the pathway from technical feasibility to commercial operation remains unclear. The need of the hour is simple: predictable rules, measurable timelines, and uniform implementation, so responsible recovery can scale with confidence.

5.Collaborative Effort and Global Illustrative Benchmarks

Accelerating outcomes in mining and beneficiation is less about any one reform and more about system coordination. The direction is clear: central frameworks set the intent, state governments operationalise approvals, industry commits capital and execution capability, and research institutions help adapt technologies to India's ore complexity.

What is still missing—especially when projects involve multi-mineral recovery or secondary resources is a joined-up delivery mechanism: predictable timelines, shared data on ore and tailings characteristics, and a clear pilot-to-commercial pathway that reduces uncertainty, improves bankability, and shortens decision cycles. Without this coordination, the country risks having progressive policy on paper but uneven momentum on the ground.

Global benchmarks offer a simple lesson: policy certainty and processing capability scale together. Australia moves quickly because transparent licensing is supported by strong public geoscience and an ecosystem that makes project evaluation faster and more investible. Chile and Peru demonstrate how regulatory stability combined with large-scale processing infrastructure sustains long-term capital commitment. South Africa has consistently tied mineral development to localisation and beneficiation outcomes, while China's advantage comes from integrating exploration, mining, processing and manufacturing through coordinated planning and execution.

The takeaway for India is practical not to replicate any single model, but to build the conditions that global capital and domestic industry respond to: clarity, speed, shared infrastructure, and technology deployment at scale. When these elements move together, mineral endowment converts into sustained industrial advantage; when they remain fragmented, value leaks out through delays, sub-optimal recoveries, and missed downstream opportunities.

Providing impetus to multi-mineral beneficiation is how India enters its next phase of responsible mining growth by recovering maximum value from every tonne, not by extracting more. The intent is already clear; what will determine outcomes is execution: time-bound guidelines, uniform implementation across states, and credible pathways from pilot to commercial scale for complex ores and tailings. Success must be measured by recovery efficiency, resource productivity, and safe waste management not by volumes alone. This is a moment for leadership, not incremental change. Align policy, industry, and technology around one objective: maximum value with the smallest possible footprint. If we get this right, supply security, industrial competitiveness, and sustainability will reinforce each other not trade off.

Post-Budget 2026 Impact on the Mining & Construction Equipment Division (MCED)

Mr Sooraj Cherukat
Head – Sales and Business Development
HailStone Innovation Pvt Ltd

The Union Budget 2026, presented on February 1, has set a clear direction for India's infrastructure and industrial growth, and its impact on the Mining & Construction Equipment Division (MCED) is both immediate and long-term. The budget's strong focus on capital expenditure, mineral development, and sustainability is expected to create a favourable operating environment for equipment manufacturers and end-users alike.

One of the most encouraging takeaways from the budget is the continued thrust on infrastructure spending. Increased allocations toward highways, railways, urban infrastructure, ports, and renewable energy projects directly strengthen demand for construction and mining equipment. These investments ensure a steady pipeline of projects, which translates into higher equipment utilisation and fresh fleet additions across India.

The budget also places renewed emphasis on boosting domestic mining output and mineral security. Policy measures aimed at expanding coal production, developing critical minerals, and accelerating mine mechanisation will further drive demand for advanced crushing, screening, and material handling solutions. For the MCED sector, this signals a clear shift toward modern, high-capacity, and energy-efficient equipment.

Another positive impact stems from fiscal and financial support mechanisms. Provisions that encourage local manufacturing, easier access to credit, and MSME financing will help contractors and fleet owners invest with greater confidence. Any rationalisation in GST structures for machinery and spare parts, along with incentives for capital investment, will further improve affordability and market sentiment.

Importantly, Budget 2026 has also reinforced the national agenda of sustainability and decarbonisation. The focus on clean energy, green mobility, and environmentally responsible technologies aligns perfectly with the industry's transition toward hybrid-electric and digitally enabled equipment. Incentives supporting energy-efficient machinery, along with investments in digital infrastructure and skill development, will accelerate the adoption of smart and sustainable solutions across project sites.

However, some challenges remain. Rising input costs, logistics pressures, and tighter regulatory compliance norms continue to demand careful planning from OEMs and customers. The real impact of the budget will depend on how effectively projects are executed on the ground and how quickly financial benefits reach end-users

Overall, the post-Budget 2026 scenario is highly positive for the MCED segment. The policy mix of infrastructure investment, mining reforms, manufacturing support, and sustainability incentives provides a solid foundation for industry growth. At Hailstone Innovations, we view this as a strong opportunity to expand our footprint with technologically advanced, fuel-efficient, and digitally integrated solutions that support India's next phase of infrastructure development.

OEM Leadership and the Critical Minerals Imperative

Engineering the future of Sustainable Mining

by Promac Engineering Industries Limited

Mr S. Jayaram Reddy
Chairman & Managing Director
Promac Engineering Industries Limited

Executive Summary

India's transition toward clean energy and advanced manufacturing has elevated the role of critical minerals. Union Budget FY2026 introduces dedicated Rare Earth Corridors and a ₹20,000-crore CCUS push, strengthening domestic value chains and expanding opportunities for OEM-driven sustainable mining solutions.

> ***The Union Budget FY2026 positions critical minerals at the heart of India's clean-energy future. The action on the ground needs OEMs as protagonists***

The global transition toward clean energy, digital infrastructure, and electrified mobility has fundamentally altered the strategic importance of minerals. What was once a 20th century discussion centered on fuel and power has now expanded into a broader material conversation. Critical minerals such as lithium, copper, alumina, titanium bearing sands, rare earths, and industrial silica have become the foundation of modern economies. From renewable energy systems to electric vehicles and advanced manufacturing, the demand for these materials is accelerating at an unprecedented pace.

This transformation places mining once again at the center of global industrial strategy. However, the expectations from mining today are markedly different from the past. Growth is no longer measured solely by volume or output. It is increasingly defined by efficiency, environmental performance, social responsibility, and long-term resilience.

Meeting these expectations requires a fundamental shift in how mining technology systems are designed and delivered. This is where Original Equipment Manufacturers must step forward as leaders rather than followers.

Traditionally, OEMs in the mining and construction ecosystem were assessed primarily on mechanical robustness, throughput, and capital efficiency. While these factors remain relevant, they are no longer sufficient.

Today's mining and cement sectors require integrated engineering solutions that align equipment design with sustainability objectives

OEMs such as Promac Engineering, which have invested in clay calcination technologies to enable the production of low-carbon cement using supplementary cementitious materials (SCMs), improving accessibility to cement and concrete manufacturers across the Global South.

OEMs today are expected to operate as system integrators. This includes designing equipment that is compatible with electrification and automation, reducing energy and water intensity across processing circuits, enabling digital monitoring and predictive maintenance, and supporting lifecycle performance and carbon reporting rather than one time supply.

In the context of critical minerals, this role becomes even more pronounced. Many of the minerals essential for energy transition are found in complex ore bodies or lower grade deposits. Extracting value from these resources without escalating environmental and social costs is a challenge that cannot be solved by mining companies alone. It requires close collaboration with OEMs that can engineer fit for purpose solutions from the ground up.

One of the most significant developments supporting this transition is the emergence of Ore Sand technology. This approach represents a shift in how finely ground ore and mineral residues are treated, processed, and ultimately valued. Instead of viewing fine fractions and tailings as waste streams requiring long term containment, Ore Sand technology focuses on recovery, classification, and productive reuse.

At its core, this technology enables the separation and utilization of ultra-fine mineral particles through advanced processing routes that reduce reliance on water intensive beneficiation and large tailings storage facilities. For minerals such as iron bearing sands, titanium minerals, alumina rich fines, and industrial silica, Ore Sand approaches can convert what was previously discarded material into valuable industrial inputs.

The implications are far reaching. Mining operations can reduce their physical footprint, lower environmental risk, and improve overall resource efficiency. For OEMs, this opens new avenues for innovation in crushing, classification, material handling, and modular plant design. It also demands higher levels of precision engineering and digital integration to manage fine particle systems effectively.

India occupies a unique position in the global critical minerals landscape. It is a rapidly growing consumer of minerals, an emerging exporter of mining and construction equipment, and a trusted development partner for many countries across Africa, Southeast Asia, and Latin America. This combination positions India as a natural leader in Global South South cooperation.

Unlike traditional technology flows that move from developed economies to developing ones, South South collaboration is built on shared operating realities. These include complex geology, infrastructure constraints, cost sensitivity, and the need to balance development with social inclusion. Indian OEMs have decades of experience engineering solutions under precisely these conditions.

By combining global process innovations such as Ore Sand technology with India's engineering and manufacturing capabilities, it becomes possible to deliver sustainable mining solutions that are both advanced and accessible. This approach not only strengthens Indias domestic mining ecosystem but also enables Indian companies to support responsible mineral development across the Global South.

Green mining is often discussed in terms of compliance or environmental targets. It is fundamentally an engineering challenge. Energy efficiency, water reduction, emissions control, and waste minimization are outcomes that must be embedded into system design rather than addressed after installation.

OEMs therefore play a decisive role in determining whether mining operations can meet future sustainability expectations. Equipment and plants designed today will operate for decades. Decisions taken at the design stage will influence energy consumption, environmental performance, and operating costs throughout their lifecycle.

In India, the mining and construction equipment sector is already witnessing a shift toward automation, digital monitoring, and cleaner power systems. The next phase is to align these capabilities more directly with critical mineral processing and advanced beneficiation routes such as Ore Sand systems. Doing so will ensure that growth in mineral production does not come at the expense of environmental or social outcomes.

At Promac Engineering Industries Limited, we believe that OEM leadership in the critical minerals space must extend beyond equipment supply. It must encompass system level thinking, long term partnership, and a clear commitment to sustainability driven innovation.

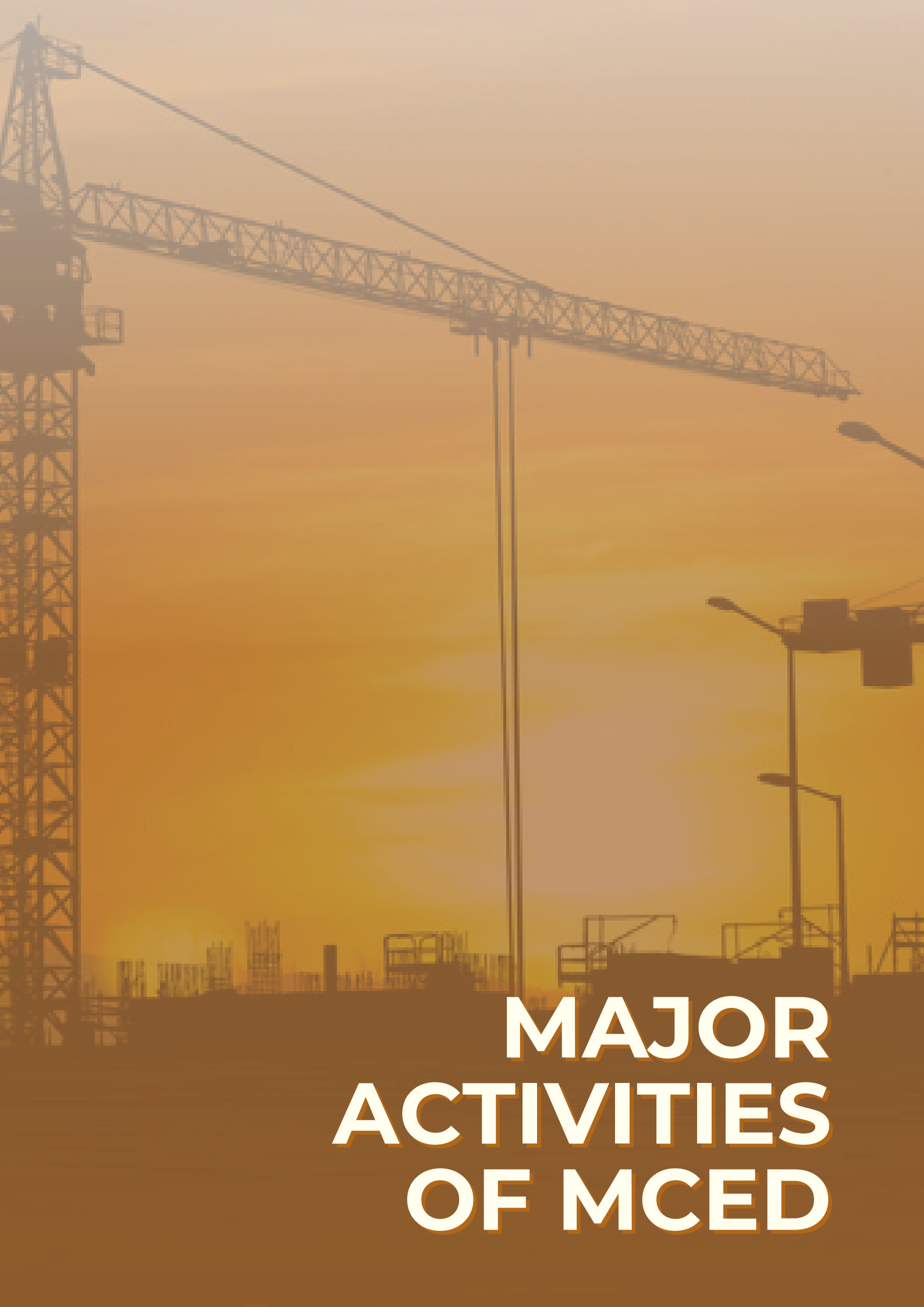
Jayaram Reddy, Chairman and Managing Director, Promac Engineering Industries Limited, states: "*The future of mining will be defined by how intelligently we engineer systems rather than how aggressively we extract resources. OEMs have a responsibility to design solutions that enable value recovery from complex ores while reducing environmental impact. Technologies such as Ore Sand processing demonstrate that sustainability and productivity can advance together. India can lead this shift not only for itself but for the wider Global South.*"

Promac views this moment as an opportunity for Indian OEMs to move up the global value chain. By investing in advanced process engineering, modular plant concepts, and digital integration, Indian companies can deliver solutions that are competitive on a global scale while remaining grounded in local realities.

The demand for critical minerals will continue to grow as the world accelerates toward cleaner energy systems and advanced manufacturing. Meeting this demand responsibly will require a new model of mining that places engineering leadership at its core.

OEMs are central to this transformation. By embracing integrated system design, supporting innovations such as Ore Sand technology, and strengthening Global South South cooperation, OEMs can help redefine mining as a sustainable and future ready industry.

For India, this represents more than an industrial opportunity. It is a strategic pathway to global leadership in green mining technologies. With the right collaboration between policymakers, mining companies, and OEMs, India can help shape a mining transition that is efficient, inclusive, and aligned with long term development goals.



MAJOR ACTIVITIES OF MCED

Roundtable Interaction with Hon'ble Industry Minister , Government of Odisha

Mining and Construction Equipment Division meeting on the sidelines of EXCON 2025

The Mining and Construction Equipment Division of CII convened a divisional meeting on the sidelines of EXCON 2025 on 10 December, bringing together key industry stakeholders to deliberate on critical policy imperatives for the sector. The session was chaired by Vivek Bhatia, Chairman of the Division, and co-chaired by Manav Kohli, Regional Chairman, CII MCED (Northern Region).

Deliberations centred on BIS certification requirements, evolving European export regulations, and the need to integrate carbon sustainability across global value chains. The discussions underscored the industry's shared commitment to strengthening regulatory compliance, enabling smoother market access, and accelerating the shift towards more sustainable and responsible mining and construction ecosystems.

Viewpoints on the

Union Budget

Mr Vivek Bhatia
Chairman, CII National Mining and Construction Equipment Division and MD and CEO of TKIL Industries Pvt. Ltd

The Union Budget 2026–27 sets a strong direction for mining, critical minerals and the construction equipment sector. Alongside record capital expenditure and infrastructure-led logistics expansion, the Budget introduces a new Scheme for Enhancement of Construction and Infrastructure Equipment (CIE), reinforcing the sector's journey towards self-reliance. The focus on rare earth corridors, equipment indigenisation, and stronger domestic value chains—supported by green infrastructure and advanced technologies will reduce import dependence, improve cost competitiveness, and position India's mining and construction equipment ecosystem as globally competitive and future-ready.

Budget 2026 balances focus on Physical and Digital Infrastructure. Incentives for urban infrastructure, waterways, semiconductor and datacenters paves way for a modern economy. Granular focus on manufacturing of high technology, Construction and Infrastructure equipment is a welcome policy initiative. The emphasis on critical minerals and mining in Budget 2026 lays the foundation for Viksit Bharat!

Mr Manav Kohli
Chairman, CII Mining and Construction Equipment Division- Northern Region and Executive Director & Chief Executive Officer, Gainwell Commosales Pvt Ltd,

Viewpoints on the
recent FTA's signed

Mr Vivek Bhatia
Chairman, CII National Mining and Construction Equipment Division and MD and CEO of TKIL Industries Pvt. Ltd

As Chairman of CII MCED, I welcome and congratulate the Governments of India and the EU for sealing the "mother of all deals" with this landmark FTA.

This game-changer deal eliminates tariffs on 100% of key mineral lines, slashes export costs, and unlocks Europe's premium markets for steel, electronics, autos, and renewables. Zero duties will supercharge our mineral exports, draw EU investments in cutting-edge extraction tech, promote sustainable mining via strong partnerships, and fuel jobs while modernizing MSME operations. In the long run, it cements India's role as a trusted global supplier of critical minerals, aligning perfectly with the EU's supply chain diversification goals.

The India–USA trade agreement marks a defining moment for two of the world's largest democracies. While we wait for the fine print and details of the agreement to be released, the reduction in tariffs to 18% is a significant step that will enhance export competitiveness for Indian manufacturers and also strengthen economic ties between the two leading democracies.

A more predictable and open trade environment creates meaningful opportunities to expand exports of high-value, technology-driven engineering solutions to the U.S. market. Lower trade barriers will improve cost efficiencies, enable smoother supply chain integration, and unlock additional avenues for bilateral investment and industrial collaboration.

This agreement lays the foundation for stronger investment flows, and a future-ready industrial partnership between India and the United States.

I proudly welcome the "mother of all deals" signed between the Governments of India and the European Union. I see this landmark agreement as a major boost for the mining and construction equipment sector. The reduction of tariffs on engineering goods-including machinery that earlier faced duties of up to 22% in the EU-opens new growth opportunities for Indian manufacturers. At the same time, easier access for EU machinery into India will accelerate technology transfer, encourage joint ventures, and help modernise domestic mining and infrastructure operations.

Mr Ravi Todi
Chairman, CII Mining and Construction Equipment Division - Eastern Region and Managing Director, BTL EPC Ltd

Upcoming Events of Mining and Construction Equipment Division 2026

Month	Events
April	Interactive session with Chairman, Hindustan Copper Ltd- Eastern Region
April	Mine Visit to NLC, Tamil Nadu
May	CEO roundtable in Chattisgarh
May	Interactive session with NTPC CMD
May	Interactive session with Chairman, Coal India Ltd
June	MCED Annual Summit and Awards
July	Session on Safety in Mining
August	Session on Skilling – (Honeywell)
August	Session on Sustainability in Mining
September	International delegation to Indonesia
October	Meeting – Southern Region
October	Factory Visit (Komatsu/ L&T / Tata Hitachi /Toyota)
November / December	Interactive Session (with NMDC CMD)

Confederation of Indian Industry
EASTERN REGION

MINING AND CONSTRUCTION EQUIPMENT DIVISION

Strategic Mining for the Future: Strengthening Supply Chains, Powering Progress

COMING SOON

STAY TUNED WITH US!

Contact:
Ms Disha Chakraborty | +91 7980838197 | disha.chakraborty@cii.in

Notes

Confederation of Indian Industry

The Confederation of Indian Industry (CII) works to create and sustain an environment conducive to the development of India, partnering Industry, Government and civil society through advisory and consultative processes.

CII is a non-government, not-for-profit, industry-led and industry-managed organisation, with around 9,700 members from the private as well as public sectors, including SMEs and MNCs, and an indirect membership of over 365,000 enterprises from 318 national and regional sectoral industry bodies.

For more 130 years, CII has been engaged in shaping India's development journey and works proactively on transforming Indian Industry's engagement in national development. CII charts change by working closely with the Government on policy issues, interfacing with thought leaders, and enhancing efficiency, competitiveness, and business opportunities for industry through a range of specialised services and strategic global linkages. It also provides a platform for consensus-building and networking on key issues.

Through its dedicated Centres of Excellence and Industry competitiveness initiatives, promotion of innovation and technology adoption, and partnerships for sustainability, CII plays a transformative part in shaping the future of the nation. Extending its agenda beyond business, CII assists industry to identify and execute corporate citizenship programmes across diverse domains, including affirmative action, livelihoods, diversity management, skill development, empowerment of women, and sustainable development, to name a few.

For 2025-26, CII has identified "Accelerating Competitiveness: Globalisation, Inclusivity, Sustainability, Trust" as its theme, prioritising five key pillars. During the year, CII will align its initiatives to drive strategic action aimed at enhancing India's competitiveness by promoting global engagement, inclusive growth, sustainable practices, and a foundation of trust.

With 70 offices, including 12 Centres of Excellence, in India, and 9 overseas offices in Australia, Egypt, Germany, Indonesia, Singapore, UAE, UK, and USA, as well as institutional partnerships with about 250 counterpart organisations in almost 100 countries, CII serves as a reference point for Indian industry and the international business community.

Confederation of Indian Industry

6, Netaji Subhas Road, Kolkata-700001

T: +91 33 2230 7727

E: zoha.khurshid@cii.in | W: www.cii.in

----------Follow us on ----------

facebook.com/CII4ER **X.com/CII4ER** **linkedin.com/company/CII4ER**