



# Nickel manganese cobalt battery project financing options in Poland 2030

What is a zloty grant for a battery recycling plant?

Ascend Elements describes the 1.22 billion Polish zloty (around 290 million euros) grant now being offered by the Polish government to establish a battery recycling plant as "one of the largest grants ever awarded by the Republic of Poland".

What challenges does the cobalt supply chain face?

The cobalt supply chain faces challenges related to price volatility and the ethical sourcing of materials, prompting a push for greater transparency and sustainability. Although manganese ore is abundant, its use in batteries requires refining into high-purity manganese sulphate monohydrate (HPMSM).

Will demand for cobalt increase by 75% a year?

Despite its diminishing role in battery chemistry, McKinsey says absolute demand for cobalt could increase by 7.5% annually until 2030. The cobalt supply chain faces challenges related to price volatility and the ethical sourcing of materials, prompting a push for greater transparency and sustainability.

What does Poland's PCAM grant mean for the battery industry?

The cash grant, among the largest ever offered by the Polish government, will support the construction of a pCAM facility to accelerate Europe's battery supply chain.

How will the Polish PCAM investment affect European cathode active material producers?

The Polish pCAM investment creates significant pressure on incumbent European cathode active material producers like BASF and Umicore. These established players may face price competition on high-nickel product lines and increased incentives to either license recycling technology or form joint ventures with recycling specialists.

What type of nickel is used in a battery?

Today, about 65% of class 1 nickel--a high-purity type essential for batteries--is used in stainless steel production. By 2030, the competition between the battery and steel sectors could lead to shortages.

**Executive Summary** The rate at which the global automotive market is adopting electric vehicles (EVs) is accelerating at a rapid pace, creating significant opportunities for investment in battery ...

Ascend Elements plans to commercialize its innovative technology for the manufacture of sustainable nickel, manganese, and cobalt (NMC) pCAM made from recycled ...

The proposed plant will be built and operated solely by Ascend Elements and will use its proprietary hydro-to-cathode technology to manufacture sustainable nickel, ...



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In the field of lithium-ion batteries, a key distinction is made between lithium nickel manganese cobalt oxide (NMC) and lithium iron phosphate (LFP). NMC has been for many years the ...

SVOLT's cobalt-free NMx cells feature 75% nickel and 25% manganese cathode materials with energy density reaching 240-245 Wh/kg. The company aims to expand from 12 GWh capacity ...

Notably, multiple initiatives focus on lithium (22), nickel (12), cobalt (10), manganese (7), and graphite (11), strengthening the EU battery value chain. With these efforts, ...

Lithium iron phosphate (LFP) will be the dominant battery chemistry over nickel manganese cobalt (NMC) by 2028, in a global market of demand exceeding 3,000GWh by 2030.

Chvaletice Manganese Project (Czechia): an integrated manganese extraction and processing project by Euro Manganese Inc targeting battery-grade manganese NorthCYCLE (Sweden): a recycling project by ...

The Strategic Projects cover 14 of the 17 strategic raw materials listed in the Critical Raw Materials Act. This includes several projects covering lithium (22 projects), nickel (12 projects), ...

Following these strategies, plans, and regulations, the widespread production, promotion, and adoption of battery-electric cars (BEVs) got underway with the intention of ...

In this study, we examined how transitioning to higher-nickel, lower-cobalt, and high-performance automotive lithium nickel manganese cobalt oxide (NMC) lithium-ion ...

Learn how Nickel Cobalt Manganese (NCM) cathodes improve lithium battery capacity, cycle life, and thermal safety--ideal for EVs, ESS, and portable electronics.

By the end of 2022, Lithium Nickel Manganese Cobalt Oxide (NMC ) stood as the dominant choice of battery chemistry, followed by Lithium Iron Phosphate (LFP) and Nickel Cobalt ...

Battery technology has evolved significantly in recent years. Thirty years ago, when the first lithium ion (Li-ion) cells were commercialized, they mainly included lithium cobalt oxide as cathode material. Numerous other ...

The GREET model (Argonne National Laboratory 2018c) currently uses a US-centric material and production supply chain for NMC111, so this was modified to account for the globally regional variability of production ...

Within the battery market itself, the choice of battery chemistries determines demand for materials, driven by



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the need to balance battery performance and cost. There are currently two broad families of battery ...

This process is intended to enable the production of nickel-manganese-cobalt pCAM from used batteries. According to the results of Ascend Element's internal life cycle ...

PDF | On Oct 1, 2024, Solomon Evro and others published Navigating Battery Choices: A Comparative Study of Lithium Iron Phosphate and Nickel Manganese Cobalt Battery ...

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%.

In contrast, the new pCAM plant would be entirely owned by Ascend Elements. Using the Hydro-to-Cathode technology The company has announced that it will use its ...

The combined Daegu Gyeongbuk Institute of Science and Technology and Gachon University team is studying nickel-cobalt-manganese cathodes, potentially ushering in a 'new chapter in the development of high ...

Currently, the nickel-manganese-cobalt (NMC) and lithium-iron-phosphate (LFP) variants of lithium-ion (Li-ion) batteries lead the market for EV battery packs, with LFP batteries ...

Total metals demand from lithium-ion batteries will reach 13.5 million metric tons by 2030. BloombergNEF expects the nickel-manganese-cobalt oxide (NMC) 622 and NMC 811 ...

Here, Scope 3 Magazine takes a closer look at key materials including lithium, nickel, cobalt and manganese as McKinsey reveals the complexities of ensuring a sustainable ...

The five main raw materials used in the current lithium-ion batteries are lithium, cobalt, nickel, manganese and graphite. Other materials include copper, aluminum and iron. The movement ...

Uses environmentally unsustainable raw materials Nickel-manganese-cobalt (NMC) batteries are the most common form found in EVs today, ranging from the Nissan Leaf to Mercedes-Benz EQS. As the name ...

'Battery projects like this are central pillars of our investment strategy,' says Pawel Pudlowski from the Polish Investment and Trade Agency (PAIH). The deal strengthens ...



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