



Rare Metals Needed

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The future of sustainable energy looks bright—except for one thing. Many of the metals needed to build critical components like batteries and solar panels are vulnerable to political interference or are mined in unstable environments. More than half the world's cobalt is mined in the Democratic Republic of Congo, which is in the midst of a long and brutal civil war. China, whose economy and government is an open rival to the U.S., controls the market for rare earth metals like neodymium and dysprosium, which are required in consumer electronics and high-tech defense applications. The strategic vulnerability is so great that the U.S. Pentagon has begun directly financing mining and refining operations.

A recent report by the Eurasia Group also notes that the flow of critical minerals, even from friendly nations, is about to become more uncertain and expensive. Australia (lithium), Canada (neodymium and praseodymium), Chile (Europium, Gadolinium, Terbium, Erbium, and Ytterbium), the Democratic Republic of Congo (cobalt), Indonesia (Monazite, Scandium, and Thorianite) and Zambia (copper, lithium, cobalt and nickel) have all begun to impose export measures on raw mineral ores, and China is creating an export control regime to weaponize its mineral dominance in gallium, germanium, and graphite. Tanzania is about to enact a ban on raw lithium exports, and Nigeria passed an export ban on mineral ores last year.

The report predicts that exploration initiatives currently underway will eventually uncover new sources of the materials needed to support the giant electric vehicle giga factories that are coming online this year and the growing solar panel market. But until then, the sustainable energy sector is going to have to deal with increased price volatility, supply chain instability, and hard-to-anticipate production shortfalls.

Sources:

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If you have any questions about this article or want to discuss your family finances, investment portfolio, or financial planning advice, please call on me anytime at my number [\(215\) 325-1595](tel:2153251595) or you can [click here to schedule a meeting](#).

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