COBALT SUPPLY INSIGHTS IN THE FACE OF INCREASED ELECTRIC VEHICLE DEMAND

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Understanding cobalt criticality and availability is necessary as lithium-ion battery demand, particularly for electric vehicles, is projected to increase exponentially throughout the next decade. With these increases in demand, supply concentration and mining limitations, particularly in the Democratic Republic of Congo, could have significant impact on cobalt-dependent firms, sectors, and emerging technologies. With increased EV demand, secondary supply from EV batteries reaching end of life may become necessary for cobalt supply to meet demand in the short-term. Increased recycling, cobalt refining capability, and possible substitution away from cobalt in high demand sectors form the basis of modeling scenarios; these scenarios are created to identify the implications of changes in the cobalt supply-demand balance to 2030. Based on these, cobalt faces a tight but not impossible short-term market, where recycling and additional cobalt sources should be seriously explored and will become increasingly important out to and past 2030. Demand for cobalt is estimated to range from 235kt to 420kt in 2030 and supply from scheduled and unscheduled production as well as secondary production is estimated to range from 323kt to 458kt. Future cobalt supply may become more diversified geographically and more may be mined as a byproduct of Ni over this time period.