

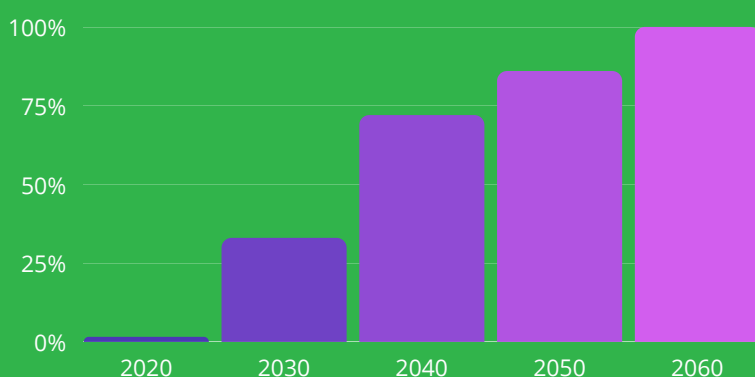


# Nickel Supply & Demand

Nickel is a critical metal in the cathode for lithium-ion batteries. As the demand for EVs grows, so does the demand for battery-grade nickel. An estimated 40-70 new nickel mines will be needed by 2040 to meet the demand for lithium-ion batteries.

## PASSENGER EV SALES

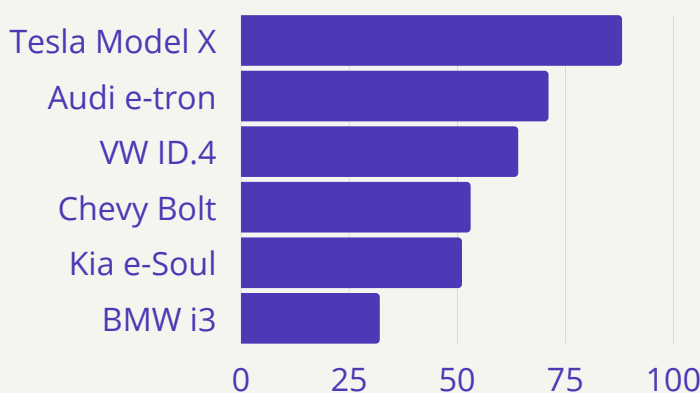
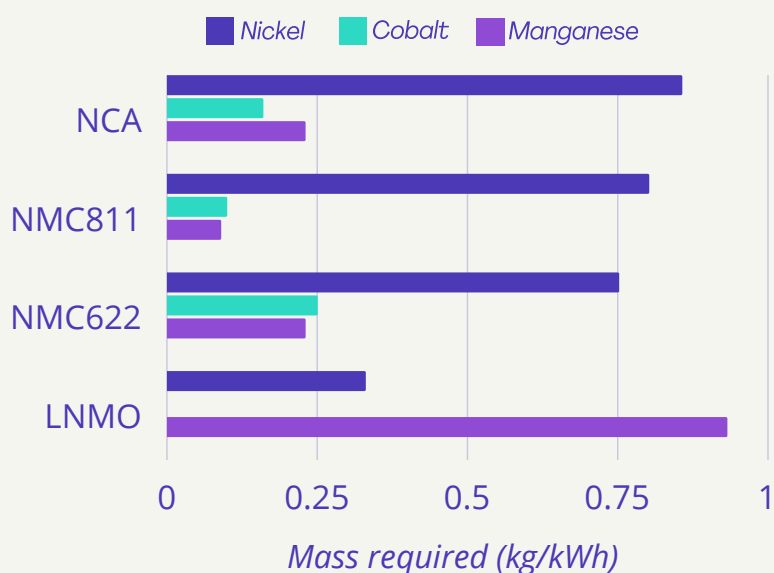
To support the transition to renewable energy, Canada has set a target of **100% of new ZEVs** by 2035. The US is targeting 50% by 2030.



Source: Bloomberg, extrapolated to 100% in 2060.

## BATTERY TYPES AND NICKEL USAGE

EVs rely heavily on minerals, especially for their batteries. There are several types of batteries used in EVs. If you want better energy density and longer range for your EV, **you need more nickel**. EVs with the best range have a high percentage of nickel in the cathode. LFP batteries are nickel-free but have a much shorter range.



Estimated nickel content of some North American EVs (kg)

Source: Trytten Consulting

## NICKEL REQUIRED

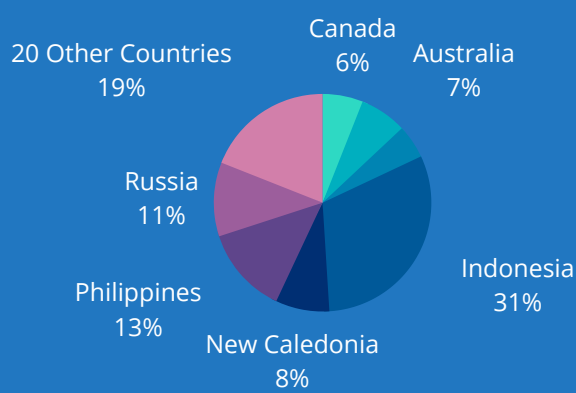
Nickel production in North America today is **130,000** tonnes of nickel per year. It is estimated that in North America alone, we will need over **300,000** tonnes of **fresh** nickel per year between 2040 -2060.

# 323,000 t/y

Source: Trytten Consulting

## NICKEL PRODUCTION

North America produces about 7% of the world's nickel supply.

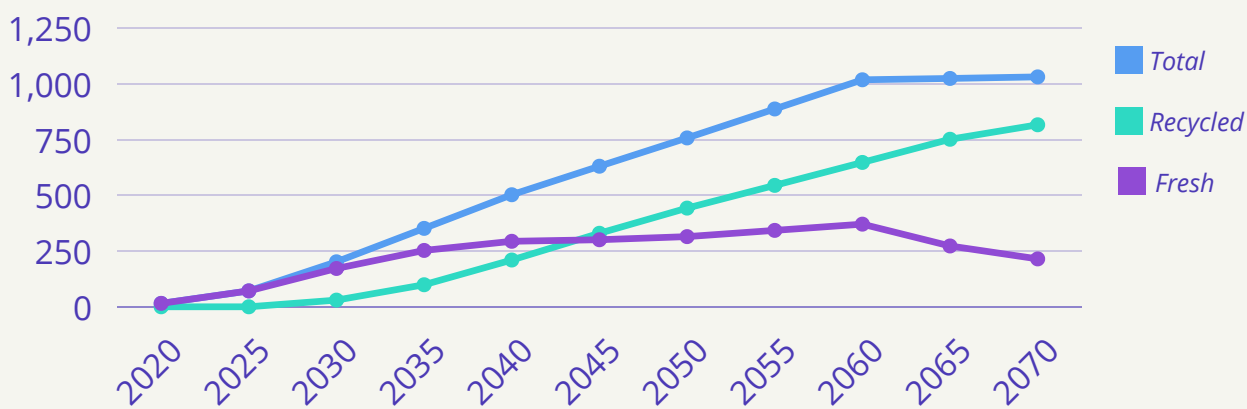


Global nickel mining production (metric tons)

Source: USGS

## NICKEL DEMAND

To achieve netzero, the IEA forecasts the demand for nickel for clean technology will increase **19x by 2040**. In North America, the demand for nickel in passenger EVs alone will outpace domestic supply by 2030 without new mines and refineries.



Expected nickel consumption, fresh & recycled (kt/y)

Source: IEA, Trytten Consulting



Want to learn about Giga Metals' plan to develop a sustainable supply of nickel for EV batteries? **Visit us at [gigametals.com](https://gigametals.com).**

Get in touch: [info@gigametals.com](mailto:info@gigametals.com)