

The challenges of European battery raw materials producers – and how to address them

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- **Europe needs to have a sustainable battery supply chain** as part of its efforts to **mitigate climate change**.
- This value chain **requires planning security** for the necessary long-term investments. Planning security goes hand-in-hand with predictability. And this is closely linked to consistency in the regulatory framework.
- When it comes to making choices between Risk Management Options, **regulatory decisions should become more predictable**.
- **Societal benefits of the use of hazardous substances must be taken into account**. While the substitution principle may apply to all substances with a certain hazard profile, the **regulatory substitution pressure should be moderate when** analyses show that despite research into alternatives the use of **a hazardous substance remains indispensable**. In such a case the focus should be on ensuring the safe use of the hazardous substance.
- Production of raw materials such as nickel is energy intensive. There is a **risk** that producers in the **EU will lose** their global **competitiveness due to emissions trading costs** in Europe.
- European nickel producers need a consistent regulatory framework where coherence between different policy objectives is central and which is based on principles of sound science, risk-based approaches, full life-cycle thinking and impact assessments.

In 2017, the European Commission and EU member states established the European Battery Alliance with the aim of developing a complete European batteries value chain for electric vehicles, from mining to battery production to recycling. It is one of the Commission's most ambitious projects in recent years and brings together stakeholder groups acting within or around the batteries value chain.

Climate change needs to be addressed urgently. Given that **batteries are essential to mobility solutions** there is now the need to close the gap between EU industry and the market-leading battery producers outside Europe. This must be done in a timely, efficient and targeted manner.

From 2025 onwards, according to the European Commission, Europe could capture an annual battery market of up to €250 billion. This would require at least 10 to 20 large-scale battery cell production facilities. The question is where will the batteries value chain be located? **Will Europe be amongst the regions that will benefit from this market opportunity?**

The European Commission has published a strategic action plan, comprising a wide range of activities and concrete actions covering raw materials to batteries production and recycling. Industrial consortia and partnerships are up and running; many R&D projects have been kicked off with access to finance for actors within the batteries value chain. Significant investments have been made and production sites are already in operation or expected to start operating within the short to medium term.

Because the batteries value chain with its individual production stages is capital intensive, access to finance is crucial. Any actor within this value chain requires planning security for the long-term investments which must be made until 2030 and beyond. **Planning security goes hand-in-hand with predictability. And this is closely linked to consistency in the regulatory framework**. Industry and investors need to be certain that the regulatory framework allows raw materials to be produced and batteries to be assembled. There must be a thriving batteries and automotive industry as well as other industries to eventually re-use batteries as well as recycling industries for end of life recovery.

Raw materials going into batteries play a critical role. Maintaining and promoting European raw materials production is important from various perspectives.

- It ensures that Europe reduces dependencies on imports from outside Europe.
- Raw materials produced in Europe are produced under the highest environmental and social standards.
- Europe maintains highly qualified and well-paid jobs and the industry contributes significantly to Europe's GDP.
- The source of raw materials influences the overall emission performance of an electrical vehicle significantly. European metals production is known to be highly energy efficient and linked to a lower carbon footprint.

Nickel is one of the main components of current and future EV battery technology. The European nickel industry is however facing challenges, such as growing global competition especially from producers in China. For many years industry has known how to address these issues and how to remain competitive – by being innovative, energy and resource efficient and continually improving its processes. However, **production of raw materials such as nickel is energy intensive, even though companies are continuously improving their energy efficiency.** The **risk is that companies in the EU will lose their global competitiveness due to emissions trading costs in Europe, because of a lack of compensation of indirect CO₂ emission costs** through increased electricity prices.

Europe has a significant demand for battery raw materials which – ideally – are produced in Europe. These substances fall under the scope of European **chemicals management legislation**. We observe that **regulatory decisions are inconsistent in some areas** when it comes to making choices between Risk Management Options offered by different but overlapping pieces of legislation, such as e.g. EU workplace legislation and EU REACH. Currently, companies lack clarity on how they can expect their substances to be regulated. To mitigate this uncertainty, **guiding principles should be defined for when one risk management option would be preferable over another**. Furthermore, in making decisions on how best to manage chemical risks, the **societal benefits of the use of hazardous substances are not taken into consideration sufficiently**: While the substitution principle may apply to all substances with a certain hazard profile, the **regulatory substitution pressure should not be high, when** analyses of alternatives show that despite research into alternatives the use of a **hazardous substance remains indispensable**.

European industry wants to continue producing essential raw materials in Europe. This should also be in the interest of regulators and other actors in the value chain. European nickel producers urgently need the certainty of a consistent regulatory framework based on principles of sound science, risk-based approaches, full life-cycle thinking and impact assessments. This allows us to continue production in Europe and to contribute to a sustainable European batteries value chain. This value chain is critical to helping tackle climate change in a way that keeps jobs and know-how within the EU.

The Nickel Institute is the global association of leading primary nickel producers. Our mission is to promote and support the use of nickel in appropriate applications. The NI grows and supports markets for new and existing nickel applications including stainless steel, and promotes sound science, risk management, and socio-economic benefit as the basis for public policy and regulation. Through our science division NiPERA Inc., we also undertake leading-edge scientific research relevant to human health and the environment. The NI is the centre of excellence for information on nickel and nickel-containing materials and has offices in Asia, Europe and North America.