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Cover Story.



India's Clean Energy Horizon: Building a Resilient, Circular Grid **Beyond 300 GW**

India has crossed 300 GW of installed non-fossil power capacity a major milestone on the road to 500 GW by 2030. But here's the bigger question: Can India ensure that all this clean power is available when and where it is needed?

The next chapter of the energy transition is not just about building more solar and wind. It is about moving, managing and delivering electricity reliably through changing demand, extreme weather and decades of operation.

From solar cables and wind generators to battery busbars, transformers and substations, copper will play a critical role in keeping this system efficient and resilient. Copper's high conductivity, thermal performance, durability and recyclability make it an important part of this evolving infrastructure. The 500 GW target is about more than capacity it's about building an energy system that can stand the test of time.

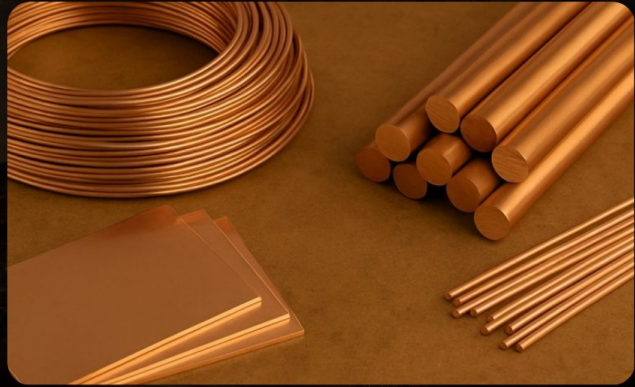
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Industry Perspectives

Why copper will be the most strategic metal of the next decade

ET INSIGHTS

Exclusive Interview with Mayur Karmarkar
Managing Director, ICA India



Copper has been a defining material across human civilisation, evolving from Bronze Age tools to the electrical infrastructure powering the modern world. Its exceptional conductivity, malleability and reliability have made it essential to power grids, electric vehicles, renewable energy and advanced manufacturing. Today, its role is expanding into emerging technologies from industrial 3D printing and offshore wind to AI data centres, where copper supports high- performance electrical and thermal management systems.

The rise of robotics is further strengthening its importance, with copper enabling motors, actuators, sensors and internal cabling. As electrification, digitalisation and automation accelerate, copper is moving beyond its traditional applications to become a critical enabler of the technologies shaping the future. The metal that helped build every age is helping build the next one too.

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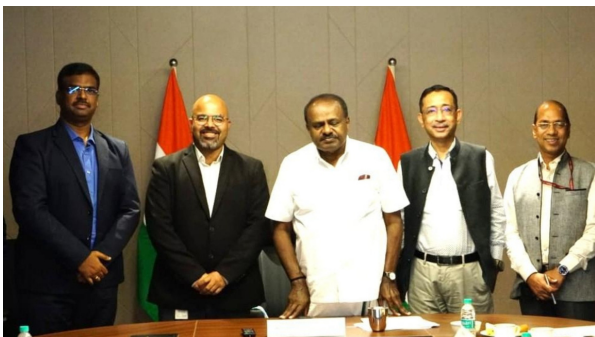
ICA India Events



ICA Promotes Copper Cabling in Building Bylaws to Enhance Electrical and Fire Safety

Ranchi | Eastern India

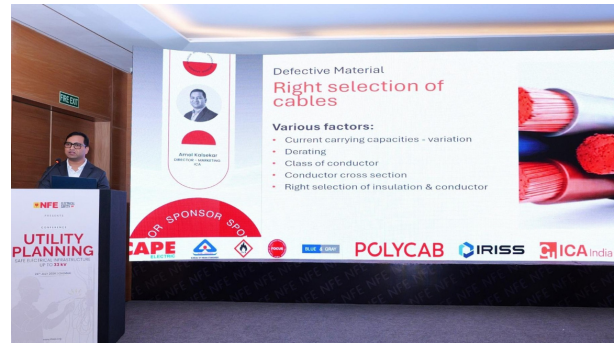
ICA India engaged urban development and fire officials to advocate copper cabling in building electrical systems, highlighting revised national codes, lower energy losses, long-term performance and reduced fire risk, while using thermography evidence to demonstrate the safety and performance differences between copper and aluminium cables.



ICA Advocates Incentives for Domestic Battery-Grade Copper Foil Manufacturing

New Delhi | Policy Engagement

Shri H. D. Kumaraswamy, Hon'ble Minister of Heavy Industries, Government of India, ICA India advocated incentives for battery-grade copper foil and highlighted the importance of domestic copper component manufacturing to strengthen India's battery ecosystem and support a more self-reliant advanced chemistry cell industry.



ICA Highlights Copper's Role in Safer and More Reliable Building Electrical Infrastructure

Chennai | Southern India

At a co-hosted session with 150+ industry experts, decision makers and influencers, ICA India promoted copper-based electrical installation practices, highlighted revised building codes and standards, and raised awareness of risks associated with non-standard aluminium flexible cables in building electrical systems.



ICA Promotes Copper-Based Distribution Infrastructure for Reliable Rural Electrification

Lucknow | Uttar Pradesh

ICA India convened an industry dialogue on strengthening rural distribution infrastructure, highlighting copper's role in reliable distribution transformers and the importance of network modernisation, lifecycle-based investment and high-performance copper systems to reduce losses, improve reliability and support growing electricity demand.

ICA India Events



ICA Advocates Life-Cycle Costing for Smarter Distribution Transformer Procurement

Chandigarh | Haryana

At an event hosted by Haryana Power Utilities, ICA India promoted Life Cycle Costing and Total Cost of Ownership for distribution transformer procurement, demonstrating how service life, energy losses, maintenance, replacement and residual value should inform long-term efficiency, reliability and sustainability decisions.

