

MARKET ANNOUNCEMENT

Lithium Energy to Pursue Downstream Graphite Processing Opportunity at Emerging Townsville Battery Hub

KEY HIGHLIGHTS

- Burke Graphite Deposit is one of the worlds highest-grade graphite deposits, with a JORC Inferred Mineral Resource Grade of 16% Total Graphitic Carbon (TGC), within which there is a higher-grade component of 2.3Mt @ 20.6% TGC.
- The Burke Deposit's high grade and low impurities make it particularly attractive for use in lithium-ion batteries.
- The Burke Deposit in Queensland is favourably located relative to the North Queensland Townsville Energy Chemicals Hub which is emerging as an important precinct for the production of critical materials for battery technologies in Australia
- Lithium Energy believes that the high-grade nature of the Burke Deposit, its location in Queensland and the prior test work indicating its suitability for use in lithium-ion batteries, affords the Company a highly advantageous position to expand the scope of its proposed graphite operations from that of a pure graphite miner.
- Lithium Energy believes there are significant advantages in creating an in-country vertically integrated operation that will encompass a mine, a concentrator and a downstream processing operation to produce Purified Spherical Graphite for sale to lithium-ion battery anode manufacturers.
- The demand for Purified Spherical Graphite as a battery mineral component is expected to grow significantly in step with the projected growth in use and applications for lithium-ion batteries, particularly in the electric vehicle sector where graphite is the largest component by weight in such batteries.
- Lithium Energy plans to now advance with studies to confirm the commercial viability of establishing a Purified Spherical Graphite manufacturing operation using its very high grade Burke Graphite as a feedstock material, to be potentially located at or near to the North Queensland Townsville Energy Chemicals Hub

Lithium Energy Limited (ASX:LEL) (**Lithium Energy** or the **Company**) is pleased to provide an update on proposed activities planned for its Burke Graphite Project (**Burke**) and the Burke tenement (**EPM 25443**), which contains a very high grade JORC Inferred Mineral Resource.

Lithium Energy is pleased to report that it has commenced investigations into the establishment of a dedicated, environmentally sustainable manufacturing facility to purify and spheronise graphite sourced from its high-grade Burke Graphite deposit in Queensland, for use as anode material in lithium-ion batteries.



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VALUE DRIVERS FOR A LITHIUM ENERGY PROCESSING FACILITY

Lithium Energy believes the creation of a value adding processing facility using its Burke Graphite Deposit as a feedstock affords a number of potential advantages including:

- The initial high starting grade of the Burke Deposit being one of the highest-grade graphite deposits in the world together with its low level of impurities affords savings in mining and processing costs
- The location of the Burke Deposit in Queensland affords transport savings compared with manufacturing operations that are required to import graphite as a bulk commodity from overseas mines
- Test work undertaken by CSIRO has been highly encouraging of the suitability of Burke Graphite for use in lithium-ion batteries.¹ The Company continues to work with CSIRO to test and optimise the processes used for purification and spheronisation of its Burke Graphite which works will flow into and help finalise processing plant design.²
- By investing in a manufacturing facility to undertake the purification and spheronisation required to produce battery-grade anode material, Lithium Energy will potentially tap into significantly greater market with a higher value-added sale price than just the production of unpurified graphite concentrate
- Lithium Energy will adopt best practice manufacturing technologies for the concentration and refinement of its graphite using environmentally sustainable manufacturing processes compared with highly toxic chemical processes currently used in China.
- Lithium Energy will seek to be one of a limited number manufacturers of Purified Spherical Graphite (PSG) outside of China in circumstances where PSG is currently a near Chinese monopoly product
- The Burke Graphite Deposit is located in the Cloncurry region of North Central Queensland, adjacent to the Mt Dromedary graphite deposit held by Novonix Limited (ASX: NVX).

DEMAND FOR PURIFIED SPHERONISED GRAPHITE

The demand for Purified Spherical Graphite (PSG) for use in lithium-ion batteries is expected to increase ten-fold over the next decade, as the world rapidly moves towards the electrification of mobility and renewable grid storage.

Graphite is a critical component of today's lithium-ion batteries – in fact, there is typically ten times by weight more graphite in a lithium-ion battery than lithium. Most of the world's supply of battery grade purified graphite for use as anode material in Electric Vehicle (**EV**) batteries is sourced from China. The technology currently used in China for purification uses highly toxic chemicals which are dangerous to handle and environmentally damaging.

Battery manufacturers are therefore increasingly seeking alternative sources for graphite. Australia is well positioned to meet this demand, with strong technical capabilities together with a range of Government funded initiatives such as the Future Battery Industries Cooperative Research Centre (CRC) which actively support the value enhancement of local critical minerals, including graphite.

1 Refer Strike Resources Limited (ASX:SRK) ASX Announcement dated 16 October 2017: Test-work confirms the potential suitability of Burke graphite for Lithium-ion battery usage and Graphene production

2 Refer LEL ASX Market Announcement dated 27 September 2021: High Grade Burke Graphite to be Optimised for Lithium Battery Application

THE BURKE GRAPHITE DEPOSIT

The Burke Graphite Deposit is located in the Cloncurry region of North Central Queensland, adjacent to the Mt Dromedary graphite deposit held by Novonix Limited (ASX: NVX).

Whilst the final location for Lithium Energy’s manufacturing facility is still to be determined, the close proximity of the Burke Graphite Project to Townsville is fortuitous in that Townsville is set to become a focus of Australian battery manufacture with the recently announced Townsville Energy Chemicals Hub (TECH) being considered as a centre for refining ore for battery production.

The Burke Graphite Deposit has defined an Inferred Mineral Resource as follows:

- **6.3 million tonnes @ 16.0% TGC** (with a TGC cut-off grade of 5%) for **1,000,000 tonnes** of contained graphite;
- Within the mineralisation envelope there is included higher grade material of **2.3 million tonnes @ 20.6% TGC** (with a TGC cut-off grade of 18%) for **464,000 tonnes** of contained graphite which will be investigated further

Mineral Resource Category	Weathering State	Mt	TGC (%)	Contained Graphite (Mt)	Density (t/m)
Inferred Mineral Resource	Oxide	0.5	14.0	0.1	2.5
	Fresh	5.8	16.2	0.9	2.4
	Total Oxide + Fresh	6.3	16.0	1.0	2.4

Note: The Mineral Resource was estimated within constraining wireframe solids defined above a nominal 5% TGC cut-off. The Mineral Resource is reported from all blocks within these wireframe solids. Differences may occur due to rounding.

Refer Grade Tonnage Data in Table 2 of CSA Global Pty Ltd’s Burke Graphite Project MRE Technical Summary dated 9 November 2017 (attached as Annexure A of Strike’s ASX Announcement dated 13 November 2017: Maiden Mineral Resource Estimate Confirms Burke Project as One of the World’s Highest Grade Natural Graphite Deposits

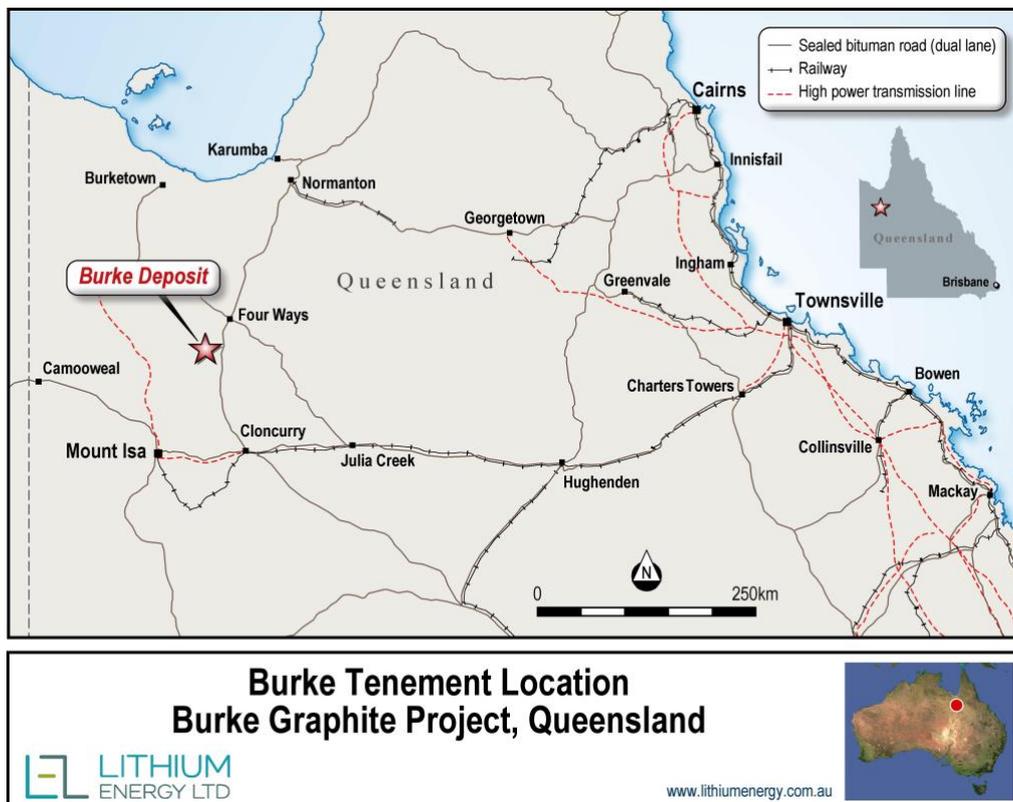


Figure 1: Burke Graphite Deposit Locations in North Central Queensland

NEXT MAJOR STEPS

Lithium Energy plans to now advance with a number of studies to confirm the commercial viability of establishing a Purified Spherical Graphite manufacturing operation, using its very high-grade Burke Graphite as a feedstock material.

As these studies advance, Lithium Energy envisages a potential pathway to production encompassing:

- Appointment of lead engineering company(ies) to assist with project studies;
- Finalisation of facility location;
- Completion of current CSIRO test work and the engagement with regional Government agencies which may provide financial and technical support for such an initiative;
- Finalisation of process flow sheet upon completion of test work and selection of underlying processing methodology;
- Upgrading current JORC Mineral Resource to an Ore Reserve status;
- Conversion of the Burke tenement to a Mining Lease;
- Construction of Pilot Plant;
- Initial Production from Burke Deposit to Pilot Plant;
- Finalisation of Plant Design based upon Pilot Plant data;
- Finalisation of Processing Plant Design;
- Completion of all required studies and permitting; and
- Receipt of Project Finance and Final Investment Decision.

AUTHORISED FOR RELEASE - FOR FURTHER INFORMATION:

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ABOUT LITHIUM ENERGY LIMITED (ASX:LEL)

Lithium Energy Limited is an ASX listed battery minerals company which is developing its flagship Solaroz Lithium Brine Project in Argentina and the Burke Graphite Project in Queensland. The Solaroz Lithium Project (LEL:90%) comprises 12,000 hectares of highly prospective lithium mineral tenements located strategically within the Salar de Olaroz Basin in South America's "Lithium Triangle" in north-west Argentina. The Solaroz Lithium Project is directly adjacent to or principally surrounded by mineral tenements being developed into production by Orocobre Limited (ASX/TSX:ORE) and Lithium Americas Corporation (TSX/NYSE:LAC). The Burke Graphite Project (LEL:100%) contains a high grade graphite deposit and presents an opportunity to participate in the anticipated growth in demand for graphite and graphite related products. LEL was spun out of Strike Resources Limited (ASX:SRK) via a \$9 million IPO; Strike remains a major (43%) shareholder of the Company.

JORC CODE COMPETENT PERSON'S STATEMENTS

Some of the Competent Persons named below have been previously engaged by Strike Resources Limited (ASX:SRK) (**Strike**), the former parent company of Lithium Energy Limited (and subsidiaries) that hold the interests in the Burke Graphite Project. Lithium Energy Limited was spun out of Strike into a new ASX listing in May 2021.

(a) The information in this document that relates to Mineral Resources in relation to the Burke Graphite Project is extracted from the following ASX market announcement made by Strike dated:

- 13 November 2017 entitled "Maiden Mineral Resource Estimate Confirms Burke Project as One of the World's Highest-Grade Natural Graphite Deposits".

The information in the original announcement (including the CSA Global MRE Technical Summary in Annexure A) that relates to these Mineral Resources is based on information compiled by Mr Grant Louw under the direction and supervision of Dr Andrew Scogings. Dr Scogings takes overall responsibility for this information. Dr Scogings and Mr Louw are both former employees of CSA Global Pty Ltd, who had been engaged by Strike to provide mineral resource estimate services. Dr Scogings is a Member of AIG and the Australasian Institute of Mining and Metallurgy (**AusIMM**) 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 JORC Code. The Company confirms that it is not aware of any new information or data that materially affects the information included in the original market announcement (referred to above). The Company confirms that the form and context in which the Competent Person's findings are presented have not been materially modified from the original market announcement (referred to above).

(b) The information in this document that relates to metallurgical test work results in relation to the Burke Graphite Project is extracted from the following ASX market announcements made by Strike dated:

- 16 October 2017 entitled "Test-work confirms the potential suitability of Burke graphite for lithium-ion battery usage and Graphene production".
- 13 November 2017 entitled "Maiden Mineral Resource Estimate Confirms Burke Project as One of the World's Highest-Grade Natural Graphite Deposits".

The information in the original announcements that relates to these metallurgical test work matters is based on, and fairly represents, information and supporting documentation prepared by Mr Peter Adamini, BSc (Mineral Science and Chemistry), who is a Member of AusIMM. Mr Adamini is a full-time employee of Independent Metallurgical Operations Pty Ltd, who had been engaged by Strike to provide metallurgical consulting services. Mr Adamini 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 JORC Code (2012). The Company confirms that it is not aware of any new information or data that materially affects the information included in the original market announcements (referred to above). The Company confirms that the form and context in which the Competent Person's findings are presented have not been materially modified from the original market announcements (referred to above).

(c) The information in this document that relates to Exploration Results in relation to the Burke Graphite Project is extracted from the following ASX market announcements released by:

(i) Lithium Energy dated:

- 27 September 2021 entitled "High Grade Burke Graphite to be Optimised for Lithium Battery Application"
- 9 July 2021 entitled "Graphene from Burke Graphite Project Opens Up Significant Lithium-Ion Battery Opportunity".

(ii) Strike dated:

- 21 April 2017 entitled "Jumbo Flake Graphite Confirmed at Burke Graphite Project, Queensland".
- 13 June 2017 entitled "Extended Intersections of High-Grade Graphite Encountered at Burke Graphite Project".
- 21 June 2017 entitled "Further High-Grade Intersection Encountered at Burke Graphite Project".
- 16 October 2017 entitled "Test-work confirms the potential suitability of Burke graphite for lithium-ion battery usage and Graphene production".

- 13 November 2017 entitled “Maiden Mineral Resource Estimate Confirms Burke Project as One of the World’s Highest-Grade Natural Graphite Deposits”.
- 26 June 2018 entitled “Burke Graphite Project – New Target Area Identified from Ground Electro-Magnetic Surveys”.

The information in the original announcements is based on, and fairly represents, information and supporting documentation prepared and compiled by Mr Peter Smith (BSc (Geophysics) (Sydney) AIG ASEG). Mr Smith is a Member of AIG, a consultant to Strike and also a Director of the Company (since 18 March 2021). Mr Smith 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 JORC Code (2012). The Company confirms that it is not aware of any new information or data that materially affects the information included in the original market announcements (referred to above). The Company confirms that the form and context in which the Competent Person’s findings are presented have not been materially modified from the original market announcements (referred to above).

FORWARD LOOKING STATEMENTS

This document contains “forward-looking statements” and “forward-looking information”, including statements and forecasts which include without limitation, expectations regarding future performance, costs, production levels or rates, mineral reserves and resources, the financial position of the Company, industry growth and other trend projections. Often, but not always, forward-looking information can be identified by the use of words such as “plans”, “expects”, “is expected”, “is expecting”, “budget”, “scheduled”, “estimates”, “forecasts”, “intends”, “anticipates”, or “believes”, or variations (including negative variations) of such words and phrases, or state that certain actions, events or results “may”, “could”, “would”, “might”, or “will” be taken, occur or be achieved. Such information is based on assumptions and judgements of management regarding future events and results. The purpose of forward-looking information is to provide the audience with information about management’s expectations and plans. Readers are cautioned that forward-looking information involves known and unknown risks, uncertainties and other factors which may cause the actual results, performance or achievements of the Company and/or its subsidiaries to be materially different from any future results, performance or achievements expressed or implied by the forward-looking information. Such factors include, among others, changes in market conditions, future prices of minerals/commodities, the actual results of current production, development and/or exploration activities, changes in project parameters as plans continue to be refined, variations in grade or recovery rates, plant and/or equipment failure and the possibility of cost overruns.

Forward-looking information and statements are based on the reasonable assumptions, estimates, analysis and opinions of management made in light of its experience and its perception of trends, current conditions and expected developments, as well as other factors that management believes to be relevant and reasonable in the circumstances at the date such statements are made, but which may prove to be incorrect. The Company believes that the assumptions and expectations reflected in such forward-looking statements and information are reasonable. Readers are cautioned that the foregoing list is not exhaustive of all factors and assumptions which may have been used. The Company does not undertake to update any forward-looking information or statements, except in accordance with applicable securities laws.