

# Domestic Production of Battry Grade Graphite

Critical Minerals | Battery Materials June 2024

ASX: VRC



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#### **Competent Person statement**

The information in this announcement which relates to exploration results is based upon details compiled from the available documentation by Mrs Christine Standing, who is a Member of the of the Australian Institute of Geoscientists. Mrs Christine Standing is an employee of Optiro Pty Ltd and has sufficient experience which is relevant to the style of mineralisation and the deposit under consideration, and to the activity which she is undertaking to qualify as a Competent Person as defined in the 2012 edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (the JORC Code). Mrs Christine Standing confirms that the information included in this announcement in respect of the mineralisation at Jadar North, Ljig and Petlovaca is an accurate representation of the available data and studies.

Where information in this presentation relates to exploration results, mineral resources, ore reserves, production targets or forecast financial information that has previously been disclosed to the ASX, reference is made to the applicable ASX announcements where such information was first disclosed. Volt confirms that it is not aware of any new information or data that materially affects the information included in those announcements.



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### **Corporate Overview**



#### Capital Structure. Listed on ASX

ASX Code

VRC

#### Major Shareholders

Major Shareholders (as of 16 Nov 2023)

14.11% Kabunga Holdings Pty Ltd5.09% PR & E Notman3.09% 10 BOLIVIANOS PTY LTD2.72% D Virgara1.89% Bosswhat Pty Ltd

Others

Balance

#### **Key Executive Team**

Executive Chairman Managing Director & CEO Non-Executive-Director Company Secretary Asimwe Kabunga Prashant Chintawar "PC" Jack Fazio Robbie Featherby

# **The Volt Team**

#### **Battery Materials, Mining, & Specialty Chemical Background**



#### Asimwe Kabunga Executive Chairman

Asimwe is a Tanzanian born Australian entrepreneur with multiple interests in mining and IT businesses around the world. Asimwe has extensive technical and commercial experience in Tanzania, Australia, United Kingdom and the United States.



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#### Prashant Chintawar MD & CEO

Prashant is an entrepreneurial global business leader with a track record of business management (over \$1 billion product P&L) and creation + scale up of new specialty chemical, battery material businesses. His key strengths include strategic planning and tactical execution by rallying teams. He has PhD in Chemical Engineering & management certificate in finance.





#### Roman Saramaga Director, Zavalievsky Graphite

Roman is based in Ukraine and has over fifteen years' experience in project management. He previously served as Deputy Head of the Ukrainian Geological Survey where he was involved in mining licensing, geological exploration and modernization of resource industry legislation. He also launched the Strategic Partnership between the European Union and Ukraine on critical raw materials and batteries.

> Ukrainian Geological Survey



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#### Chris Larder VP, Technology

Chris is VP of Technology for Volt. He is a highly experienced metallurgist and brings experienced forged over a long career providing technical management for a range of projects in various jurisdictions and commodities. He brings significant experience in all aspects of concentration and purification of graphite.





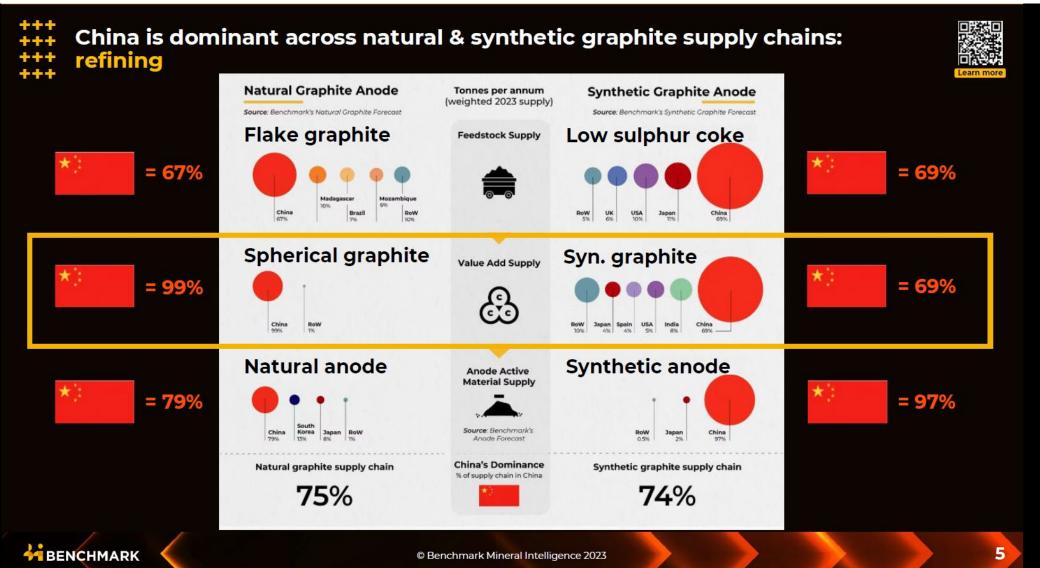
# Volt = Purified Graphite and Anode

# Bunyu Graphite (Africa) + Zavalievsky Graphite (Europe)

# **Problem Statement**

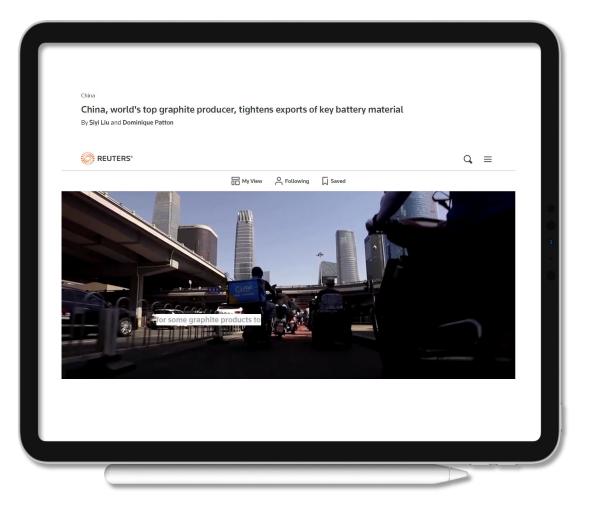


## China dominates the graphite supply chain



# **Graphite Export Curbs from China**





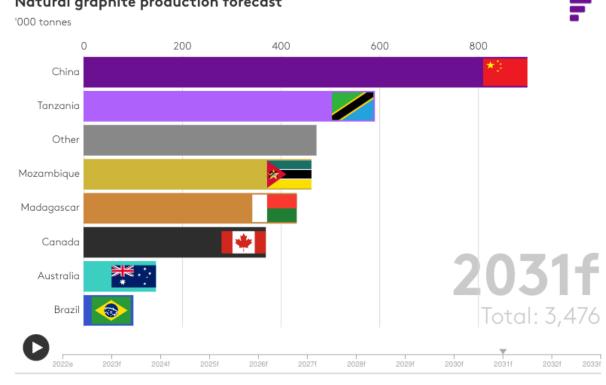
BEIJING, Oct 20 (Reuters) - China said on Friday it will require export permits for some graphite products to protect national security, springing a surprise with another bid to control critical mineral supply in response to challenges over its global manufacturing dominance.

China is the world's top graphite producer and exporter. *It also refines more than 90% of the world's graphite into the material that is used in virtually all EV battery anodes,* which is the negatively charged portion of a battery.



### **Graphite Forecast** Tanzania forecast to be key producer

#### Natural graphite production forecast



Source: Fastmarkets • Flags courtesy of Wikipedia

# **Graphite Demand Vs Supply**

Synthetic Graphite Anode: 2022–2030		Natural Graphite Anode: 2022–2030	
Supply Growth	Demand Growth	Supply Growth	Demand Growth
150%	170%	95%	415%
Synthetic C	Graphite Anode		
Natural Gra	aphite Anode		
(tpa)			
Market Balance (tpa)			
<u> </u>			

2021 2022 2023 2024 2025 2026 2027 2028 2029 2030 2018 2019 2020

Source: Benchmark Mineral Intelligence Q4-2022

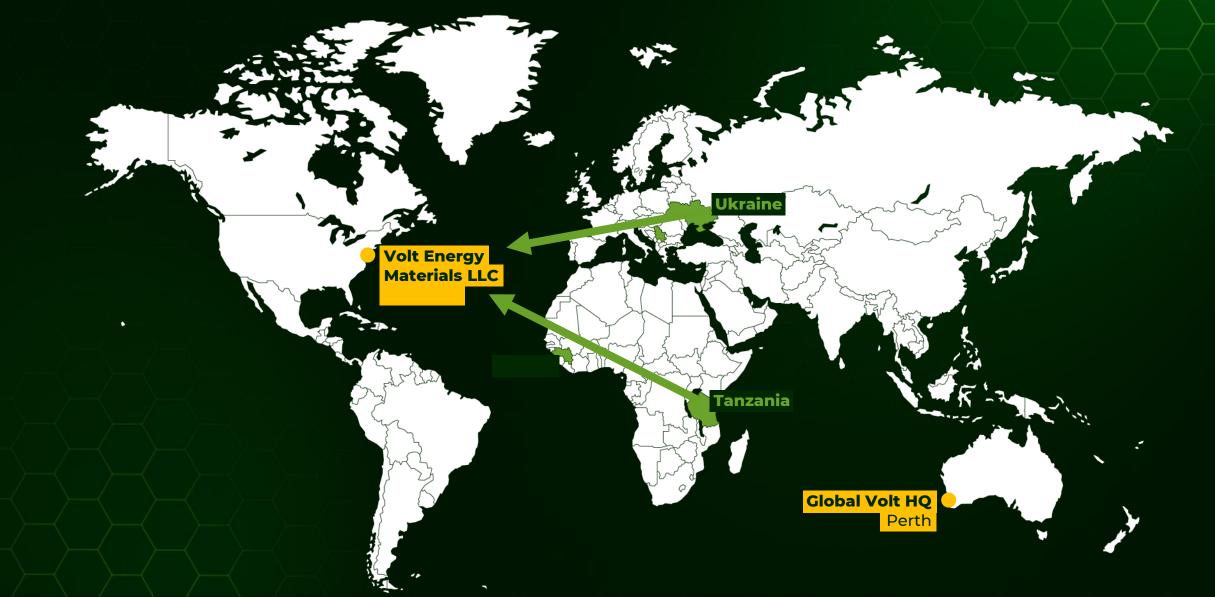


### **Planned Graphite Processing Site in Tuscaloosa, Alabama**



## Integrated Production of Natural Graphite Anode via Innovative Process





# Volt is a proven graphite producer with a mine in operation since 1934

- Significant portion of graphite is fine mesh suitable for lithium-ion batteries
- Flotation + Concentration + Purification done at mine
- Permits for subsoil use (mining licence equivalent) valid until November 2035.
- Makes graphite products across the range and potential to significantly increase high value, large flake production.
- Excellent transport infrastructure covering road, rail, river and sea freight combined with reliable grid power.

#### **Project KPIs**

- Ownership
  70% Volt, 30% Ukraine entities
- Long-life: producing graphite mine that has been in operation for over 87 years, with exploration upside

- Resources: 22.9 million ton at a grade of 6.8% carbon – subset of overall deposit based on south-east zone only<sup>1</sup> (Non-JORC and approximately 20% of Russian code resources)
- Production : average 7,300 TPA graphite concentrate from 2017 to 2021. 1980s – 60 kTPA

#### **Upcoming Milestones**

- Increase product purity from 99.5% to 99.95+%
- Become a supplier to lithiumion battery cell makers based in Europe and North America



#### Ukraine

🛛 Kyiv

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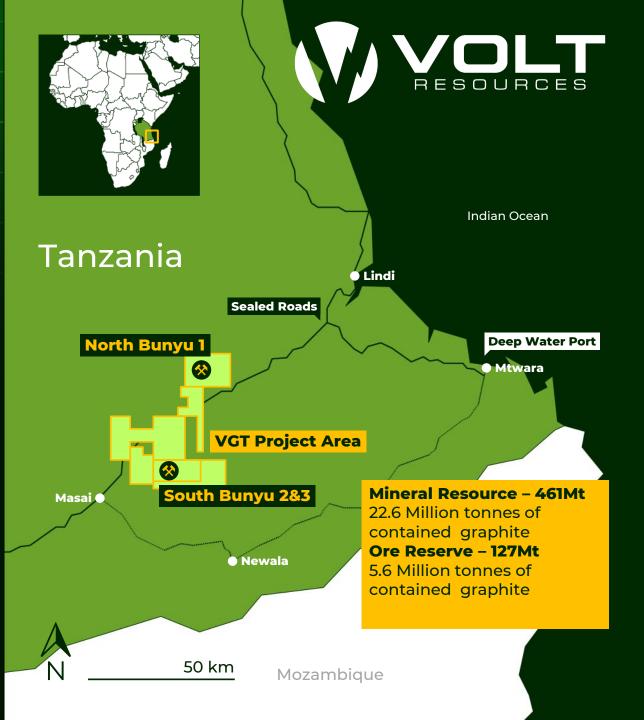
### Tanzania Bunyu Graphite Enough to power 2.8 million EVs per year

#### Highlights

- One of the largest graphite deposits in the world. 100% owned; Greenfield project; Bunyu is the largest JORC Mineral resource in Tanzania
- Only 140 km from Mtwara port
- Two stage development strategy with Stage 1 significantly de-risking the development of Stage 2 Expansion Project
- Stage 1 to produce 24,780 tpa flake graphite (@ 6.26% TGC feed grade)<sup>2</sup> and Stage 2 expansion increases annual production to 170,000 tpa flake graphite.
- Environmental Impact Assessment Certificate and Mining Licences received covering both Stage 1 and 2
- Africa is set to become graphite production leader
- Refer to ASX announcement "Pre-feasibility Study Completed" 15/12/2016
- 2 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.

#### **Upcoming Milestones**

- Secure financing
- Stage 2 graphite production is enough for about 2.8 million EVs per year



### BUNYU has Strong Project Economics – Stage 1 feasibility study completed in 2023



Stage 1 Project	Unit	Financial		
		Performance		
		2023		
Project Period - from first ore	years	13.7		
Total Net Revenue	US\$ M, real	433.2		
Total EBITDA	US\$ M, real	169.6		
IRR - before tax	%, real	31.5		
IRR – after tax*	%, real	23.6		
NPV @ 7.5% - before tax	US\$ M, real	58.9		
NPV @ 7.5% - after tax*	US\$ M, real	36.4		
Capital Cost (year 0)	US\$ M, real	33.1		
Payback period, before tax – from first ore	years	2.9		
Payback Period - after tax - from first ore	years	3.9		
* Tanzanian corporate income tax rate of 30% has been applied to the project plus minimum tax (MTA) of				
0.5% of sales revenue in loss years. Payments of corporate tax on profits are estimated to commence				
from year 1 of production, after utilising the benefits of carried forward income tax losses.				
<sup>1</sup> A discount rate of 10% was used to determine NPV for the 2018 study.				

Volt is looking for about USD 40 million financing for Stage 1

# Stage 1 Bunyu Graphite sold

#### **Graphex Group Limited**

Binding offtake agreement signed with global battery anode material producer Graphex Group Limited subsidiary, Graphex Michigan 1 LLC. Graphex Group is listed on Hong Kong Stock Exchange and the NYSE.

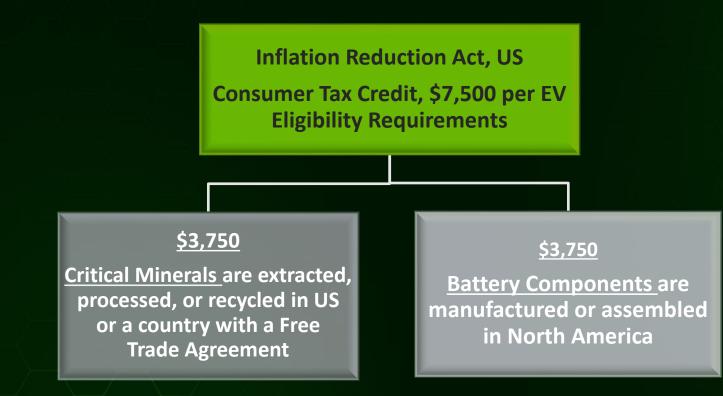
- 7,500-10,000 tpa fine flake graphite for five years
- An option to extend a further five years
- All Stage 1 fine graphite product is sold

#### Qingdao Baixing Graphite Company Ltd

Binding offtake agreement signed with established producer of graphite products

- 12,000-90,000 tpa coarse flake graphite for five years
- An option to extend a further five years
- All Stage 1 coarse graphite product is sold

# Tanzania & Ukraine Graphite Projects are IRA Compliant





- To get Inflation Reduction Act benefits, from 2024, battery components can not be manufactured or assembled in a Foreign Entity of Concern
- 2. From 2025, Critical Minerals can not be extracted, processed, or recycled in a Foreign Entity of Concern
- 3. Foreign Entity of Concern China, Russia, N Korea, & Iran
- 4. The US Geological Survey reaffirmed graphite as a Critical Mineral in its 2021 Review and Revision of the US Critical Minerals List, ranking graphite higher than manganese, lithium, nickel, and copper in overall supply risk

### Contact

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