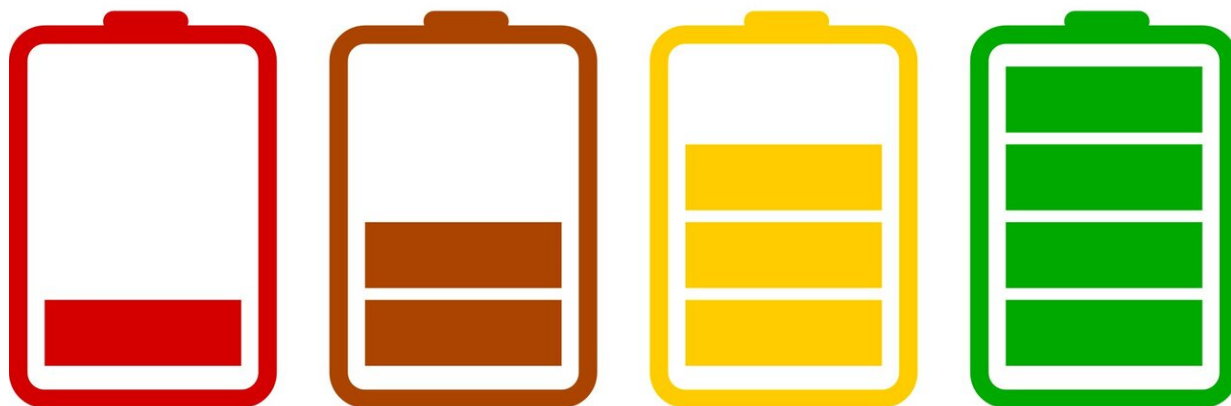


Cobalt supply can meet demand for electric vehicle and electronics batteries: study

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Greater use of electric vehicles might be good for the environment, but further growth hinges on continued availability of critical battery components such as cobalt. Cell phones and other electronics also depend on the element's availability. Supplies of the metal are adequate in the short term, but shortages could develop down the road if refining and recycling aren't ramped up or made more efficient, according to research published in ACS' *Environmental Science & Technology*.

Roughly 60% of mined cobalt is sourced from the Democratic Republic of Congo (DRC). The element is often recovered as a byproduct from mining copper and nickel, meaning that demand and pricing for those other metals affects the availability of cobalt. Half of the current supply of cobalt is incorporated into cathodes for [lithium-ion batteries](#), and many of those batteries are used in consumer electronics and electric vehicles. Demand for these vehicles and their batteries is growing swiftly: In 2018, the global electric car fleet numbered in excess of 5.1 million, up 2 million from the prior year, according to the International Energy Agency. Elsa Olivetti and coworkers wanted to find out if planned cobalt expansions could keep pace with this brisk growth.

To determine potential cobalt supply and demand through 2030, the researchers analyzed variables, including electric vehicle demand; cobalt mining, refining and recycling capacity; battery chemistry trends; socioeconomic and political trends; and the feasibility of substituting other materials for cobalt. These variables could be affected by [political instability](#) in DRC, [policy decisions](#) favoring [electric vehicles](#), disruptions in China (which refines around half of the cobalt supply), and fluctuations in copper and nickel prices. The researchers concluded that cobalt supply is adequate in the short-term. They estimate supply will reach 320-460 thousand metric tons by 2030, while demand will reach 235-430 thousand metric tons. The team recommends that the industry invest in additional efficient refining and recycling capacity, so it can continue to meet demand.

More information: "Perspectives on Cobalt Supply through 2030 in the Face of Changing Demand" *Environmental Science & Technology* (2020). pubs.acs.org/doi/abs/10.1021/acs.est.9b04975

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