Protecting North America's Graphite Industry

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Re: Critical Manufacturing Consultation

The North American Graphite Alliance (NAGA) appreciates the opportunity to comment on potential tariffs in response to unfair Chinese trade practices in critical manufacturing sectors. NAGA would like to convey that the North American graphite industry is in a pivotal moment. Demand for battery-grade graphite is expected to exponentially increase over the coming years in line with the demand for lithium-ion batteries used in electric vehicles and energy storage systems. However, the nascent industry is at risk: domestic producers face unfair competition from China's long-established graphite operations and its proven record of manipulative trade practices. Tariffs must be placed on all graphite products from China to protect and stimulate the North American graphite industry and reduce the national security risks associated with depending on China for a vital material that is a necessary component of the clean energy transition.

As part of our efforts to spotlight the importance of growing a domestic graphite industry, NAGA commissioned the attached report by Oxford Economics. It presents a variety of data that illustrates China's startling dominance of the graphite supply chain and delves deeper into how trade protections can help protect North America's graphite producers. Select statistics from the report are woven into the comments below to reinforce key points. We hope that, taken together, the commissioned report and our comments successfully convey both the severity of the issue and the suitability of the remedy at hand.

Background

NAGA represents producers of battery-grade natural and synthetic graphite, both of which are used to create anode material for lithium-ion batteries. NAGA's members are Canadian producers Northern Graphite and Nouveau Monde Graphite, as well as American producers Anovion Technologies, Epsilon Advanced Materials, NOVONIX, and Birla Carbon U.S.A.

Natural graphite is mined from the ground and then processed, and synthetic graphite is manufactured from petroleum coke. Graphite is the most abundant material in batteries: a standard 60 kilowatt-hour (KWh) EV battery may contain 160 pounds of graphite compared to 20 pounds of lithium.[1] Demand for anode material is expected to surge exponentially as the domestic battery manufacturing market grows. In fact, North American demand will grow by 300% over the next five years, while global demand will swell 189% over the same period.[2] In

[1] The Washington Post. America's EV Ambitions Need a Graphite Plan. Fast. February 2023.
[2] Oxford Economics. Enabling North American Graphite Growth. February 2024.

addition, the actions of both the Trudeau and Biden administrations illustrate they understand the significance of graphite: both have invested billions into building facilities to help establish a domestic supply chain for graphite anode material and EVs more broadly.

While it is clear that graphite is a crucial material for North America's energy independence, global production is completely dominated by China. In 2023, China produced 79% of the world's natural graphite and 97% of synthetic graphite for use in anode material.[3] Its dominance of the graphite market is poised only to expand, as China accounts for 98% of announced anode-manufacturing projects through 2030. There is only *one* active natural graphite mine in North America – in [XX], which is operated by NAGA member Northern Graphite. In addition, there are currently zero synthetic producers of graphite in Canada, while there are two in the United States. Despite positive signs of initial growth from these natural and synthetic producers, production will remain limited in the short term as favorable market conditions still do not exist for these companies to boost production significantly. This is due to the domestic industry's inability to compete with Chinese graphite companies, which can set the global price of graphite and engage in unfair trade practices due to China's massive overcapacity of graphite.

The Extent and Impact of China's Unfair Market Practices

China's complete dominance of the battery-grade graphite supply chain allows it to maliciously influence the global graphite market. This revelation is not surprising, given that this public input window on new tariffs is the result of the Canadian government's determination the China engages in widespread and methodical unfair trade practices across numerous industries. There are several direct examples of China manipulating the graphite market, as well as several parallel examples.

Between 2021 and 2023, due to overproduction, China's supply of anode material surpassed global demand. This has caused global graphite prices to decrease sharply. In 2023, a year after reaching its peak in 2022, the price of anode material produced from natural graphite fell 18% and is projected to fall a total of 27% by 2026.[4] The price of anode material produced from synthetic graphite decreased even more – by 24% in 2023, with a projected total decrease of 38% by 2026.

In October 2023, China enacted a protective trade measure to curb graphite exports. The Chinese Commerce Ministry announced it would require export permits for several graphite products, which was "conducive to ensuring the security and stability of the global supply chain and industrial chain, and conducive to better safeguarding national security and interests."[5] This step can only be interpreted as a tool to squeeze graphite supply with the goal of wielding geopolitical influence in a global market that is completely dependent upon China. Although the full impact of the protective measure on North America is not yet evident, Japan offers an

[3] Oxford Economics. Enabling North American Graphite Growth. February 2024.
[4] Oxford Economics. Enabling North American Graphite Growth. February 2024.
[5] Reuters. China, world's top graphite producer, tightens exports of key battery material. October 2023.

example of China's intended outcome. Chinese exports to Japan decreased by 42% in December 2023 – while Japan depends on China for 90% of its graphite imports.[6] The severe curtailment has strained Japan's short term graphite supply, as other options for importing graphite remain limited.

The US solar industry serves as a cautionary tale for when China's predatory market practices go unchallenged. In the early 2000s, the US was a world leader in the production of photovoltaic (PV) modules for solar energy installations. But between 2007 and 2011, Chinese exports of solar panels increased nearly 1600% and global prices plummeted by 70%.[7] By the end of the surge of Chinese exports in 2011, up to 75% of PV modules used in the US were imported, and most domestic producers had shuttered. China had effectively used its manufacturing prowess to generate an overcapacity of PV cells and destroy a US industry.

More recently, Chinese companies have been engaged in price manipulation of lithium. They have been overmining lepidolite, which is a low-grade lithium ore that the mining industry generally does not extract due to cheaper alternatives. It costs $25 per kilogram to mine and process lepidolite into lithium carbonate (the main component in iron-based battery cathodes), while other abundant rocks such as spodumene can be converted to lithium carbonate for as cheap as $5 per kilo.[8] It is estimated that China ended 2023 with a massive surplus of iron-based cathodes – enough for 2.5 million EVs – further lowering lithium demand. China's actions have no doubt contributed to a devastating year for the global lithium market, as lithium prices have fallen 81%,[9] forcing companies around the world to layoff workforce, shed assets, and reconsider future output.

As evidenced above, China's unethical trade practices have induced widespread market volatility in the battery supply chain, which subsequently prevents the necessary development of new domestic graphite projects. This is because graphite projects face significant challenges securing financing because the market volatility causes a lack of long-term offtake commitments from original equipment manufacturers (OEMs), including both auto and battery manufacturers, who are unsure whether the graphite will exist in sufficient supply at prices that are competitive with China. And without the ability to demonstrate future revenue, typically done via an offtake agreement, graphite companies are at a disadvantage when attempting to secure investments.

North America Must Establish Its Own Domestic Graphite Industry

A basic doctrine of foreign policy stipulates that a country should never rely on a non-allied foreign actor for critical technologies and materials. The Trudeau Administration has consistently demonstrated its grasp of this fundamental principle through its industrial policy and historic investments in the domestic battery supply chain. As has been argued throughout this letter, China's iron grip on the global graphite market has created such a scenario, which

[6] The Japan News. China's Drastic Reduction in Graphite Exports to Japan; Urgent Need for Diversification in Japanese Imports. January 2024.
[7] Oxford Economics. Enabling North American Graphite Growth. February 2024.
[8] The Electric. Amid a Lithium Industry Bloodbath, Albemarle Lays off 300 Employees. January 2024.
[9] Reuters. Piedmont Lithium lays off 27% of workforce amid weak prices. February 2024.

holds many national security ramifications. In North America, an alignment of circumstances has made this moment for the advanced battery sector more pivotal than ever, spearheaded by the accelerating push to adopt electric vehicles and establish the critical material supply chains required for that effort. By 2030, the North American EV market is expected to swell to $230 billion, up from $63 billion in 2022.[10] But, as the earlier example involving Japan illustrates, China has the power to disrupt the transition to electric vehicles – and the economic and environmental benefits associated with that transition – at any moment by withholding graphite exports. This dynamic makes Canada and the United States beholden to a foreign actor which has repeatedly abused its production capacity and has demonstrated the ability to set global prices. A robust domestic graphite industry would lessen dependence on China, reducing national security risks related to using lithium-ion batteries made with foreign graphite not only for EVs, but for the electric grid, advanced energy storage systems, and military applications.

Proposed Scope of Action

Trade protections must be enacted to blunt the effects of China's ability to overproduce graphite and effectively control the global market. Government intervention could, in fact, be viewed as the appropriate counter measure: China's ability to overproduce goods across several sectors is made possible due to massive subsidies and other financial incentives provided to companies by the Chinese government. [11]

NAGA urges the Canadian government to install a 25% tariff, effective immediately, on three natural graphite products identified by the HTS codes below. The US government installed 25% tariffs on the same products in September 2024:

2504.10.10 – Natural graphite, crystalline flake (not including flake dust)
2504.10.50 – Natural graphite, in powder or flakes (other than crystalline flake)
2504.90.00 – Natural graphite, other than in powder or in flakes

In addition, while the following graphite products are outside the scope of proposed items in Annex I, they are vital to the lithium-ion battery industry and currently imported from China. The US government renewed 25% tariffs on them, effective immediately, in June 2024.

3801.10.5000 - Artificial graphite, in powder form
3801.10.5000 - Artificial graphite, in powder or flake form, for manufacturing into the lithium-ion anode component of batteries
3801.90.0000 - Natural graphite, in powder form

Conclusion

NAGA would like to thank the Canadian government for their ongoing efforts to counter China's malicious trade practices. The North American graphite industry is in a vulnerable position and

[10] Fortune Business Insights. North American Electric Vehicle Market. July 2023.
[11] Voice of America. China Spends Billions of Dollars to Subsidize Favored Companies. May 2022.

its future hinges on the ability to counter China's anticompetitive actions. Instating tariffs on all graphite products would help stimulate the burgeoning graphite industry in North America, boost the Canadian economy, and create a stable industry that will aid the clean energy transition. We know these are all priorities of the Canadian government, and we look forward to collaborating with you to see these priorities to fruition by effectively supporting our domestic graphite manufacturers.

Sincerely,

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