



Recycling, circular economy & low-carbon products

p.3 EXECUTIVE SUMMARY

p.4 **PART 1** Context & challenges
FACING THE RAW MATERIALS "WALL"

p.5 **PART 2** Nexans' point of view
**CIRCULAR ECONOMY AND DECARBONIZATION:
CATALYSTS FOR ELECTRIFICATION**

p.6 **PART 3** Nexans' solutions
THREE PILLARS FOR CIRCULAR ELECTRIFICATION

p.8 **PART 4** Conclusion
**RECOMMENDATION FOR THE ADOPTION
OF RESPONSIBLE "DUAL SOURCING"**

Demand for copper is growing. From 1995 to 2020, copper consumption more than doubled, and could reach 40 million tons by 2030. But production capacity, estimated to be around 33 million tons by that time, won't be able to meet this demand.

These figures are illustrating a reality that goes beyond the issues inherent to copper: the scarcity of virgin resources. An industrial shift needs to happen, and fast. Convinced that "today's waste is tomorrow's growth," Nexans asserts that the circular economy and low-carbon programs are no longer peripheral options, but the very foundations of energy sovereignty. By investing heavily in industrial recycling, we are proving that it is possible to transform a resource constraint into a performance opportunity.

To electrify the future, we must move from a linear model to a virtuous cycle, reconciling industrial resilience with climate responsibility.

Facing the raw materials “wall”

Electrification is the backbone of the energy transition. Smart grids, renewable energies, and electric mobility require massive infrastructure deployment.

However, this ambition faces a systemic challenge: extreme pressure on raw materials. Global demand for copper (see our Position Paper on *Responsible Copper Sourcing*), which is essential for electrification, is accelerating. The world will need to add 10 million tons of copper supply in just 10 years—growth that previously took closer to 25 years to reach. By 2035, global installed mining capacity will have reached its limits, causing price volatility and structural risks of supply disruptions. At the same time, the carbon footprint of networks is mainly “embedded” upstream, during the extraction and processing of metals.

The linear “extract-produce-dispose” model is now obsolete and dangerous for energy security. In addition, regulatory pressure is intensifying, demanding total transparency on the carbon impact and circularity of products.

The challenge is clear: how can we accelerate electrification without depleting the planet’s resources or creating new dependencies?



Circular economy and decarbonization: catalysts for electrification

For Nexans, circular economy and decarbonization are the catalysts for electrification. Our conviction is clear: tomorrow’s electrification must be industrially sovereign, low-carbon, and circular.

As a pure player in electrification with unique vertical integration (with our own foundries), we see recycling as a bold industrial strategy, not just a way to comply with CSR requirements. Our E3 (Economy, Environment, Engagement) performance model puts resource management at the heart of our profitability.

Nexans positions recycling as a lever for sovereignty. End-of-life copper products extracted from so-called “urban mines” are valuable resources that supply our new refinery processes. We’re ensuring that cable waste can be recycled indefinitely to manufacture new products—a virtuous cycle that reduces our reliance on virgin copper imports while helping to reuse local materials.

We are committed to an ambitious and measurable trajectory: achieving 25% recycled copper in our cables by 2028 and net-zero emissions by 2050. **For us, a sustainable cable is one that contributes to the long-term resilience of the power grid.**



Responses to common counterarguments

“Recycled materials compromise technical performance.”

- **FALSE:** When properly processed, recycled copper, aluminum, polyethylene & PVC meet the same standards as primary materials.

“Recycling capacity cannot scale fast enough.”

- **FALSE:** Industrial investments such as the Nexans Copper Casting and Refining project in Lens show that recycling can be scaled rapidly through technology and partnerships.

Three pillars for circular electrification

At Nexans, circular economy is a proven industrial lever for ensuring our material sovereignty and decarbonizing networks. Contrary to common belief, we are proving that our circular solutions maintain absolute technical excellence while optimizing the total cost of ownership for our customers in the long term. Our strategy is based on three pillars.

1. Developing recycling through new loops and new sources

We refuse to accept waste as inevitable by transforming it into strategic resources through partnerships and the exploitation of new sources. Our innovative CableLoop service is proof of this: we collect scrap and obsolete cables directly from construction sites or via specialized distributors in order to recycle them with full traceability. At the same time, we have created a unique industrial chain with RTE, France's Transmission System Operator, for recycling aluminum from dismantled high-voltage cables, forming a local closed loop that directly reintegrates this metal into the electrical networks.

2. Integrating recycled materials

Metal conductors represent 70% to 90% of a cable's cradle-to-gate carbon footprint, making the integration of recycled copper or aluminum the most effective lever for reduction. To drastically reduce our emissions and progress toward Net Zero, we are replacing primary materials with secondary ones. We are taking a key step forward by offering cables that incorporate recycled aluminum, providing a high-performance,

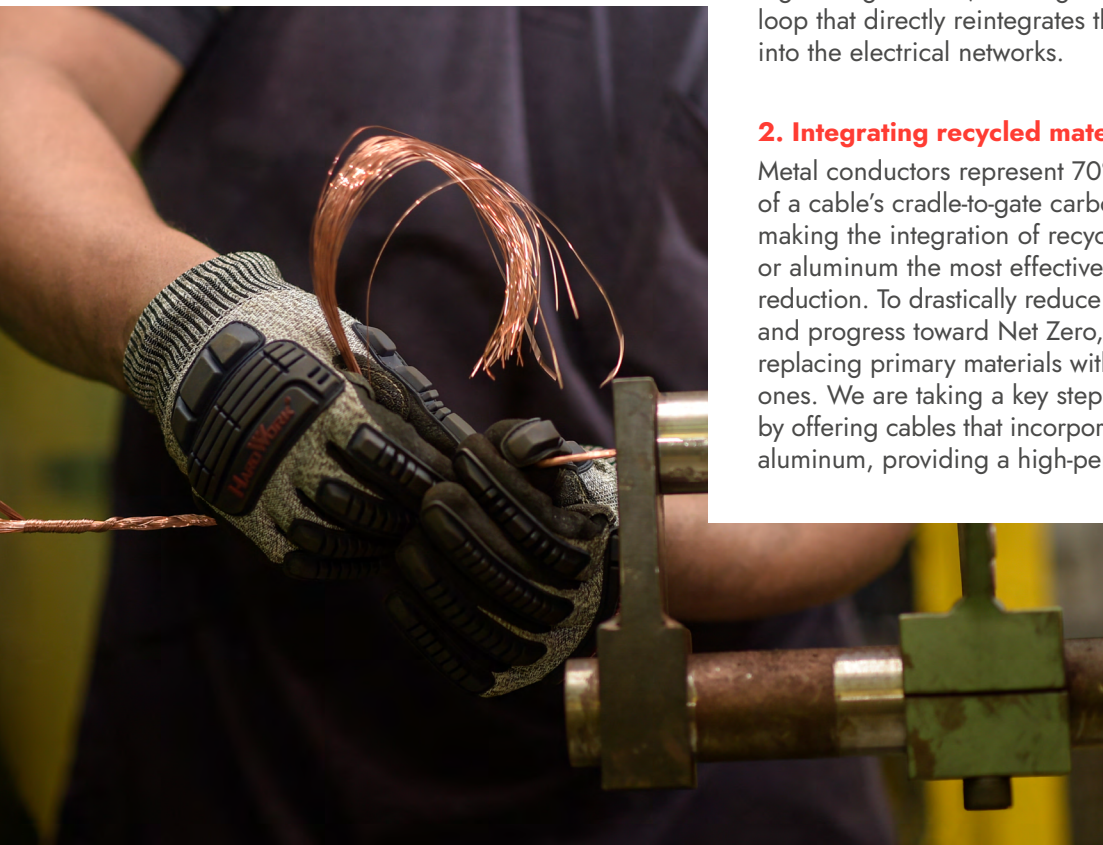
low-carbon alternative to alleviate copper supply tensions. This eco-design requirement also extends to insulation: Nexans already recycles 13,000 tons of polymers annually, and, through the Circular Plastics Alliance, integrates recycled polyethylene and PVC that meet the same strict electrical and mechanical standards as virgin materials.

3. Engaging our partners in low-carbon ecosystems

Successful transition requires the involvement of the entire electrification value chain. With our Low Carbon program, we provide customers with transparent environmental product data, enabling informed decisions and sustainable choices, while continuously improving the environmental performance of our products. Our long-standing partnership with Enedis illustrates this evolution, driven by Europe's largest electricity distribution network operator. At the same time, leading players increasingly adopt our eco-designed medium-voltage cables. By promoting our low-carbon offerings and recycling services, we help our public and private customers reduce their own emissions while jointly building a resilient and sustainable electrical infrastructure.

"Nexans has placed sustainability and responsible growth at the heart of its strategy. Through circular economy initiatives and low-carbon innovation, Nexans is building resilience, creating stakeholder value and accelerating the global energy transition."

Julien Hueber | CEO of Nexans



Recommendation

for the adoption of responsible "dual sourcing"





Electrification will shape the coming decades. Its success will depend not only on its speed and scale, but on our ability to reconcile growth with responsibility.

Sustainable electrification cannot rely solely on the extractive model. That is why Nexans recommends adopting responsible "dual sourcing": maintaining an ethical primary supply while massively increasing the share of secondary materials from recycling.

➔ **By integrating the principles of the circular economy and low carbon footprint throughout the product life cycle, Nexans demonstrates that the future of electrification can be resilient, competitive, and sustainable.**

References

European Commission – Circular Economy Action Plan, European Green Deal, IEA Critical minerals reports, Investment Bank Consulting Firm, ISO 14040 / ISO 14044 – Life Cycle Assessment standards, Nexans internal reports, PEP Ecopassport® – Environmental Product Declarations.

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The logo features a stylized red 'N' followed by the word 'exans' in a bold, black, sans-serif font.
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ELECTRIFY THE FUTURE