



L'ALTRA STRADA PER LA TRANSIZIONE

XV CONFERENZA NAZIONALE SULL'EFFICIENZA ENERGETICA

ROMA | 28-29 NOVEMBRE 2023

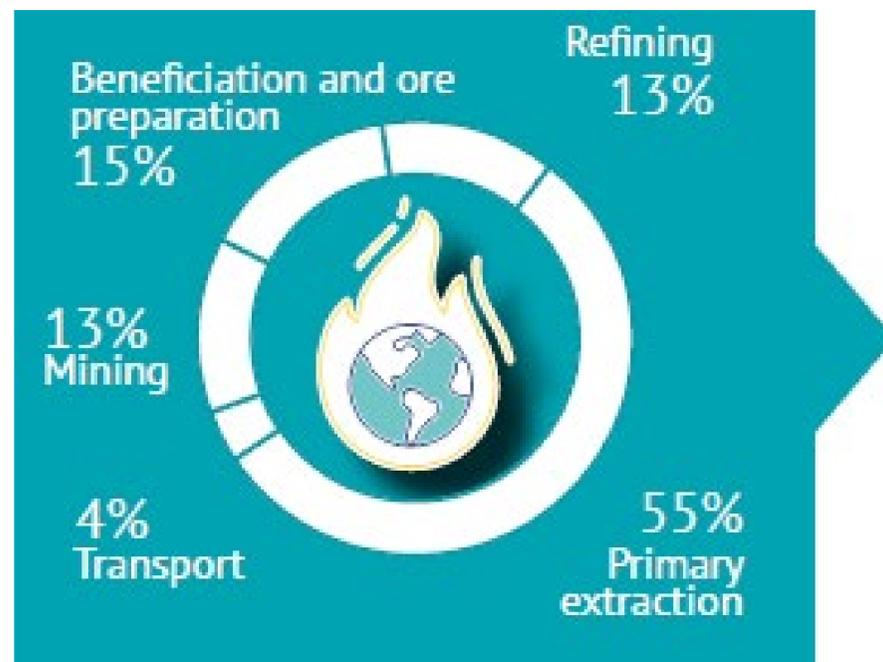
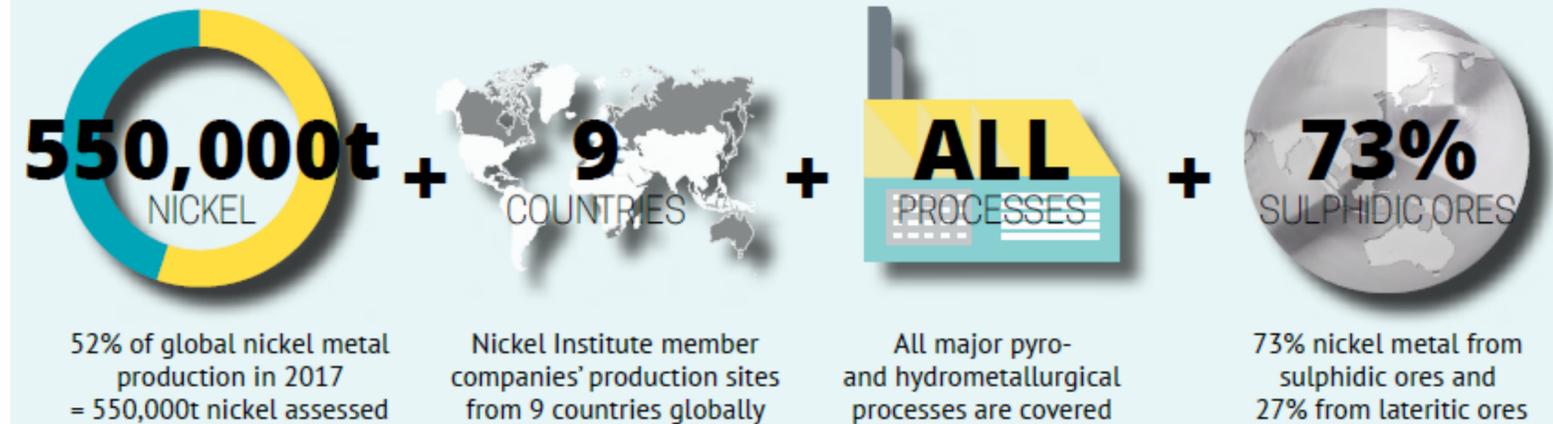
L'intensità energetica è una dipendenza geologica.

Giovanni Brussato

Nickel metal LIFE CYCLE DATA

Member companies of the Nickel Institute updated their life cycle data for nickel metal in 2018 and 2019. These producers are committed to provide stakeholders with the most recent life cycle data showing important parameters such as global warming potential, primary energy demand, or water demand for the production of different nickel products.

WHAT IS COVERED BY THE LIFE CYCLE ANALYSIS ?

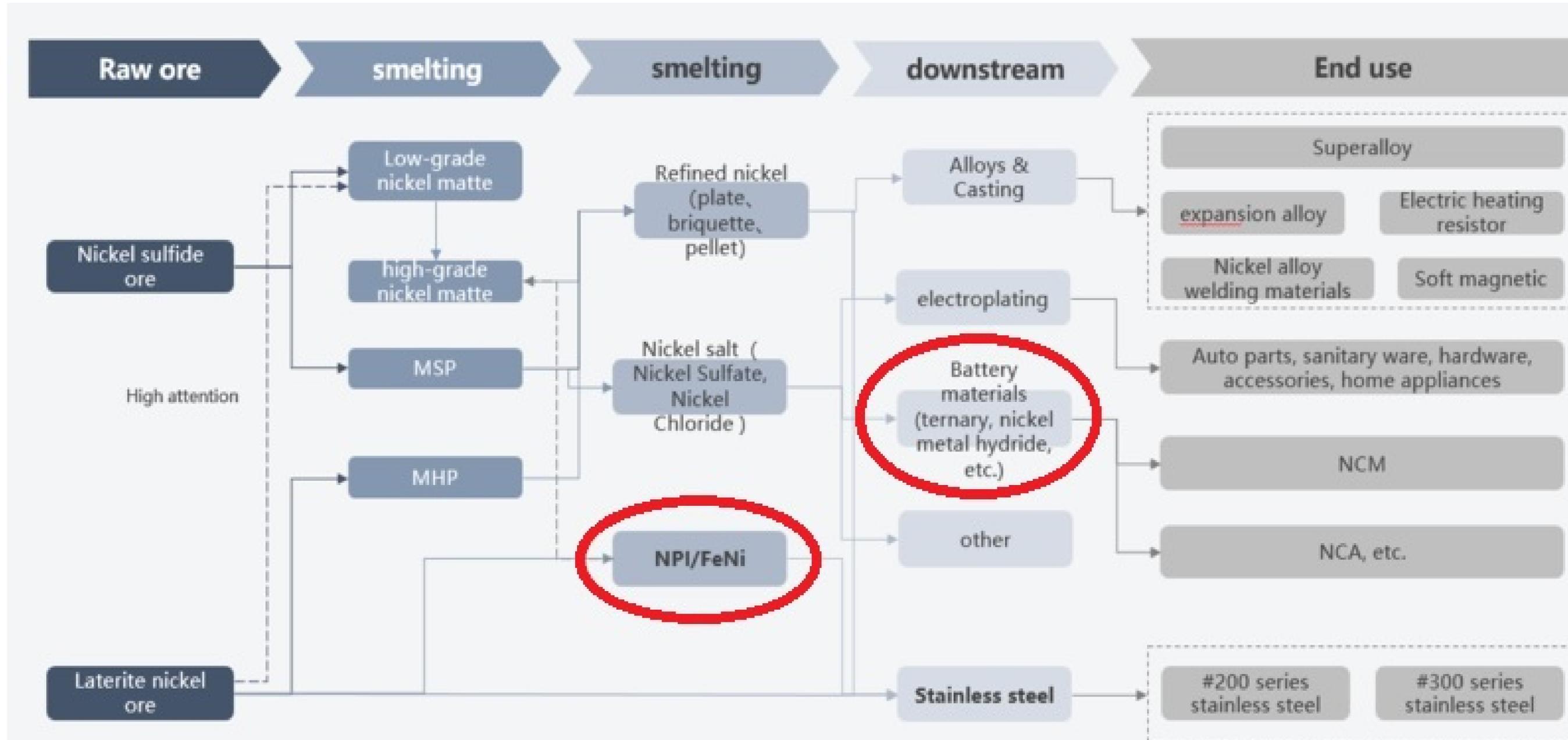


GLOBAL WARMING POTENTIAL

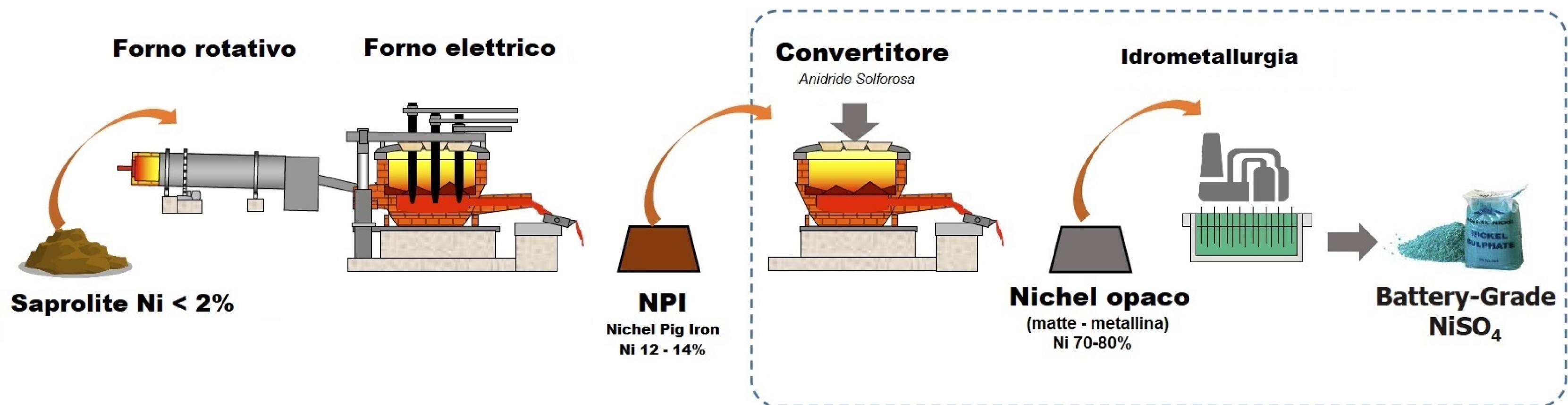
13 kg CO₂ / kg Ni

13 kg CO₂ / kg nickel with
primary extraction as
process stage with highest
carbon footprint

L'intensità energetica è una dipendenza geologica

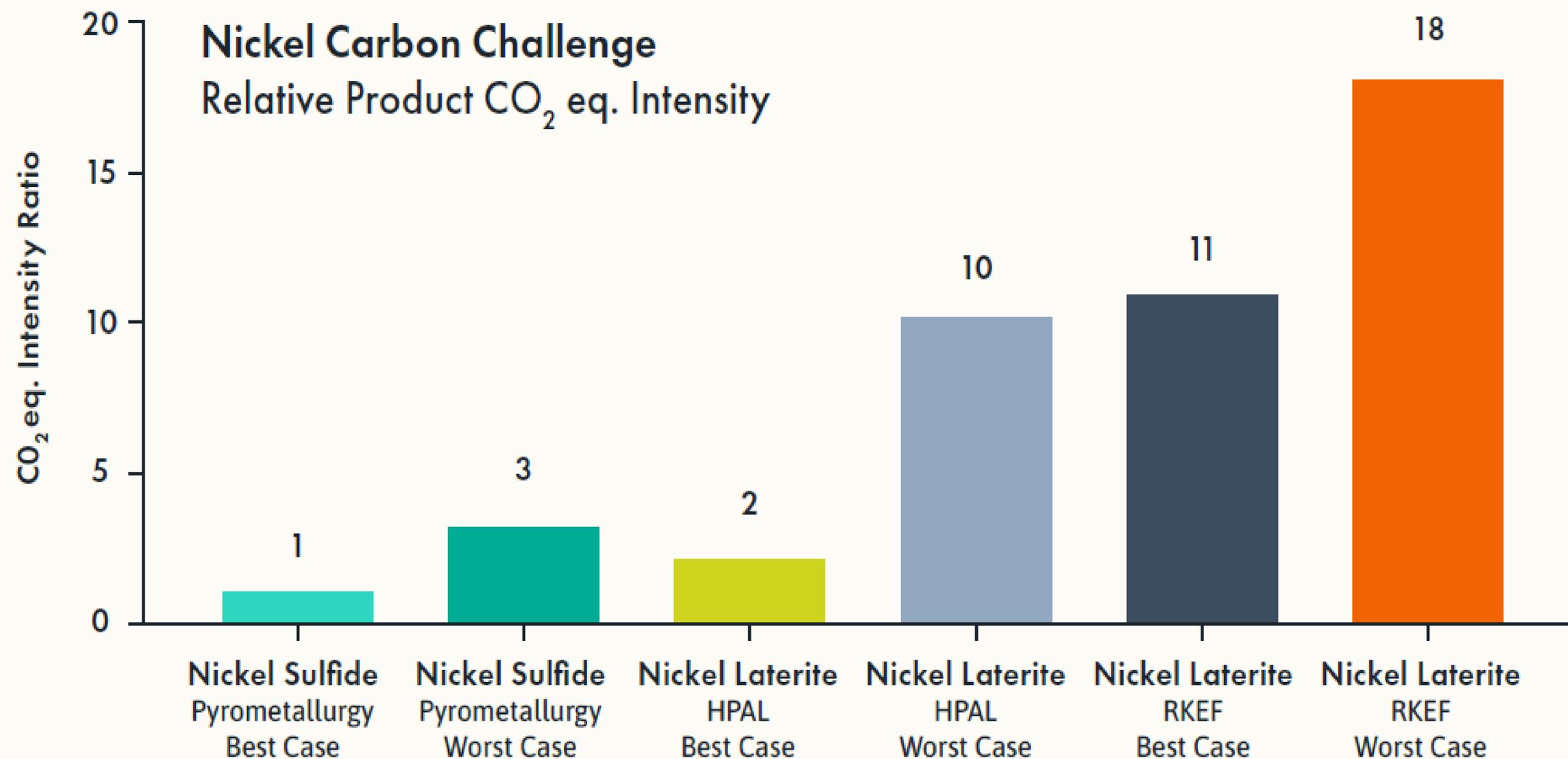


L'intensità energetica è una dipendenza geologica



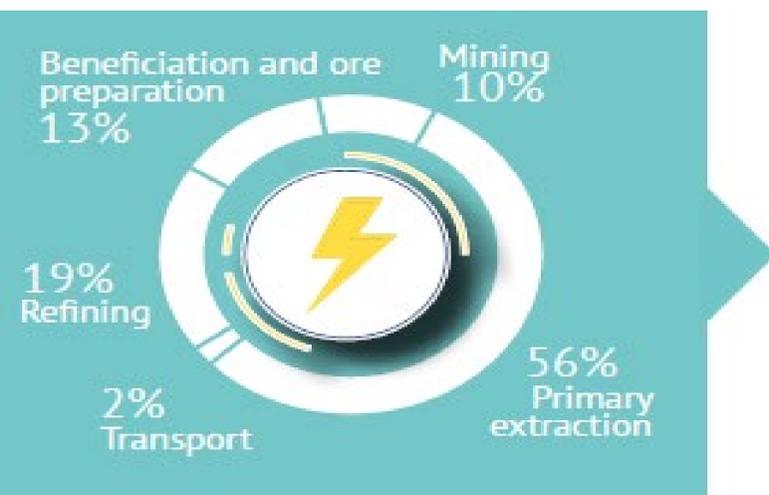
Produzione di nichel di classe 1 da lateriti (**Tsingshan**)

L'intensità energetica è una dipendenza geologica



L'impronta carbonica per chilogrammo di nichel contenuto nel solfato di nichel esaidrato è presentato come un rapporto dell'impronta carbonica minore (pirometallurgia del solfuro di nichel con una fonte di energia idroelettrica).

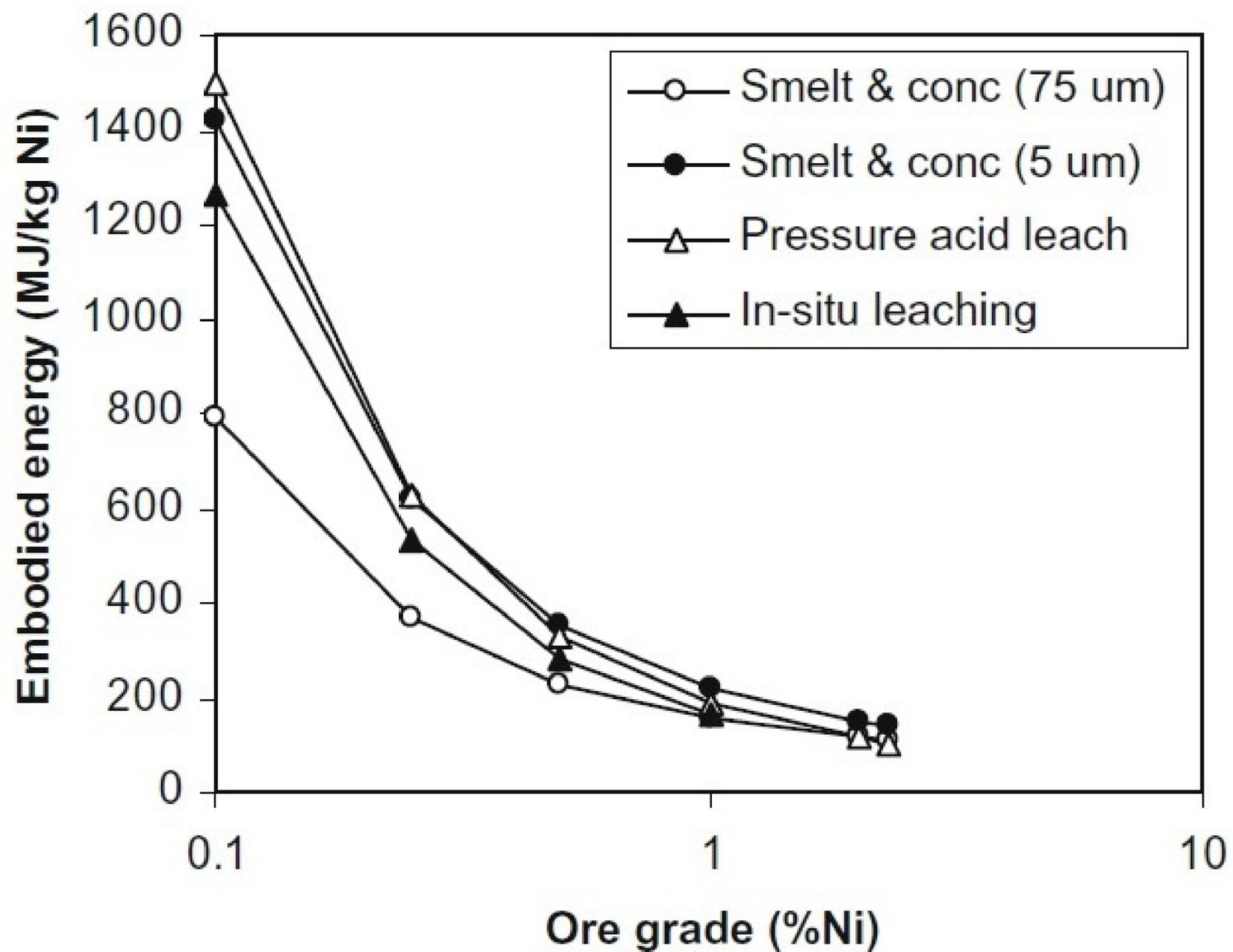
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PRIMARY ENERGY DEMAND

236 Mj / kg Ni

Fonte: Nickel Institute

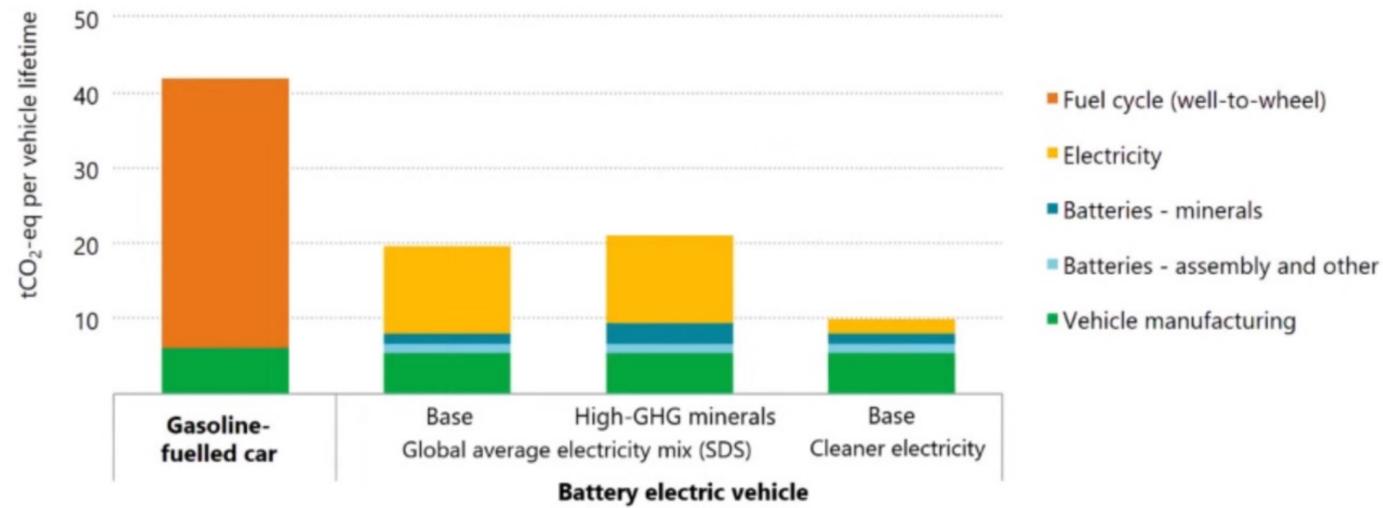


L'intensità energetica è una dipendenza geologica

The Role of Critical Minerals in Clean Energy Transitions

Critical minerals do not undermine the case for clean energy

Comparative life-cycle GHG emissions of a mid-size battery electric versus a conventional car



Tim Gould

Head of Division for Energy Supply Outlooks and Investment, IEA

Even though mineral extraction is relatively emissions-intensive, on average the full lifecycle emissions of an EV bought today are around half those of a conventional car

