EcoGraf Ltd.: Independent Study Confirms Highly Attractive Mechanical Shaping Opportunity

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Reduction in Operating Costs Driven by Low Energy Costs

EcoGraf Ltd. (EcoGraf or the Company) (ASX: EGR; FSE: FMK; OTCQX: ECGFF) is pleased to provide an update following the completion of its Tanzanian Mechanical Shaping Study to produce unpurified active anode material for the lithium-ion battery market.

Highlights

- Four locations for the initial development of a 20,000 tonne per annum processing facility producing unpurified spherical graphite (SPG) and fines from natural flake graphite were assessed.
- Study confirmed Operating cost savings of up to 50%[1] with similar Capital cost can be achieved by locating these activities in Tanzania, driven by substantially lower energy costs, the major cost component for milling and shaping.
- Tanzania is one of the worlds lowest cost jurisdictions for energy. TANESCO, Tanzania's Government owned electric utility, has installed capacity of over 1,700 MW with significant baseload provided from green renewable sources. Stage 1 of the 2,100 MW Julius Nyerere Hydro Project is due for completion in 2024.
- Recent Independent Life Cycle Assessment (LCA) confirms a ~20% reduction in CO_2 emissions during the shaping process by using Tanzania's cost-competitive hydro-energy.
- Tanzanian mechanical shaping supports optimised global logistics into Europe, Asia and North America with location footprint sought to support future expansion, enabling EcoGraf to expand in step with the anticipated strong growth in demand for active anode material.
- Investment incentivesTanzania's Export Processing Zones Authority (EPZA) include up to 10-year exemptions on corporate tax, local government taxes, VAT on utilities and exemptions on duties for capital equipment.
- Finalising preferred site based on securing development sites, customary regulatory approvals and EPZA incentives.

Mechanical micronising and shaping is the first step in the conversion of high quality flake graphite concentrate into battery grade anode material used in the production of lithium-ion batteries. Graphite concentrate of less than 150 microns is sized and then spheronised in a series of specialist milling machines to produce spheronised graphite to very tight physical specifications.

Extensive test work by EcoGraf has confirmed that Epanko concentrate achieves the precise physical specifications required by battery and EV manufacturers.

After mechanical shaping, the spherical graphite is then shipped to the global battery manufacturing hubs where the Company is evaluating to locate its patented purification technology in Europe, Asia and North America to produce active anode material.

Figure 1 - Micronising Mills

Locations

Four locations were assessed in Dar es Salaam, Kwala, Ifakara and Mahenge to provide a comparison across a range of development options.

In particular, the evaluation of alternative locations identified key advantages of future development sites in

both Dar es Salaam and Ifakara.

Dar es Salaam has well-developed infrastructure, including roads, highways, bridges, and rail connections. The Port of Dar es Salaam is the principal seaport in Tanzania and one of the busiest in East Africa. It serves as a vital gateway for international trade, handling a significant portion of Tanzania's imports and exports. The port facilitates the movement of goods and raw materials, providing logistical support to industries not only in Dar es Salaam but also in the surrounding regions.

Ifakara is located in the Kilombero District of the Morogoro Region on the banks of the Kilombero River. Ifakara serves as an important economic and administrative centre in the region and has excellent infrastructure with rail providing a direct link into the port of Dar es Salaam. The recently completed 220kV substation at Ifakara provides a robust connection point into the TANESCO grid.

The company is finalising the preferred site based on securing development sites, customary regulatory approvals and EPZA incentives.

Power - Green, Reliable and Cost Competitive

TANESCO has in excess of 1700 MW of installed generating capacity and is dominated by hydro and gas. As such it has a low carbon emissions footprint and TANESCO is investing in additional renewable energy with Stage 1 of the 2,100 MW Julius Nyerere Hydro Project due for completion in 2024.

As part of optimising EcoGraf's graphite supply chain to support both industrial and battery markets, Independent Life Cycle Assessment studies confirm there is a ~20% reduction in CO_2 emissions during the shaping process by using Tanzania's cost-competitive hydro-energy and the country's location provides an efficient logistics export-hub for global graphite markets.

Tanzania's electricity prices compare very favourably against OECD countries and is a key competitive advantage for locating energy intensive milling and shaping in Tanzania.

System reliability of the TANESCO network is high, particularly for industrial users.

Global Logistics Hub

In response to global legislation such as the Inflation Reduction Act in the USA and the EU Green deal, governments are seeking to secure and de-risk critical mineral supply chains. This includes avoiding concentration in supply through diversification and ensuring tight integration with local manufacturing.

Tanzania is well placed to service multiple global markets with its strong history as a stable country for mining investment. With the establishment of a mechanical shaping hub in Tanzania, EcoGraf can service multiple markets, taking advantage of Tanzania's strengths as a low cost, green energy jurisdiction.

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

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1: Relative to previous studies by EcoGraf on other global locations.

About EcoGraf

EcoGraf is building a vertically integrated battery anode materials business to produce high purity graphite products for the lithium-ion battery and advanced manufacturing markets. Over US$30 million has been invested to date to create a highly attractive graphite mining and mineral processing business.

In Tanzania, the Company is developing the TanzGraphite natural flake graphite business, commencing with the Epanko Graphite Project, to provide a long-term, scalable supply of feedstock for EcoGraf™ battery anode material processing facilities, together with high quality large flake graphite products for specialised industrial applications.

Using its environmentally superior EcoGraf HFfree™ purification technology, the Company will upgrade the flake graphite to produce 99.95%C high performance battery anode material to supply electric vehicle, battery and anode manufacturers in Asia, Europe and North America as the world transitions to clean, renewable energy.

Battery recycling is critical to improving supply chain sustainability and the Company's successful application of the EcoGraf™ purification process to recycle battery anode material provides it with a unique ability to support customers to reduce CO_2 emissions and lower battery costs.

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