

INTERVIEW: Volt Resources plans Alabama graphite refinery as China limits exports

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- Volt has identified a 33-acre site for the refinery
- Engaging with a range of potential funding partners
- Refinery to source natural graphite from mining assets in Ukraine, Tanzania

Volt Resources is preparing to ramp up high-purity graphite production as it seeks to capitalize on the growing demand for non-Chinese supply, CEO Prashant Chintawar told Platts, part of S&P Global Commodity Insights, in a recent interview.

The Australian-listed company currently holds a 70% interest in the Zavalievsky graphite mine and processing plant in Ukraine and is steadily advancing the development of its wholly owned Bunyu graphite project in Tanzania.

While the Zavalievsky mine, one of the largest known deposits in Europe, is primarily focused on supplying high-purity graphite to customers in South Korea, Japan and Europe, Chintawar said that the company has witnessed a notable increase in demand from North America in recent months.

Chintawar said that China's export restrictions on certain types of artificial and natural flake graphite from the country have contributed to an increase in global demand for alternative sources of mined and processed material.

The US does not currently mine natural graphite, according to the US Geological Survey. In 2024, the country relied entirely on imports to meet its natural graphite requirements.

The developments support Volt's strategy to develop its North American business through the construction of a dedicated refinery in Alabama, capable of producing up to 10,000 metric tons/year of initially high-purity (99.5%) and later both high and ultra-high-purity (99.95%) graphite.

"We have seen strong customer interest in a localized graphite refinery that can help reduce US dependence on imported graphite sourced from countries such as Brazil and China," he said.

He added that the US Graphite Refinery will focus on utilizing both natural graphite sourced from Volt's global mining assets and from other mines, processing it through the company's proven refining technology.

Chintwar advised that the new refinery will initially produce high-purity 99.5% graphite -- used widely across the industrial sectors -- and later produce ultra-high-purity 99.95% grade required to produce lithium-ion batteries.

He noted that the company is focused on purified graphite, rather than graphite anode production, due to the comparatively high capital costs, technology requirements, and extended qualification timelines associated with graphite anode production.

"We want to be a merchant graphite refiner where we can take graphite from our own mines, or graphite from other mines and just purify it in line with our core competency, refining technology," he said.

Chintawar said that the graphite refinery at Zavalievsky has been producing, marketing and selling highpurity graphite since 2017, which would provide the basis for the design and construction of the Alabama refinery. He noted that the company was steadily advancing its project, having recently identified a 33-acre site for the refinery.

According to Chintawar, the company is now focusing on securing the site and continued to engage with the state and local government regarding a potential incentives package.

According to Chintawar, Volt's graphite purification process offers significant cost and environmental advantages over conventional methods as thermal purification and the hydrofluoric acid purification process widely utilized in China.

Under President Donald Trump, the US government has announced a wave of grants and funding opportunities for various critical minerals projects aimed at enhancing domestic production and reducing reliance on foreign sources.

Chintawar said that Volt is monitoring various government funding opportunities and plans to pursue them as the project progresses through to commercial production.

"It's a fairly long process, but based on all the executive orders announced over the past few months, I think critical minerals will remain a large focus for the Trump administration," he said.

He added that the company is continuing to engage with potential offtake and funding partners, as well as state and local officials.

Volt advances Tanzanian graphite project

In Tanzania, Chintawar said the company continues to make progress on securing financing for Stage 1 of the Bunyu project, adding discussions with potential investors are ongoing. Volt released a Stage 1 feasibility study in August 2023 based on a mining and processing plant throughput of 400,000 mt/year of ore and total production of about 24,780 mt/year of graphite products.

The company has secured a binding offtake agreement with battery anode material producer Graphex Group for the sale of 10,000 mt/year of fine graphite from Bunyu for a period of five years from the start of production with an option to extend.

Bunyu will also supply China's Qingdao Baixing Graphite with 12,000-90,000 mt/year of coarse flake graphite for five years, with an option to extend.

With Stage 1 offtake now allocated, Chintawar said the major focus is on moving the project from the planning phase to commercial production.

Platts last assessed natural flake graphite at \$400/mt FOB China Nov. 4, down \$5/mt day over day and week over week. The price reflects the spot value of natural flake graphite with 94%-95% carbon content and a minus 100 mesh size delivered to Qingdao port.