Friday, 2 December 2022 ASX Code : LEL

MARKET ANNOUNCEMENT

Resource Development Drilling Underway at Burke Graphite Project

SUMMARY

- Drilling has commenced at the Burke Graphite Project in North Central Queensland, with the objective to upgrade the (**6.3Mt @ 16.0% TGC**) Burke Deposit from a JORC Inferred Mineral Resource to a higher standard Indicated Mineral Resource category.
- DDH1 Drilling has commenced a drilling programme at the Burke Tenement (EPM 25443), comprising 20 RC (totalling ~2,000 metres) and 6 diamond core (metallurgical and geotechnical) (totalling ~600 metres) holes.
- Core samples will also provide graphite material for further metallurgical and anode optimisation test work, to support metallurgical flowsheet and Purified Spherical Graphite (PSG) development.
- Results from the drilling and testwork programme will be used to support an Engineering Study for an anode manufacturing facility based in Queensland, to produce high value PSG material for use in lithium-ion batteries.
- Drilling (~2,200 metres) is planned at the Corella Tenement (EPM 25696), on completion of the Burke Tenement drilling programme, to test the extent of graphite mineralisation identified through previously conducted sampling and EM surveys.

Lithium Energy Limited (ASX:LEL) (**Lithium Energy** or the **Company**) is pleased to provide an exploration update in relation to its highly prospective 100%-owned Burke Graphite Project located in Queensland, Australia (**Burke Project**).

The Company has commenced a drilling programme at the Burke Tenement (EPM 25443), with the objective to upgrade the Burke Deposit from a JORC Inferred Mineral Resource to a higher standard JORC Indicated Mineral Resource category. The drilling programme will comprise a combination of reverse circulation (**RC**), diamond core and geotechnical holes totalling ~2,000 metres across ~20 RC holes, to a maximum depth of ~110 metres and ~600 metres across 6 Diamond holes, to maximum depths of ~120 metres.

The Diamond holes have been planned to provide a sufficient representative core sample of the Burke Deposit, which will form the basis of an extensive metallurgical and Purified Spherical Graphite (**PSG**) testwork and development programme, to support a planned Engineering Study for the Burke Project.

Lithium Energy has also received all environmental and Heritage and Cultural permits and approvals to undertake a drilling programme at the Corella Tenement (EPM 25696), which will test the extent of graphite mineralisation identified through the previously conducted Electro Magnetic (**EM**) surveys.

A ~2,000 metre RC and ~200 metre Diamond drilling programme at Corella is expected to commence following the completion of drilling at the Burke Tenement.

Burke Tenement Drilling Programme

Lithium Energy is undertaking a drilling programme comprising a combination of RC, diamond core and geotechnical holes (of ~2,600 metres across ~26 holes, to a depth of ~120 metres), with the objective to upgrade part of the JORC Inferred Mineral Resource at its Burke Tenement to a higher JORC Indicated Mineral Resource category.

The Burke Deposit currently has a 6.3Mt 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.[1]

The drilling programme will also be used to obtain representative samples of graphite for flowsheet optimisation metallurgical testwork, which will also provide graphite flake concentrate for further anode development testwork.

The upgrade in the resource classification of the Burke Tenement and the metallurgical and PSG optimisation testwork is required to support a planned Engineering Study on the viability of establishing a PSG Anode manufacturing facility, using high-grade Burke Graphite as feedstock material.

DDH1 Drilling has been contracted to undertake the drilling programme at the Burke Tenement. Established in 2006, DDH1 Drilling is a leading provider of drilling services to the Australian mineral exploration and mining industry (www.DDH1drilling.com.au).

The drilling programme, subject to weather events, is expected to be completed in January 2023.

Corella Tenement Drilling Programme

In addition to the drilling on the Burke Tenement, Lithium Energy has planned a drilling programme at the Corella Tenement located ~30km west of Cloncurry (and ~150km south of the Burke Tenement), to test the extent of graphite mineralisation (identified through previous sampling and EM surveys) with the objective of delineating a maiden JORC Inferred Mineral Resource.

All Heritage and Cultural approvals and access permits have now been received and the drilling programme is expected to commence following the completion of drilling (using the same DDH1 drill rig) at the Burke Tenement. Approximately 2,000 metres of RC drilling and ~200 metres of Diamond drilling is planned, which will provide assays and samples for supporting resource development and metallurgical testwork.

A ground Electro Magnetic (**EM**) survey and surface sampling programme (that indicated multiple occurrences of high grade graphite of up to 14.8% TGC) in the north-east corner of the Corella Tenement (refer Figure 1) identified the potential for significant graphite mineralisation.[2]

The Corella Tenement EM survey was carried out over outcropping and sub-cropping Geological Survey of Queensland mapped Graphitic Schists - the “Milo beds” - within the Corella Formation. Graphite grading 5 - 10% TGC is widespread throughout the outcropping Milo beds and the EM survey was carried out to identify higher-grade areas of mineralisation and identify future drill targets. The survey highlighted an area of approximately 1000m x 500m (refer Figure 1) within which conductive features similar to those corresponding to high-grade graphite occurring at the Burke Tenement were identified.

1 Refer Strike Resources Limited (ASX:SRK) ASX Announcement dated 13 November 2017: Maiden Mineral Resource Estimate Confirms Burke Project as One of the World’s Highest-Grade Natural Graphite Deposits

2 Refer SRK ASX Announcement dated 26 June 2018: Burke Graphite Project – New Target Area Identified from Ground Electro-Magnetic Surveys

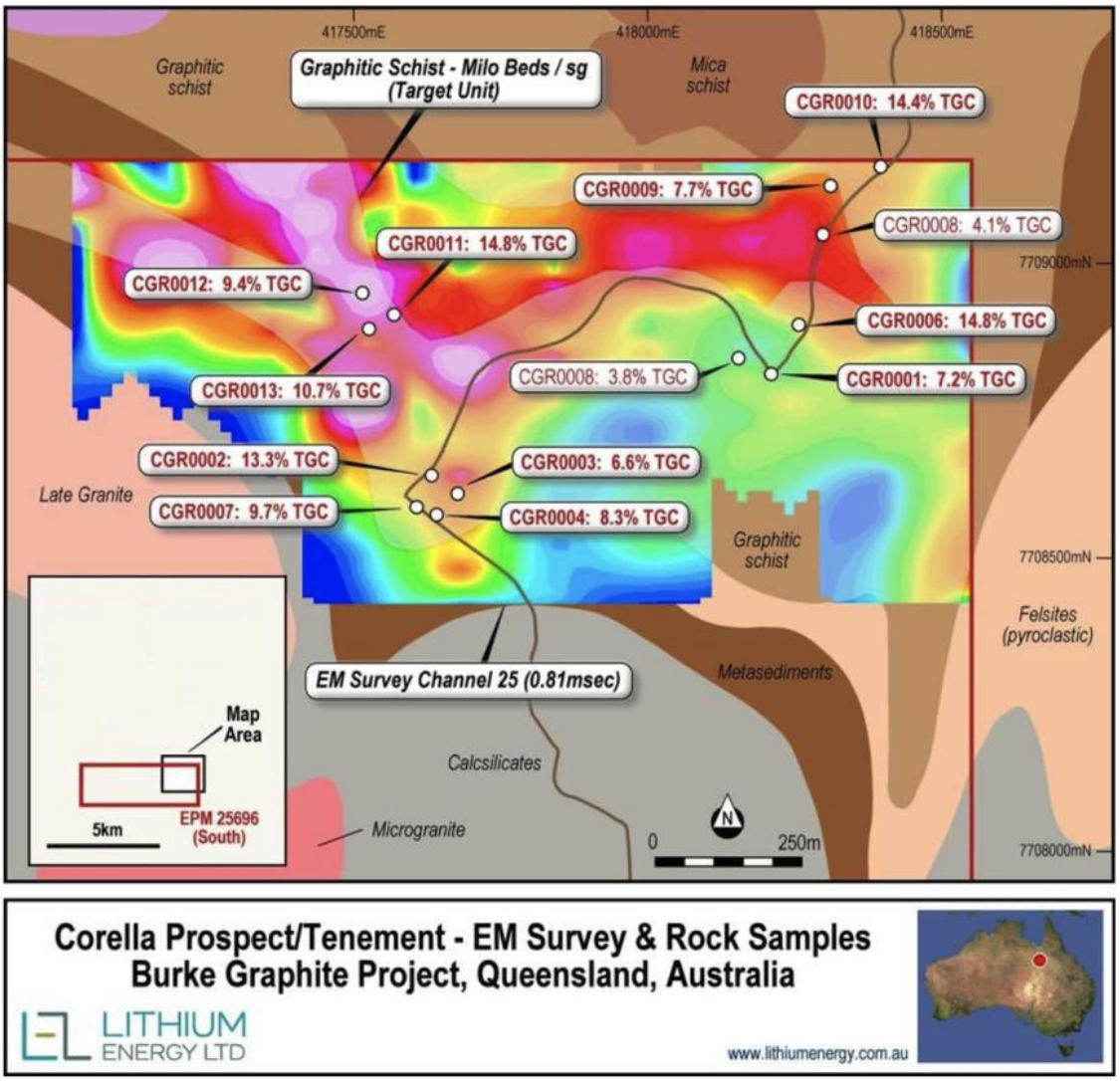

Figure 1 - EM Survey - Corella Prospect, Burke Graphite Project

The conductive features identified at the Corella Tenement appear to be shallow to flat-lying and occur in areas of outcropping and sub-cropping graphite that have rock chips of up to 14.85% TGC[3].

Subject to the Queensland wet season and completion of drilling at the Burke Tenement, the Corella drilling programme is expected to be completed in Q1 of 2023.

Burke Graphite Project Background

The Burke Graphite Project comprises two granted Exploration Permits for Minerals (**EPM**) totalling approximately 26 square kilometres located in the Cloncurry region in North Central Queensland, where there is access to well-developed transport infrastructure to an airport at Mt Isa (~122km) and a port in Townsville (~783km) (refer Figure 2).

The Burke EPM 25443 tenement (**Burke Tenement**) is located 125km north of Cloncurry adjacent to the Mt Dromedary Graphite Project held by Novonix Limited (ASX: NVX). The Corella EPM 25696 tenement (**Corella Tenement**) is located 40km west of Cloncurry near the Flinders Highway that links Mt Isa to Townsville.

3 Refer SRK ASX announcement dated 21 April 2017: Jumbo Flake Graphite Confirmed at Burke Graphite Project, Queensland

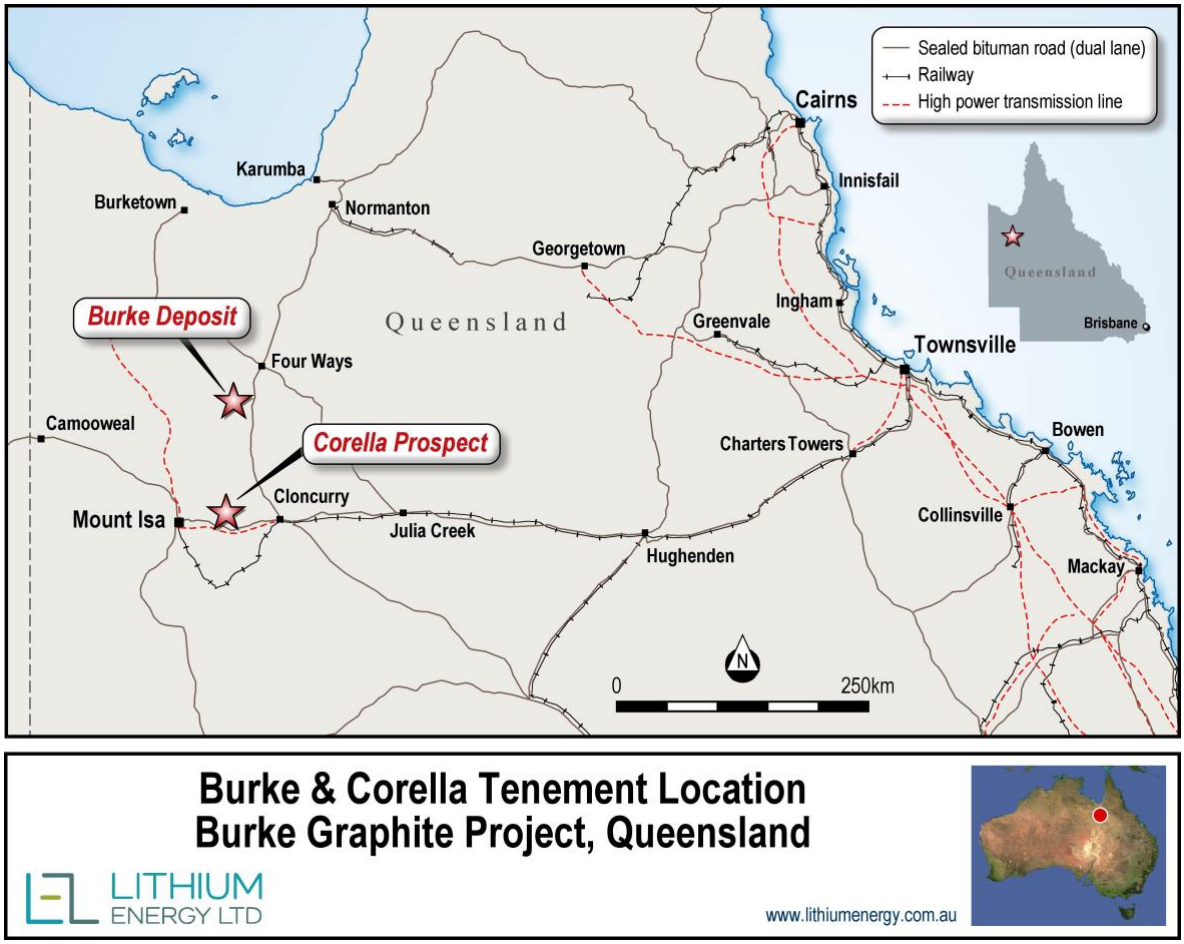

Figure 2: Burke Graphite Project Tenement Locations in North Central Queensland

Burke Deposit

A Mineral Resource Estimate (**MRE**) for the Burke Tenement has defined a maiden Inferred Mineral Resource (**Burke Deposit**) of:

- **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

The Burke Deposit presents the opportunity for Lithium Energy to participate in the anticipated growth in demand for graphite and graphite related products particularly with respect to the production of Lithium-ion batteries where graphite is the largest single component by weight.

In addition to the high-grade nature of the deposit, the Burke Deposit:

- Comprises natural graphite that has been demonstrated to be able to be processed by standard flotation technology to international benchmark product categories. The flotation tests previously conducted have confirmed that a concentrate of purity **in excess of 95% and up to 99% TGC** can be produced using a standard flotation process.[4]
- Contains graphite from which Graphene Nano Platelets (**GNP**) have been successfully extracted direct from the Burke Deposit via Electrochemical Exfoliation (**ECE**).[15] The ECE process is relatively low cost and environmentally friendly compared to other processes, yet it can produce very high purity Graphene products. The ECE process is however not applicable to the vast majority of worldwide graphite deposits as it requires a TGC of over 20% and accordingly the Burke Deposit has potentially significant processing advantages over other graphite deposits.
- Is located in the relatively safe and mining friendly jurisdiction of Queensland, Australia with well-developed transport infrastructure and logistics nearby.
- Is favourably located relative to the Lansdown Eco-Industrial Precinct near Townsville in North Queensland, which is emerging as an important precinct for the production of critical materials for battery technologies in Australia.
- Is potentially amenable to low-cost open-pit mining.

Potential Value Adding Processing Facility

Lithium Energy believes that:

- The high-grade nature of the Burke Deposit, its location in Queensland (including relative to the Lansdown Eco-Industrial precinct near Townsville) and the prior test work indicating its potential 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.
- 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 (**PSG**) for sale to lithium-ion battery anode manufacturers.

Accordingly, Lithium Energy is investigating the establishment of a dedicated, environmentally sustainable manufacturing facility potentially within the 22,000-hectare Lansdown Eco-Industrial precinct located 40 kilometres south of Townsville (where Queensland Pacific Minerals is also proposing to construct the Townsville Energy Chemicals Hub (TECH) Project) to purify and spheronise graphite sourced from the Burke Deposit for use as anode material in lithium-ion batteries.[5]

AUTHORISED FOR RELEASE - FOR FURTHER INFORMATION:

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4 Refer SRK ASX Announcement dated 16 October 2017: Test-work confirms the potential suitability of Burke graphite for Lithium-ion battery usage and Graphene production

5 Refer LEL ASX Market Announcement dated 21 October 2021: Lithium Energy to Pursue Downstream Graphite Processing Opportunity at Emerging Townsville Battery Hub

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 concessions 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 concessions being developed into production by Allkem Limited (ASX/TSX:AKE) 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.

JORC CODE (2012) COMPETENT PERSON STATEMENTS

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. 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 the requisite 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 the requisite 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 Lithium Energy, 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 Lithium Energy 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. Lithium Energy 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. Lithium Energy does not undertake to update any forward-looking information or statements, except in accordance with applicable securities laws.