Protecting North America's Graphite Industry

February 21, 2024

The Honorable Katherine Tai
The Office of the United States Trade Representative
600 17th St. NW
Washington, DC 20006

Re: Docket ID USTR-2024-0001

Dear Ambassador Tai,

The North American Graphite Alliance (NAGA) appreciates the opportunity to comment on the Extensions of Exclusions regarding the Section 301 investigation of China's Acts, Policies, and Practices Related to Technology Transfer, Intellectual Property, and Innovation. 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. Section 301 tariffs must be reinstated on all graphite products 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 American producers Anovion Technologies, Epsilon Advanced Materials, and NOVONIX, as well as Canadian producers Northern Graphite and Nouveau Monde Graphite.

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

[1] The Washington Post. America's EV Ambitions Need a Graphite Plan. Fast. February 2023.

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] Graphite's strategic importance is underscored by its presence on the critical material lists of the Department of Energy (DOE), Department of Defense (DOD), and US Geological Survey (USGS). In addition, the actions of the Biden Administration illustrates that it understands the significance of graphite: through the Infrastructure Investment and Jobs Act (IIJA), it has invested hundreds of millions into building the domestic supply chain for graphite anode material.

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 are only two US-based natural graphite mining projects under development in Alaska and Alabama, and there is one active mine in Canada – the *only* active natural graphite mine in North America. There are two producers of synthetic graphite in the United States, with two additional producers poised to come online. There are zero synthetic graphite producers in Canada. 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.

China's Unfair Market Practices

China's complete dominance of the battery-grade graphite supply chain allows the Government to maliciously influence the global graphite market. This revelation is not surprising, given that the creation of the Section 301 tariffs themselves are the result of the US 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.

[2] Oxford Economics. Enabling North American Graphite Growth. February 2024.
[3] Oxford Economics. Enabling North American Graphite Growth. February 2024.
[4] Oxford Economics. Enabling North American Graphite Growth. February 2024.

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 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.

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 Biden Administration has consistently demonstrated its grasp of this fundamental principal through its industrial policy and historic investment 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 holds many national security ramifications. In North America, an alignment of circumstances has made this

[5] Reuters. China, world's top graphite producer, tightens exports of key battery material. October 2023.
[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.

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 the United States and Canada 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.

Policy Recommendation: Reinstate 301 Tariffs on Graphite Products

NAGA urges you to reinstate 301 tariffs on all graphite products and forgo extending the exclusions for these materials once again. Intervention from the U.S. government is paramount to help level the playing field for the graphite market.

Because China can flood global markets with cheap graphite, domestic graphite manufacturers can't secure the investments necessary to bolster production capacity to the levels needed to meet domestic demand. 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] The graphite sector is likely no exception; China's overproduction of lithium was made possible in part by Chinese EV companies – many of which control lithium mines – receiving $28 billion in subsidies from 2009-2022.[12]

The fate of the US solar industry provides evidence that government intervention is vital. After the crash of the industry in 2011, the Department of Commerce found that Chinese firms had been receiving government subsidies and dumping solar products in the US market. A range of protective trade measures were enacted in 2018, including 301 and 201 tariffs. Over a four-year period after the tariffs were placed, US PV module manufacturing grew 400%.[13] While the competitive threat from China still exists, the domestic solar industry is in a far more sustainable position than it was before the tariffs were enacted.

Conclusion

NAGA would like to thank the United States Trade Representative and President Biden for their ongoing efforts to counter China's malicious trade practices. The North American graphite

[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.
[12] China Dialogue. Life After Subsidies for China's EVs. November 2023.
[13] Oxford Economics. Enabling North American Graphite Growth. February 2024.

industry is in a vulnerable position and its future hinges on the ability to counter China's anticompetitive actions. Reinstating Section 301 tariffs on all graphite products would help stimulate the burgeoning graphite industry in North America, boost the U.S. economy, and create a stable industry that will aid the clean energy transition. We know these are all priorities of the Biden Administration, and we look forward to collaborating with you to see these priorities to fruition by effectively supporting our domestic graphite manufacturers.

Sincerely,

Erik Olson
North American Graphite Alliance