



## ASX ANNOUNCEMENT

By e-lodgement

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# STRATEGIC COLLABORATION WITH URBAN ELECTRIC POWER

## Highlights

- **Volt entering into a Joint Development Agreement with Urban Electric Power (“UEP”)**
- **Focus on non-spherical graphite products to improve alkaline battery performance with plans to enter into an offtake agreement between UEP and Volt**
- **Leveraging Volt’s graphite production from Zavalievsky in Europe and AETC’s inverted LIB anode materials flowsheet design to produce non-spherical graphite products including conductive graphite for the battery market**
- **Alkaline battery market estimated annual sales of US\$7.5 billion<sup>1</sup> comprising 12 billion battery cells<sup>2</sup> sold that require over 14,000 tonnes of graphite**

Graphite producer and battery anode material developer **Volt Resources Limited (ASX: VRC)** (“**Volt**” or “**the Company**”) is pleased to advise it is in the process of entering into a strategic collaboration with advanced alkaline battery producer, Urban Electric Power (“**UEP**”).

Under a Joint Development Agreement (“**JDA**”) currently in preparation, UEP, Volt and its technology partner in the United States, American Energy Technologies Co. (“**AETC**”), will collaborate on the development of new technologies using non-spherical purified graphite for conductivity enhancement and ultra-high-purity graphite-based coatings to improve alkaline battery performance. Notably this will improve the alkaline battery performance while benefitting the end users - consumers of UEP’s alkaline battery technologies - by offering a more attractive cost structure than the currently available industry solutions on the market.

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<sup>1</sup> [https://www.fortunebusinessinsights.com/alkaline-battery-market-103298#:~:text=How%20much%20is%20the%20alkaline,period%20\(2020%2D2027\).](https://www.fortunebusinessinsights.com/alkaline-battery-market-103298#:~:text=How%20much%20is%20the%20alkaline,period%20(2020%2D2027).)

<sup>2</sup> Sustainable refining and processing of battery-grade graphite for the US Government applications. National Defense Industrial Association (NDIA) Military Power Sources Committee (MPSC), 10/07/2021: [www.forgenano.com/mps](http://www.forgenano.com/mps)

The companies expect to finalize and execute the JDA in January 2022. Following the successful completion of the graphite technology programs for use in alkaline batteries, UEP and Volt plan to enter into an offtake agreement for the supply of ultra-high-purity graphite-based coatings and additives in addition to potential licensing benefits derived from the intellectual property developed.

The non-spherical purified graphite is made as a by-product of the spheroidization of purified graphite when producing lithium-ion battery anode material (“**BAM**”). Volt is leveraging the ‘inverted’ flowsheet developed by AETC to produce not only spherical purified graphite for lithium-ion batteries, but also non-spherical material that can be used in applications such as conductivity enhancement and other specialty uses<sup>3</sup>.

The development of non-spherical graphite products for the alkaline battery market will improve the economics of Volt’s planned BAM facilities in the US and Europe leveraging our current flake graphite production capability from the Zavalievsky graphite business located in Europe combined with the Bunyu graphite project development in Tanzania.

**Urban Electric Power Chief Technology Advisor, Alex Couzis, commented:** “Urban Electric Power is enthusiastic about the opportunity to collaborate with Volt and its technology partner in the United States, American Energy Technologies Co.

Volt is a very innovative company in the area of graphite’s and mixing and they’re open culture toward collaboration is inspiring.”

**Volt Managing Director, Trevor Matthews, commented:** “We are excited about the opportunity to work with Urban Electric Power to develop commercially based technologies to improve alkaline battery performance and lower costs.

Volt views the alkaline battery market as a tremendous opportunity to participate in a sector with annual sales of US\$7.5 billion.”

This collaboration introduces Volt to the US battery market and the board expects the JDA will accelerate the commercialization of Volt’s downstream value-added graphite products in various battery applications.”

### **About Urban Electric Power**

Urban Electric Power revolutionizes the traditional alkaline battery (e.g. AA battery) transforming it into a powerful rechargeable alkaline battery. Incumbent battery solutions are falling short to meet the needs of changing energy infrastructure.

UEP spun out of federal and state research funds from the City University of New York Energy Institute.

Developing nations utilize toxic lead-acid to solve challenges with electricity access and intermittency. The Urban Electric Power battery utilizes earth-abundant materials from existing supply chains mined within ally nations, ensuring safe supply.

Urban Electric Power envisions a future with clean renewable energy and safe battery technology to meet these challenges. For further information visit <https://urbanelectricpower.com/>

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<sup>3</sup> Refer ASX announcement dated 8 November 2021 and titled “High Performance Results from Bunyu Battery Cell Testwork”

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**About Volt Resources Limited**

Volt Resources Limited (“Volt”) is a graphite producer/developer and gold exploration company listed on the Australian Stock Exchange under the ASX code VRC. Volt has a 70% controlling interest in the Zavalievsky Graphite business in Ukraine. Zavalievsky is in close proximity to key markets with significant developments in LIB facilities planned to service the European based car makers and renewable energy sector. ZG benefits from an existing customer base and graphite product supply chains based on excellent transport infrastructure covering road, rail, river and sea freight combined with reliable grid power, ample potable ground water supply and good communications. ZG has current plans to install a processing plant and equipment in order to commence production of spheroidised purified graphite (SPG) for the European LIB market<sup>4</sup>.

Volt acquired three licence applications that are considered to be prospective for lithium-borate mineralisation. The licence applications are in respect to a total area of 291km<sup>2</sup>, located in Serbia and are west and south-west of the Serbian capital, Belgrade<sup>5</sup>.

Volt is progressing the development of its large wholly-owned Bunyu Graphite Project in Tanzania, as well as gold exploration in Guinea leveraging the Company’s existing extensive networks in Africa.

The Bunyu Graphite Project is ideally located near to critical infrastructure with sealed roads running through the project area and ready access to the deep-water port of Mtwara 140km from the Project. In 2018, Volt reported the completion of the Feasibility Study (“FS”) into the Stage 1 development of the Bunyu Graphite Project. The Stage 1 development is based on a mining and processing plant annual throughput rate of 400,000 tonnes of ore to produce on average 23,700tpa of graphite products<sup>6</sup>. A key objective of the Stage 1 development is to establish infrastructure and market position in support of the development of the significantly larger Stage 2 expansion project at Bunyu.

The Guinea Gold Projects comprise 6 permits in Guinea, West Africa having a total area of 348km. The Projects are located in the prolific Siguiri Basin which forms part of the richly mineralised West African Birimian Gold Belt.

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<sup>4</sup> Refer to Volt’s ASX announcements titled “Volt to Acquire European Graphite Business following Completion of Due Diligence” dated 14 May 2021 and “Completion of the ZG Group Transaction Following Execution of New Convertible Securities Facility” dated 26 July 2021.

<sup>5</sup> Refer to Volt’s ASX announcement titled “Strategic European Lithium Acquisition – Jadar North” dated 18 November 2021.

<sup>6</sup> Refer to Volt’s ASX announcement titled “Positive Stage 1 Feasibility Study Bunyu Graphite Project” dated 31 July 2018. 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.