

## Expected ROI of nickel manganese cobalt battery project in Hungary 2030

### APPLICATION SCENARIOS



## Overview

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Will lithium & cobalt produce more manganese in 2040?

The quantities of material demand for manganese used in LIBs are low in contrast to the high global production volume. However, the calculation for lithium and cobalt predicts a higher material demand in 2040 than the production volume of these battery metals in 2021. In the case of nickel, it depends on the technology and growth scenario.

What is McKinsey's 2030 battery raw materials supply outlook?

McKinsey's 2030 battery raw materials supply outlook (Source: McKinsey)  
McKinsey's report pinpoints geographical concentrations of raw materials: Indonesia is a key player in nickel, the DRC in cobalt and Argentina, Bolivia and Chile in lithium.

What is the future demand for lithium & cobalt in 2040?

Depending on the growth and technology scenario, the future demand for lithium and cobalt exceeds today's production by up to 8 times in 2040. Nickel exceeds today's production in one scenario. For manganese, future demand in 2040 remains far below today's production.

What is the future demand for lithium & cobalt in EV Lib cathodes?

The results show that in 2040 the future material demand for lithium, cobalt, and nickel for use in EV LIB cathodes exceed today's production volume. Future demand for lithium and cobalt in SSP1 and SSP2 exceeds today's production by up to 8 times. Nickel exceeds today's production only in the critical material scenario in SSP1.

Will cobalt demand rise in 2030?

Despite the decreasing role of cobalt in battery technology, McKinsey forecasts a 7.5% annual rise in cobalt demand until 2030. The volatility in cobalt prices and ethical sourcing concerns are driving the industry towards

greater transparency and sustainability in cobalt procurement.

What is the future demand for manganese in 2040?

For manganese, future demand in 2040 remains far below today's production. The recycling potential for lithium and nickel is more than half the raw material demand for Lithium-Ion Batteries in 2040. For cobalt, the recycling potential even exceeds the raw material demand in 2040.

## Expected ROI of nickel manganese cobalt battery project in Hungary



### Supply-demand imbalance looms for critical battery ...

While the share of cobalt in battery chemistry mix is expected to decrease, the absolute demand for cobalt for all applications could rise by 7.5% a year from 2023 and 2030, McKinsey estimates

### Samsung SDI expands Battery Factory in Hungary , SMM

It is speculated that, NMC (nickel manganese cobalt) material will continue to exist together with NCA. "using new cathode materials with more than 80 per cent nickel ...



### Nickel Demand to Triple by 2030: Can the Market Keep Up?

But most of these vehicles use LFP batteries, limiting the impact on nickel demand. Additionally, battery producers are leaning toward mid-nickel NCM chemistries. ...

### The Hungarian Battery Industry Strategy 2030

Hungarian Battery Strategy With a worldwide

rank Nr. 12, Hungary has a good starting point  
Lithium-ion battery supply chain rankings in  
2020 and expected in 2025 Source:  
BloombergNEF



## What Impact are EVs and Renewables Having on Raw Materials?

With only modest increases in HPMSM production projected and a fraction of demand expected to be met by 2030, this highlights significant supply challenges ahead.



## Huayou Cobalt invests in high-nickel power battery ternary ...

In June 2023, Huayou Cobalt invested in a ternary cathode project for high-nickel power batteries in Hungary, with a planned total investment of 1.278 billion euros.



## Hungary Automotive Lithium-ion Battery Cell Market (2024-2030)

Historical Data and Forecast of Hungary Automotive Lithium-ion Battery Cell Market Revenues & Volume By Lithium Nickel Manganese Cobalt Oxide (NMC) for the Period 2020- 2030

## Energy Transition Expected to Fuel Surging Demand ...

As the global push toward clean energy gains momentum, demand for certain minerals and metals is projected to increase significantly by 2040. The infographic above illustrates how lithium, graphite, cobalt, nickel, ...



## Supply-demand imbalance looms for critical battery ...

While the share of cobalt in battery chemistry mix is expected to decrease, the absolute demand for cobalt for all applications could rise by 7.5% a year from 2023 and 2030, McKinsey estimates, adding that shortages of ...



## Battery 2030: Resilient, sustainable, and circular

Battery 2030: Resilient, sustainable, and circular  
 Battery demand is growing--and so is the need for better solutions along the value chain.



## Hungary Minerals For Lithium Batteries Market (2024-2030)

Historical Data and Forecast of Hungary Minerals For Lithium Batteries Market Revenues & Volume By Lithium Nickel Manganese Cobalt Oxide Battery for the Period 2020- 2030



## From waste to value: Why battery recycling is Europe's chance for

End-of-Life batteries and scrap from battery gigafactories in Europe have potential to provide 14% of all lithium, 16% of nickel, 17% of manganese, and a quarter of ...



## Global battery demand to quadruple by 2030 -- report

The report highlights that nickel manganese cobalt (NMC) and lithium-iron phosphate (LFP) will be the dominant cathode chemistries. LFP and NMC chemistries together currently make up more than 90%

## Comparing NMC and LFP Lithium-Ion Batteries for C&I

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In a previous article, we discussed how a lithium-ion battery works and provided an introduction to NMC and LFP batteries. Let's dive into the details further. NMC Battery ...





## What Impact are EVs and Renewables Having on Raw Materials?

The Democratic Republic of Congo (DRC) produces 64% of the global cobalt output, largely as a by-product from copper and nickel mining. Despite the decreasing role of ...

### France for Batteries

This initiative aims to support the industrialization of green technology equipment, complementing the existing EUR54 billion "France 2030" subsidy program. This tax credit will be valid for all ...



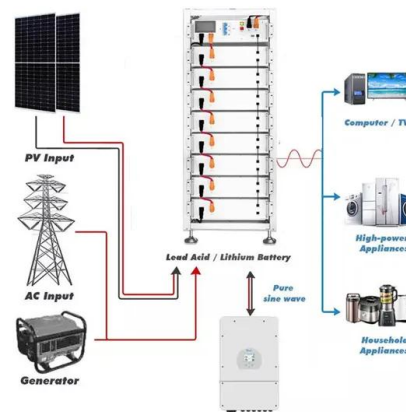
**200kWh  
Battery Cluster**

## Will the Global Cobalt Raw Material Production of Approximately ...

The long-term bullish logic for cobalt prices has weakened, but the boom period of the new energy industry, 2025-2030, may trigger a temporary supply-demand mismatch. ...

## U.S. Lithium-ion Battery Market Size & Outlook, 2023-2030

U.S. lithium-ion battery market highlights The U.S. lithium-ion battery market generated a revenue of USD 87.8 million in 2023 and is expected to reach USD 526.9 million by 2030. The U.S. ...



## Navigating battery choices: A comparative study of lithium ...

This research offers a comparative study on Lithium Iron Phosphate (LFP) and Nickel Manganese Cobalt (NMC) battery technologies through an extensive methodological approach that focuses ...

## Cobalt long-term forecast

Our cobalt long-term forecasts are part of a set of products including long-term forecasts for lithium, graphite, nickel, copper, manganese sulfate and recycled materials



## Lithium, nickel, cobalt, manganese EV batteries lead over LFP

Nickel and cobalt also have more recycling value than iron and phosphate, he said. Some companies are combining elements by adding manganese to lithium iron ...



## McKinsey: Is the 2030 Battery Supply Sustainable?

By 2030, this figure is projected to increase to 95%. Innovations such as direct lithium extraction are progressing, yet demand continues to outpace supply, underscoring the ...



## Nickel Manganese Cobalt Nmc Battery Market

The Global Nickel Manganese Cobalt (NMC) Battery Market is accounted for \$25.8 billion in 2023 and is expected to reach \$81.7 billion by 2030 growing at a CAGR of 17.9%.

## [Battery recycling report](#)

The estimated recovery of 105 kt of lithium (LCE), nickel, cobalt and manganese from recycling in Europe by 2030 could enable the production of 1.3 to 2.4 million battery electric cars (or 14% to ...



## North America's Potential for an Environmentally ...

The Detroit Big Three General Motors (GMs), Ford, and Stellantis predict that electric vehicle (EV) sales will comprise 40-50% of the annual vehicle sales by 2030. Among the key components of LIBs, the ...



## Lithium, nickel, cobalt, manganese EV batteries lead ...

...

Nickel and cobalt also have more recycling value than iron and phosphate, he said. Some companies are combining elements by adding manganese to lithium iron phosphate chemistries.



## LFP vs. NMC Batteries: Market Growth and Performance ...

Batteries are the heart of modern electric vehicles (EVs) and energy storage solutions. Among the many battery chemistries available today, Lithium Iron Phosphate (LFP) and Nickel ...



## Will the EU have enough minerals to drive their electric dreams ...

The results have shown that there will be a crisis in the graphite supply by the end of the decade and a considerable danger to the supply of nickel and cobalt due to the ...



## National Battery Industry Strategy 2030

Studies carried out by MOL show that Hungary may have lithium-rich geothermal deposits, thus, in the future, it may be able to meet at least domestic demand and play a role in the production ...



## Lithium Battery Costs: Key Drivers Behind Pricing Trends

Lithium battery costs impact many industries. This in-depth pricing analysis explores key factors, price trends, and the future outlook.



## Toward a resilient European battery ecosystem by 2030: Strategic

However, the rapid increase in battery demand, combined with critical material constraints--such as lithium, cobalt, and nickel--places Europe in a vulnerable position within the global supply ...



## McKinsey: Is the 2030 Battery Supply Sustainable?

McKinsey reveals 2030 battery raw material outlook on lithium, nickel and cobalt as demand for these materials may soon outstrip base-case supply The electrification of ...



## McKinsey: Supply shortage looms for critical battery ...

Based on the current market, battery manufacturers can expect challenges securing the supply of several essential battery raw materials such as lithium, high-grade nickel, cobalt and manganese.

## A forecast on future raw material demand and recycling potential ...

This study focuses on the future demand for electric vehicle battery cathode raw materials lithium, cobalt, nickel, and manganese by considering different technology and ...



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