

Europe's Fastest Route to a Resilient Battery Supply

New research finds Europe can decarbonise road transport with far less mining

Europe's race to electrify road transport faces a metals supply challenge. But new research shows that Europe can ease that pressure by reducing the amount of battery metals it needs in the first place. Now, 40 organisations are calling on the EU to make demand reduction a core part of Europe's security strategy rather than an afterthought.



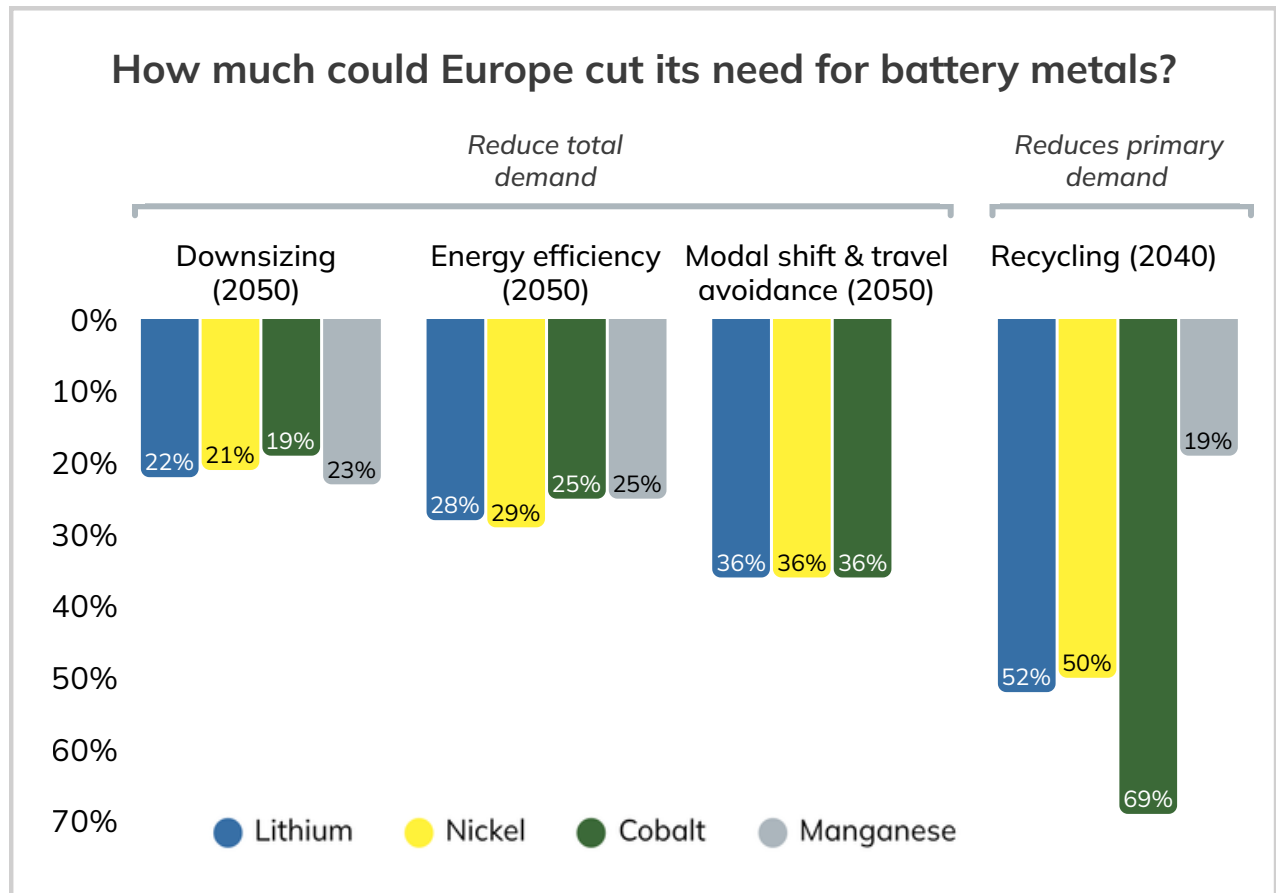
Europe's electrification agenda risks swapping one vulnerability for another. The EU is still paying the price for phasing out oil and other fossil fuels too slowly. But replacing dependence on fossil fuels with ever-growing dependence on finite raw materials would simply create a new vulnerability. Concentrated supply chains, volatile commodity prices and geopolitical risks are already shaping the market for battery metals.

The EU can diversify sourcing, build processing capacity and stockpile strategic reserves, and still find itself at the mercy of a market it does not control. **For Europe, the challenge is therefore not only to secure more raw materials, but to reduce how much it needs in the first place.**

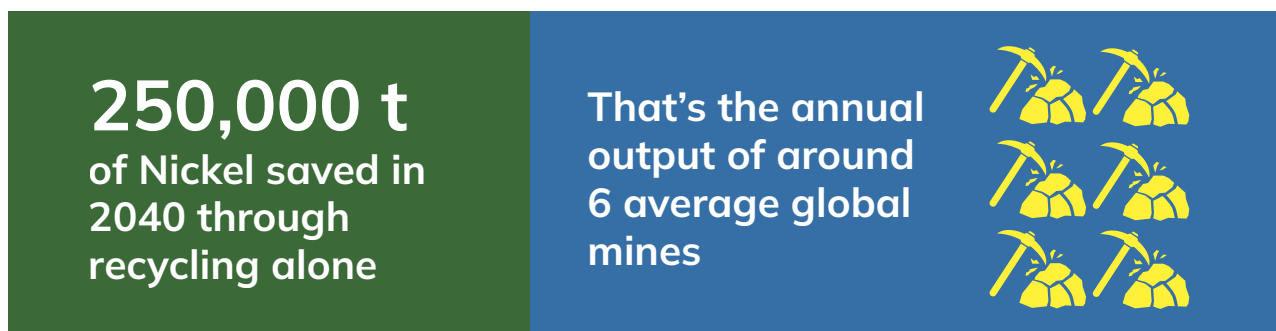
Battery chemistries are already shifting towards alternatives that use less or none of some minerals, but this alone cannot offset projected growth in overall demand.

Vast underused potential unexplored

New research by Öko-Institut, reviewing 30 authoritative studies, finds that Europe is sitting on significant untapped potential to slash battery metal demand. They conclude that "a less mining-intensive pathway is already technically feasible, credible and available now" in order to achieve decarbonisation goals.



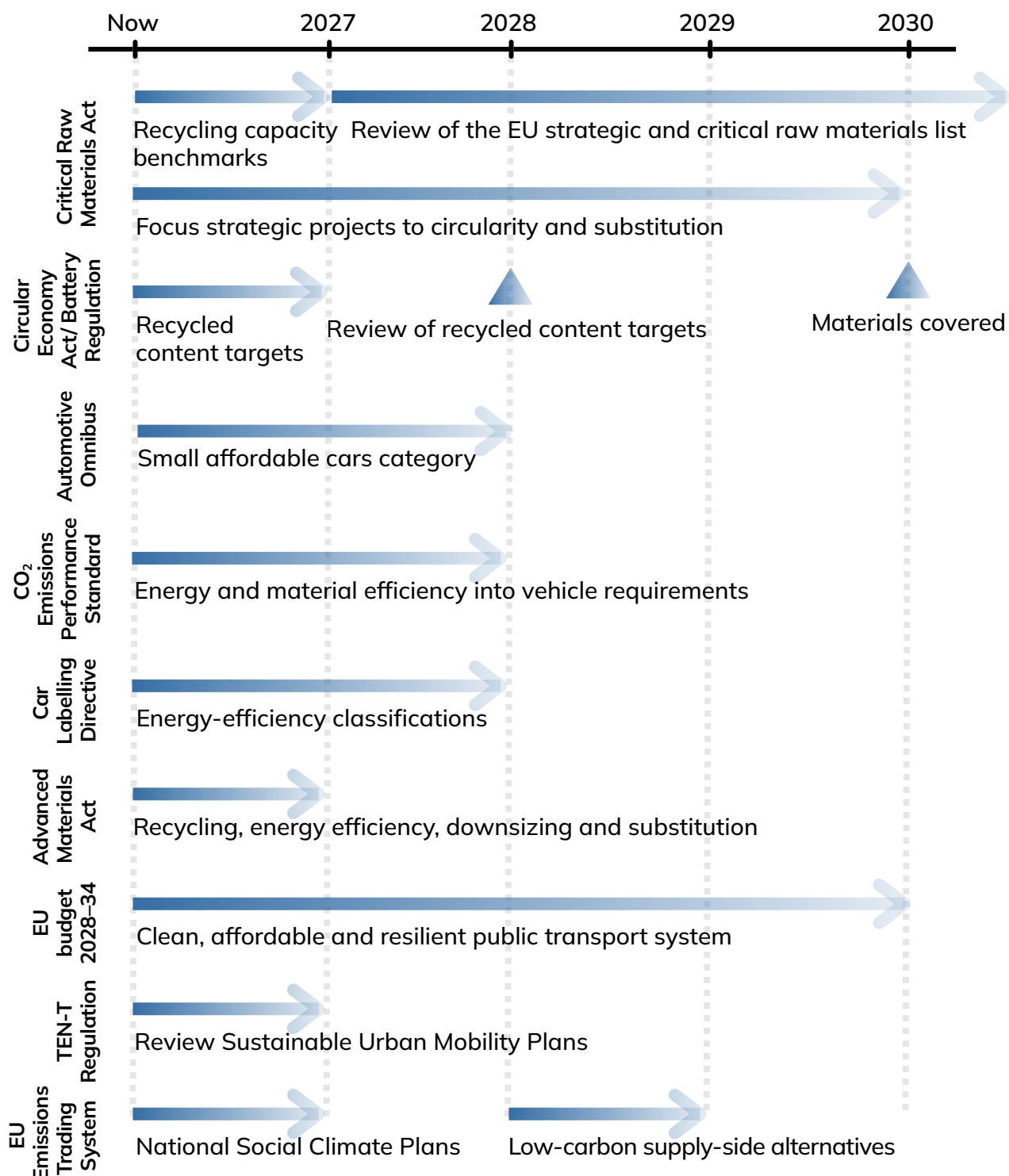
Data from Öko-Institut, upper reduction potential per measure (years shown per row), compared to business-as-usual scenarios. Figures come from different studies with different assumptions and cannot be added together.



Based on Öko-Institut's analysis of data commissioned by the European Commission. Mine comparison uses 2022 data from [Benchmark Minerals](#). Output varies between operations and years. The saving potential constitutes around 7% of average annual nickel production.

The policy windows are already open

The EU has over 20 policy entry points to decisively curb its battery metal needs, by boosting recycling, downsizing, energy efficiency, modal shift, and travel avoidance.



Less demand, less harm

Using fewer raw materials also means less pressure on people and nature. Reducing demand cuts water use, pollution, land disruption and mining-linked conflicts, while easing pressure on communities and Indigenous Peoples. It can help Europe meet its mobility and climate goals while reducing the transition's social and environmental costs.

Five actions for Europe's resource security

- 1 Recycle more batteries in Europe.** Recover valuable materials from old batteries so Europe needs to import less from elsewhere.
- 2 Reward energy and material efficiency.** Vehicle rules and classification should favour cars that need less energy and fewer raw materials to run.
- 3 Use public money to support resource-efficient vehicles.** Set clear standards for public procurement so taxpayer money supports vehicles that use materials and energy wisely.
- 4 Invest in alternatives to unnecessary car travel.** Use more EU funding to make public transport more affordable, reliable and attractive.
- 5 Support innovation.** Invest in smarter battery materials, smaller and lighter vehicles, material substitution and recycling, so future vehicles can deliver the same benefits with fewer raw materials.

Europe does not have to choose between decarbonisation, competitiveness and resource security. Better use of materials serves all three at once - and takes the pressure off mining, at home and abroad, whether on land or at sea.

[Read the full research](#)



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