Supply Chain of Raw Materials Used in the Manufacturing of Light-Duty Vehicle Li-ion Batteries

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Introduction
First attempt to include raw materials in the Benchmark Report
The raw materials analysis is intended to capture the flow of raw material from mine to refinery to battery component manufacturing facility.

Key Materials Used in LDV Batteries
Critical materials include lithium, graphite, cobalt, and manganese. These materials are finite resources, and their production is highly concentrated in a few economies.

As electric vehicle deployments increase, LIB production for vehicles is becoming an increasingly important source of demand. Lithium is used to produce cathode sheets as well as electrolyte components of LIB cells. The supply chain includes mining (from brine/spodumene), and beneficiating and refining into lithium carbonate and hydroxide.

Production
Cobalt is used to produce cathode sheet for LIB cells.

Demand
Estimated demand for cobalt – all uses:

Trade
Importing Country

Conclusion
The analysis serves as a foundation for incorporating the raw materials link for other clean energy technologies into future benchmark reports. Disaggregating data to track supply chain of raw materials used by a specific technology remains a challenge.