

# MINERALS ARE CRITICAL TO A RENEWABLE FUTURE



## Alaska holds untapped resources

Renewable energy, next-gen battery and fuel cells, and ultra-strong, ultralight materials all depend on mineral resources.

Determining what the nation has and the feasibility of responsibly extracting it are starting points for securing the minerals we need now to build a renewable future.

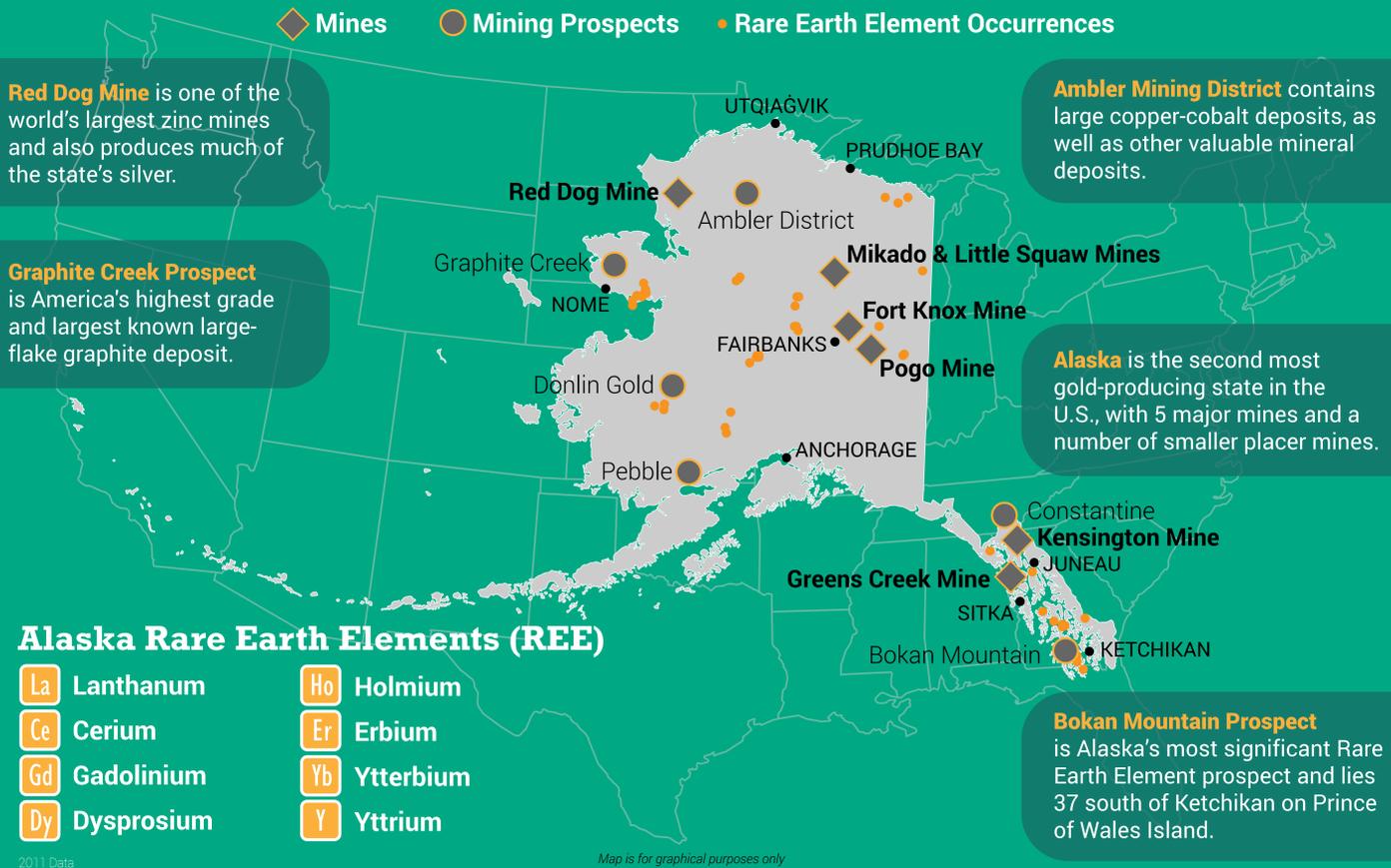
Alaska's vast mineral resources may help decrease national reliance on imports while protecting the Earth under some of the most stringent environmental laws in the world.



### Even green tech generates waste

Considering that fewer than 5% of lithium-ion batteries were recycled worldwide in 2019, for example, we can all do better at recycling the critical minerals already mined to reduce e-waste. Thinking "Recycling before re-mining" is a good place to start.

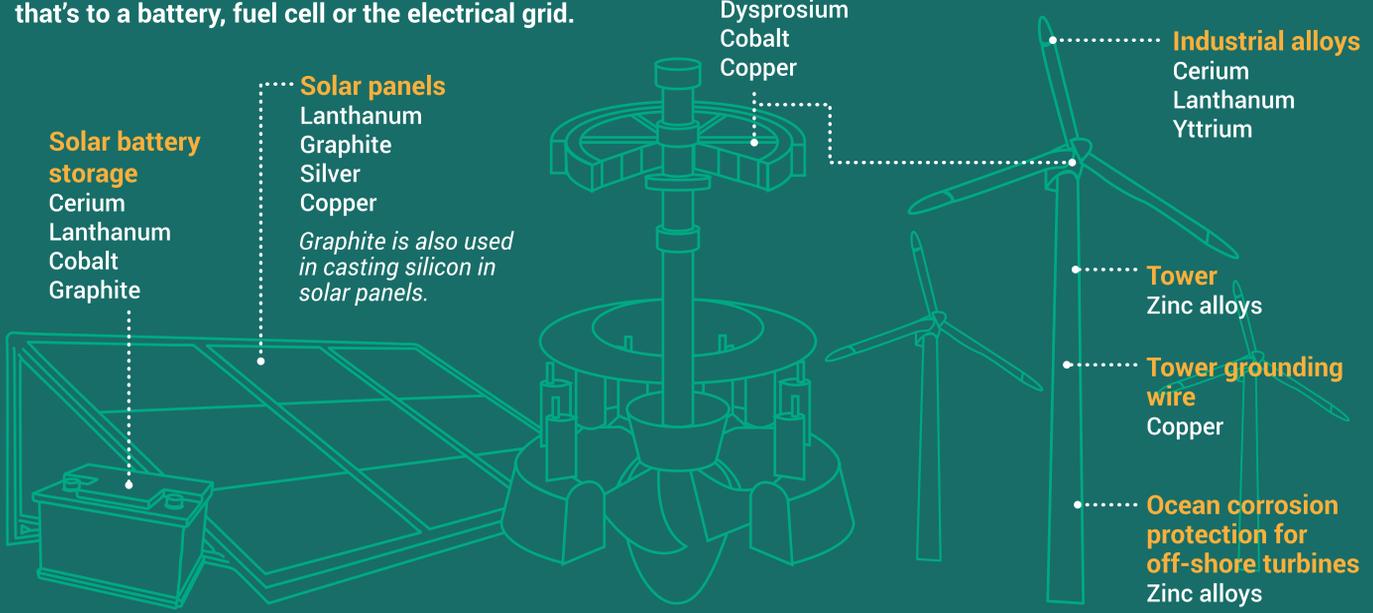
## Alaska Critical Mineral Locations



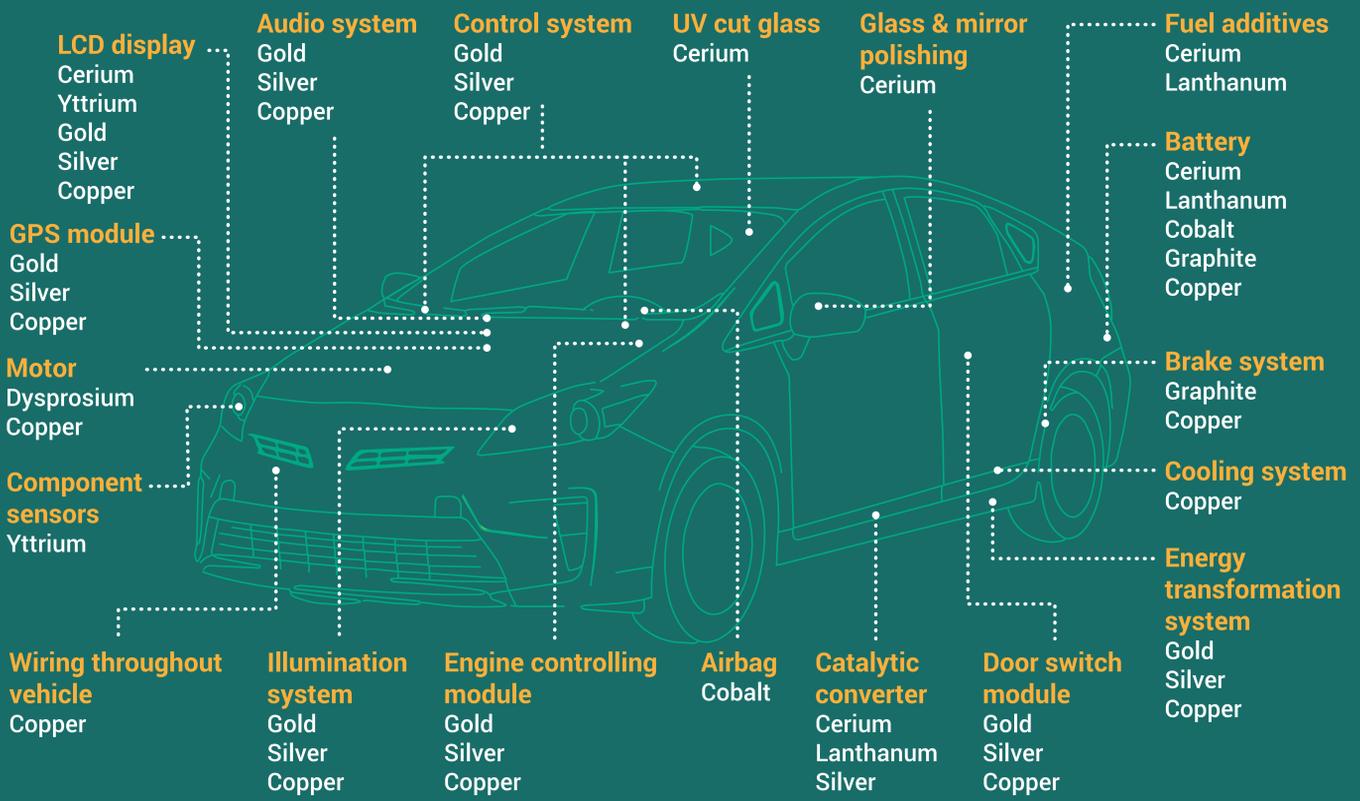
## Alaska Minerals in Renewable Energy

Copper in wires and cables also plays a central role carrying the electrical current from renewable energy systems to where it needs to go — whether that's to a battery, fuel cell or the electrical grid.

High capacity generators for wind, hydropower, tidal, biomass, and geothermal

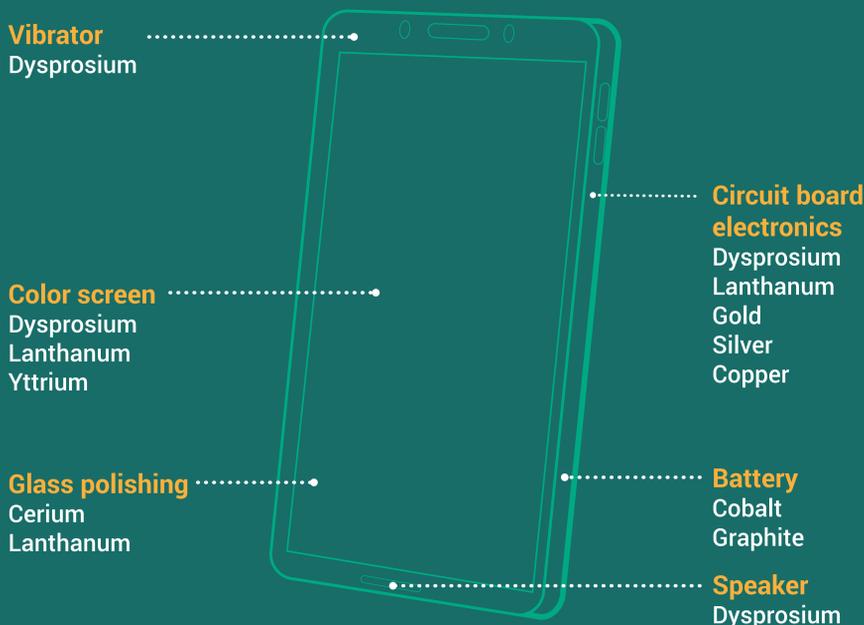


## Alaska Minerals in Electric Vehicles



\*Rechargeable Zinc-ion batteries, or RZIBs, are promising energy storage replacements for lithium-ion batteries based on their relatively high energy density and low cost, negligible environmental impact, and increased safety.

## Alaska Minerals in Mobile Devices



[www.blm.gov/alaska/minerals](http://www.blm.gov/alaska/minerals)

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