

# **An update on the graphite sector and what to expect in 2024 and beyond**

written by Matt Bohlsen | December 20, 2023

2023 has been a rough year for all the EV metals and graphite was no exception. EV battery anodes contain a combination of spherical graphite (sourced from natural flake graphite) and synthetic graphite. Today we take a look at the key trends of 2023 and what we can expect in 2024 and beyond.

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## **Can the Western graphite and anode industry rise to meet China's challenge?**

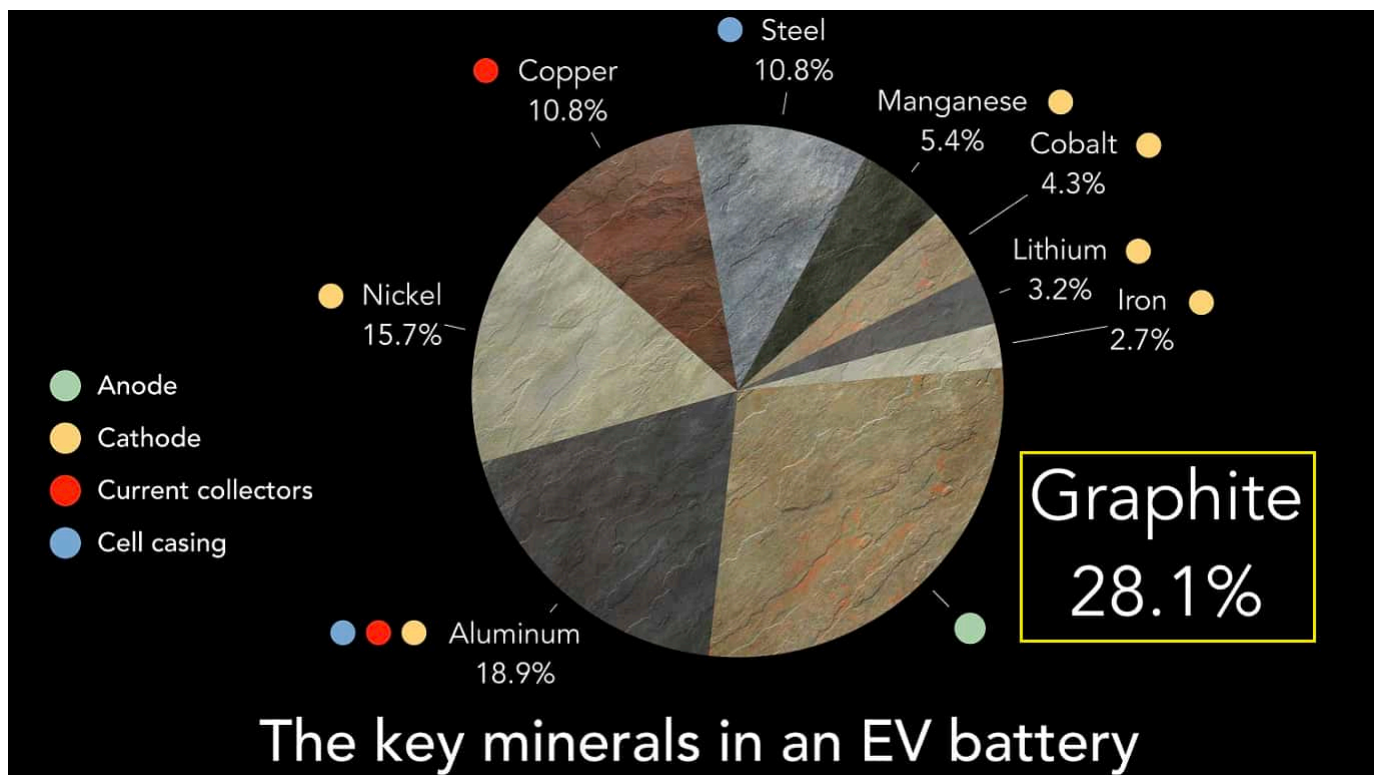
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### **China to impose some graphite and processed graphite materials 'export permits' from December 1, 2023**

Last week it was [reported](#) that China, the world's top graphite producer plans to curb exports of key battery material by implementing export permits for some graphite products from December 1 to protect national security. Another report [stated](#):

“China graphite export restrictions could hinder ex-China anode development...if it lasts into the longer term, it is likely to accelerate the build-out of a localized graphite and battery anode supply chain outside China.”

**Graphite is the number one metal required for lithium-ion batteries making up about a 28% share. It is used in the anode.**



The key metals and minerals in a battery of an electric vehicle

**The world is very dependent upon China to supply processed graphite material and anodes for Li-ion batteries**

The reason why this is huge news in the graphite world is that China produces [67% of global natural flake graphite](#) supply and refines more than [90%](#) of the world's graphite into active anode material (typically spherical graphite). If China were to deny

or delay permits for spherical graphite it will cause major problems for anode manufacturers outside China, such as those in South Korea, Japan, or North America.

China currently produces [~77% of global lithium-ion batteries](#) and 75-80% of global electric cars, thereby completely dominating the industry. If the West is shut out from sourcing processed EV battery materials from China then they will have a major problem producing their own EVs. China plans to prioritize EV battery materials for their own needs. This is why President Biden introduced the Inflation Reduction Act (IRA) and the EU introduced the EU Critical Raw Materials Act. Both are designed to address the shortages in the EV supply chain and the forecast shortages of future supply of critical raw materials. The problem is the IRA has done little to address the supply of raw materials and the EU Critical Raw Materials Act is [woefully inadequate](#) and targets fall way short of what will be needed.

## **Which western graphite companies can rise to meet the challenge to establish an ex-China graphite supply chain**

The leading western graphite companies that are working to establish an ex-China supply chain for flake graphite, synthetic graphite, and spherical graphite include:

- [Syrah Resources Limited](#) (ASX: SYR) – Largest western flake graphite producer with their 350,000tpa flake graphite capacity Balama Mine in Mozambique. Currently constructing the Vidalia spherical graphite facility in Louisiana, USA with Stage 1 production plans to produce 11,250tpa of spherical graphite. Longer term they plan to expand to


45,000tpa in 2026 and then to >100,000tpa by 2030 with an Europe/Middle East facility. Syrah already has an off-take agreement with Tesla (NASDAQ: TSLA). Syrah's stock price has surged ~80% higher the past week following the release of the China export permits news.

- [Nouveau Monde Graphite Inc.](#) (NYSE: NMG | TSXV: NOU) – Is rapidly progressing their plans for their Matawinie Graphite Mine and Bécancour Battery Anode Material Plant in Quebec, Canada. The company is [working with Panasonic](#) to qualify their graphite anode material. Panasonic supplies Tesla with batteries.
- [Northern Graphite Corporation](#) (TSXV: NGC | OTCQB: NGPHF) – Owns graphite producing and past producing mines in Quebec, Canada and Namibia. They also own the Bissett Creek graphite Project in Ontario, Canada. The Company [state](#) that they are “North America's Only Significant Natural Graphite Producer”. The Company plans to develop one of the world's largest battery anode materials facilities in Baie-Comeau Québec with [200,000tpa](#) of capacity.
- [NextSource Materials Inc.](#) (TSX: NEXT | OTCQB: NSRCF) – A new graphite producer from their Molo Graphite Mine in Madagascar with Phase 1 capacity of [17,000tpa](#) of flake graphite production and plans to expand to [150,000tpa](#). The Company's short term plan is for [a Battery Anode Facility in Mauritius](#) and longer term for similar facilities in USA/Canada, UK, EU.
- [Magnis Energy Technologies Ltd.](#) (ASX: MNS | OTCQX: MNSEF) – Magnis aims to produce high performance anode materials utilising ultra-high purity natural flake graphite from their Nachu Graphite Project in Tanzania. Magnis' partially owned U.S.-based subsidiary Imperium3 New York, Inc (“iM3NY”) operates a gigawatt scale lithium-ion battery manufacturing project in Endicott, New York.

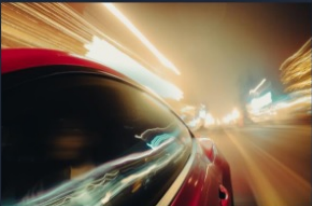
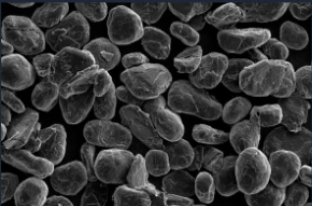


- [Talga Group Ltd.](#) (ASX: TLG) – Own the integrated mine to anode Vittangi Graphite Project in Sweden. In September 2023 Talga broke ground on their [19,500tpa](#) anode facility, [stating](#) “the refinery is projected to be the first commercial anode production in Europe for electric vehicle Li-ion batteries”.
- [Novonix Limited](#) (NASDAQ: NVX | ASX: NVX) – Has a production capacity target of [up to 20,000 tpa](#) of synthetic graphite anode material from their Tennessee facility in the USA.
- [Anovion Technologies](#) (private) – The USA anode producer plans to invest US\$800 million to produce a [40,000tpa synthetic graphite anode material facility](#) in Georgia, USA with plans to expand to [150,000tpa](#) by 2030.

**Syrah Resources leads the West’s attempt to build an ex-China flake graphite and anode material supply chain**

## Our Position



Syrah is a major ex-China natural graphite and active anode material (AAM) supplier for global customers, with upstream and downstream expansion potential underpinned by its world-class Balama resource

|   |   |  |  |
|---|---|--|--|
|  <p style="margin-top: 10px;">Natural graphite and AAM demand will increase four and six times, respectively, over the next 10 years<sup>1</sup></p> |  <p style="margin-top: 10px;">Syrah is the only operating vertically integrated natural graphite AAM supplier outside of China</p> |  <p style="margin-top: 10px;">Balama is a 350ktpa graphite producer in Mozambique supplying global battery anode and industrial customers since 2017</p> |  <p style="margin-top: 10px;">Syrah is nearing completion of an 11.25ktpa AAM facility at Vidalia in the US with commercial sales arrangements in place with tier 1 customers</p> |
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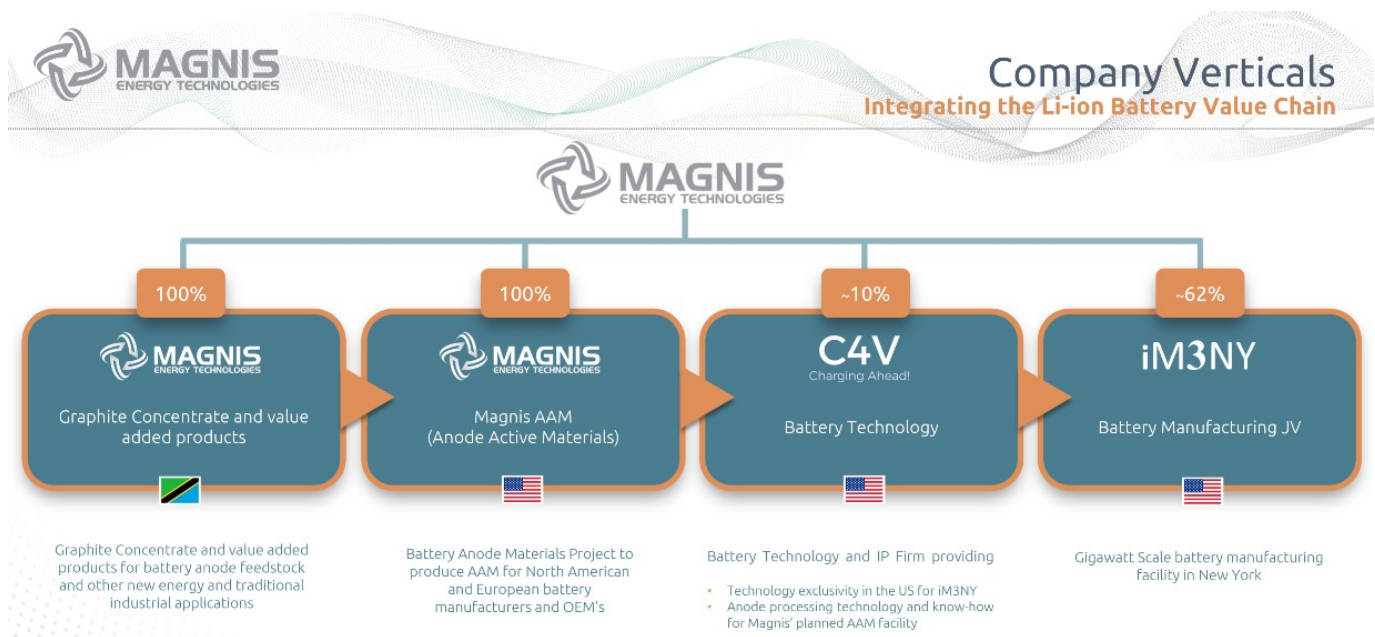
1. Source: Benchmark Minerals Intelligence Flake Graphite Forecast, Q3 2023. Note: AAM demand is for natural graphite AAM.

Source: [Syrah Resources September 2023 Quarterly Activities presentation](#)

**Magnis Energy Technologies is working towards becoming a**



graphite producer, anode materials producer and is already a small scale JV battery producer in the USA



Source: [Magnis Energy Technologies company presentation](#)

## Closing remarks

The Western world received a loud wake-up call the past week. The China graphite products 'export permits' may only serve to restrict or slow down some anode material supply from China, but it puts the West on notice of how dependent they are upon China.

Given the world is rapidly moving to electric vehicles, the West must urgently build up its EV materials supply chains or risk being left behind in the global EV race.

The USA is making some bold moves and the companies discussed in this article are moving in the right direction. Let's just hope that the western EV supply chain build out accelerates rather than stalls like [GM's latest electric pickup truck plans](#). I think Americans will want U.S.-branded electric cars and I know Europeans will want European branded electric cars. If we are not careful our only choice one day might be Tesla and Chinese

electric cars. Stay tuned.

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# Nouveau Monde's Eric Desaulniers on China's Decision to Restrict the Export of Graphite

written by InvestorNews | December 20, 2023

In a recent episode of InvestorNews, Tracy Weslosky sat down with Eric Desaulniers, MSc, Géo, President & CEO of [Nouveau Monde Graphite Inc.](#) (NYSE: NMG | TSXV: NOU), to discuss China's surprising decision to implement export permits for certain graphite products starting December 1st. Eric remarked, "Waking up to this news was unexpected, but not entirely surprising. China's decision to restrict the export of battery materials, starting with graphite, comes sooner than many experts anticipated."

With the booming demand for electric vehicles, which require five times more graphite than any other critical mineral, Tracy delved into the implications of China's move on graphite supply. Eric highlighted China's dominant position, controlling nearly 100% of natural graphite processing. "This strategic decision by China impacts many companies in the U.S. that are scaling up cell production," he said. He was proud to mention that Nouveau Monde stands out, developing one of the largest and most sophisticated natural graphite operations outside of China.

The changing dynamics are also influencing Nouveau Monde's partnerships, particularly with giants like Panasonic. The recent developments have intensified their ongoing discussions. As Eric pointed out, the challenge will be detaching from China's supply chain, especially amid skyrocketing cell production demand. "Our goal is to be a viable alternative, and this current pricing scenario outside China underscores the need for that," Eric emphasized.

To access the complete interview, [click here](#)

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## About Nouveau Monde Graphite Inc.

Nouveau Monde Graphite is striving to become a key contributor to the sustainable energy revolution. The Company is working towards developing a fully integrated source of carbon-neutral battery anode material in Québec, Canada, for the growing lithium-ion and fuel cell markets. With enviable ESG standards, NMG aspires to become a strategic supplier to the world's leading battery and automobile manufacturers, providing high-performing and reliable advanced materials while promoting sustainability and supply chain traceability.

To know more about Nouveau Monde Graphite Inc., [click here](#)

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# **China's Tightening Control over the Global Graphite Market**

written by Tracy Weslosky | December 20, 2023

China's Ministry of Commerce has announced that, effective December 1, export permits will be mandated for specific graphite products, citing national security reasons. Graphite, a pivotal component for electric vehicle (EV) batteries, finds China at its epicenter, producing 67% of the global supply of natural graphite. Additionally, China refines over 90% of the world's graphite, which is integral to almost all EV battery anodes.