

Corporate Presentation

Diversified battery anode materials company **EcoGraf Limited (EcoGraf or the Company)** (ASX: **EGR**; FSE: **FMK**; OTCQX: **ECGFF**) is pleased to release a copy of its latest corporate presentation that is being provided to EcoGraf's partners and potential customers in Europe to support further sales, collaboration and debt financing.

The Company was pleased to present again at this year's Batteries Event Conference given the increasing importance of sustainability by battery and electric vehicle manufacturers in France.

This announcement is authorised for release by Andrew Spinks, Managing Director.

For further information, please contact:

INVESTORS

Andrew Spinks
Managing Director
T: +61 8 6424 9002



 **EcoGraf**™

BATTERIES
EVENT 2023

OCT. 10 > OCT. 13
LYON - FRANCE

ASX: EGR FSE: FMK OTCQX: ECGFF

Closing the Loop with EcoGraf's HFfree Battery Anode Materials

Securities Disclaimer

This presentation is for informational purposes only and does not constitute an offer to sell, or solicit to purchase, any securities. Such offer can be made only through proper subscription documentation and only to investors meeting strict suitability requirements. Any failure to comply with these restrictions may constitute a violation of applicable securities laws.

Forward looking statements

Various statements in this document constitute statements relating to intentions, future acts and events. Such statements are generally classified as “forward looking statements” and involve known and unknown risks, uncertainties and other important factors that could cause those future acts, events and circumstances to differ materially from what is presented or implicitly portrayed herein. The Company gives no assurances that the anticipated results, performance or achievements expressed or implied in these forward-looking statements will be achieved.

Production targets and financial information

Information in relation to the feasibility study conducted on the production of battery graphite using the Company’s EcoGraf technology, including production targets and forecast financial information derived from the production targets, included in this document is extracted from an ASX announcement dated 5 December 2017 “Battery Graphite Pilot Plant”, as updated on 17 April 2019 “EcoGraf Delivers Downstream Development”, 5 November 2020 “Completion of EcoGraf™ Processing Facility Development Report” and 14 July 2021 “Commercial Scale Program Delivers 20% Product Yield Increase”, available at www.ecograf.com.au and www.asx.com.au. The Company confirms that all material assumptions underpinning the production targets and forecast financial information derived from the production targets set out in the announcement released on 5 December 2017, as updated on 17 April 2019, 5 November 2020 and 14 July 2021 continue to apply and have not materially changed.

Information in this document relating to the Bankable Feasibility Study conducted on the Epanko Graphite Project, including production targets and forecast financial information derived from the production targets, included in this document is extracted from an ASX announcement dated 21 June 2017 “Updated Bankable Feasibility Study” available at www.ecograf.com.au and www.asx.com.au. The Company confirms that all material assumptions underpinning the production targets and forecast financial information derived from the production targets set out in the announcement released on 21 June 2017 continue to apply and have not materially changed.

Competent persons

Any information in this document that relates to Exploration Results, Mineral Resources or Ore Reserves is based on information compiled by Mr Andrew Spinks, who is a Member of the Australasian Institute of Mining and Metallurgy included in a list promulgated by the ASX from time to time. Andrew Spinks is a director of EcoGraf Limited and has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which he 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”. Andrew Spinks consents to the inclusion in this document of the matters based on his information in the form and context in which it appears.

Information in this document that relates to Mineral Resources is based on information compiled by Mr David Williams, a Competent Person, who is a Member of the Australasian Institute of Mining and Metallurgy. David Williams is employed by CSA Global Pty Ltd, an independent consulting company and has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which he 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”. David Williams consents to the inclusion in this document of the matters based on his information in the form and context in which it appears.

Information in this document that relates to Ore Reserves has been compiled by Mr Steve O’Grady, who is a Member of the Australasian Institute of Mining and Metallurgy. Steve O’Grady is a full-time employee of Intermine Engineering and produced the Mining Reserve estimate based on data and geological information supplied by Mr Williams. Mr O’Grady has sufficient experience which is relevant to the estimation, assessment and evaluation of the economic extraction of the Ore Reserve that he 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”. Steve O’Grady consents to the inclusion in this document of the matters based on his information in the form and context in which it appears.

High Value Vertically Integrated Battery Anode Material

EXTRACT	UPGRADE	RECYCLE
		
<p>Duma TanzGraphite Natural Graphite</p>	<p>EcoGraf HFfree™ Battery Anode Material</p>	<p>Anode Recycling</p>
<p>High quality, long life Epanko and Merelani- Arusha Graphite Projects</p>	<p>High performance, low CO₂ battery anode material</p>	<p>EcoGraf™ purification technology with sector leading ESG credentials</p>



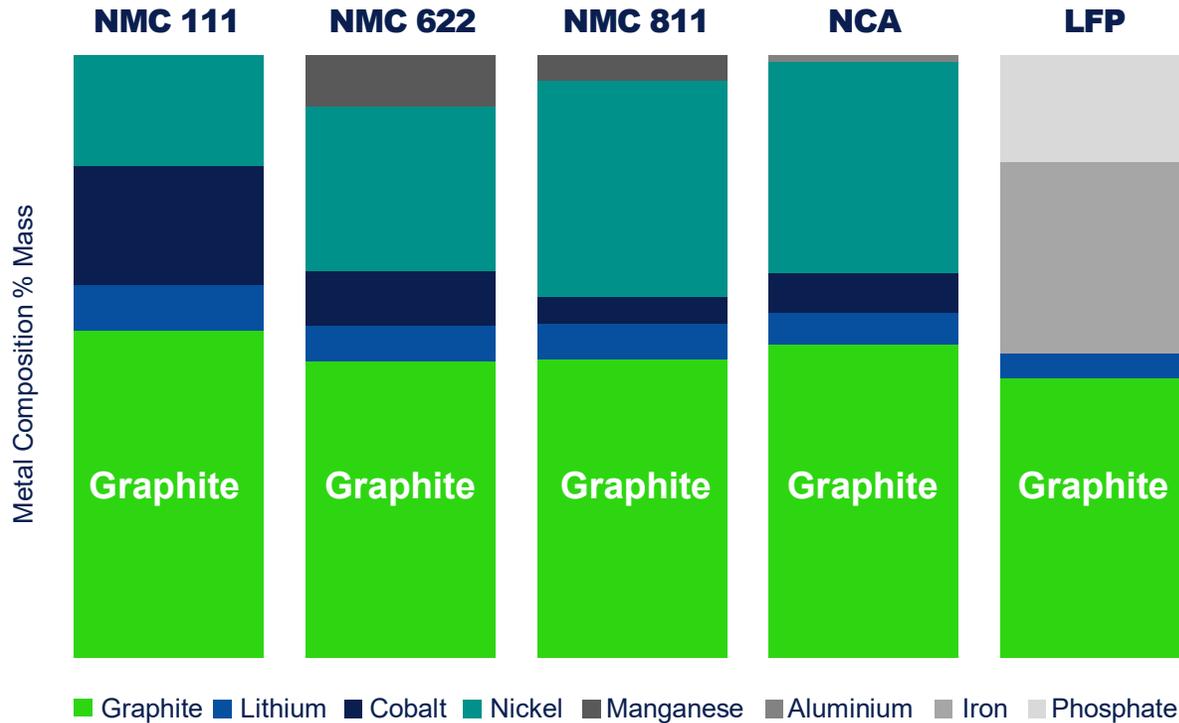


2023 Global Legislation

IRA has pushed development of critical battery minerals under MSP and trade deals

EU Green Deal to support new supply chains in EU

Critical battery minerals is creating increased cooperation between companies and continents to establish new supply chains



Graphite will continue to dominate as the anode material in lithium-ion batteries

Source : BMI, UBS and company research

Lithium-ion battery to drive strong demand for graphite

1.1kg required per kWh

15-25 wt. %

Anode graphite in a LIB

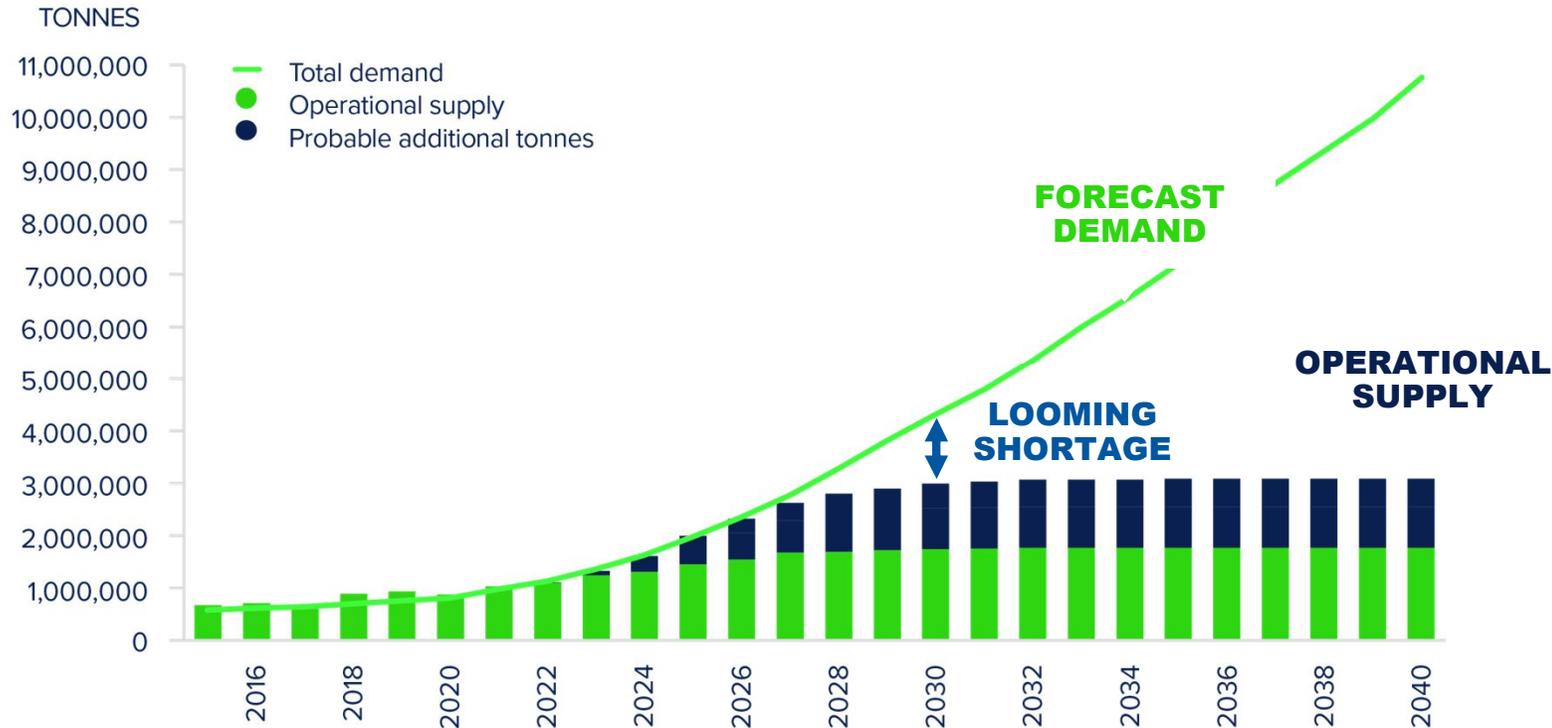
Up to +100 kg

anode material used per EV

Structural shortage looming: demand and supply

EV adoption rates are forecast to increase demand for lithium-ion batteries with BMI forecasting the market to grow at a CAGR of 23.9% over the next 10 years.

- ✓ New markets for EV driving forecast demand above existing and new sources of supply
- ✓ Benchmark Mineral Intelligence forecast that planned capacity and projects in development will not be able to meet forecast demand as soon as 2025



Gigafactories and Raw Materials. Source: Strategy&

1. Strategy& projections based on EV sales figures

Graphite: one of the fastest growing critical minerals

- ✓ Equates an incremental market growth of US\$5.8 billion
- ✓ East Africa will be a key source of new supply for the lithium-ion battery industry

EU Commission's battery ESG regulations



EcoGraf's sector leading ESG credentials are aligned to the new energy lending policies that support projects relating to the supply of critical raw materials

	POLICY	ECOGRAF'S ESG
	Responsible sourcing	<ul style="list-style-type: none">✓ EcoGraf™ HFfree proprietary purification process✓ Epanko developed under Equator Principles
	Carbon (CO₂) footprint, performance and durability labelling	<ul style="list-style-type: none">✓ EcoGraf™ recycling and blending✓ Renewable energy inputs into businesses✓ Implementing low impact mining methods
	Traceability	<ul style="list-style-type: none">✓ Implementation of Block Chain technology
	Recycling and establishing a circular economy	<ul style="list-style-type: none">✓ EcoGraf™ HFfree proprietary purification process eliminates use of toxic hydrofluoric acid✓ EcoGraf™ recycling enables customers to achieve improved recycling efficiencies

Proprietary processing technology

IP protection - International Examining Authority deems all 25 patent claims novel and inventive

- ✓ Patent granted by US Patent and Trademark Office.
 - ✓ Product made (outside of the US) by a patented process (patented in the US), would be an infringement when imported into the US
- ✓ Patent submissions have been lodged by EcoGraf in all key battery markets to protect the IP : EU, Korea, Malaysia, Vietnam, East Africa, South Africa and Australia.
- ✓ Company filed Evidence in Answer lodged with IP Australia to oppositions raised by two parties to the Company's Patent Application 2021261902 "Method of producing purified graphite"
- ✓ Patent covers 'anode recycling'

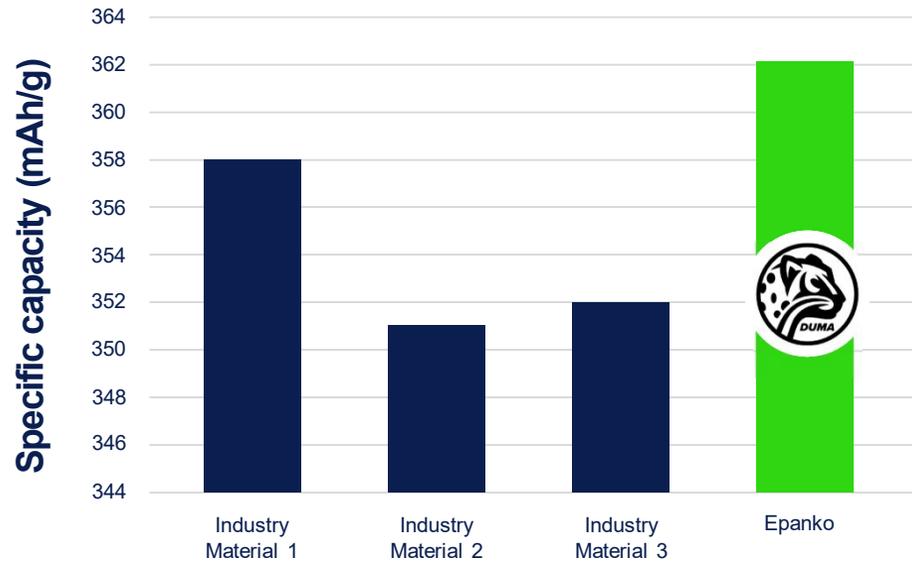
Proprietary purification process provides cost competitiveness to existing market materials

- ✓ High Purity Battery Anode Material - >99.95% achieved
- ✓ >60% yield for maximum efficiency

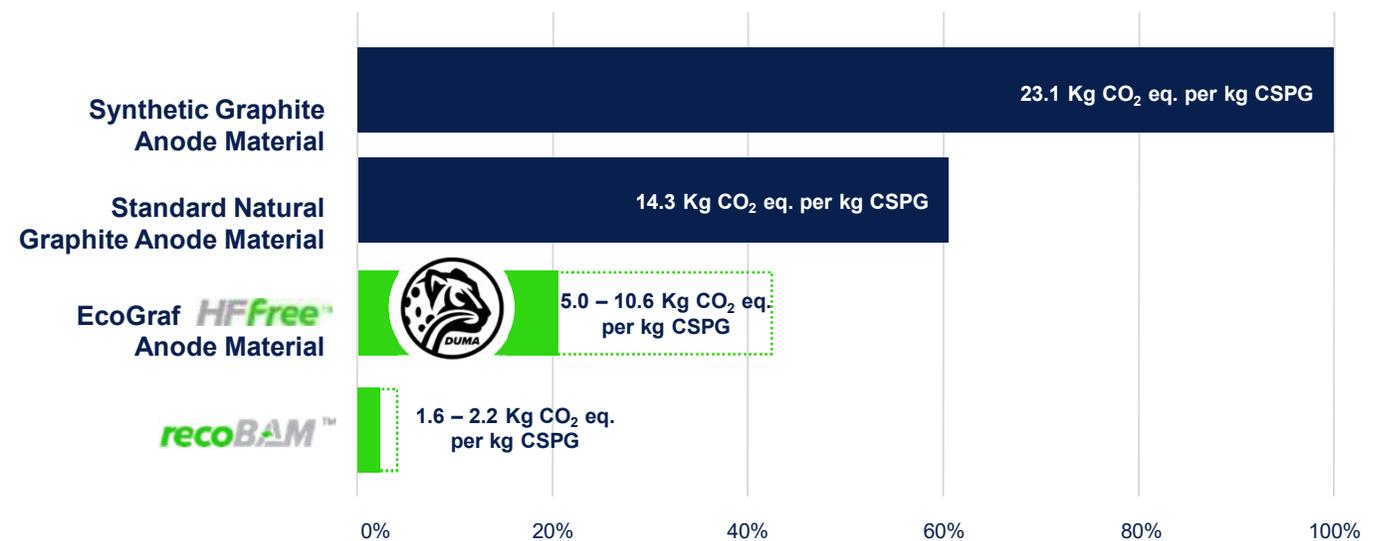




Superior Energy Storage



Lowest CO₂ footprint



EcoGraf HFfree™ anode material delivers improved battery performance and significantly lower CO₂ footprint



Natural Graphite Projects

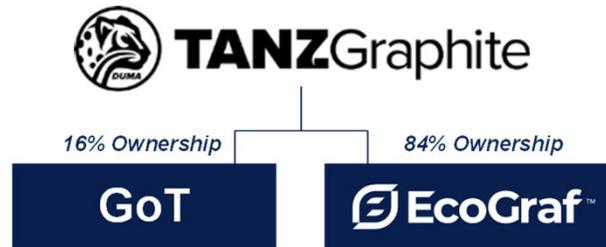
KEY ACTIVITIES

- ✓ Signed framework agreement with Tanzanian Government for Epanko
- ✓ Confirming expansion options and evaluating benefits of in-country micronizing and spheronizing to optimize global supply chain
- ✓ Financing and development

Exceptional geology provides superior performance

EPANKO

- Development ready - project defined and de-risked, commencing at 73,000tpa with potential to significantly expand production to meet market demand¹
- Evaluation of multi-stage expansion of Epanko in progress, targeting 300,000tpa of production
- 2017 bank appointed Independent Engineer’s Review completed by SRK Consulting.
- Sector leading ESG credentials with Equator Principles development model



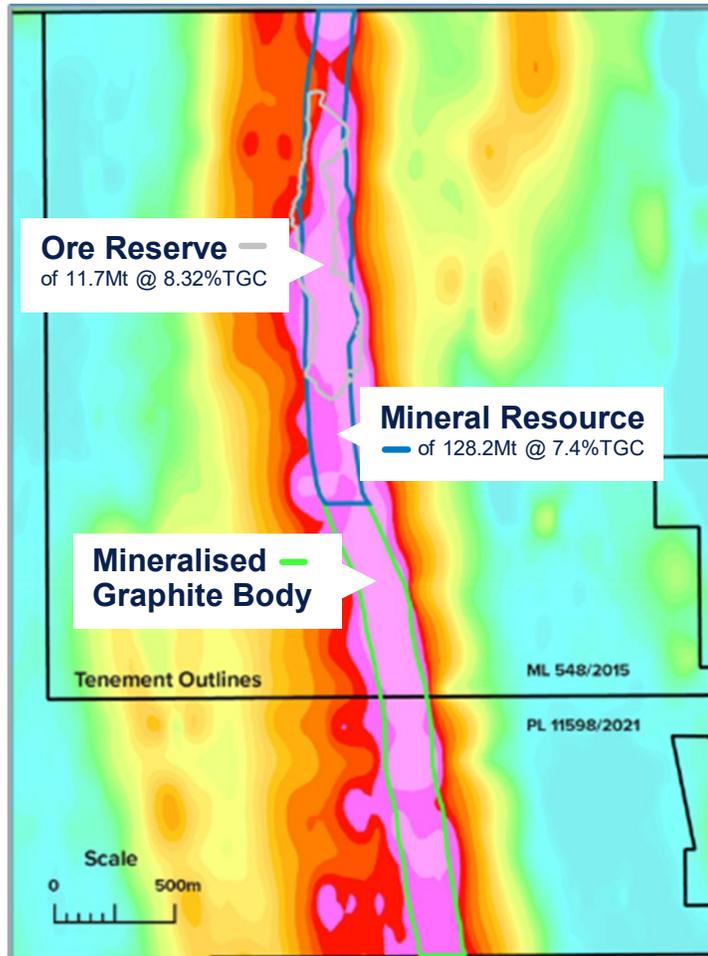
MERELANI-ARUSHA

- Supportive Government with plans for additional development of the Arusha mining sector

Two advanced, high quality, long life Tanzanian natural graphite projects provides supply diversity and scale-up optionality



Refer to ASX announcement “EcoGraf Pre Development Program Delivers Outstanding Results”, 28 April 2023



JORC classification	Tonnage (Mt)	Grade (%TGC)	Contained graphite (Mt)
Epanko Mineral Resource estimate >5.5% TGC¹			
Total (Meas, Ind, Inf)	128.2	7.4	9.5
Epanko Ore Reserve²			
Proven	5.7	8.4	0.5
Probable	5.9	8.2	0.5
Total	11.7	8.3	1.0

1. Refer to ASX announcement "Epanko Mineral Resource Upgrade", March 2023
 2. Refer to ASX announcement "Updated Bankable Feasibility Study", 21 June 2017

Epanko 38% Resource increase supports future expansion to meet growing battery demand with high carbon concentrates

- ✓ Large resource base
- ✓ High carbon concentrates grade 96-98%C
- ✓ Low strip ratios < 0.3:1
- ✓ High Processing Recoveries
- ✓ Exceptional Geology
- ✓ Superior Performance

Epanko's key attribute is its high carbon concentrates through simple flotation requiring less downstream processing due to lower impurities

EcoGraf confirms that it is not aware of any new information or data that materially affects the information included in this presentation. All material assumptions and technical parameters underpinning the estimates in those releases continue to apply and have not materially changed.



HFfree™ Battery Anode Material

Key activities

- ✓ Development of product qualification facility in Australia
- ✓ Evaluate BAM facility in Vietnam with VinES and VinFast
- ✓ Formalise strategic partnerships for commercial scale production
- ✓ Evaluate potential development site locations in North America and Europe
- ✓ Advance coatings capability

Global expansion driven by EV demand and legislation to encourage new and more sustainable supply chains

Increased requirement for new supply of battery anode materials following launch of US Mineral Security Partnership (June 2022) and Inflation Reduction Act (August 2022)

- Australian Government grant of A\$2.9m towards a battery anode material product qualification facility
- Product Qualification facility provides product samples and engineering design for single-phase commercial scale development
- Australian Government support for commercial scale development through Major Project status, Project of State Significance status and conditional approval of US\$40m debt financing package
- Strategy to develop multiple production facilities in key global battery markets
- Co-operation Agreement signed with POSCO May 2023
- Signed agreement with VinES to evaluate BAM facility in Vietnam
- Partnership opportunities under discussion with European, North American and Asian battery market participants



The new state-of-the-art processing facilities will manufacture BAM for the global lithium-ion battery markets



EcoGraf's vision is to be a leader in the supply of high performance, sustainably produced battery anode material



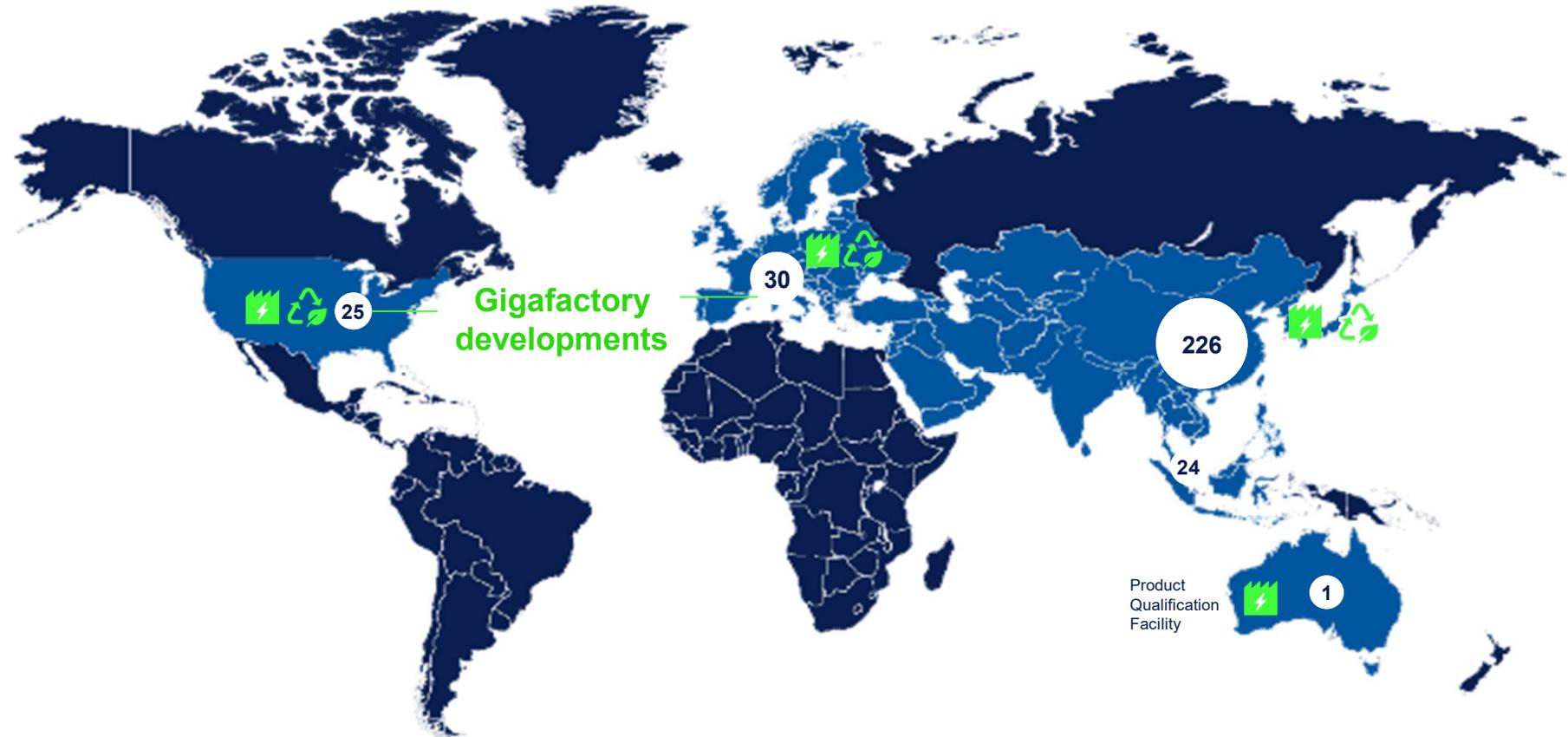
Global expansion strategy to meet battery anode demand

Positioning EcoGraf purification and anode recycling capability in regional EV and battery hubs



Purification

Anode Recycling



Other Battery Makers and OEMs



1. Source Benchmark Mineral Intelligence



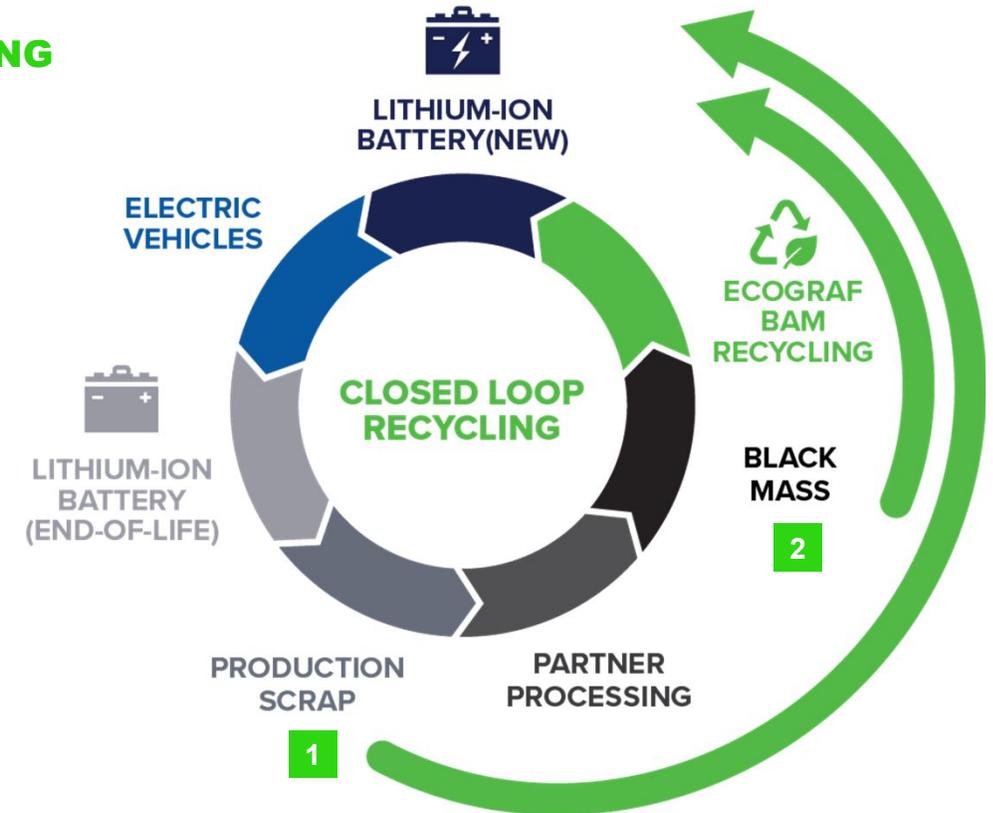
EcoGraf Anode Material Recycling

KEY ACTIVITIES

- ✓ Developing 'Proof of Concept' based on positive results for Production Anode Scrap
- ✓ Ongoing testing with EV and battery manufacturers
- ✓ Establish partnerships for pilot plant for product development and qualification processes for recycling and downcycling into industrial markets

ECOGRAF HFFREE™ PURIFICATION SUPPORTS CLOSED LOOP RECYCLING

- **Objective:** Recover battery anode materials to provide customers lower battery costs and CO₂ emissions:
 - 1** Production Anode Scrap: Priority
 - 2** Leached Black Mass: Develop under long term partnership
- Increasing efforts given recent EU + US legislation for battery recycling



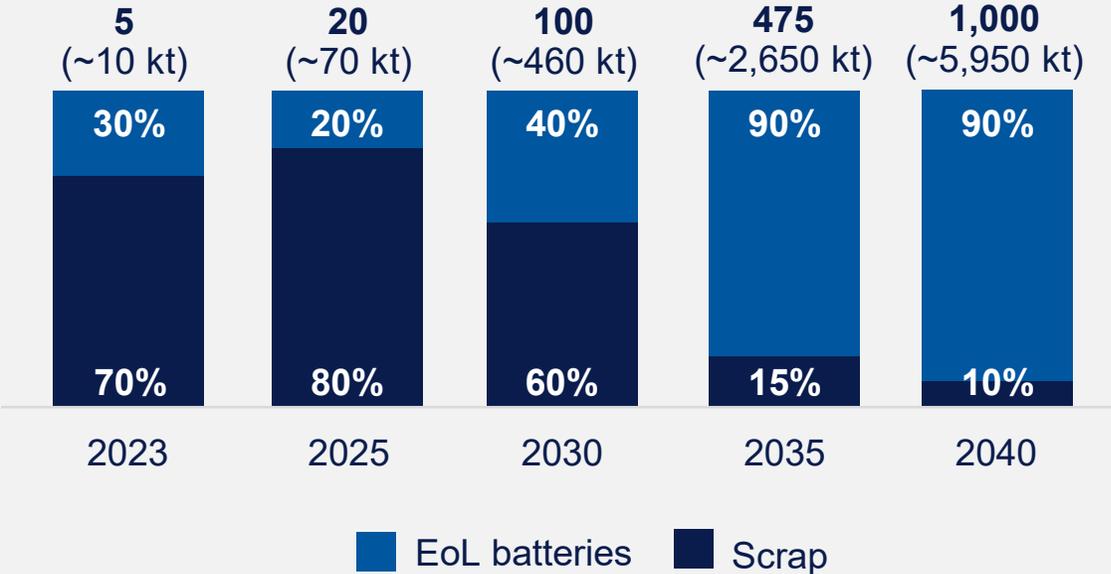
CURRENT PARTNERS



Europe – initially dominated by production anode scrap

- Between 2023 and 2030, gigafactory scrap drives the market
- With scrap rates reducing significantly, it will comprise ~10% of the market in 2040
- ~5,950 kt of end-of-life batteries in 2040 drive the market

Distribution of recyclable material (in GWh, kt)

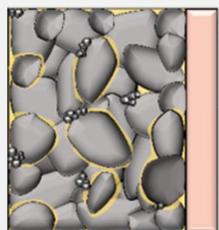


Source: Benchmark Mineral Intelligence and PWC report

EcoGraf solution for anode scrap recycling

PARTNERS

Anode Electrode Scrap



Graphite + Binders

Cu Foil

Delamination

Sieving + pre-treatment

Copper Product

Graphite Product

PURIFICATION

EcoGraf™

HF free

Purification

recoBAM

Recycled Anode Material

RAW MATERIALS

TANZGraphite



Natural Flake Graphite

hdBAM

Natural Spheronised Graphite

BATTERY MANUFACTURERS

Blending



Anode Manufacturing



Purification results for anode recycling

Positive results achieved for a range of product samples and customers under CA/NDA's

Results support developing piloting plant for Production Anode Electrode Scrap

Carbon Grade after EcoGraf HFfree™ Purification

Company	Product	Carbon Grade	High Purity Industrial Market	Li-ion Battery Anode Market (>99.95)
Recycler	End of Life	99.80%	●	
EV	Production Anode Scrap	99.97%		●
EV	Production Anode Scrap	99.92%	●	
Battery	Production Anode Scrap	99.98%		●
Recycler	End of Life	99.50%	●	
Recycler	Production Anode Scrap	99.98%		●
Chemical	End of Life	99.17%	●	
Research	End of Life	99.20%	●	
Recycler	Production Anode Scrap	99.77%	●	
Recycler	End of Life	99.80%	●	

1. Refer to ASX announcement "Lithium-ion Battery Anode Recycling Pilot Plant", 16 August 2021
 2. See Appendix C: Anode recycling process detail

ANODE SCRAP MATERIAL

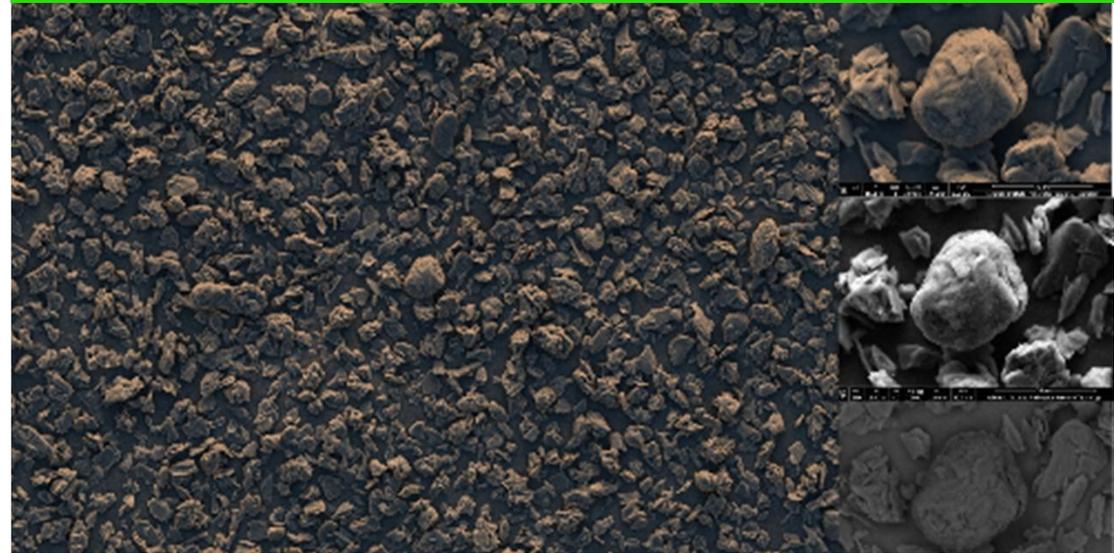


→ 98.49% C



HFfree™

PROCESS

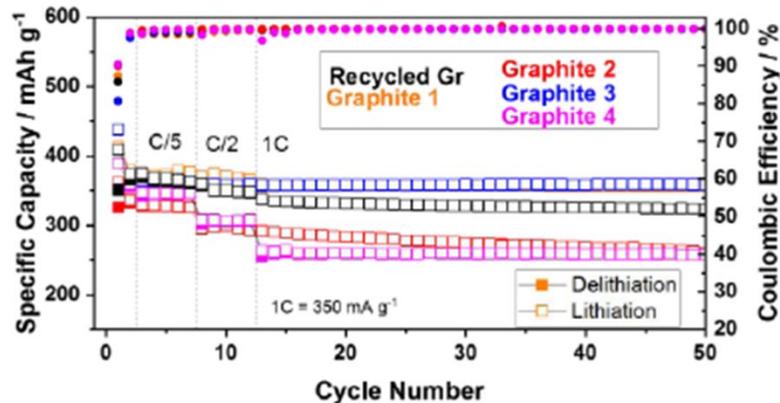


→ 99.95% C

HELMHOLTZ - INSTITUTE : EIT award winning German research program confirms RecoBAM™ matches the electrochemical performance of newly manufactured commercial battery graphite



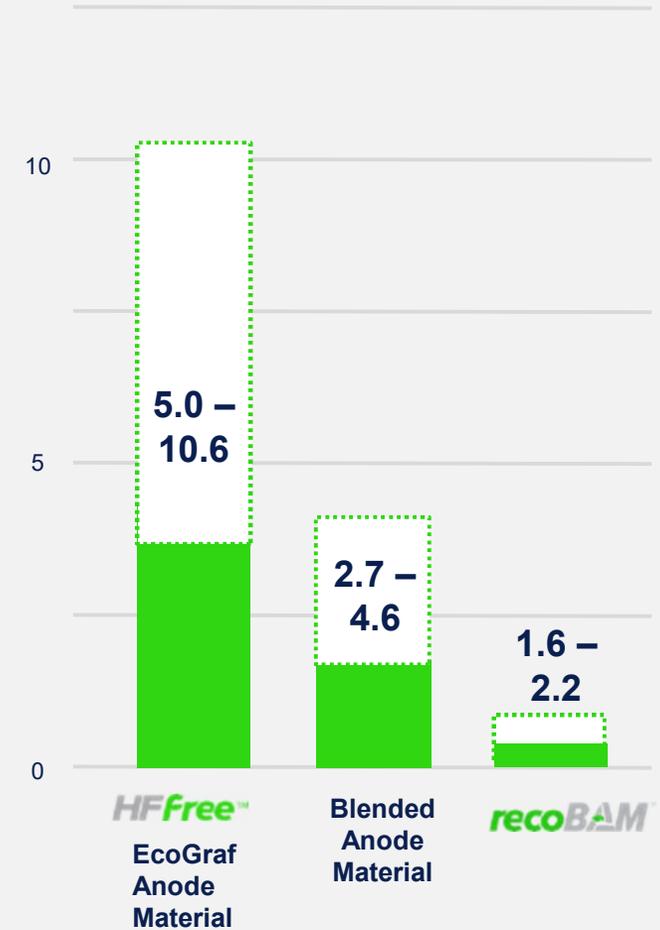
Blending (2:1) significantly lowers the CO₂



Electrode contains: **95% recycled graphite** (+3% SBR, 1% CMC, 1% C45)

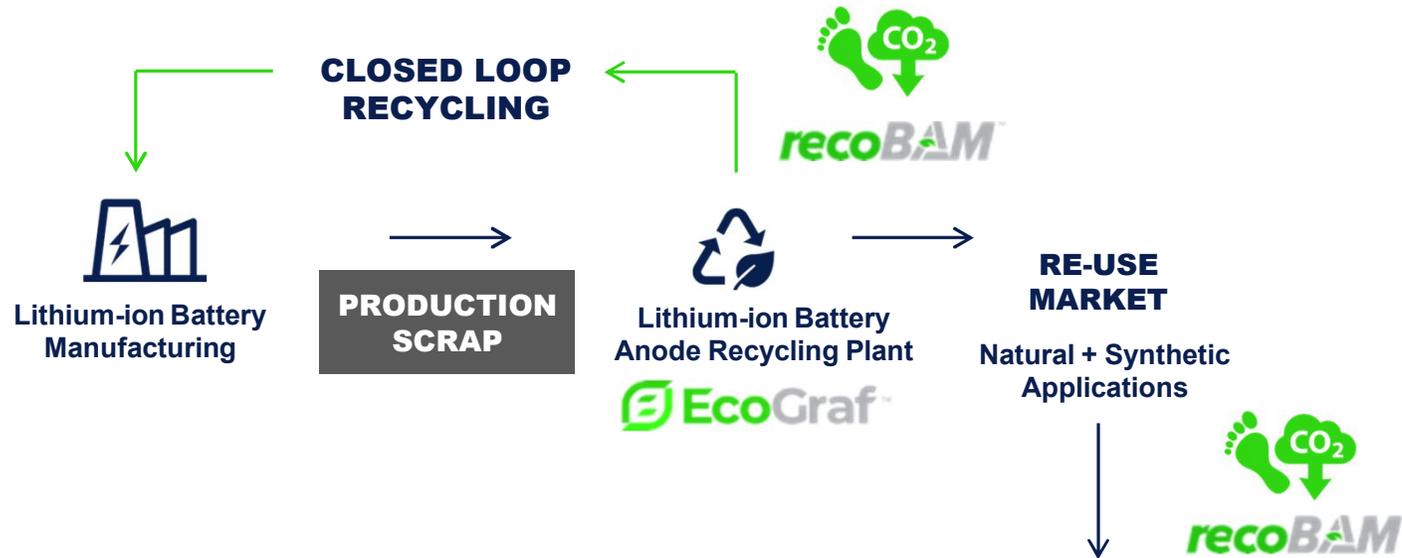
Olutogun *et al.* 2023

**Global Warming Potential
Kg CO₂ eq. per kg CSPG**



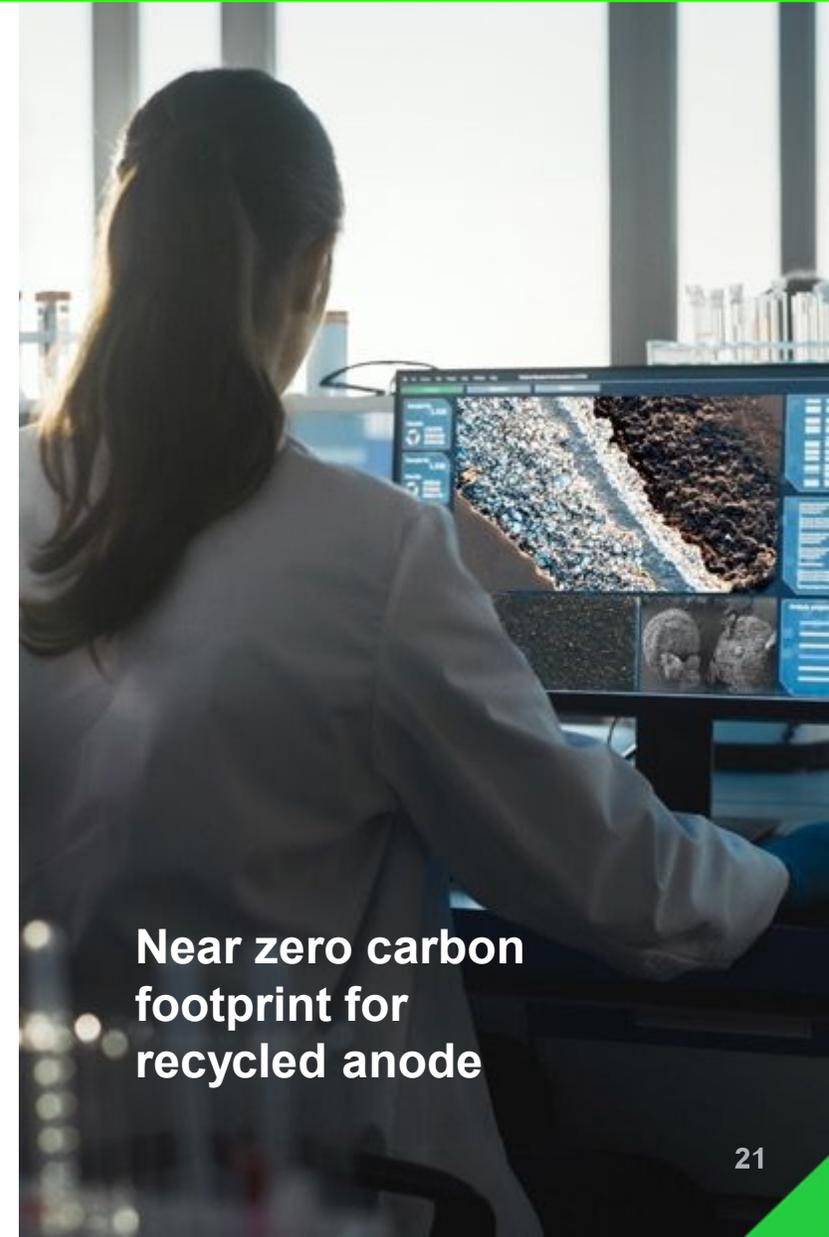
Pilot plant required for anode product qualification

RECYCLING ANODE MATERIAL SUPPORTS THE CIRCULAR ECONOMY



Natural	Synthetic	High Purity Industrial Markets
✓	✓	Alkaline and zinc carbon batteries
✓	-	Friction materials
✓	-	Refractories
-	✓	Carbon additives

FOCUS PRODUCT QUALIFICATION IN HIGH VALUE MARKETS



Near zero carbon footprint for recycled anode

Supported by long standing partnerships



Australian and German Government Support



Memberships and Affiliations



Integrated battery anode material business supporting the global transition to clean energy and e-mobility

- ✓ Over 8 years of technical work programs and extensive product qualification with a range of potential customers
- ✓ Bank due diligence processes undertaken with rigorous reviews of technical and engineering studies
- ✓ Product sales and collaboration with market leading counterparties
- ✓ Production levels matched to market demand with engineering designs to allow rapid expansion
- ✓ Sector leading ESG Credentials
- ✓ Downstream processing strategy centered on producing purified spherical graphite for a market forecast to grow 15x over the next decade
- ✓ Diversified battery anode materials business positioned to support recent EU legislative changes on sustainability and meet US IRA
- ✓ Lithium-ion battery recycling business provides the opportunity to lower battery production costs and reduce carbon emissions from EV manufacturing
- ✓ Anode recycling provides a unique eco-friendly product
- ✓ Strategy to expand production and regionalise additional facilities in Europe, Asia and the US to support increasing demand
- ✓ Planning initiated on purification plant in Europe
- ✓ On-going research and innovation to identify further value adding opportunities using the EcoGraf™ purification process
- ✓ US Patent and Patent submissions providing international protection in US, ASIA & EU

The future is electric

ASX: EGR FSE: FMK OTCQX: ECGFF

 **EcoGraf™**



[JOIN OUR MAILING LIST](#)

www.ecograf.com.au