ASX ANNOUNCEMENT
By e-lodgement
11 November 2024

Volt advances graphite purification process and commercial Graphite Refinery strategy in the US

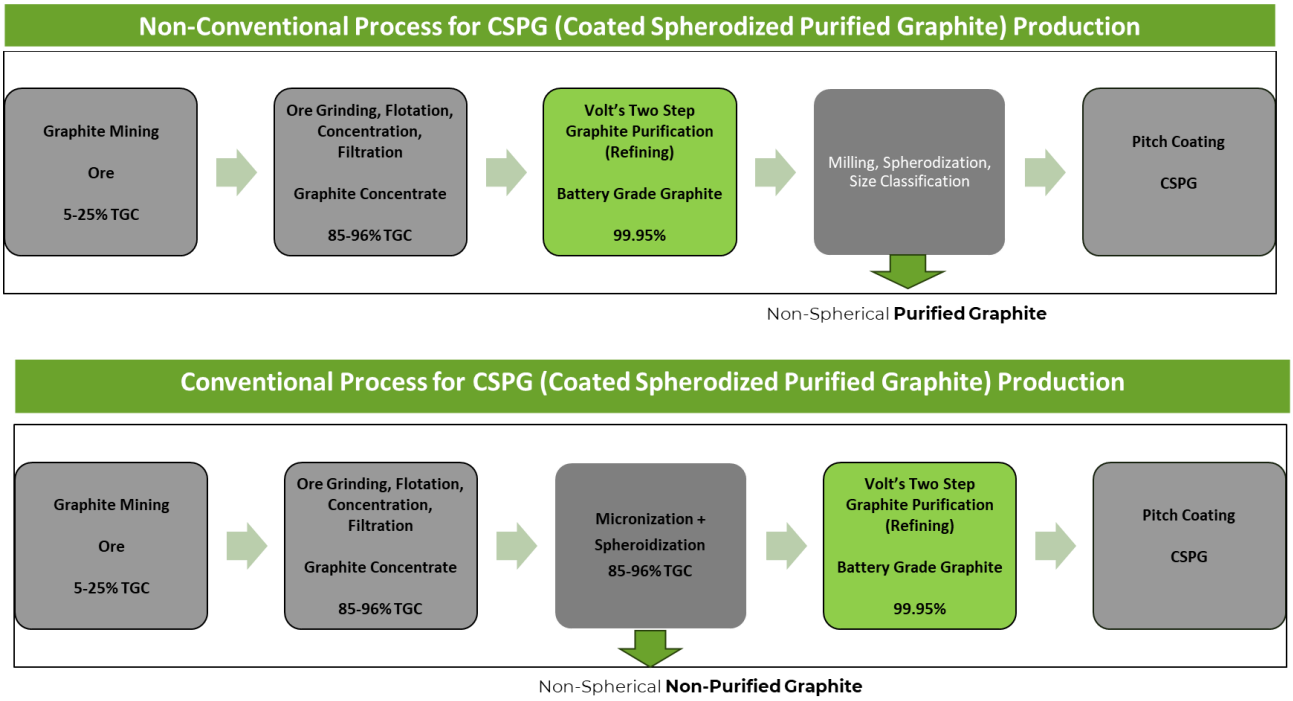
Highlights

- **Provisional patent application for Volt's novel graphite purification process has been extended to protect our technology**
- **Initiated an internal pre-feasibility study for the planned US Graphite Refinery saving costs, with preliminary tasks completed**
- **Acquired various graphite samples to demonstrate the versatility of our graphite purification process**

Volt Resources Limited (ASX: VRC) ("Volt" or "the Company") is pleased to announce progress on the commercialization of its novel graphite purification process.

Graphite Purification Process Update

A key differentiator for Volt is our low-cost two-step process for producing high-purity graphite (HPG) and ultra-high purity graphite (UHPG). We recently extended provisional patent application (US Patent Application Number 63/696,244) for this process. UHPG is essential for manufacturing a critical material in lithium-ion batteries used in electric vehicles (EV). As illustrated in the diagram below, natural graphite anode or CSPG (Coated Spherical Purified Graphite) production follows one of two processes both of which require UHPG with a typical purity of 99.95% or higher.



Conventional graphite purification methods for UHPG involve hydrofluoric acid (HF) presenting significant challenges such as advanced logistics, safety protocols, waste management and permitting, all of which add to operational costs. The alternative thermal purification method is also costly, requiring high capital investment and substantial electrical energy, along with operational complexities. As shown below, Volt's process offers clear advantages over these methods.

		Volt's Process	Thermal Purification	HF Purification
Economic Comparison	Low Initial Capital Cost	☑	XX	X
	Low Sustaining Capital Cost	☑	X	X
	Low Operating Cost	☑	X	X
Technical Comparison	Ease of Operation	☑	X	?
	Ease of Permitting	☑	☑	XX
	No Environmental Issues	☑	☑	XX
	Process Simplicity	☑	XX	X
	Ease of Process Control	☑	X	☑
ESG Comparison	Low CO_2 Emissions	☑	X	☑
	High Resource Efficiency	☑	XX	☑

Our low-cost graphite purification process positions Volt to enter various markets beyond lithium-ion battery anode (e.g., oil and gas drilling, food grade polymer, alkaline batteries, expandable graphite, cathode additives, and electronics), where qualification times are shorter.

US Commercial Graphite Refinery Strategy & Updates

Our commercial strategy involves capitalizing on our low-cost purification process through a US based Graphite Refinery. A funding request has been submitted (positive outcome expected in 2025), to support Volt's development plans in the USA with an internal pre-feasibility study (PFS) already underway. At this stage, we have completed the Process Design Criteria, Process Flow Diagrams, and Mass & Water Balances. By conducting the PFS internally, we have reduced the need for a Definitive Feasibility Study (DFS) only requiring a cost validation going directly to a Front End Engineering and Design (FEED) as the process is simple with backing of data from pilot scale plant.

Volt's proposed Graphite Refinery in the US will be capable of handling multiple feed materials and create products such as HPG, UHPG, and other variants to cater to battery EV and conventional markets.

Feed materials include:

- Graphite sourced from our subsidiary Zavalievsky Graphite (ZG) in Ukraine and Bunyu in Tanzania

- Graphite sourced from existing producers including a large African graphite mining company and a North American graphite producer. Both have sent Volt Resources samples of their natural flake graphite for evaluation.

- Recycled graphite from battery production waste. Volt has been engaging with a prominent European lithium-ion battery recycler who has agreed to deliver to Volt six different graphite samples in November 2024 which will consist of end-of-life batteries and battery production waste.

Once our purification process is proven on the variety of graphite sources described above, it will further strengthen our value proposition.

-ENDS-

This announcement was authorised for release by the Board of Volt Resources Ltd.

For further information, please contact
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About Volt Resources Limited

Volt Resources Limited ("Volt") is critical minerals and battery material company listed on the Australian Stock Exchange under the ASX code VRC. We are an established graphite producer and an emerging natural graphite anode (a key component of lithium-ion batteries) manufacturer.

In 2021, Volt acquired 70% interest in each of the companies comprising the ZG Group, namely - Zavalievsky Graphite LLC (processing plant buildings, processing plant, mining equipment, power sub-station, and distribution), Stone Found LLC (crushed granite operations), and Graphite Invest LLC (holds a 79% interest in PJC Zavalievsky Graphite Kombinat – mine, land, main administration office building. It is this entity that holds the 636 hectares of freehold land on which the Zavalievsky mine, and other related buildings and facilities are located) [1] .

Volt acquired three licence applications that are prospective for lithium-borate mineralisation. The licence applications are in respect to a total area of 291 km2 , located in Serbia and are west and south-west of the Serbian capital, Belgrade[2]

Volt is also progressing the development of its large wholly owned Bunyu Graphite Project in Tanzania. The Bunyu Graphite Project is ideally located near critical infrastructure with sealed roads running through the project area and ready access to the deep-water port of Mtwara. In August 2023, Volt reported the completion of the revised Feasibility Study ("FS") for Stage 1 development of the Bunyu Graphite Project. The Stage 1 development is based on a mining and processing plant with annual throughput rate of 400,000 tonnes of ore to produce on average 24,780 tpa of graphite products[3] . Key objectives of Stage 1 development are to establish Bunyu Graphite Project as a world-class supplier of graphite products, grow Volt's existing natural flake graphite business, provide cashflow, and establish infrastructure in support of the development of the significantly larger Stage 2 expansion project.

Volt's wholly owned subsidiary, Volt Energy Materials LLC, is headquartered in EcoComplex "Clean Energy Centre" in New Jersey, US. EcoComplex has laboratories which provide bench space for wet chemistry, chemical hoods, vented hood, a clean room, separate gas storage, and laboratory refrigeration. This facility also offers 1,200 square feet, two story scale-up space, specifically designed for pilot scale demonstration of new clean technologies.

[1] Refer to Volt's ASX announcement titled "VOLT TO ACQUIRE EUROPEAN GRAPHITE BUSINESS FOLLOWING COMPLETION OF DUE DILIGENCE" dated 14 May 2021.
[2] Refer to Volt's ASX announcement titled "Strategic European Lithium Acquisition – Jadar North" dated 18 November 2021.
[3] Refer to Volt's ASX announcement titled "Feasibility Study Update for Bunyu Graphite Project Stage 1, Tanzania Delivers Significantly Improved Economics" dated 14 August 2023.

The Company confirms that it is not aware of any new information or data that materially affects the information included in this document and that all material assumptions and technical parameters underpinning the estimates continue to apply and have not materially changed.