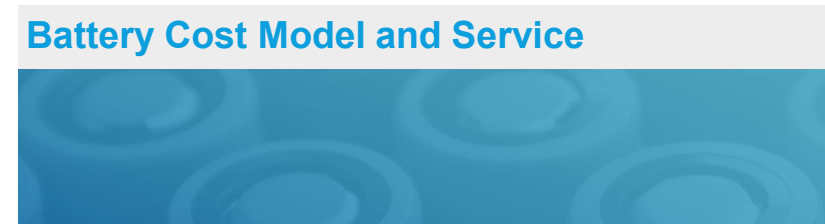
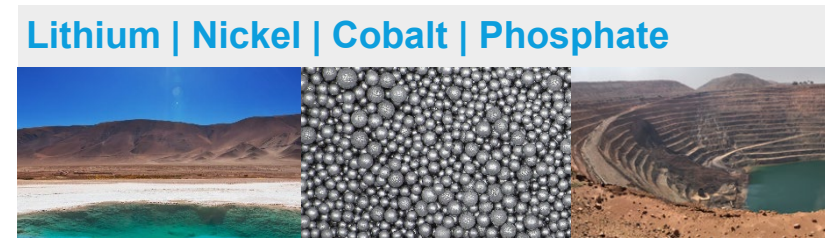
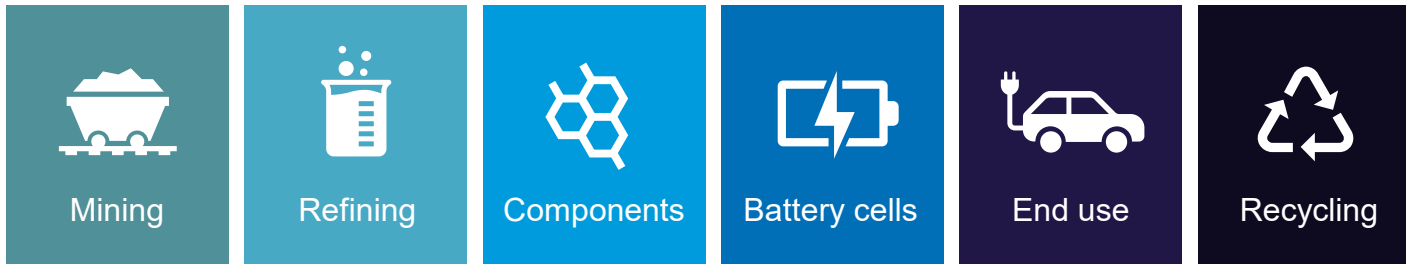




# CRU Battery Value Chain Services

NAATBatt 2024

# CRU provides market intelligence, analysis & strategy consulting covering the full battery value chain



# CRU analysis and strategic advisory services span from the raw materials required ...

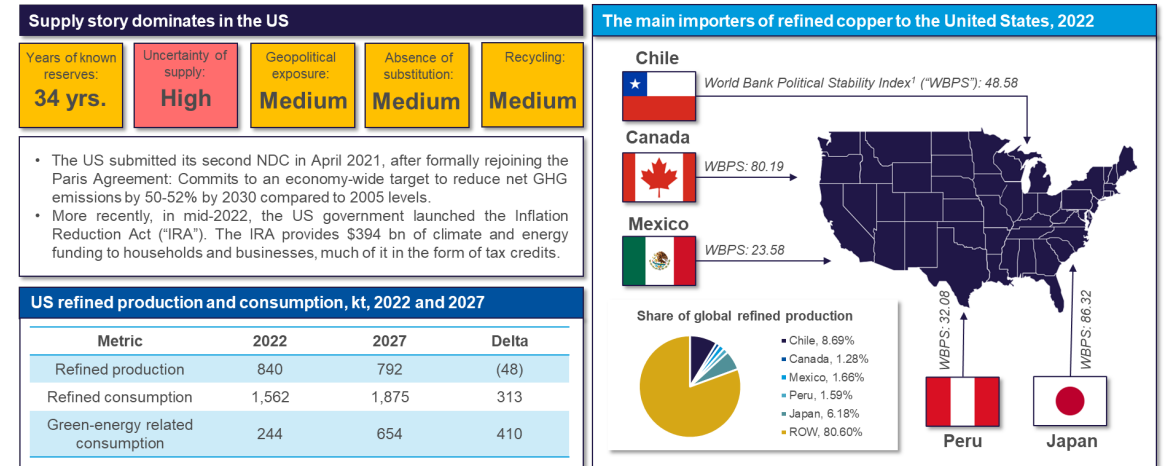
CRU analysts and strategy consultants provide expert insight into the battery value chain, beginning with unparalleled knowledge of the raw materials critical for the energy transition

We are able to leverage deep expertise and long experience from across the commodity sector, including steel, nickel, copper, graphite and phosphates

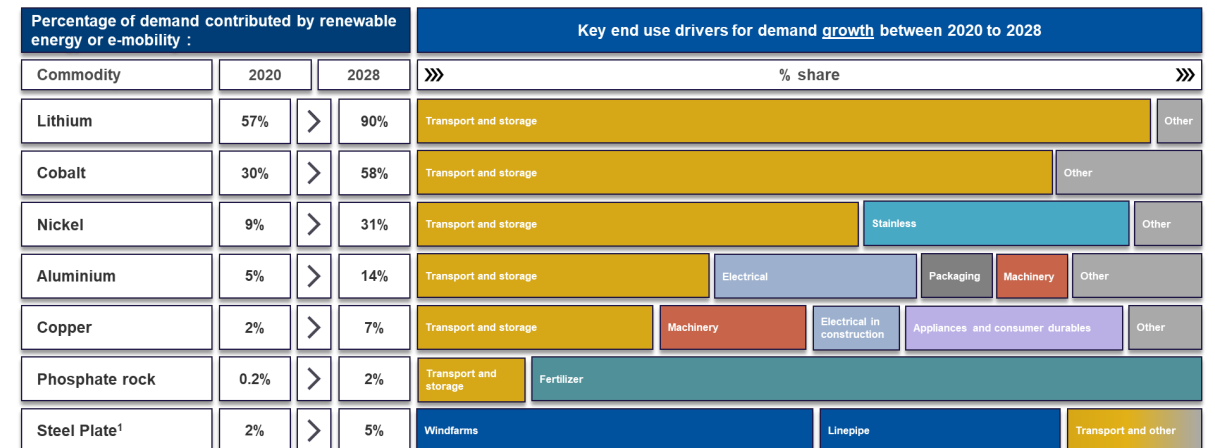
Our global presence gives us access to on-the-ground intelligence in key regions:

- China (Shanghai and Beijing)
- South America
- Australia
- Singapore
- US
- Europe

## CASE STUDY: The United States: Copper supply is the key risk to the energy transition, investments in secondary supply starting



While decarbonization represents the dominant driver for growth across the medium term (RHS), the extent to which this impacts the overall share of demand attributable to decarbonization varies (LHS)



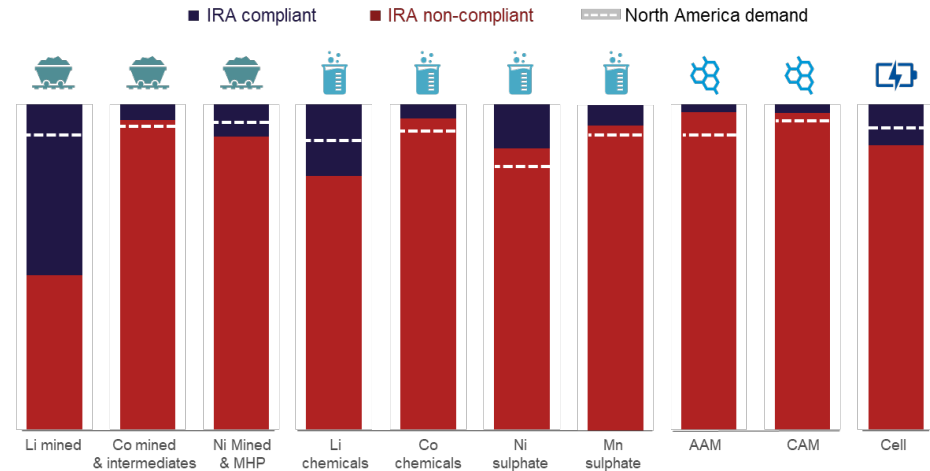
# ...to the entire battery value chain

CRU Battery Value Chain Service gives you a unique and holistic view of the entire industry:

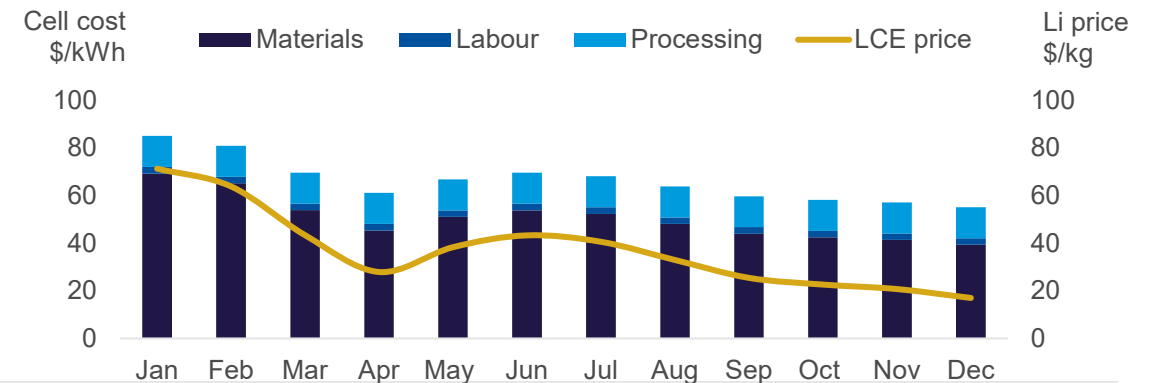
- **Supply, demand, price, and technology outlooks** with a long track record and solid understanding of the battery and raw material markets
- **Design your products, manage your costs, and target your investments** with strategic insights backed by world-class data and methodology
- **Supply chain mapping** from raw materials to electric vehicle models

## Automakers will struggle to qualify for IRA tax credits because of insufficient compliant supply

Battery supply chain production in 2025, split by IRA 30D tax credit eligibility, %



## China has commodified LFP: lithium price plummet driving huge reductions in Chinese LFP cell costs



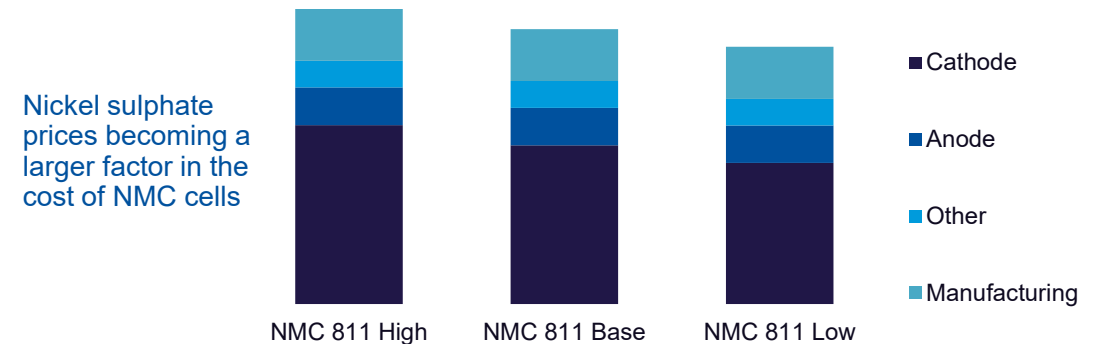
# CRU's Battery Cost Model

Our bottom-up Battery Cost Model and Service helps you to compare and forecast how battery costs vary between technologies, companies, locations and raw material prices.

- **Technology forecasts:** analysis of the cost structure of different technologies and materials, including next-generation cells
- **Customisable:** model over 100 different parameters: chemistries, cell formats, component attributes, production methods, plant sizes, and locations. Choose from pre-filled values or override with your inputs
- **Bill of materials:** compare how raw material price scenarios impact cell costs
- **Real data:** use real manufacturer's costs, not just theoretical calculations



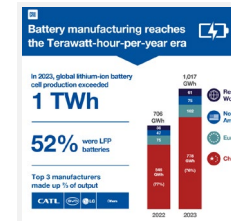
Cost variation for NMC 811 pouch cells in USA based on nickel sulphate price scenarios, \$/kWh



# Read our recent insights



**US automakers will struggle to qualify for EV tax credits**



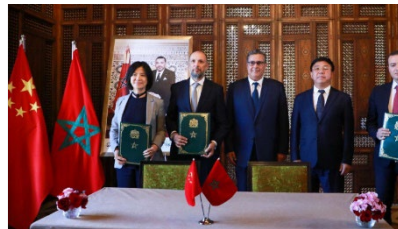
**Battery manufacturing reaches the 1 TWh/y milestone**



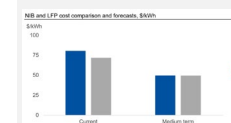
**LMFP battery material will revolutionise energy density and affordability for electric vehicles**



**South Korea's role in the battery supply chain**



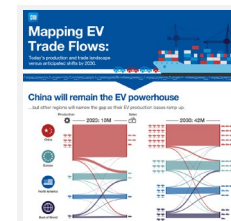
**Chinese companies look to Morocco for access to N America and Europe's battery market**



**Sodium-ion batteries will take time to be truly cost-competitive**



**Overproduction in China's battery cell industry will lead to global consolidation**



**Mapping EV trade flows**



## Contact us

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