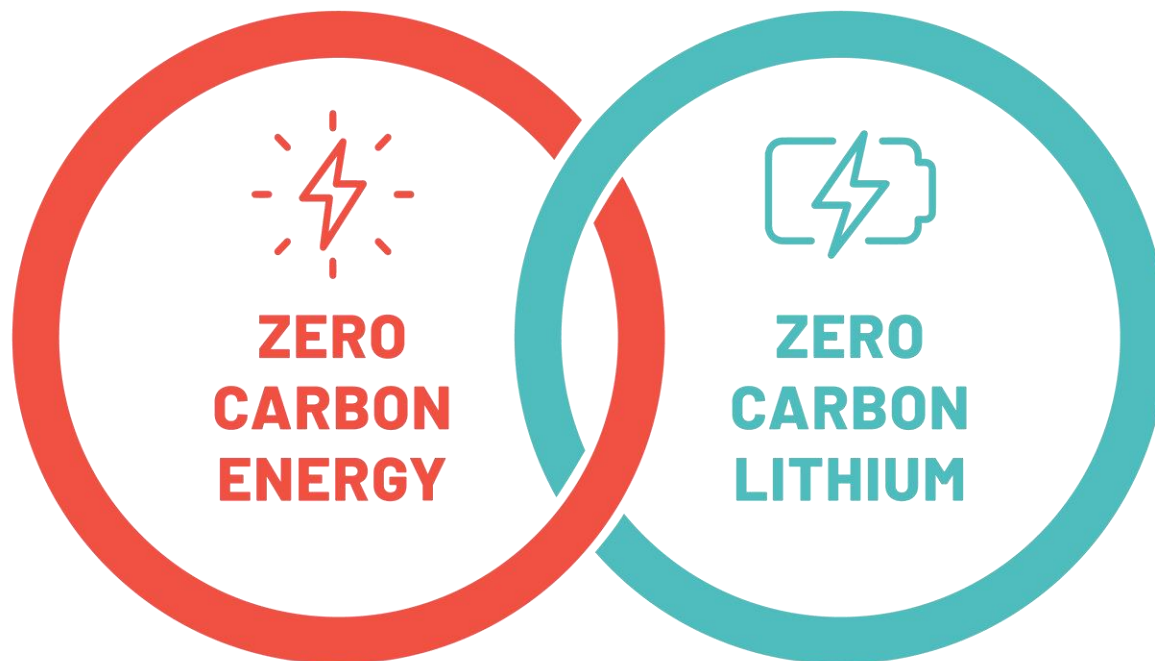




**VULCAN ENERGY**  
**ZERO CARBON LITHIUM™**



# Disclaimer

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- fully underwritten placement of new fully paid ordinary shares in Vulcan ("**New Shares**") to certain eligible institutional investors ("**Placement**"); and
- offer to eligible Vulcan shareholders to apply for New Shares under a share purchase plan ("**SPP**"), as further described in this Presentation.

Together, the Placement and SPP are referred to as the "**Offer**".

Vulcan reserves the right to withdraw the Placement or the SPP (or both), or to vary the timetable for the Placement or SPP (or both), without notice. The SPP is not underwritten, and will be conducted in accordance with ASIC Corporations (Share and Interest Purchase Plans) Instrument 2019/547.

## Summary Information

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In addition, prospective investors should be aware that financial data in this Presentation includes "non-IFRS financial information" under ASIC Regulatory Guide 230 "Disclosing non-IFRS financial information" published by ASIC and also "non-GAAP financial measures" within the meaning of Regulation G under the U.S. Securities Exchange Act of 1934.

The non-IFRS financial measures do not have standardised meanings prescribed by Australian Accounting Standards and, therefore, may not be comparable to similarly titled measures presented by other entities, nor should they be construed as an alternative to other financial measures determined in accordance with Australian Accounting Standards. Although Vulcan believes the non-IFRS financial information (and non-IFRS financial measures) provide useful information to readers of this Presentation, readers are cautioned not to place undue reliance on any non-IFRS financial information (or non-IFRS financial measures).

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## Forward-looking statements

This Presentation may contain certain forward-looking statements. Often, but not always, forward-looking statements can be identified by the use of forward looking words such as "may", "will", "expect", "intend", "plan", "estimate", "target", "propose", "anticipate", "continue", "outlook" and "guidance", or other similar words. Such forward-looking statements may include, but are not limited to, statements regarding: the proposed use of proceeds from the Offer; the outcome and effects of the Offer; estimated mineral resources and ore reserves; expected future demand for lithium products; planned production and operating costs; planned capital requirements; planned strategies and corporate objectives; and expected construction and production commencement dates.

By their nature, forward-looking statements involve inherently involve known and unknown risks, uncertainties and other factors that may cause actual results, performance and achievements to be materially greater or less than estimated, including those generally associated with the lithium industry and/or resources exploration companies (refer to the "Risk factors" section of this Presentation in Appendix 7).

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These factors may include, but are not limited to, changes in commodity and renewable energy prices, foreign exchange fluctuations and general economic conditions, increased costs and demand for production inputs, the speculative nature of exploration and project development (including the risks of obtaining necessary licenses and permits and diminishing quantities or grades of reserves), political and social risks, changes to the regulatory framework within which Vulcan operates or may in the future operate, environmental conditions including climate change and extreme weather conditions, geological and geotechnical events, environmental issues, the recruitment and retention of key personnel, industrial relations issues and litigation.

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### Ore Reserves and Mineral Resources Reporting

It is a requirement of the ASX Listing Rules that the reporting of ore reserves and mineral resources in Australia comply with the Joint Ore Reserves Committee's Australasian Code for Reporting of Mineral Resources and Ore Reserves ("**JORC Code**"). Investors outside Australia should note that while ore reserve and mineral resource estimates of the Company in this document comply with the JORC Code (such JORC Code-compliant ore reserves and mineral resources being "**Ore Reserves**" and "**Mineral Resources**" respectively), they may not comply with the relevant guidelines in other countries and, in particular, do not comply with (i) National Instrument 43-101 (Standards of Disclosure for Mineral Projects) of the Canadian Securities Administrators (the "**Canadian NI 43-101 Standards**"); or (ii) Industry Guide 7, which governs disclosures of mineral reserves in registration statements filed with the US Securities and Exchange Commission ("**SEC**").

Information contained in this Presentation describing mineral deposits may not be comparable to similar information made public by companies subject to the reporting and disclosure requirements of Canadian or US securities laws. In particular, Industry Guide 7 does not recognise classifications other than proven and probable reserves and, as a result, the SEC generally does not permit mining companies to disclose their mineral resources in SEC filings. You should not assume that quantities reported as "resources" will be converted to reserves under the JORC Code or any other reporting regime, or that the Company will be able to legally and economically extract any such resources.

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## Disclaimer

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### Disclosure

Each Joint Lead Manager, together with its respective affiliates and related bodies corporate, is a full service financial institution engaged in various activities, which may include trading, financing, financial advisory, investment management, investment research, principal investment, hedging, market making, margin lending, brokerage and other financial and non-financial activities and services including for which they have received or may receive customary fees and expenses. Each Joint Lead Manager (and/or its respective affiliates and related bodies corporate) have performed, and may perform, other financial or advisory services for Vulcan, and/or may have other interests in or relationships with Vulcan, and its related entities or other entities mentioned in this Presentation for which they have received or may receive customary fees and expenses.

In the ordinary course of its various business activities, each Joint Lead Manager (and/or its respective affiliates and related bodies corporate) may purchase, sell or hold a broad array of investments and actively trade or effect transactions in equity, debt and other securities, derivatives, loans, commodities, currencies, credit default swaps and/or other financial instruments for their own account and for the accounts of their customers, and such investment and trading activities may involve or relate to assets, securities and/ or instruments of Vulcan, its related entities and/or persons and entities with relationships with Vulcan and/or its related entities. Each Joint Lead Manager and/or its respective affiliates and related bodies corporate, or their respective officers, employees, consultants or agents may, from time to time, have long or short positions in, buy or sell (on a principal basis or otherwise), and may act as market makers in, the securities or derivatives, or serve as a director of any entities mentioned in this Presentation. Each Joint Lead Manager (and/or its respective affiliates and related bodies corporate) currently hold, and may continue to hold, equity, debt and/or related derivative securities of Vulcan and/or its related entities.

In connection with the Placement bookbuild, one or more investors may elect to acquire an economic interest in the New Shares ("**Economic Interest**"), instead of subscribing for or acquiring the legal or beneficial interest in those shares. The Joint Lead Managers (or their respective affiliates) may, for their own account, write derivative transactions with those investors relating to the New Shares to provide the Economic Interest, or otherwise acquire shares in Vulcan in connection with the writing of such derivative transactions in the Placement bookbuild and/or the secondary market. As a result of such transactions, the Joint Lead Managers (or their respective affiliates) may be allocated, subscribe for or acquire New Shares or shares of Vulcan in the Placement bookbuild and/or the secondary market, including to hedge those derivative transactions, as well as hold long or short positions in such shares. These transactions may, together with other shares in Vulcan acquired by the Joint Lead Managers or their respective affiliates in connection with their ordinary course sales and trading, principal investing and other activities, result in the Joint Lead Managers or their respective affiliates disclosing a substantial holding and earning fees.

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# Investment highlights



Goal to become world's first Zero Carbon Lithium™ Company<sup>1</sup>

- Planned co-generation of geothermal energy to power lithium extraction, without the use of fossil fuels, mining or evaporation ponds, to create a unique Zero Carbon Lithium™ Project
- Proposed dual revenue streams from renewable energy business (74MW) and lithium production business (40ktpa lithium hydroxide)<sup>2</sup>



Robust & resilient PFS economics and largest JORC lithium Resource in Europe<sup>6</sup>

- Geothermal powered lithium extraction presents opportunity for very low OPEX operations, with targeted unit operating costs of €2,640/t LiOH and a pre-tax NPV of €3.4Bn (21% IRR)<sup>2</sup>
- JORC Mineral Resource estimate of 15.85Mt LCE (Indicated & Inferred), with the Upper-Rhine Valley hosting a high grade, low impurity geothermal brine<sup>3</sup>



In the heart of the fastest growing lithium battery market in the world<sup>5</sup>

- Europe is the world's fastest growing electric vehicle and lithium-ion battery production centre, yet currently has zero local production of lithium chemicals
- New EU battery regulations supporting the responsible sourcing of lithium and phasing out of high CO<sub>2</sub> footprint batteries
- Renewable energy sector strongly backed by large ESG and EU funds looking to finance the green transition



Supported by leading participants in the EV industry

- Binding offtake term sheets for lithium supply with LG Energy Solution, the world's largest producer of lithium-ion batteries for EVs, and Renault Group, a leader in European electric vehicles<sup>4</sup>
- BNP Paribas, a leader in sustainability with a track record in advisory and financing of battery and renewable projects, appointed as Financial Adviser for financing the Zero Carbon Lithium™ Project



Equity raising to accelerate and expand dual strategy

- Equity raising provides Vulcan funding to accelerate exploration initiatives and expand Vulcan's dual renewable energy and lithium development strategy
- Equity raising coincides with Vulcan's inclusion in the S&P/ASX 300 index, which is set to occur on 17 September 2021



Team of leading experts

- Leading experts in the fields of geothermal project development, lithium chemistry, DLE and chemical engineering, local to the project area in Germany
- Complemented by a Board with significant experience in renewable energy, project finance, chemicals and the lithium-ion battery industry

Note 1: The Company's Zero Carbon Lithium™ Project ("Project") is an early stage exploration and development project. There are a number of risks and uncertainties (known and unknown) that are associated with resources exploration and development (including in respect of the Project). Refer to the "Risk Factors" in Appendix 7 for more information, including the "Exploration risk", "Development and operations risk", "Limited operating history" and "Mineral resource and ore reserve estimates; accuracy of feasibility studies" risk factors

Note 2: Refer to Appendix 1-3 for further details regarding the Project economics and production targets

Note 3: Refer to Appendix 5 for further details regarding the Company's resources and reserves estimates

Note 4: Refer to slide 22 for further details regarding the Company's offtake term sheets, including the key conditions precedent to the offtake arrangements

Note 5: Based on electric vehicle sales and lithium-ion battery production growth

Note 6: Based on lithium focused peers with comparable project size and stage and published resource information. Refer to Appendix 4 and 5 for further information



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# Equity Raising

## Equity raising overview

Vulcan is conducting an underwritten institutional placement to raise A\$200 million and a non-underwritten share purchase plan to raise up to A\$20 million (collectively “the Offer”)

Offer structure and size	<ul style="list-style-type: none"> <li>Vulcan is conducting the Offer to raise up to A\$220 million, comprising               <ul style="list-style-type: none"> <li>An underwritten placement to sophisticated, professional and institutional investors to raise A\$200 million (“<b>Placement</b>”)<sup>1</sup>; and</li> <li>A non-underwritten share purchase plan to eligible shareholders (up to A\$30,000 per shareholder) to raise up to A\$20 million (“<b>SPP</b>”)</li> </ul> </li> <li>Approximately 14.8 new fully paid ordinary shares (“<b>New Shares</b>”) to be issued under the Placement and up to approximately 1.5 million New Shares to be issued under the SPP, with New Shares issued under the Placement representing approximately 13.6% of existing shares on issue</li> <li>New Shares issued under the Offer and Director Placement will rank pari passu with fully paid ordinary shares</li> </ul>
Offer price	<ul style="list-style-type: none"> <li>Offer price of A\$13.50 per New Share represents a:               <ul style="list-style-type: none"> <li>15.1% discount to the last traded price of A\$15.90 on Monday, 13 September 2021</li> <li>8.7% discount to the 10 day volume weighted average price of A\$14.78 as at Monday, 13 September 2021</li> </ul> </li> </ul>
Use of proceeds	<ul style="list-style-type: none"> <li>Proceeds of the Offer, together with existing cash, will be used to accelerate exploration initiatives and expand Vulcan’s dual renewable energy and lithium development strategy (See slide 9 for further details on the use of proceeds of the Offer)<sup>2</sup></li> </ul>
Underwriters	<ul style="list-style-type: none"> <li>Canaccord Genuity (Australia) Limited and Goldman Sachs Australia Pty Ltd</li> </ul>
SPP details	<ul style="list-style-type: none"> <li>Eligible Vulcan shareholders with a registered address in Australia or New Zealand as at the Record Date of 7:00pm (AEST) on Monday, 13 September 2021 will have the opportunity to apply for up to A\$30,000 of New Shares per eligible shareholder under the SPP</li> <li>SPP offer price of A\$13.50 per New Share, being the same offer price as the Placement</li> <li>Vulcan retains the right to accept oversubscriptions or to scale back applications (in whole or in part) at its absolute discretion that may result in the SPP raising more or less than A\$20 million</li> </ul>
Director Placement	<ul style="list-style-type: none"> <li>In addition to the Placement and SPP, Vulcan intends to issue up to A\$1 million of New Shares to certain Vulcan directors (“<b>Director Placement</b>”)</li> <li>The Director Placement is not underwritten, does not form part of the Offer and is subject to shareholder approval</li> <li>Provided shareholder approval is obtained, the Director Placement will be conducted at an issue price of A\$13.50 per New Share, being the same price as under the Placement and SPP</li> </ul>

Note 1: Refer to the “Underwriting risk” in the “Risk Factors” in Appendix 7 for more information in relation to the underwriting arrangements

Note 2: There are a number of risks and uncertainties (known and unknown) that are associated with resources exploration and development (including in respect of the Company’s Zero Carbon Lithium™ Project). Refer to the “Risk Factors” in Appendix 7 for more information including the “Exploration risk”, “Development and operations risk” and “Limited operating history” risk factors

## Sources and uses of funds

Proceeds from the Offer, together with existing cash, will be used to accelerate exploration initiatives and expand Vulcan's dual renewable energy and lithium development strategy<sup>1</sup>, with proceeds being applied to:

### 1) Targeted acquisition and refurbishment of exploration equipment:

- Enables Vulcan to accelerate exploration initiatives and ensure timely project execution
- Reduces the likelihood of delays resulting from supply chain disruptions caused by COVID-19<sup>2</sup>

### 2) Targeted acquisition and upgrade of existing brownfield energy and brine infrastructure:

- Expands Vulcan's dual development strategy by adding complementary existing renewable energy generation and future potential lithium production
- Brownfield nature of existing infrastructure significantly de-risks development of Vulcan's Zero Carbon Lithium™ Project

### 3) Expanded project development:

- Expanding the scope of current projects with the aim of increasing future targeted production to meet offtake demand
- Increased exploration data acquisition, land acquisition and feasibility costs to accommodate the above

### 4) General working capital and costs of the Offer:

- General working capital required to support significant investment in local expertise to accelerate on-the-ground development, and transactions cost associated with the Offer

Note 1: There are a number of risks and uncertainties (known and unknown) that are associated with resources exploration and development (including in respect of the Company's Zero Carbon Lithium™ Project). Refer to the "Risk Factors" in Appendix 7 for more information including the "Exploration risk", "Development and operations risk" and "Limited operating history" risk factors

Note 2: Refer to the risk factor "COVID 19 and other pandemics; supply chain risk" in the "Risk Factors" in Appendix 7

Note 3: Assumes exchange rate of €0.625/A\$1.00

Note 4: Excludes potential proceeds of up to \$1 million from the Director Placement, which is not underwritten, does not form part of the Offer and is subject to shareholder approval

Note 5: Assumes the SPP is fully subscribed to raise A\$20 million. The SPP is not underwritten and there is no guarantee that the full amount offered under the SPP will be raised

Note 6: As at 31 August 2021

Sources of funds <sup>4</sup>	A\$m	€m <sup>3</sup>
Placement proceeds	200	125
SPP proceeds <sup>5</sup>	20	13
Existing cash and cash equivalents <sup>6</sup>	111	69
<b>Total Sources</b>	<b>331</b>	<b>207</b>

Uses of funds (including existing cash)	A\$m	€m <sup>3</sup>
Targeted acquisition and refurbishment of exploration equipment	35	22
Targeted acquisition and upgrade of existing brownfield energy and brine infrastructure	165	103
Expanded project development	111	69
Corporate costs, equity raising costs, overheads and general working capital	20	13
<b>Total Uses</b>	<b>331</b>	<b>207</b>

## Offer timetable

Event	Time(AEST)/ Date <sup>1</sup>
<b>Placement</b>	
Trading halt	Tuesday, 14 September 2021
Launch of Placement	Tuesday, 14 September 2021
Trading halt lifted and recommencement of trading	Thursday, 16 September 2021
Settlement of Placement	Tuesday, 21 September 2021
Allotment of Placement Shares	Wednesday, 22 September 2021
<b>SPP</b>	
Record date to be eligible to participate in SPP	7:00pm on Monday, 13 September 2021
Dispatch of SPP documentation and SPP offer open date	Friday, 24 September 2021
SPP closing date	Wednesday, 13 October 2021
Announcement of SPP results and allotment of SPP Shares	Monday, 18 October 2021

Note 1: The Placement and SPP timetable is indicative only and subject to variation. The Company reserves the right to alter the timetable at its discretion and without notice, subject to ASX Listing Rules and the Corporations Act and other applicable law



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# Zero Carbon Lithium™ Project



# Vulcan: Goal to become world's first Zero Carbon Lithium™ & renewable energy development company<sup>1</sup>

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Goal to become world's first Zero Carbon Lithium™ Company



Geothermal & DLE in Germany



Proposed dual revenue Green energy & lithium



In the heart of the fastest growing lithium battery market in the world<sup>2</sup>



Largest JORC lithium Resource in Europe<sup>3</sup>



Potential for very low OPEX operation



Strong cash position



Team of leading experts



Project supported by the EU



ENERGY BUSINESS

74MW Renewable Electricity



LITHIUM BUSINESS

40,000 tonnes per year Lithium hydroxide

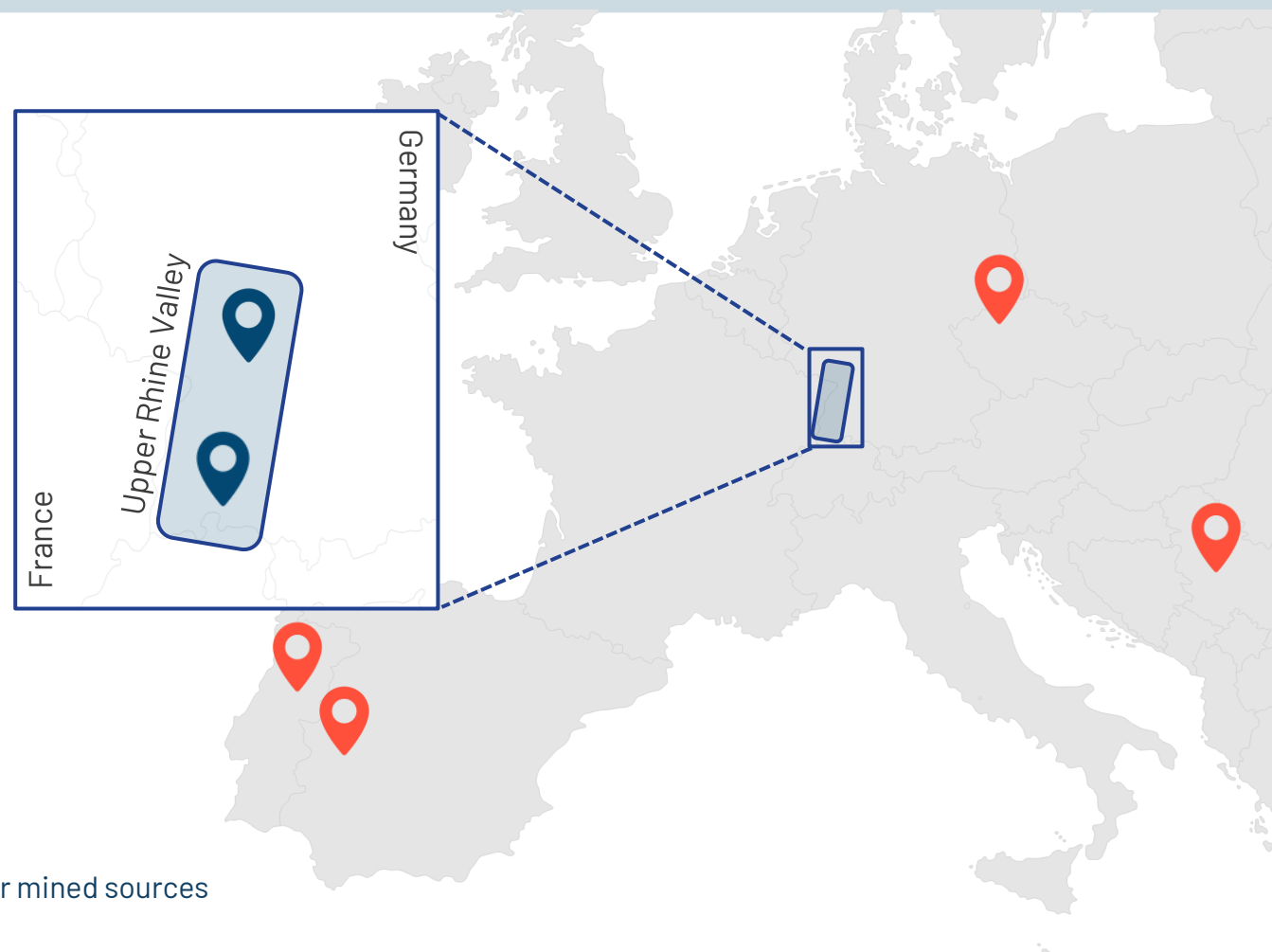
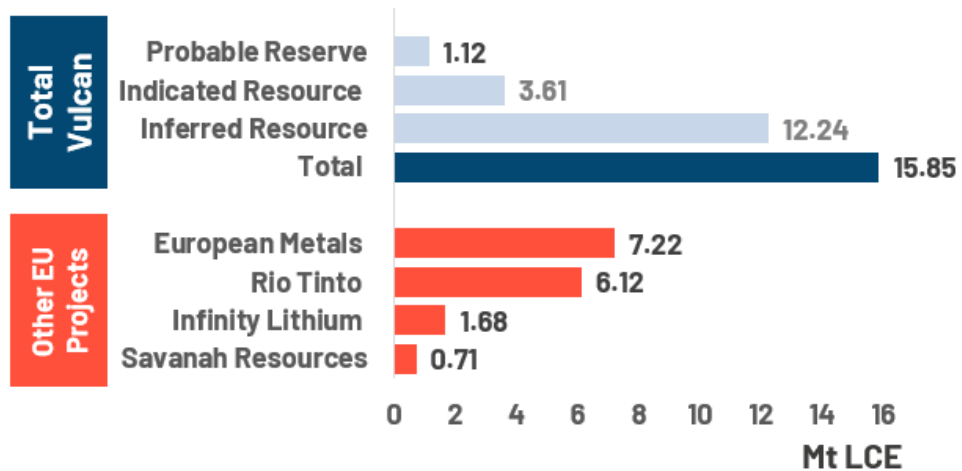


Note 1: There are a number of risks and uncertainties (known and unknown) that are associated with resources exploration and development (including in respect of the Company's Zero Carbon Lithium™ Project). Refer to the "Risk Factors" in Appendix 7 for more information including the "Exploration risk", "Development and operations risk" and "Limited operating history" risk factors. Refer also to Appendix 1 – 3 for further details regarding the Project economics and production targets

Note 2: Based on electric vehicle sales and lithium-ion battery production growth

Note 3: Refer to Appendix 4 and 5 for further details

## We've defined the largest lithium resource in Europe



- Large license package
- Largest lithium resource in Europe: 15.85Mt LCE
- Significant potential to scale up production as market grows: advantage over mined sources

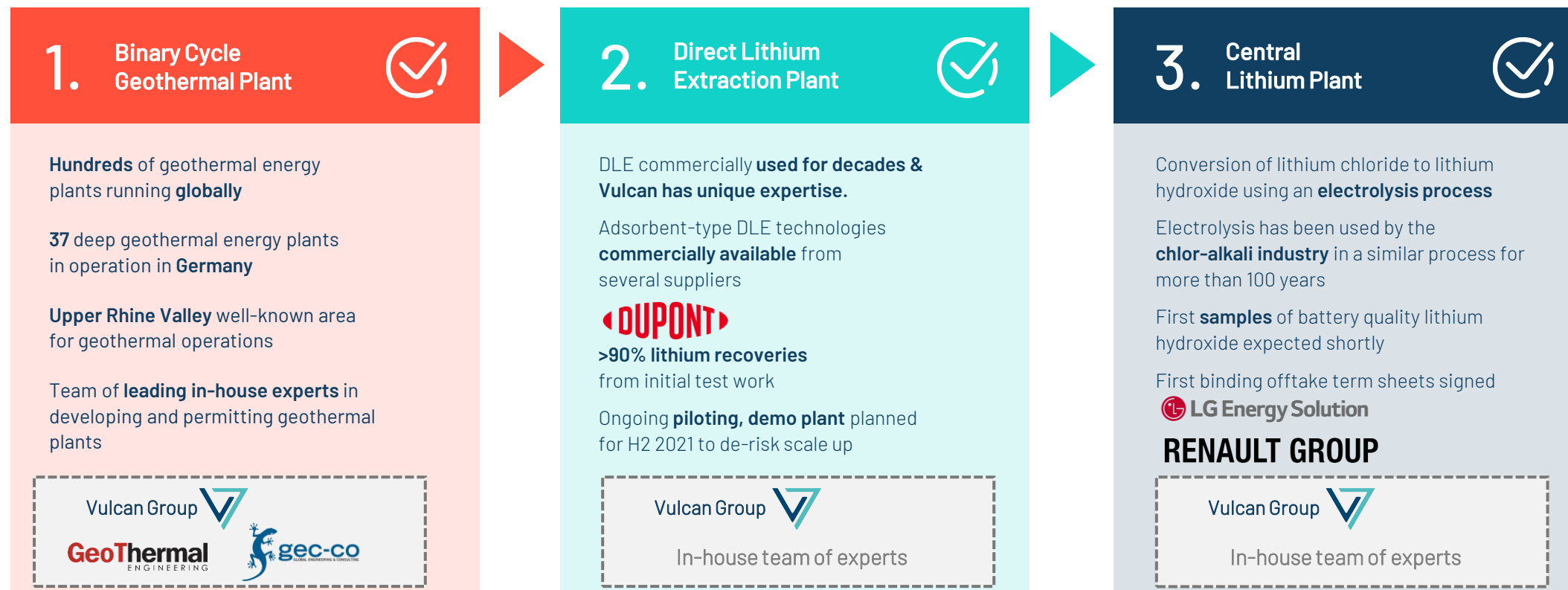


14

# Commercially available technologies combined & adapted to be fossil-free

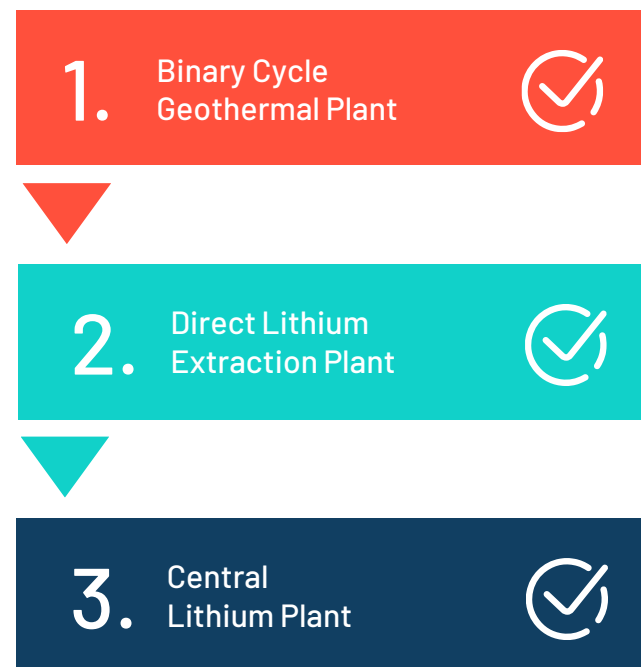
Our process incorporates technologies with commercial analogues across the world.

What is unique about us is the proposed combination of these different steps, and our **strict exclusion of fossil fuels to power our process.**

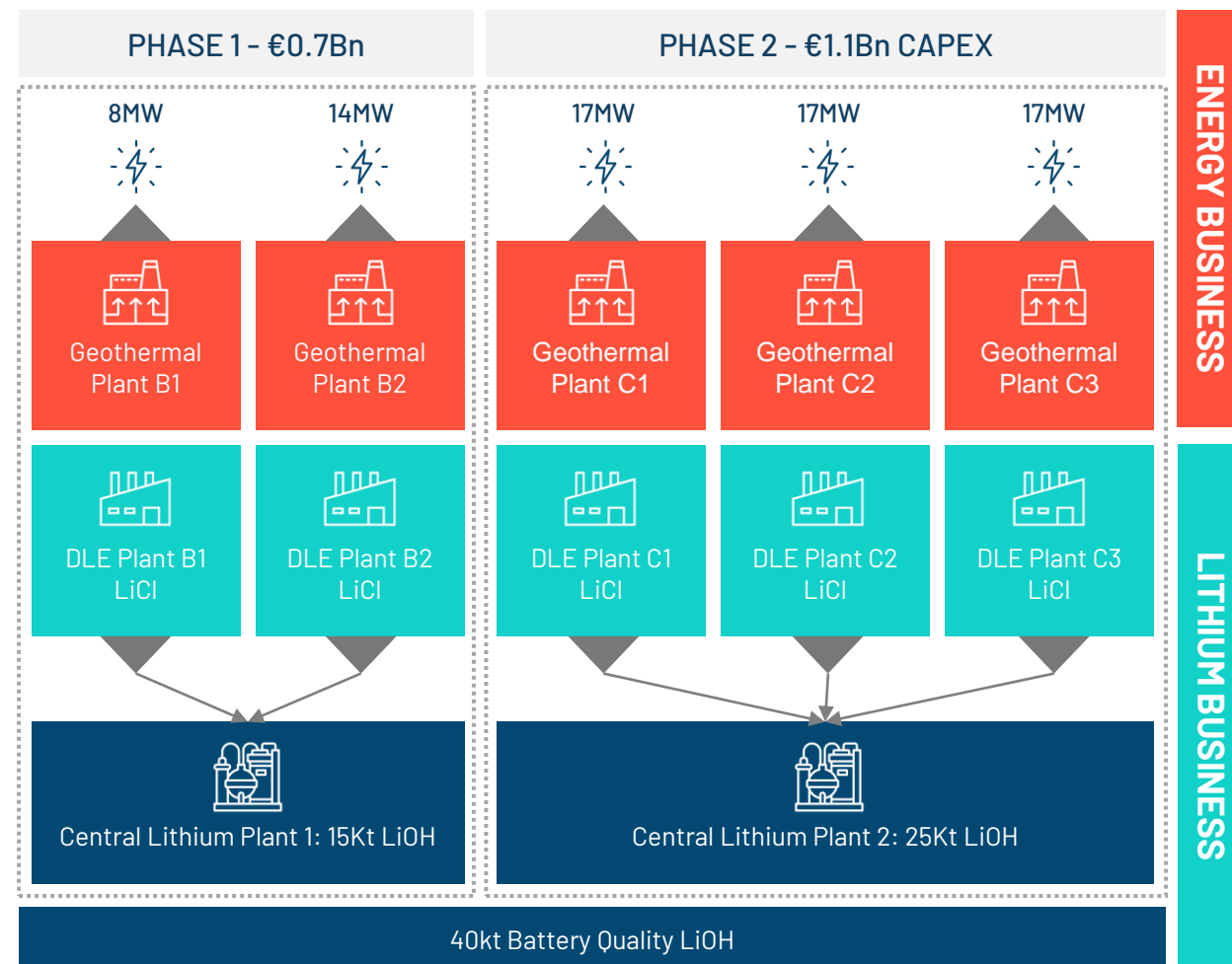


# Proposed dual purpose renewable energy and battery chemicals project

Energy Business, Zero Carbon Lithium™ Business:



Target metrics from Pre-Feasibility Study:



# Proposed dual revenues: energy and lithium

## ENERGY BUSINESS



Decarbonizing the grid

Grid



Renewable Electricity: Geothermal energy in the form of electricity is sold to the grid

Feed-in Tariff  
€25.2c /KWh

Guaranteed  
for 20 years



Coal phase-out  
in Germany

Industries



Renewable Heat: Energy in the form of heat can be sold to several public and private customers via pipes, proximity is a requirement



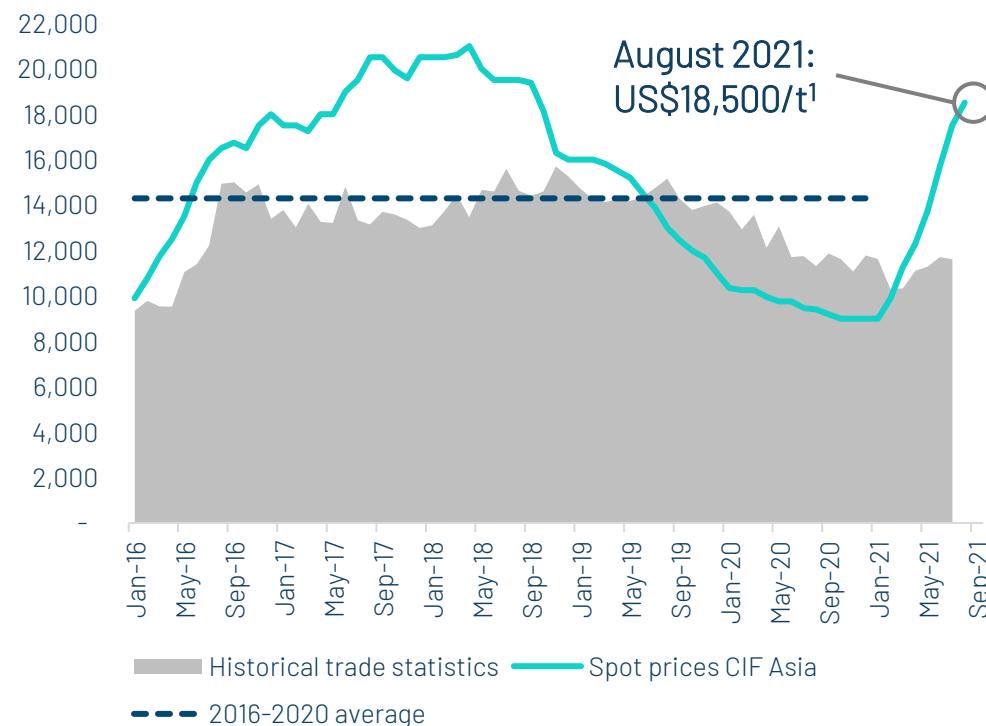
Bans for  
fossil heating  
systems

Cities



## LITHIUM BUSINESS

Lithium Hydroxide Prices

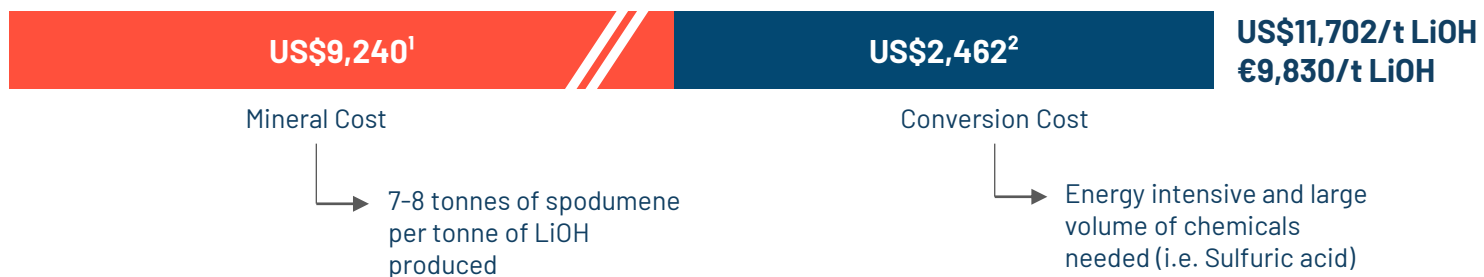


Source: Trade statistics compiled from Global Trade Atlas®, Benchmark Minerals (2016-2017), Fastmarkets (2017-2021)

## Potential for very low OPEX operation

### Select South American brine and Australian/Chinese mineral conversion vs Vulcan's process

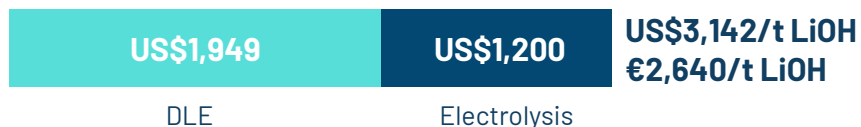
#### LiOH VIA HARD-ROCK PROCESSING



#### LiOH VIA BRINE PROCESSING



#### VULCAN'S PROCESS<sup>5</sup>



Note 1: S&P Global Platts, 27 August 2021, 6% Spodumene Concentrate FOB Australia: \$1,320/mt

Note 2: Kidman Resources PFS announcement, October 2018, contingency on Refinery OPEX of 15%. Cash operating cost including royalties.

Note 3: Cash operating costs lithium carbonate, Orocobre 2021 Annual report

Note 4: Orocobre 2020 Corporate Presentation – Naraha Lithium Hydroxide plant, Japan

Note 5: Refer to Appendix 1-3 for further details regarding the Project economics and production targets

Note 6: Figures in this slide assume an exchange rate of €0.84/US\$1.00

Note 7: Vulcan notes that the comparison operating cost figures above are actual results from lithium hydroxide projects that are currently in production, whereas the above data for Vulcan's process is based on estimates in the PFS. As the Project is still at an early exploration and development stage, there is a high level of inherent uncertainty associated with the Project. Refer to "Risk Factors" in Appendix 7



#### Feedstock

Vulcan's "feedstock" is expected to be low cost and have a dual purpose: lithium extraction and energy production in the form of renewable electricity.

#### Processing

Vulcan plans to use DLE to isolate lithium as opposed to using large volumes of chemicals such as sulfuric acid to dissolve a rock feedstock or soda ash for brine. Vulcan intends to use low-cost energy coming from its geothermal operation.

#### Upgrading

Vulcan plans to use electrolysis to upgrade chloride into a high purity hydroxide using renewable energy. No heavy reagent usage such as sodium hydroxide or lime.

## Robust target project financials and production metrics from PFS

### ENERGY BUSINESS



**74MW Power**

**€0.7Bn NPV** Pre-tax

**€0.5Bn NPV** Post-tax

**16% IRR** Pre-tax

**13% IRR** Post-tax

**€226M CAPEX** Phase I

**€0.066/KWh OPEX**

**Payback: 6 years**

### LITHIUM BUSINESS



**40,000tpa LiOH**

**€2.8Bn NPV** Pre-tax

**€1.9Bn NPV** Post-tax

**31% IRR** Pre-tax

**26% IRR** Post-tax

**€2,681/t LiOH OPEX**

**€474M CAPEX** Phase I

**Payback: 4 years**



**BNP PARIBAS** appointed as Financial Advisor toward financing the Zero Carbon Lithium™ Project

Note 1: The Company's Zero Carbon Lithium™ Project is an early stage exploration and development project. There are a number of risks and uncertainties (known and unknown) that are associated with resources exploration and development (including in respect of the Project). Refer to the "Risk Factors" in Appendix 7 for more information, including the "Exploration risk", "Development and operations risk", "Limited operating history" and "Mineral resource and ore reserve estimates; accuracy of feasibility studies" risk factors.

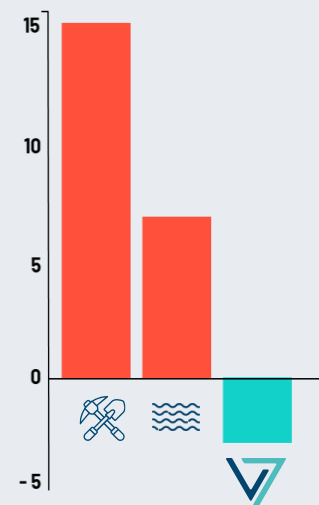
Note 2: Refer to Appendix 1-3 for further details regarding the Project economics and production targets

# Leading environmental credentials

## Per tonne of lithium hydroxide produced

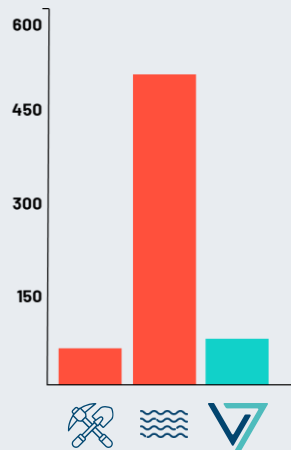
### CARBON EMISSIONS (Scope 1,2,3)

Tonnes CO<sub>2</sub>



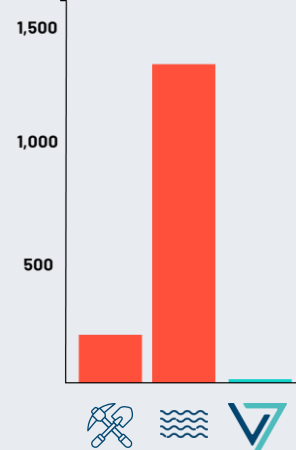
### WATER CONSUMPTION

m<sup>3</sup>



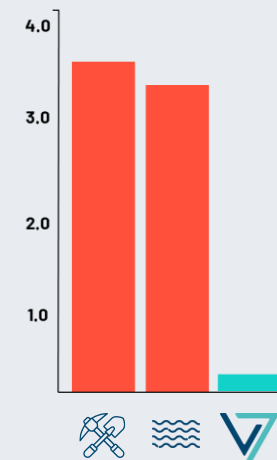
### LAND USE

m<sup>2</sup>



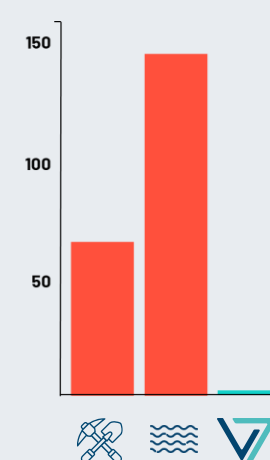
### REAGENTS CONSUMPTION

Tonnes



### WASTE GENERATION

Tonnes



 **Hard rock mining**  
60% of world lithium production

 **Evaporation ponds**  
40% of world lithium production

 **VULCAN ENERGY**  
**ZERO CARBON LITHIUM™**

**Goal to have the lowest  
environmental footprint of any  
lithium project globally**

Source: Minviro Life Cycle Analysis 2021 & Vulcan Energy's Pre-Feasibility Study

Note 1: The Company's environmental credentials set out in this slide (and elsewhere in this Presentation) are based on the Company's Pre-Feasibility Study. There is no guarantee that the Company will be able to achieve the targeted metrics. Refer to the "Risk Factors" in Appendix 7 for more information including the "Exploration risk", "Development and operations risk", "Limited operating history" and "Mineral resource and ore reserve estimates; accuracy of feasibility studies" risk factors

# Materially improving the global battery chemicals supply chain



Energising  
the Green  
Future of  
Extraction



Process development and R&D development of world's first lithium and renewable energy co-production process in Pre-Feasibility Study: Zero Carbon Lithium™.

Life cycle assessment shows leading environmental credentials including negative carbon footprint (Scope 1, 2, 3) for planned lithium production, a world first.

Working with Circular to achieve world's first lithium traceability and dynamic CO<sub>2</sub> measurement across supply chain.

Admission to Global Battery Alliance toward advancing battery materials traceability and transparency.

**CARBON NEUTRAL NOW,  
NOT IN THE FUTURE.**

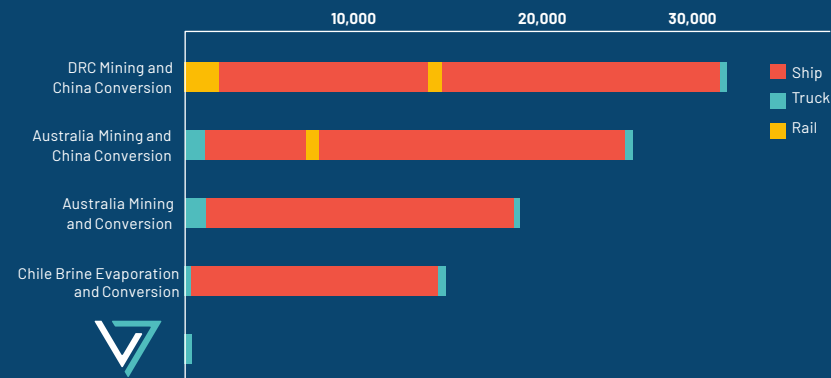
Not for release to US wire services or distribution in the United States

Lithium Chemicals  
Spodumene



## Transport Distances for Different Lithium Chemicals

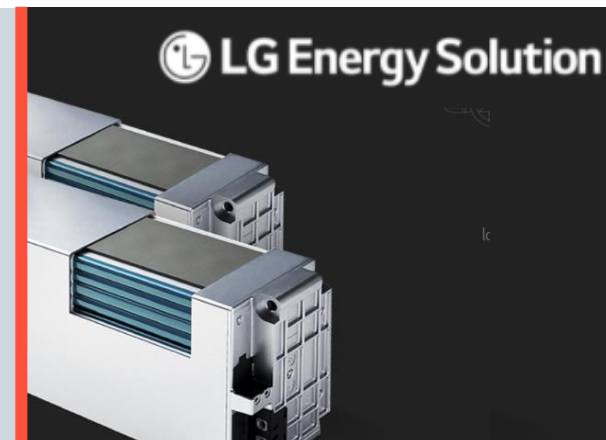
Transport Distances for Different Lithium Chemicals



## Securing long term lithium supply contracts

### LG ENERGY SOLUTION 19<sup>th</sup> JULY 2021

- **Binding lithium hydroxide offtake term sheet** signed with **LG Energy Solution**
- Initial **5-year term** which can be extended by further 5 years
- Start of commercial delivery set for **2025**
- LGES to purchase **up to 10,000tpa** of battery grade lithium hydroxide
- LGES is the **largest producer of lithium-ion batteries for EVs in the world**
- LGES is operating a **6GWh LIB factory in Poland**, and planning to increase this capacity to 65GWh
- Conditions precedent to start of commercial delivery include the execution of a definitive formal agreement on materially the same terms by end November 2021, successful start of commercial operation and full product qualification



### RENAULT GROUP 1<sup>ST</sup> AUGUST 2021

- **Binding lithium hydroxide offtake term sheet** signed with **Renault Group**
- Initial **5-year term** which can be extended if mutually agreed
- Start of commercial delivery set for **2026**
- Renault to purchase between **6,000 and 17,000tpa** of battery grade lithium chemicals
- In line with Renault Group's strategy to offer competitive, sustainable and '**made in Europe**' EVs
- Renault Group will be able to **avoid from 300 to 700 kg of CO<sub>2</sub>** for a 50-kWh battery
- Conditions precedent to start of commercial delivery include the execution of a definitive formal agreement on materially the same terms by 20 November 2021, and product achieving qualification to the agreed timeline



# Lithium market dynamics



## Technology & Costs



"We expect **DLE technology to dominate** the future lithium mining sector. Fitch posits **geothermal lithium extraction** techniques to rise in popularity among Western consumers"<sup>1</sup>



"We could have a European producer [Vulcan] producing at **one of the lowest costs globally**. These are the kind of initiatives we expect Europe to take in order to compete on raw material globally"<sup>2</sup>



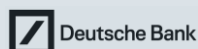
"**DLE could offer many benefits** including faster speed to market, as well as lower material costs and water usage. In Germany, Vulcan is pursuing this capability in the Upper Rhine Valley, Europe's largest lithium resource"<sup>3</sup>



## Sustainability



"**Geothermal lithium extraction has a much lower carbon footprint** than both hard rock and brine extraction methods, as well as reduced water usage"<sup>1</sup>



"The more **sustainable lithium producers will become the suppliers of choice** and be seen as less risky by customers and lenders. Country specific sustainability regulation is increasing and will likely lead to restrictions and higher production costs for producers that are less environmentally friendly"<sup>3</sup>



"The drive for **greener cars must be matched by cleaner lithium**"<sup>5</sup>



## Market Balance



"Incorporating the stronger demand outlook combined with limitations on the supply response due to rising product quality requirements is expected to see the lithium market shift from a small surplus in 2021 to a **deficit in 2022 and remain in tight for 2023-2025**, deficits widening each year"<sup>6</sup>



"Beyond 2025, we continue to forecast **significant market deficits**, noting a ~7x increase is required to meet our 2030 demand forecast"<sup>7</sup>



## Prices



"Lithium prices are likely to be impacted by **green premiums** due to heightened **priority of sustainable lithium extraction techniques**"<sup>1</sup>



"Long term Lithium Hydroxide Prices are expected to be around **\$16,000 per ton**"<sup>1</sup>

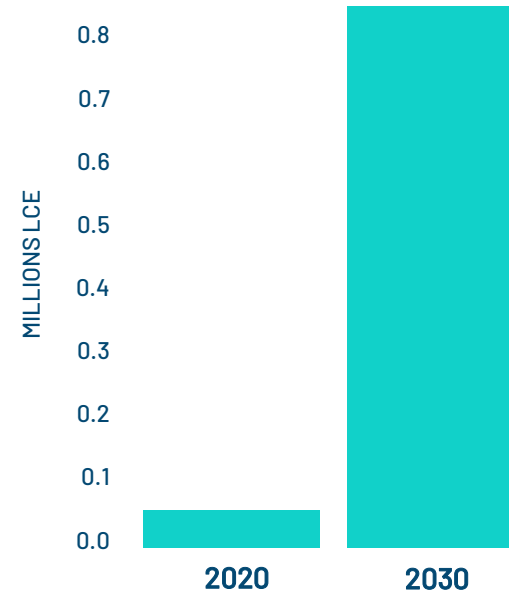
# How to support 30 million EVs by 2030 in the EU?

1,000GWh Lithium-ion  
Battery Capacity By 2030<sup>1</sup>



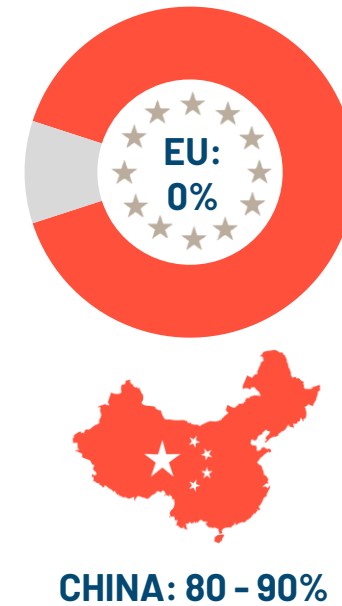
Source: Public announcements

EU: Fastest Growing  
Lithium Market In The World<sup>2</sup>



Source: Based on LiB capacity, Benchmark Minerals & Roland Berger

Zero Local Supply  
Of Lithium Hydroxide



Source: Bloomberg

Note 1: Refer to Appendix 6 for further details on EU lithium-ion battery capacity  
Note 2: Based on electric vehicle sales and lithium-ion battery production growth

## Auto and battery-makers committing to carbon neutrality

### RENAULT GROUP

'Reducing carbon footprint is not just reducing vehicle emissions while they are being operated, but also [...] from the company's resource extraction and production processes through to the end of the vehicle's life cycle'

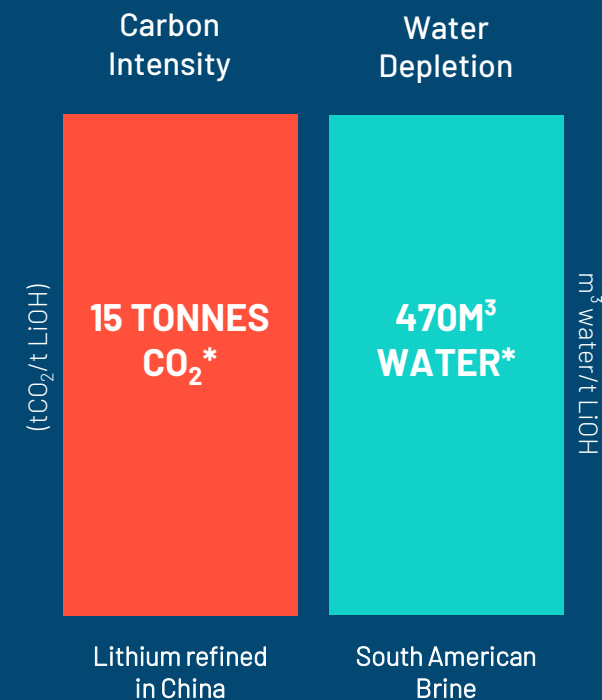


'Road to carbon neutrality: With our suppliers, we work in partnership to implement responsible procurement practices, to ensure sustainable progress throughout the entire supply chain, with specific emphasis wise use of natural resources and reduced environmental impacts'



'LG Energy Solution commits to be 100 percent carbon neutral by 2030. LG will set an example in cutting carbon emissions through battery production and promote the expansion of EVs'

Lithium production has a significant environmental footprint:



\*Source: Minviro

## The EU stepping in to support and regulate the industry

### Green Supply Chain



New EU Battery Regulation



Carbon Border Adjustment Mechanism



Battery Passport



ISO/TC 333 Lithium

### Local Supply Chain



European Battery Alliance



Critical Raw Materials List



EIB new energy lending policy



European Raw Materials Alliance



We are 100% dependent on lithium imports. The EU, if finding the right environmental approach, will be self-sufficient in a few years, using its resources. – **Thierry Breton - EU commissioner**

## The story so far: progress to date

2019		2020	2021				
Full Year		Full Year	Q1	Q2	Q3	Q4	
	Acquisition of EU focused Vulcan Lithium Project	Positive Scoping Study published	Positive Pre-Feasibility Study published	EU sustainable battery & CO <sub>2</sub> policy expert, Former Tesla Head of Battery Supply Chain, Former senior EY Global Renewables Partner and Evonik Senior executive join Board	New exploration license granted		
	Agreement with major German utility to access operational geothermal plant	Start of lithium extraction test work	\$120 million placement	Agreement with Circular to develop world's first lithium traceability & product CO <sub>2</sub> measurement	Vulcan signs binding lithium offtake term sheet with LG Energy Solutions		
	Largest JORC lithium resource in Europe identified <sup>1</sup>	\$4.8m institutional and ESG investor equity placement	Acquisition of world-class geothermal sub-surface development team - GeoT	Vulcan pilot plant for DLE on Upper Rhine Valley brine operational	Renault Group and Vulcan Energy: five-year strategic partnership and binding lithium offtake term sheet		
		Investment agreement signed with EU-backed EIT InnoEnergy	Agreement with DuPont to advance Direct Lithium Extraction	Vulcan doubles size of technical team with acquisition of leading German geothermal engineering business	Life Cycle Assessment updated: negative 2.9t of CO <sub>2</sub> emitted per tonne of LHM, lowest planned in the world		
		New exploration license granted	High lithium grades from bulk brine sampling	Lithium process expert Dr Stephen Harrison appointed as Chief Technical Officer	Vulcan announces intention to apply to dual list on the FSE		
		Increased lithium resource, reaching 15.85 Mt LCE			BNP Paribas appointed as Financial Advisor toward project financing		

I am from Syria and I have been living in Germany for 6 years. I finished my education as a chemical lab technician in Germany. My hobbies are painting, sports and reading.

As a chemical technical assistant in Vulcan's laboratory, I am working with lithium extraction and ICP-OES instruments. I am a part of the Vulcan team because I like new challenges: exploring how to extract and produce lithium optimally so that in the future we can supply many European countries with lithium and reduce our climate and land of as much CO<sub>2</sub> as possible.

**Aziz Mohadeen | Technician**

Note 1: Refer to Appendix 4 and 5 for further information

# Target project timeline

2021

2022

2023

2024

2025

+



Exploration



PFS



Test work



Project Development Financing

AS\$120M



Further Exploration

Data



Phase 1 Definitive/Bankable Feasibility Study

Data



Piloting

LiOH samples



Offtake Agreements with European OEMs



Brownfield Project Development



Permitting



Project Financing



Drilling

2 Geo Plants

2 DLE Plants

1 CLP

Construction

Phase 1



Production

Energy 22MW

Lithium 15Kt/y



Drilling

3 Geo Plants

3 DLE Plants

1 CLP

Construction

Phase 2



Production

Energy 52MW

Lithium 25Kt/y

Phase 1

Lithium 40Kt/y

Phase 2

Energy 74MW

Note 1: Refer to Appendix 1-3 for further details regarding Project economics and production capacity

# Vulcan – Zero Carbon Lithium™ Board



**Dr. Francis Wedin**  
Managing Director &  
Founder-CEO

Founder of Vulcan Zero Carbon Lithium™ Project. Lithium industry executive since 2014. Previously Executive Director of ASX-listed Exore Resources Ltd. Track record of success in lithium industry as an executive since 2014, including the discovery of three resources on two continents. PhD in Geology, MBA in Renewable Energy, global experience in battery metals sector.



**Dr. Horst Kreuter**  
Co-Founder, Board Advisor  
& Exec Director Germany

Ex-CEO of Geothermal Group Germany GmbH and GeoThermal Engineering GmbH (GeoT). Co-Founder of Vulcan Zero Carbon Lithium™ Project. Successful geothermal project development & permitting in Germany and worldwide. Widespread political, investor and industry network in Germany and Europe. Based in Karlsruhe, local to the project area in the Upper Rhine Valley.



**Gavin Rezos**  
Chair

Executive Chair/CEO positions of three companies that grew from start-ups to the ASX 300. Extensive international investment banking experience. Investment banking Director of HSBC with senior multi-regional roles in investment banking, legal and compliance functions. Currently Chair of Resource and Energy Group, principal of Viaticus Capital, Non-Executive Director of Kuniko Limited and Non-Executive Chair Resources & Energy Group Limited.



**Annie Liu**  
Non-Executive  
Director

Former Tesla Head of Battery and Energy Supply Chain. Led and managed Tesla's multi-billion-dollar strategic partnerships and sourcing portfolios that support Tesla's Energy and Battery business units including Battery, Battery Raw Material, Energy Storage, Solar and Solar Glass, including raw materials sourcing efforts such as lithium for battery cells. 20 years' experience with Tesla and Microsoft.



**Dr. Heidi Grön**  
Non-Executive Director

Dr. Grön is a chemical engineer by background with 20 years' experience in the chemicals industry. Since 2007, Dr. Grön has been a senior executive with Evonik, one of the largest specialty chemicals companies in the world, with a market capitalization of €14B and 32,000 employees.



**Ranya Alkadamani**  
Non-Executive Director

Founder of Impact Group International. A communications strategist, focused on amplifying the work of companies that have a positive social or environmental impact. Experience in working across media markets and for high profile people, including one of Australia's leading philanthropists, Andrew Forrest and Australia's former Foreign Minister and former Prime Minister, Kevin Rudd.



**Josephine Bush**  
Non-Executive Director

Member of the EY Power and Utilities Board. Led and delivered the EY Global Renewables and Sustainable Business Plan and spearheaded a series of major Renewable Market Transactions. Successfully advised on the first environmental yieldco London Stock Exchange listing, Greencoat UK Wind PLC. Ms. Bush is a Chartered Tax Advisor, holds an MA Law degree from St Catharine's College, Cambridge, and brings a wealth of experience in ESG strategic advisory.



**Julia Poliscanova**  
Special Advisor

Senior Director with the EU's Transport and Environment. Instrumental in shaping policies around EU vehicle CO<sub>2</sub> standards & sustainable batteries. On the steering committee for the Battery CO<sub>2</sub> Passport program of the Global Battery Alliance. Previously worked for the Mayor of London and in the European Parliament following EU legislation on renewables, energy efficiency and sustainable transport.

## Vulcan – Zero Carbon Lithium™ Team – Australia and International



**Vincent Ledoux-Pedailles**  
**Vice President**  
**– Business Development**

Vincent was previously Executive Director – Corporate Strategy at Infinity Lithium Corporation, where Vincent led the project to become the first to secure EU funding. Vincent was also appointed as a Lithium Expert by the European Commission. He previously worked at IHS Markit where he led the lithium and battery materials research team covering the entire industry's supply chain from raw materials to E-mobility. Vincent holds a Business Masters in Risk Management and International Purchasing from ESDS Business School in France.



**Rob Ierace**  
**Chief Financial Officer**  
**– Australia**

Robert is a Chartered Accountant and Chartered Secretary with over 20 years experience, predominately with ASX and AIM listed resource and oil and gas exploration and production companies. He has extensive experience in financial and commercial management including experience in corporate governance, debt and capital raising, tax planning, risk management, treasury management, insurance, corporate acquisitions and divestment and farm in/farm out transactions. Robert holds a Bachelor of Commerce degree from Curtin University, a Graduate Diploma in Applied Corporate Governance and a Graduate Certificate of Applied Finance and Investment.



**Daniel Tydde**  
**Company Secretary &**  
**In-House Legal Counsel**

Daniel is an experienced corporate lawyer with over 15 years' experience across a wide range of corporate, commercial and finance areas including initial public offerings; equity and debt capital raisings; corporate regulatory compliance; asset and share sales and purchases; corporate governance; corporate restructuring and re-organisations; and litigation. Most recently, Daniel held a senior position at Steinepreis Paganin and prior to that, worked at Clayton Utz and Phillips Fox (now DLA Piper).



**Jess Bukowski**  
**Public & Investor**  
**Relations Manager**

Jess has extensive experience advising top 20 ASX companies on communications, media and investor relations including six years with Fortescue Metals Group as Senior Media and Corporate Affairs Specialist. Jess was previously an adviser to Prime Minister Kevin Rudd working across government and international organisations. She brings academic qualifications in social policy and community development from the University of Queensland and post-graduate qualifications in public relations and investor relations.



**Our team of leading experts in geology, chemistry and engineering is supported by a Board with significant leadership and expertise in renewable energy, project finance, chemicals and the lithium-ion battery industry.**

# Vulcan – Zero Carbon Lithium™ Team – Germany



**Thorsten Weimann**  
Chief Operating Officer

Expert in geothermal and drilling technology, with more than 25 years of professional experience. Thorsten is Technical Manager of the German Geothermal Association (Bundesverband Geothermie e.V.) and he is well connected in the German geothermal industry. Diploma in Engineering (Technical University of Munich) and an MBA (Universities of Augsburg and Pittsburgh).



**Markus Ritzauer**  
Chief Financial Officer – Germany

Markus has over 20 years' experience in finance roles within the chemicals industry. His previous role was as Head of Finance at Currenta, a chemical park service provider in Germany formerly part of Bayer, with ~EUR 1.7bn turnover, ~5,300 employees and ~EUR 250m EBITDA. Markus was also CFO of the Bayer Group of companies in South Korea and Head of Corporate M&A in the APAC region for Bayer.



**Dr Stephen Harrison**  
Chief Technical Officer

CTO of Simbol Materials for seven years (2008-2015), where he led the scientific and engineering teams through a rapid process development, taking less than one year to develop a process to extract lithium from geothermal brine. As CEO of Rakehill Technology LLC, Dr. Harrison has since consulted to the lithium industry on various lithium extraction technologies including sorbents.

## Renewable Energy Business



**Markus Ruff**  
CEO Global Engineering & Consulting Company



**Tobias Hochschild**  
CEO GeoThermal Engineering GmbH



Engineering company focused on deep geothermal projects at surface: power plant, heat stations, drill pads, and permitting. More than 300 years engineering knowledge of Gec-Co's team. Created in 2012.



Planning and Engineering company for deep geothermal energy projects, based in the Upper Rhine Valley, Germany. Highly credentialed scientific team with >100 years of combined leading expertise. Created in 2005.

## Lithium Chemicals Business



**Dr Thomas Aicher**  
Lead Chemical Engineer

### Laboratory Team

### Chemical Engineering & Piloting Team



Project Development team based in Germany. Leading experts in the fields of lithium chemistry, DLE and chemical engineering.



**70+ People**



**Leading Engineering Team**



**40% Female Workforce**

We have developed a success-driven culture orientated towards delivering our Zero Carbon Lithium™ Project utilising the best technologies and leading experts.



# Share price and capital structure<sup>1</sup>

Not for release to US wire services or distribution in the United States

## ASX : VUL

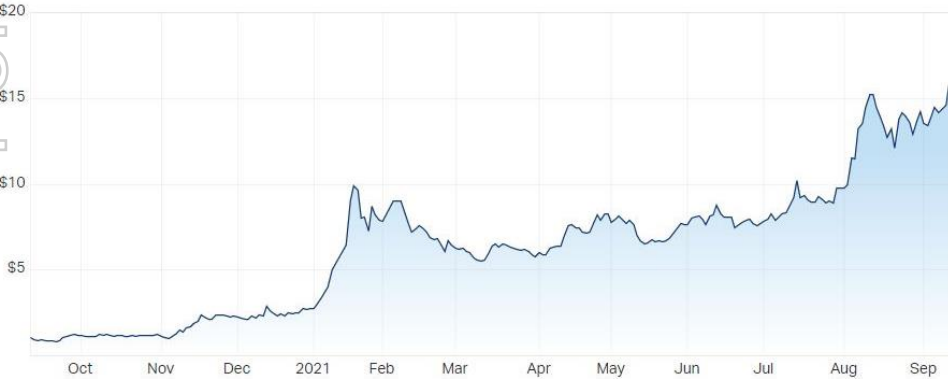
Shares on Issue	108,791,364
Performance Milestone Shares	4,491,174
Performance Rights	11,238,688
Market Capitalisation at \$15.90 (undiluted)	~\$1.7B
Enterprise Value at \$15.90 (undiluted)	~\$1.6B
Cash Position	~\$111M

Top 20 Shareholders	~52%
Management (undiluted)	~19%

## Frankfurt: 6K0

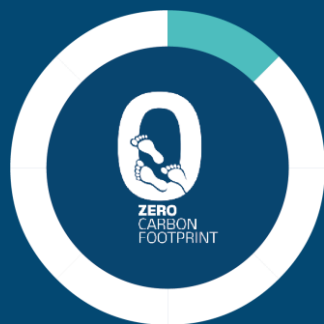
### Key Shareholders

Dr. Francis Wedin	11.95%
Hancock Prospecting Pty Ltd	6.66%
Mr. Gavin Rezos	5.58%



Note 1: As at market close on 13 September 2021

# Conclusion



**Goal to become  
world's first Zero  
Carbon Lithium™  
Company**



**Europe's largest  
lithium Resource<sup>1</sup>**



**Location centre  
of fastest growing  
market<sup>2</sup>**



**Supported By EU  
funding, regulation  
& initiatives**



**Low cost & resilient  
financials**



**Strong cash position**



**The right team  
for the job**



**Rapidly advancing  
lithium project**

Note 1: Refer to Appendix 4 and 5 for further information

Note 2: Based on electric vehicle sales and lithium-ion battery production growth



VULCAN ENERGY  
ZERO CARBON LITHIUM™

Not for release to US wire services or distribution in the United States

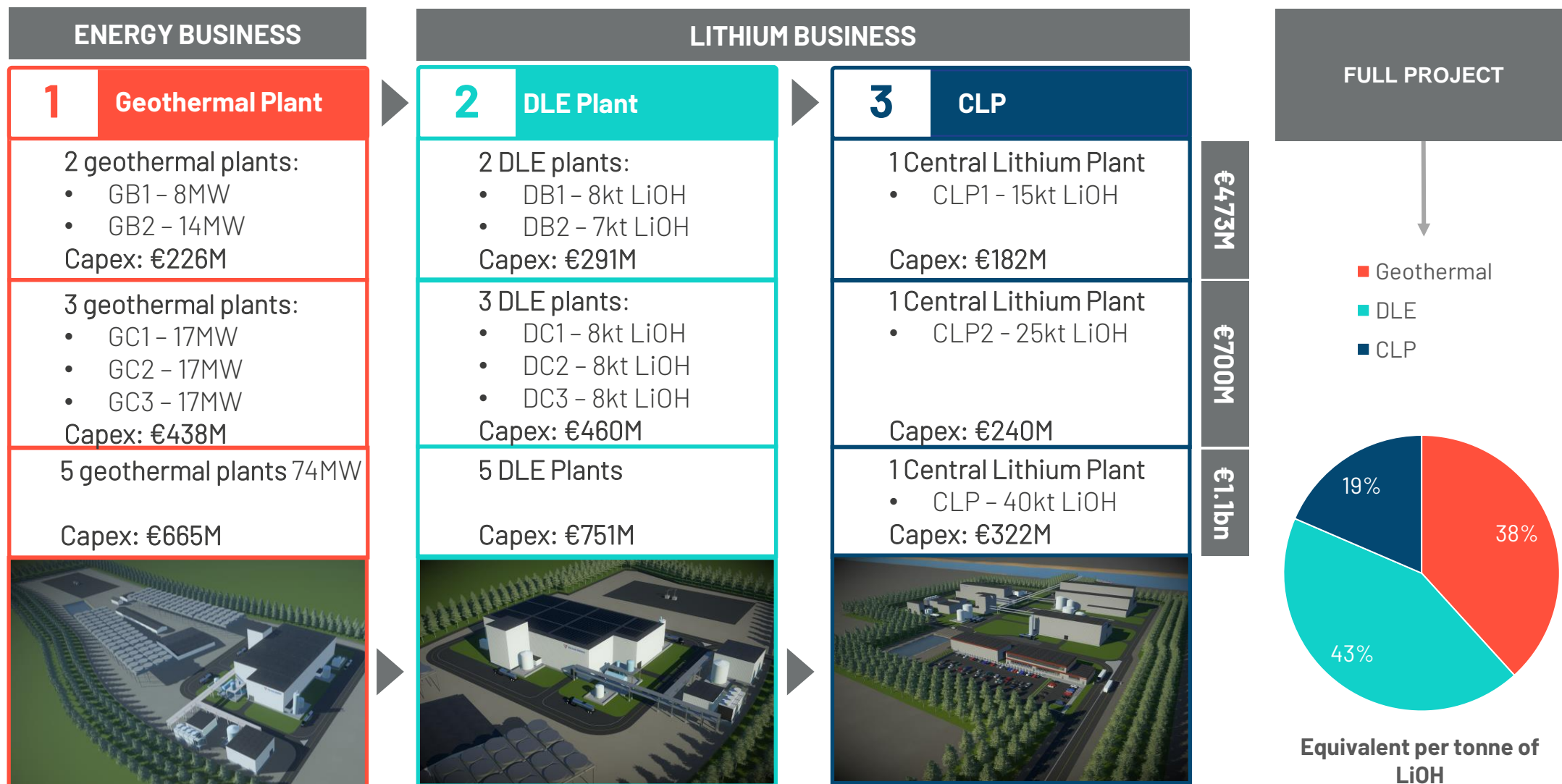
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# Appendices

## Appendix 1: Target project economics from PFS – CAPEX

For personal use only



Note 1: Refer to the Company's ASX announcement entitled "Positive Pre-Feasibility Study" dated 15 January 2021, available on the Company's website and [www.asx.com](http://www.asx.com), for further details. The Company confirms that all material assumptions underpinning the production targets, and the forecast financial information derived from such production targets, in this Presentation, continue to apply and have not materially changed

## Appendix 2: Target project economics – possible structures

Full project developed at the same time but **separated** in two different businesses: Energy and Lithium.

### FULL PROJECT - NO PHASING 2024 Start

#### ENERGY BUSINESS

GB1	GB2	GC1	GC2	GC3
DB1	DB2	DC1	DC2	DC3
CLP				
74MW				

#### LITHIUM BUSINESS

GB1	GB2	GC1	GC2	GC3
DB1	DB2	DC1	DC2	DC3
CLP				
40Ktpa LiOH				

Revenues €M/y  
Net Op. Cash Fl. €M/y  
NPV Pre-tax €M  
NPV Post-tax €M  
IRR Pre-tax  
IRR Post-tax  
Payback (year)  
CAPEX €M  
CAPEX Geo  
CAPEX DLE  
CAPEX CLP  
OPEX €/KWh or LiOH€/t

157	500
114	394
685	2,802
470	1,897
16%	31%
13%	26%
6	4
665	1,073
	751
0.066	322
	2,681

Phase 1 developed first, **separated** in two different businesses: Energy and Lithium.

### PHASE 1 2024 Start

#### ENERGY BUSINESS

GB1	GB2	GC1	GC2	GC3
DB1	DB2	DC1	DC2	DC3
CLP1		CLP2		
22MW				

#### LITHIUM BUSINESS

GB1	GB2	GC1	GC2	GC3
DB1	DB2	DC1	DC2	DC3
CLP1		CLP2		
15Ktpa LiOH				

46	187
31	140
155	971
99	644
13%	27%
11%	22%
4	4
226	474
226	291
182	
0.078	3,201

Phase 2 developed second, **separated** in two different businesses: Energy and Lithium.

### PHASE 2 2025 Start

#### ENERGY BUSINESS

GB1	GB2	GC1	GC2	GC3
DB1	DB2	DC1	DC2	DC3
CLP1		CLP2		
52MW				

#### LITHIUM BUSINESS

GB1	GB2	GC1	GC2	GC3
DB1	DB2	DC1	DC2	DC3
CLP1		CLP2		
5Ktpa LiOH				

111	312
83	242
530	1,647
371	1,111
18%	32%
15%	26%
7	5
438	700
438	460
	240
0.061	2,855

Note 1: Lithium Hydroxide Battery Quality at €12,542 or US\$14,925/t (assumes exchange rate of €0.84/US\$1.00)

Note 2: Phase 1 relates to Taro license, Phase 2 to Ortenau license

Note 3: Ortenau license is 100% owned by Vulcan. Vulcan has a 100% interest in Taro

Note 4: Refer to the Company's ASX announcement entitled "Positive Pre-Feasibility Study" dated 15 January 2021, available on the Company's website and [www.asx.com](http://www.asx.com), for further details. The Company confirms that all material assumptions underpinning the production targets, and the forecast financial information derived from such production targets, in this Presentation, continue to apply and have not materially changed

## Appendix 3: Target project economics – possible structures

Full project developed at the same time and integrated under one business.

FULL PROJECT NO PHASING 2024 Start				
INTEGRATED BUSINESS				
GB1	GB2	GC1	GC2	GC3
DB1	DB2	DC1	DC2	DC3
CLP1		CLP2		
74MW & 40Ktpa LiOH				

<b>Revenues €M/y</b>	<b>652</b>
<b>Net Op. Cash Fl. €M/y</b>	<b>507</b>
<b>NPV Pre-tax €M</b>	<b>3,443</b>
<b>NPV Post-tax €M</b>	<b>2,250</b>
<b>IRR Pre-tax</b>	<b>26%</b>
<b>IRR Post-tax</b>	<b>21%</b>
<b>Payback (year)</b>	<b>5</b>
<b>CAPEX €M</b>	<b>1,738</b>
<i>CAPEX Geo</i>	<i>665</i>
<i>CAPEX DLE</i>	<i>751</i>
<i>CAPEX CLP</i>	<i>322</i>
<b>OPEX €/KWh or LiOH€/t</b>	<b>2,640</b>

Phase 1 developed first and is an integrated business

PHASE 1 2024 Start				
INTEGRATED BUSINESS				
GB1	GB2	GC1	GC2	GC3
DB1	DB2	DC1	DC2	DC3
CLP1		CLP2		
21MW & 15Ktpa LiOH				

<b>232</b>
<b>171</b>
<b>1,114</b>
<b>703</b>
<b>23%</b>
<b>18%</b>
<b>5</b>
<b>700</b>
<i>226</i>
<i>291</i>
<i>182</i>
<b>3,139</b>

Phase 2 developed second and is an integrated business

PHASE 2 2025 Start				
INTEGRATED BUSINESS				
GB1	GB2	GC1	GC2	GC3
DB1	DB2	DC1	DC2	DC3
CLP1		CLP2		
52MW & 25Ktpa LiOH				

<b>420</b>
<b>324</b>
<b>2,145</b>
<b>1,403</b>
<b>27%</b>
<b>22%</b>
<b>6</b>
<b>1,138</b>
<i>438</i>
<i>460</i>
<i>240</i>
<b>2,792</b>

Note 1: Refer to the Company's ASX announcement entitled "Positive Pre-Feasibility Study" dated 15 January 2021, available on the Company's website and [www.asx.com](http://www.asx.com), for further details. The Company confirms that all material assumptions underpinning the production targets, and the forecast financial information derived from such production targets, in this Presentation, continue to apply and have not materially changed

## Appendix 4: Reference information for slide 13 and Appendix 5

Company <sup>1</sup>	Code	Project	Stage	Resource Category	Resources M tonnes	Resource Grade (Li2O)	Contained Mt LCE Tonnes	Information Source
European Metals	ASX: EMH	Cinovec	PFS Complete	Indicated & Inferred	695.9	0.42	7.22	Corporate Presentation July 2021 - Company Website
Rio Tinto	ASX: RIO	Jadar	PFS Complete	Indicated & Inferred	139.3	1.78	6.12	ASX Announcement Released 10 December 2020
Infinity Lithium	ASX: INF	San Jose	PFS Complete	Indicated & Inferred	111.3	0.61	1.68	Company Presentation Released to ASX 16 February 2021
Savannah Resources	AIM: SAV	Barroso	DFS Underway	Measured, Indicated & Inferred	27.0	1.00	0.71	Corporate Presentation September 2021 - Company Website

Company	Project	Stage	Resource Category	Brine Volume	Resource Grade	Contained Mt LCE Tonnes	Information Source
Controlled Thermal Resources	Hell's Kitchen	PEA Completed	Inferred	Unknown	181mg/l Li	2.7	Company Website
E3 Metals	Clearwater, Rocky and Exshaw	PEA Completed	Inferred	5.5 billion m <sup>3</sup>	74.6mg/l Li	2.2	PEA released in December 2020

Elders, W., Cohen, L., (1983) The Salton Sea Geothermal Field, California, Technical Report. Institute of Geophysics and Planetary Physics, University of California

GeORG (2013) Projektteam Geopoteniale des tieferen Untergrundes im Oberrheingraben Fachlich-Technischer Abschlussbericht des INTERREG-Projekts GeORG. Teil 2: Geologische Ergebnisse und Nutzungsmöglichkeiten

Pauwels, H., Fouillac, C., Brach M. (1989) Secondary production from geothermal fluids processes for Lithium recovery 2nd progress report. Bureau de Recherches Geologiques et Minieres Service Geologique National

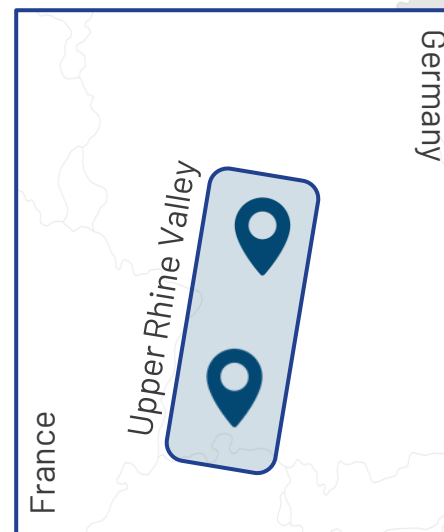
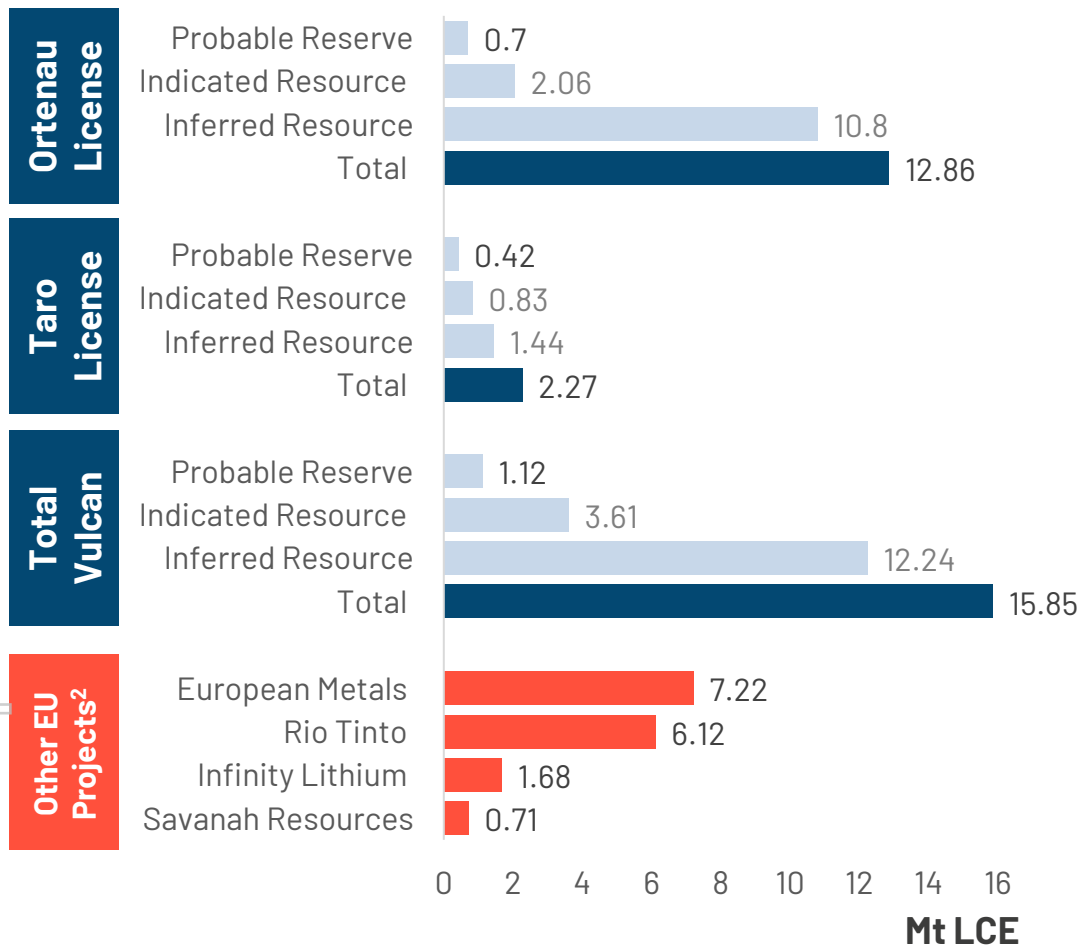
Pauwels, H. and Fouillac, C. (1993) Chemistry and isotopes of deep geothermal saline fluids in the Upper Rhine Graben: Origin of compounds and water-rock interactions. Geochimica et Cosmochimica Acta Vol. 51, pp. 2737-2749

Sanjuan, B., Millot, R., Innocent, C., Dezayes, C., Scheiber, J., Brach, M., (2016) Major geochemical characteristics of geothermal brines from the Upper Rhine Graben granitic basement with constraints on temperature and circulation. Chemical Geology 428 (2016) 27-47

Note 1: Data provided for lithium focused peers with comparable project size and stage and published resource information

Note 2: The Company is not aware of any new information or data that materially affects the information contained in the above sources or the data contained in this Presentation

## Appendix 5: Vulcan lithium Resource and Reserve in Europe<sup>1</sup>



- 4 exploration permits granted and several applications
- Largest lithium resource in Europe: **15.85Mt LCE**

Note 1: Vulcan's URVP Li-Brine resource and reserve area in Europe. Mineral resources are not ore reserves and do not have demonstrated economic viability. Refer to the ASX Announcement entitled "Updated Ortenau Indicated and Inferred Resource" dated 15 December 2020 and the ASX Announcement entitled "Positive Pre-Feasibility Study" dated 15 January 2021, which refer to the Company's Mineral Resources and Ore Reserves (respectively) included in this Presentation, available on the Company's website and [www.asx.com](http://www.asx.com). The Company confirms that it is not aware of any new information or data that materially affects the information including in the original market announcements and that all material assumptions and technical parameters underpinning the estimates in the relevant market announcements continue to apply and have not materially changed. The Company confirms that the form and context in which the Competent Person's findings are presented in this Presentation have not been materially modified from the original market announcements

Note 2: Refer to Appendix 4 for further information

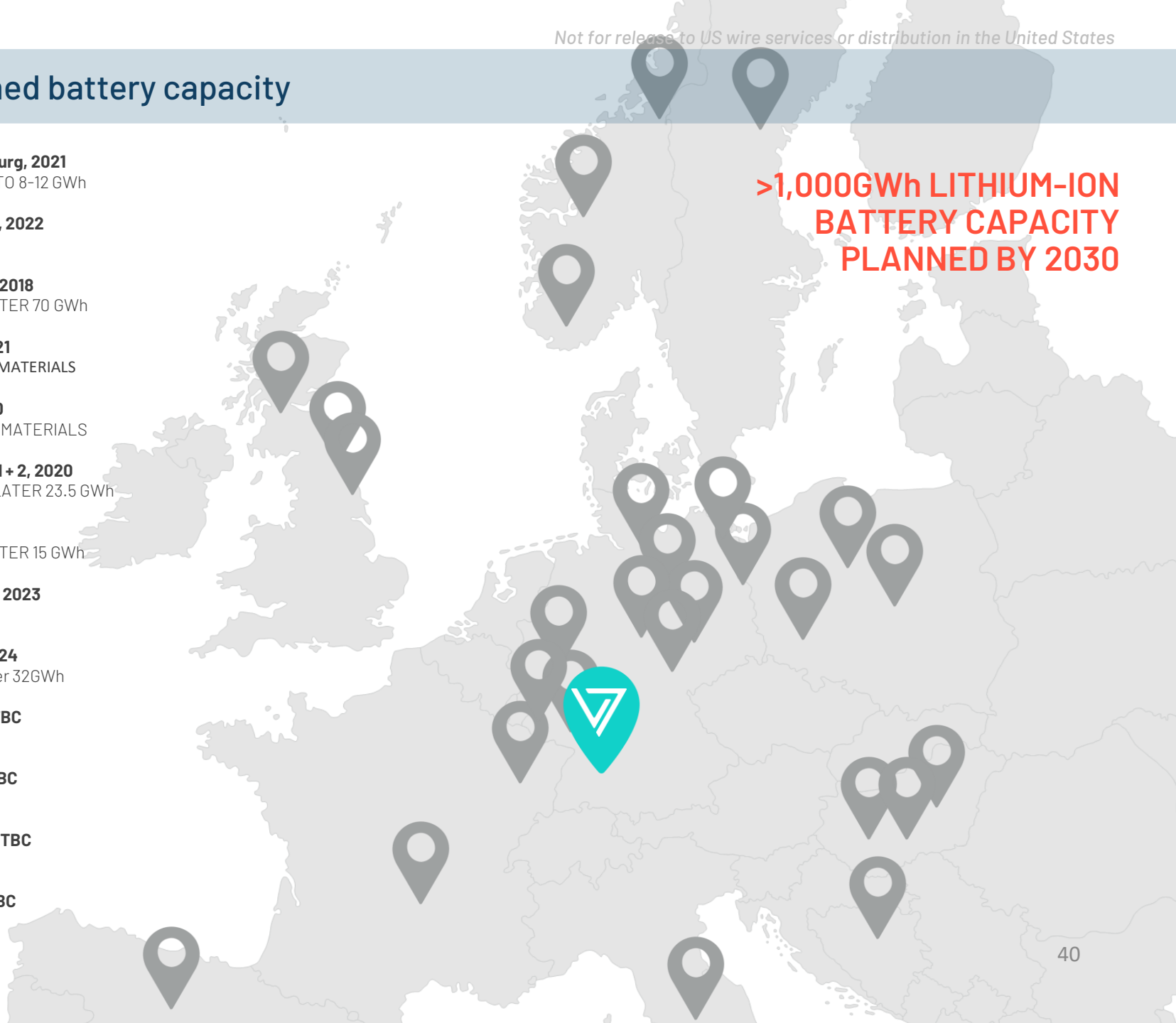


## Appendix 6: EU lithium-ion planned battery capacity

For personal use only

	<b>Brandenburg, 2021</b> At least 20GWh		<b>Brandenburg, 2021</b> RAMP UP TO 8-12 GWh
	<b>Salzgitter, 2025</b> 40GWh		<b>Bitterfeld, 2022</b> 16 GWh
	<b>Spain, Eastern Europe, etc.</b> 4x40GWh		<b>Wroclaw, 2018</b> 6 GWh, LATER 70 GWh
	<b>Erfurt, 2022</b> 14 GWh LATER 100 GWh		<b>Konin, 2021</b> CATHODE MATERIALS
	<b>Sunderland, 2010</b> 2.5 GWh		<b>Nysa 2020</b> CATHODE MATERIALS
	<b>Willstätt, 2020</b> 1 GWh		<b>Komaron 1+ 2, 2020</b> 7.5 GWh, LATER 23.5 GWh
	<b>Germany &amp; France, 2022</b> 16 GWh, LATER 48 GWh		<b>Göd, 2018</b> 3 GWh, LATER 15 GWh
	<b>Überherrn, 2023</b> 24 GWh		<b>Mo I Rana, 2023</b> 32+2GWh
	<b>Germany, 202X</b>		<b>Agder, 2024</b> 8GWh, later 32GWh
	<b>4 GWh, LATER 8 GWh</b>		<b>Norway, TBC</b> Unknown
	<b>Schwarzheide, 2022</b> CATHODE MATERIALS		<b>Europe, TBC</b> Unknown
	<b>Bratislava, 2024</b> 10GWh		<b>Blyth, UK, TBC</b> Unknown
	<b>St Athan Wales, 2023</b> 10GWh, later 35Gwh		<b>France, TBC</b> Unknown
	<b>Skellefteå, 2021</b> 32 GWh LATER 40 GWh		
	<b>Hungary, TBC</b> CATHODE MATERIALS		

>1,000GWh LITHIUM-ION  
BATTERY CAPACITY  
PLANNED BY 2030



## Appendix 7: Risk factors

There are various risks associated with an investment in New Shares or Vulcan generally, as with any securities market investment. This section summarises the following key risks.

- Industry specific risks – risks that apply generally to entities in the industry in which Vulcan operates.
- Business specific risks – risks that are specific to Vulcan.
- Risks related to the Offer and an investment in Shares (including New Shares).

Potential investors should consider whether an investment in New Shares or Vulcan generally is a suitable investment, having regard to their own personal investment objectives and financial circumstances, and the key risk factors set out below. Vulcan believes that it has implemented appropriate strategies, actions, systems and safeguards for known risks; however, some risks are outside of Vulcan's control. Investors should read this entire Presentation and review announcements made by Vulcan to ASX (at [www.asx.com.au](http://www.asx.com.au), ASX:VUL) in order to gain an appreciation of the Company, its activities, operations, financial position and prospects.

It is not feasible to produce an exhaustive list of potential risk factors that Vulcan is exposed to or that are associated with the Offer. Potential investors should consult their professional advisers before making any investment decisions. The selection of risks in this Presentation has been based on an assessment of both the probability of the risk occurring and the impact of the risk if it did occur. That assessment is based on the knowledge of Vulcan's directors as at the date of this Presentation; so that assessment may result in a different selection in the future, and none of Vulcan or its directors provide any guarantee or assurance that the prominence of certain risks will not change or that other risks will not emerge.

### Industry Specific Risks

#### 1. Exploration risk

Vulcan's Zero Carbon Lithium™ Project aims to produce a battery-quality lithium hydroxide chemical product and geothermal energy from the same deep brine source, at various locations throughout the Upper Rhine Valley in Germany. Vulcan is at the exploration and development stage, and the Company currently anticipates that, subject to obtaining further necessary funding, permits and licences, and no delays occurring, it will commence commercial production in 2024. Accordingly, it is not envisaged that Vulcan will generate revenues or realise profits in the lithium hydroxide business in the short term, and the Company cannot make any assurance that Vulcan will realise profits in its lithium hydroxide business in the medium to long term, or at all. Any future profitability of Vulcan's lithium hydroxide business will be dependent upon the development of an economically recoverable mineral resource and further exploration and development of other economically recoverable deposits. The Company cannot assure you of the existence of an economically recoverable mineral resource at this time, nor about the quantity or grade of any mineral resource. Any quantity or grade of lithium reserves the Company indicates on its project areas must be considered as estimates only until such reserves are actually extracted and processed. Any material change in the quantity or grade of lithium reserves may affect the economic viability of Vulcan's projects.

Vulcan's estimated exploration costs are based on certain assumptions with respect to the method and timing of exploration. These estimates and assumptions are subject to uncertainties and inflation and, accordingly, the actual costs may materially differ from these estimates and assumptions. There is no guarantee that the cost estimates and the underlying assumptions will be realised in practice, which may materially adversely affect the prospects of Vulcan's business and operations.

Further, the Company cannot assure you that, even if an economically recoverable mineral resource is located on its project areas, any lithium can be commercially extracted by Vulcan. The exploration and development of mineral deposits involves a high degree of financial risk over a significant period of time, which may not be eliminated even with the combination of careful evaluation, experience and knowledge of the management team. It is not possible to ensure that Vulcan's current exploration programs will result in profitable commercial lithium extraction operations. The profitability of Vulcan's operations will be, in part, directly related to the cost and success of its exploration and development programs. Higher than expected expenditures may be required to establish reserves which are sufficient for commercial extraction and to construct, complete and install the necessary facilities and infrastructure (including geothermal plants, direct lithium extraction facilities and central processing facilities) in those project areas that are actually developed.

In addition, exploration projects like the Zero Carbon Lithium™ Project have no proven operating history upon which to base estimates of future operating costs and capital requirements, and there are no existing operating lithium extraction businesses in the Upper Rhine Valley comparable to the Zero Carbon Lithium™ Project. Any future estimates of reserves, lithium extraction recoveries or cash operating costs of the Zero Carbon Lithium™ Project (and any other exploration projects Vulcan pursues in the future), will, to a large extent, be based upon the interpretation of geologic data obtained from a limited number of sampling techniques and preliminary feasibility studies. Actual operating costs and economic returns of the Zero Carbon Lithium™ Project (and any other exploration projects Vulcan pursues in the future) may materially differ from the costs and returns estimated in the Company's feasibility studies, in particular in the early stage feasibility studies. Any of the above developments could result in a delay to entering into the production phase or in not being able to enter into the production phase at all, or could significantly add to project costs, any of which could have a material adverse effect on Vulcan's ability to generate revenues or realise profits from its lithium hydroxide business and on its business, prospects, financial condition and results of operations.

## Appendix 7: Risk factors

### 2. Lithium demand risk

Following commencement of commercial production, Vulcan intends to generate a substantial majority of its future revenues from the extraction and sale of lithium. If Vulcan achieves commercial production of lithium hydroxide, the marketability of and demand for any chemicals produced may be affected by numerous factors beyond the control of Vulcan. These factors include new market developments and technological advancements, each of which may negatively impact the demand for the mineral commodities Vulcan may produce. While Lithium and its derivatives are currently preferred raw materials for certain industrial applications, such as rechargeable batteries, many materials and technologies are being researched and developed, with the goal of making batteries lighter, more efficient and less expensive. Some of these materials and technologies could be successful, which could lead to a reduced demand for lithium hydroxide product, and, accordingly, adversely affect Vulcan's business. For example, more efficient application methods or the development of more desirable substitutes for lithium batteries in electric and hybrid vehicles, consumer electronics and other applications may reduce overall demand for lithium. Also, new technologies may emerge to lower the cost of production for such substitutes, which would place cost pressures on Vulcan and impact its ability to competitively produce and market lithium. The Company cannot predict which new materials or technologies may ultimately prove to be commercially viable and in what time-frame. In addition, alternatives to lithium may become more economically attractive as global commodity prices shift. Any of these events could adversely affect demand for lithium, thereby resulting in a material adverse effect on the economic feasibility of extracting and processing any mineralisation Vulcan discovers.

### 3. Development and operations risk

The Company's ability to achieve production, development, operating cost and capital expenditure estimates on a timely basis cannot be assured.

The current and future operations of Vulcan, including exploration, appraisal, development and possible production activities, may be affected by a range of factors, including, but not limited to, the acquisition and/or delineation of economically recoverable mineralisation, geological conditions, receiving the necessary approvals from all relevant authorities and parties, seasonal weather patterns and workforce availability, as well as risks arising from unanticipated technical and operational difficulties encountered in extraction and production activities, mechanical failure of operating plant and equipment, shortages or increases in the price of consumables, spare parts and plant and equipment, cost overruns, access to the required level of funding and contracting risk from third parties providing essential services, and the ongoing COVID-19 pandemic and any other possible future outbreaks of diseases or pandemics. The exact effect of these factors cannot be accurately predicted, but the combination of these factors may result in an inadequate return or loss on invested capital. In addition, the materialisation of any such risk may cause substantial delays and require significant capital outlays, adversely affecting Vulcan's future earnings and competitive position, and its business, prospects, financial condition and results of operations.

In addition, if Vulcan commences production, its operations may be disrupted by a variety of risks and hazards, many of which are beyond the control of Vulcan. Examples of events which could have such an impact include unscheduled plant shutdowns or other processing problems, mechanical failures, the unavailability of materials and equipment or labour, poor or unexpected geological or metallurgical conditions, poor water condition, interruptions to electricity supplies, human error and adverse weather conditions.

### 4. Lithium price risk

Provided it commences commercial production, Vulcan intends to generate a substantial majority of its future revenues from the extraction and sale of lithium, with such sales to be made at prevailing market prices for lithium. The price of lithium may fluctuate widely and is affected by numerous factors beyond Vulcan's control, including international, economic and political trends, government policies, regulatory developments to promote electric vehicles, currency exchange fluctuations, interest rates, global or regional consumptive patterns, speculative activities, increased production due to new extraction developments and improved extraction and production methods, and technological changes in the markets for the end products. The general demand for lithium may also be volatile due to factors beyond Vulcan's control, including due to those same factors. Any material decrease in the price of or general demand for lithium may have an adverse effect on Vulcan's future earnings, competitive position, financial viability and results of operations.

### 5. Competition risk

In recent years, new and existing competitors have increased the supply of lithium hydroxide and lithium carbonate, which has affected its price. Further production increases could negatively affect prices. There is limited information on the status of new lithium hydroxide production capacity expansion projects being developed by current and potential competitors, particularly in the Company's main target market of Europe and, as such, the Company cannot make accurate projections regarding the capacities of possible new entrants into the market and the dates on which they could become operational. If these potential projects are completed in the short term, the increase in lithium supply could adversely affect lithium prices, thereby resulting in a material adverse effect on the economic feasibility of the Zero Carbon Lithium™ Project or of otherwise extracting lithium from brine in Vulcan's project areas and reducing or eliminating any reserves Vulcan may identify from time to time.

## Appendix 7: Risk factors

In addition, current and potential competitors may have larger financial resources or governmental support and, accordingly, may be able to launch new or expand existing lithium hydroxide production operations faster or on a broader scale than Vulcan. New and existing competitors may also establish themselves in the Upper Rhine Valley in Germany, where Vulcan is currently conducting its exploration activities, and attempt to replicate Vulcan's business model of extracting lithium from geothermal brines. Should any of these scenarios materialise, this could have a material adverse effect on the Company's competitive position and future earnings.

### 6. Geothermal energy demand risk

Vulcan's business model includes developing, owning and operating geothermal plants within its project areas. If Vulcan acquires a geothermal plant, Vulcan will produce renewable energy and the revenues from the produced electricity will be subject to the subsidised remuneration regime under the German Renewable Energy Act, or otherwise to the market price for renewable energy, as the case may be.

Additionally, Vulcan anticipates constructing several additional geothermal plants as part of its Zero Carbon Lithium™ Project. The brine from these plants will be utilised in Vulcan's lithium extraction business; however, they will also produce electricity and heat. Vulcan intends to use a portion of this electricity and heat as a power supply for its own business, and to sell the remainder of the electricity to the grid and the remainder of the heat to local municipalities (subject to the existence of necessary infrastructure). Accordingly, provided the Zero Carbon Lithium™ Project reaches commercial production, Vulcan's economic exposure to the prices of electricity and heat will increase.

The respective market prices of energy may fluctuate widely and are affected by numerous factors beyond Vulcan's control, including international, economic and political trends, regulatory developments to promote renewable energy, currency exchange fluctuations, interest rates, global or regional consumptive patterns and speculative activities. Any material decrease in the price or demand for renewable energy may have an adverse effect on Vulcan's earnings.

### Business Risks

#### 1. Limited operating history

The Company was incorporated in February 2018, acquired its flagship Zero Carbon Lithium™ Project in September 2019 and, accordingly, has a limited operating and financial history. Vulcan is exploring opportunities to extract lithium and produce geothermal energy from brine at various locations throughout the Upper Rhine Valley in Germany. As Vulcan is currently still in the exploration phase for its lithium hydroxide business, it has not generated any meaningful revenues in the past and, due to its recent acquisitions and expenditure, has incurred significant operating losses.

In addition, the Zero Carbon Lithium™ Project comprises a new type of operation, involving direct extraction of lithium from geothermal brines with net zero greenhouse gas emissions. This process is commercially unique, and therefore carries a high degree of risk, and may not technically or commercially succeed. In addition, Vulcan's targeted timeline for development of its geothermal and lithium operations is tight, and contemplates that all technical development and scale-up activities will proceed without any delays to permitting or construction. This includes a shorter development timeline than has historically been the case for developing geothermal projects in Germany, noting that Vulcan also has the added complexity of the novel lithium extraction operation, with even conventional lithium projects worldwide often suffering considerable delays and setbacks.

Vulcan has so far only carried out a pre-feasibility study relating to the Zero Carbon Lithium™ Project, and therefore at this stage may not have sufficient data to address and properly assess the risks frequently encountered by mineral companies with a limited operating history, including its ability to:

- establish and develop the Zero Carbon Lithium™ Project;
- conduct profitable lithium extraction and processing operations; and
- anticipate and adapt to any changes to any government regulations relating to the Zero Carbon Lithium™ Project.

The prospects of Vulcan must be considered in light of the risks, expenses and difficulties frequently encountered by companies in their early stage of feasibility, which have a high level of inherent uncertainty. No assurance can be given that Vulcan's Zero Carbon Lithium™ Project will achieve commercial viability. Until Vulcan is able to realise value from its Zero Carbon Lithium™ Project, it is likely to continue to incur ongoing operating losses.

## Appendix 7: Risk factors

### 2. Mineral resource and ore reserve estimates; accuracy of feasibility studies

Feasibility studies are used to determine the economic viability of a mineral deposit. Many factors are involved in the determination of the economic viability of a mineral deposit, including the achievement of satisfactory mineral reserve estimates, the level of estimated metallurgical recoveries, capital and operating cost estimates and the estimate of future metals prices. Feasibility studies are therefore subject to material uncertainties, in particular in early stage exploration projects.

Vulcan's Zero Carbon Lithium™ Project geologically represents an early-stage exploration and development project. While Vulcan has geological information from existing wells within some of its project licence areas, Vulcan, in line with standard practice for deep geothermal projects, has not yet drilled a geothermal production well, and there are no operating wells that have sampled the brines in the project areas for the Zero Carbon Lithium™ Project. Accordingly, one uncertainty of Vulcan's Pre-Feasibility Study relates to the lack of current access to deep-seated subsurface brine within the boundaries of Vulcan's licences. This has led to several assumptions in the resource estimation process in Vulcan's Pre-Feasibility Study. In deep geothermal brine projects in the Upper Rhine Valley in Germany, exploration is typically conducted with seismic data acquisition and interpretation, with the first well drilled as the first production well. Due to the unique nature of the deep geothermal brine-type deposit, exploration drilling has not been conducted within Vulcan's licence areas and Vulcan's lithium resources have been estimated using 2D and 3D seismic data, historical oil and gas wells with lithological information inside and outside Vulcan's licence areas, and lithium grades measured from proximate geothermal wells outside Vulcan's licence areas, and within an area where Vulcan has a memorandum of understanding with the geothermal operator. Estimates of the tonnes, grade and overall mineral content of a deposit in the Pre-Feasibility Study are not precise calculations, but are based on interpretation of samples from drilling, which, even at close drill hole spacing, represent a very small sample of the entire orebody. Accordingly, although the estimates may be accurate global approximations of lithium content, localised grade variability may exist, which could result in deviations from production expectations. More advanced data will only be available once the resources have been further explored by first production drilling of geothermal wells and gathering of additional exploration data (including valuation of geophysical data and enhanced geological analysis to develop a more detailed geological model and resource estimate), which Vulcan intends to undertake in its definitive feasibility study. Since the first exploration wells are also used as production wells because of their high capital cost, Vulcan will be relying on seismic data analysis and interpretations, and existing well data, for its definitive feasibility study, and will only drill its first exploration/production wells after the definitive feasibility study is completed. Until Vulcan has drilled its own exploration/production wells, there is an added degree of uncertainty as to the lithium grades in the brine and the brine flow rate, each of which could have an adverse effect on the commercial viability of the Zero Carbon Lithium™ Project.

By their very nature, estimates of Vulcan's mineral resources and ore reserves are imprecise, and depend to some extent on assumptions and interpretations, which may prove to be inaccurate. In addition, such estimates are expressions of judgement based on knowledge, experience and industry practice. Estimates which were valid when originally calculated may alter significantly when new information or techniques become available. As further information becomes available through additional fieldwork and analysis, the estimates are likely to change. This may result in alterations to development plans which may, in turn, adversely affect Vulcan's operations and financial performance.

### 3. COVID-19 and other pandemics; supply chain risk

The ongoing COVID-19 pandemic and any other possible future outbreaks of contagious diseases or pandemics may have a significant adverse effect on Vulcan. The spread of such diseases amongst Vulcan's management, employees, contractors and suppliers, as well as any quarantine and isolation requirements, may affect Vulcan's ability to efficiently operate. In particular, the imposition of any mobility restrictions may adversely affect all or parts of the supply chain in the development of (and ultimate commercial development at) Vulcan's Zero Carbon Lithium™ Project, which could cause delays in the development of the Zero Carbon Lithium™ Project and potentially affect the commercial viability of the Zero Carbon Lithium™ Project. This is exacerbated by the fact that the Zero Carbon Lithium™ Project is located in Germany, whilst Vulcan's head office, and some of Vulcan's key management team members, are located in Perth, Western Australia.

More broadly, Vulcan may also be affected by the macroeconomic effects and ensuing financial volatility resulting from the pandemic and any other possible outbreaks. While the final effects of the COVID-19 pandemic or other possible disease outbreaks are difficult to assess, it is possible that they will have a substantial negative effect on the economies in which Vulcan operates and could have an adverse effect on Vulcan's operations and financial performance.

## Appendix 7: Risk factors

### 4. Permits and licences

Vulcan currently holds all exploration licences required to undertake its exploration programs. However, many of the mineral rights and interests held by Vulcan are subject to the need for ongoing or new governmental approvals, licences and permits as the project advances and the scope of Vulcan's operations changes. For example, Vulcan will need, in various locations, permits to conduct seismic exploration and drilling. The granting and renewal of such approvals, licences and permits are, as a practical matter, subject to the discretion of applicable government agencies or officials. Also, governmental approval processes often allow for a form of participation of the general public which may consume substantial time and cost, and add an element of uncertainty to the process. If the Company pursues development of what it believes to be an economically viable mineral deposit, it will, among other things, require various approvals, permits and licences before it will be able to produce minerals from the deposit, and will need to satisfy certain environmental approval processes.

No guarantee can be given that approvals, licences or permits will be maintained or granted (at all or in a timely fashion), or, if they are maintained or granted, that Vulcan will be in a position to comply with all conditions that are imposed or that they will not be challenged by third parties. The approvals, licences or permits may be subject to prior unregistered agreements or transfers or title may be affected by undetected defects or other claims. The materialisation of any of these risks could adversely affect Vulcan's operations and its financial performance.

### 5. Stakeholder opposition

Resources exploration, development and extraction businesses, such as that carried out by Vulcan, sometimes face concerns and/or opposition from local residents, members of the local community, non-governmental organisations, environmental protection groups or other stakeholders regarding actual or potential breaches of regulatory conditions, health and safety risks, or environmental or other issues. Such stakeholders may choose to voice their concerns and opposition during the public consultation and participation process that will be undertaken in relation to the grant of certain permits and approvals for Vulcan's Zero Carbon Lithium™ Project or via the courts, either of which may result in substantial delays, additional costs, reputational risk and uncertainty as to the outcome of such procedures. Moreover, such stakeholders may decide to pursue their interests outside of formal channels by means of public protests, sit-ins or otherwise, in each case resulting in additional delays, costs, reputational risk and uncertainty. Each such risk, if it materialises, could result in the delayed commencement of operations or the temporary or permanent prevention or shutdown of operations in its entirety and, thus, adversely affect Vulcan's business. Accordingly, the success of Vulcan's operations are in part dependent on the support of local and regional stakeholders including, in particular, local communities and civil society.

### 6. Offtake agreements

Provided Vulcan commences commercial production, a substantial majority of its future revenues are intended to be generated from the extraction and sale of battery grade lithium lithium hydroxide, to be marketed and sold through binding offtake agreements (in some instances, entered into well in advance of Vulcan entering into the production phase). Vulcan's ability to generate revenues from any such agreements is subject to certain conditions, risks and uncertainties, including the production of lithium in sufficient quantities and to required specifications in accordance with an agreed timetable. There can be no assurance that Vulcan will be able to produce lithium at the required quantities and specification in the applicable time frame, or that Vulcan will reach the production phase at all. The failure to meet any such conditions could require re-negotiation of the agreements or even result in their termination, and there is no guarantee that Vulcan would be able to enter into new offtake agreements at similar or more favourable terms with other counterparties. Additionally, there is no guarantee that Vulcan will be able to enter into a sufficient number of offtake agreements to satisfy Vulcan's lithium production capacity.

### 7. Acquisition and integration risks

Since its incorporation, the Company has completed several acquisitions, including, in July 2021, the acquisitions of:

- Global Geothermal Holding UG ("GGH"), which holds an exploration licence for geothermal energy (the "Taro Licence") and exploration licence applications for geothermal energy and lithium, near the southwest German cities of Mannheim, Karlsruhe, Speyer and Neustadt;
- GeoThermal Engineering GmbH ("GeoT"), a consulting company focused on the sub-surface development of deep geothermal projects; and
- Global Engineering & Consultancy Company GmbH ("Gec-co"), a consulting company focused on the above-surface development of geothermal power and heating plants, in Europe and worldwide.

## Appendix 7: Risk factors

The Company may also in the future analyse and ultimately execute potential opportunities regarding acquisitions of existing companies, businesses, assets or technologies. However, there can be no assurance that the Company will be able to discover suitable acquisition targets at reasonable prices or at all. Should the Company be successful in making an acquisition, it may have to incur substantial expenditure, in the form of cash, shares or otherwise, incur debt, take on loss-making business divisions or take on other types of expenses. Further, the Company might fail to achieve the capacity expansion, cost savings, synergies or other benefits that it expects to realise from such acquisitions. There is no assurance that the implementation of any future acquisitions will yield benefits to the Company at a level sufficient to justify the expenses incurred in completing such acquisitions. Any integration process following any such acquisition might be complicated by the loss of key personnel, negative changes in the course of ongoing business processes and relationships with customers and employees. As a result, any such integration process may require more time, expenses and management capacity and resources than expected.

### 8. Seismicity risks

While the geothermal industry in Germany has a good system of controlling seismicity to an acceptable threshold, some geothermal brine projects have been associated with seismic events in the past, which has resulted in projects being shut-down or being scrutinised by the competent mining authorities. Should Vulcan's projects, once more advanced, cause or be associated with seismic events, they could be scrutinised by the competent authorities which could issue all necessary orders to reduce resulting risks and to exclude such events going forward. Such orders could potentially include, amongst others, increased seismic monitoring obligations, operational restrictions or (as preliminary measures or last resort) a partial or temporary, or even a complete shut-down of the relevant projects, depending on the specific circumstances. Furthermore, the operator of the facility is obliged to pay compensation for resulting damages and violations of permit provisions can be penalised as administrative offences or even criminal offences. The materialisation of any of the above risks could disrupt the operations of Vulcan and, accordingly, have a material adverse effect on Vulcan's operations and financial performance.

### 9. Climate change risks

There are a number of climate-related factors that may affect the operations and proposed activities of Vulcan. Climate change may cause certain physical and environmental risks that cannot be predicted by the Company, including events such as increased severity of weather patterns and incidence of extreme weather events, as well as longer-term physical risks such as shifting climate patterns. In particular, higher temperatures prevailing over increasing periods of time, as a result of the anticipated global warming, may negatively impact the efficiency of the chemical and physical processes in geothermal plants used in the energy production business. The materialisation of any of these risks could have a material adverse effect on Vulcan's operations and financial performance.

### 10. Key personnel risk

The Company believes that its success greatly depends on the performance of its directors and its other key personnel, including engineers, consultants, managers and other staff, who are experts in the sector and markets in which it operates. In addition, in order to achieve its strategic goals, Vulcan is targeting an increase in staff over the next three to five years.

There can be no assurance that Vulcan's efforts to retain and motivate its directors and key employees or attract and retain other highly qualified technical personnel will be successful. The loss of any directors or key employees, or failure to attract new qualified employees, including qualified technical personnel, could have a negative impact on Vulcan's current exploration operations, as well as its future development and production operations, and financial performance.

### 11. Insurance risk

While Vulcan is insured against fire, natural disasters, operational interruptions and third-party liability, its insurance policies are subject to exclusions and limitations of liability both in amount and with respect to the insured events. As a result, Vulcan's facilities or its employees may suffer physical damage resulting in losses that may not be covered by insurance, either fully or at all. In addition, there are certain types of losses, generally of a catastrophic nature or pandemic events, that may be uninsurable or are not economically insurable.

There can be no assurance that Vulcan's assessment that it is sufficiently insured in accordance with industry practice against contingencies is accurate. In addition, there can be no assurance that Vulcan will be able to maintain its current level and scope of coverage or obtain replacement insurance on acceptable terms or at all. If Vulcan suffers a loss or incurs a liability against which it is uninsured or insufficiently insured, this could adversely affect Vulcan's business, net assets, financial condition, cash flow, and results of operations.

## Appendix 7: Risk factors

### 12. Additional financing

Historically, Vulcan's finance costs have been minimal. However, significant future funding will be required by Vulcan to support the further implementation of its Zero Carbon Lithium™ Project. The current estimated financing costs of the Zero Carbon Lithium™ Project, as set out in Vulcan's Pre-Feasibility Study, comprise approximately EUR 700 million (including contingency) for the development of phase one (anticipated to commence commercial production in 2024) and a further EUR 1,138 million (including contingency) for the development of phase two. However, the exact amount of future capital requirements may significantly deviate from the Pre-Feasibility Study estimates, and additional funds may be needed to fully drill-out, extract and process the lithium at the project areas.

Vulcan expects to finance stage one and two of the Zero Carbon Lithium™ Project through a combination of debt and equity.

Management will consider the most appropriate options for further funding at the relevant times. Any additional equity financing may be dilutive to the Company's shareholders. In addition, any debt financing, if available at acceptable terms or at all, may involve restrictions on financing and operating activities, including the future potential payment of dividends, and result in a material interest expense. If Vulcan is unable to obtain additional financing as needed, on acceptable terms or at all, it may be required to reduce the scope of its development plans which may, in turn, adversely affect Vulcan's operations.

Accordingly, although Vulcan has not yet entered into or agreed the terms of any debt facility, the Company expects that, once entered into, Vulcan will have a material interest expense, which may be at a variable rate. As such, the amount of interest payable by the Company would ultimately be a function of the prevailing interest rates available to Vulcan. A material increase in interest rates during the development phase or during commercial production could ultimately lead to a higher interest expense than that which is currently forecast. In addition, in the absence of any revenue before the commencement of commercial production, these finance costs would generate additional losses before taxation for the foreseeable future. These losses may be compounded if the Company is forced to incur more debt than currently expected, for example, if the Company is required to finance cost overruns in connection with the Zero Carbon Lithium™ Project.

### 13. FSE Listing

As announced by the Company recently, Vulcan intends to pursue a dual listing on the regulated market of the Frankfurt Stock Exchange ("**FSE Listing**"). However, there is no guarantee that the FSE Listing will occur in the timeframe anticipated, or at all.

If the FSE Listing occurs, the Company would, in addition to its legal requirements from its existing listing on ASX, be simultaneously subject to the German legal requirements for public companies listed on the Prime Standard sub-segment of the regulated market of the Frankfurt Stock Exchange, which deviate from (and will be additional to) the legal requirements that apply listed on the ASX-listed companies. These new requirements would include periodic financial reporting, regular calls with securities and industry analysts, compliance with the European market abuse regulations and other public disclosures of information required by law.

If the FSE Listing is completed, the Company is expected to be the first Australian company listed on the regulated market of the Frankfurt Stock Exchange, and there may be challenges for the Company in combining the listing requirements of both markets in a coherent manner. There can be no assurance that the Company's accounting, legal or other administrative functions will be capable of responding to these additional requirements without difficulties and inefficiencies, or without incurring significant additional costs. Failure to comply with these requirements could expose the Company to delisting of its Shares on the regulated market of the Frankfurt Stock Exchange, fines, sanctions and other regulatory action, and potentially civil litigation.

The FSE Listing would also require members of the management team to devote time to these additional requirements that they could have otherwise devoted to other aspects of managing the Company's operations, and these additional requirements could also entail substantially increased time commitments and costs for the accounting and legal departments and other administrative functions.

## Appendix 7: Risk factors

### 14. Foreign currency exchange risk

The majority of Vulcan's expenses are currently paid in Euros (excluding certain corporate costs paid in Australian dollars). Because Vulcan currently retains the majority of its cash in Australian dollars (and the Offer contemplates raising funds in Australian dollars), adverse movements in these currencies may result in a relative devaluation of Vulcan's cash reserves, which would have an adverse impact on Vulcan's financial position. Vulcan Group does not hedge its foreign currency exposure against fluctuations.

In addition, should Vulcan reach commercial production, as Vulcan will continue to incur expenses predominantly in Euros, to the extent that the lithium prices under Vulcan's offtake agreements are denominated in another currency (such as US dollars), Vulcan will be exposed to any fluctuation between those currencies, which may have an adverse impact on Vulcan's operations and financial performance.

### 15. Regulatory risks and changes in law

Vulcan operates in many jurisdictions, and, accordingly, is subject to local and national laws, regulations and ordinances in both Australia and the European Union. The laws and regulations that Vulcan is subject to change frequently, evolve constantly and may become more stringent. Vulcan may be required to incur significant costs and devote significant management time to adapting its exploration or production processes and operating policies to changes in applicable laws and regulations, and there can be no assurance that its efforts will ensure it is in compliance with such laws and regulations. If Vulcan does not comply with applicable laws and regulations, it may be required to take remedial actions that could be costly and time consuming, and it may also be subject to fines, administrative penalties, claims for damages and, potentially, criminal charges.

In addition, as the Company is an Australian company and its operating subsidiaries and significant assets are based in Germany, Vulcan's assets are subject to risks with regard to their extraterritoriality such as changes in laws, practices and policies in the relevant jurisdictions, including laws that deal with overseas investors. In particular, changes to investment policies and legislation or a shift in political attitude may adversely affect Vulcan's operations and profitability. In particular, while there are currently no restrictions on the foreign ownership of mineral extraction companies in Germany, there can be no assurance that the requirements of the various governments in respect of foreign ownership and control of mineral resources companies will not change. It is not possible for Vulcan to accurately predict such developments or changes in laws or policy or to what extent any such developments or changes may have a material adverse effect on Vulcan's operations.

The occurrence of any of these risks could adversely affect Vulcan's business, net assets, financial condition, cash flow, and results of operations.

### 16. Environmental risk

As with most exploration projects, renewable energy projects and brine extraction operations, Vulcan's activities are expected to have some impact on the environment, particularly if advanced exploration or lithium processing proceeds. Many of the activities and operations of Vulcan cannot be carried out without prior approval from all relevant authorities and compliance with all relevant laws and regulations. Violations of environmental laws and regulations may lead to significant sanctions including the shutdown of affected facilities and administrative fines and could also result in payment of damages to affected parties. Environmental legislation is evolving in a manner that may require stricter standards and enforcement, increased fines and penalties for non-compliance, more stringent environmental assessments of proposed projects, and a heightened degree of responsibility for renewable energy, brine and mineral extraction companies and their directors and employees. As Vulcan is attempting a new process of extracting lithium from geothermal brine, of which there are no comparable operating commercial precedents in Germany, there are significant unknowns with regard to the permitting process and duration with authorities.

In particular, the disposal of mineral production and process waste and brine re-injection are under constant legislative scrutiny and regulation. There is a risk that environmental laws and regulations become more onerous making the Company's operations more expensive. Approvals are required for land clearing and for ground disturbing activities. Delays in obtaining such approvals can result in the delay to anticipated exploration programmes or brine production activities.

## Appendix 7: Risk factors

### 17. Intellectual property risk

Vulcan believes that its know-how and proprietary technology is critical to its success. Vulcan has sought protection of its proprietary technology through the grant of a German utility patent, and has also applied for an international patent over certain of its material proprietary technology. Vulcan also relies on trade secret protection through non-disclosure agreements and other methods to protect its proprietary rights. Vulcan has also filed extensive trademark applications for its brands in Europe, the United Kingdom and in Australia.

Vulcan is subject to a number of risks in adequately protecting its intellectual property, including that:

- Vulcan may not be able to obtain effective intellectual property protection;
- Vulcan may be required to expend significant resources (including financial, managerial and operational resources) to monitor and protect its intellectual property rights;
- Vulcan's intellectual property rights could be challenged or invalidated through administrative processes or litigation;
- Vulcan may not discover or determine the extent of any infringement, misappropriation or other violation of its intellectual property rights and other proprietary rights;
- Vulcan may not discover any infringement or other violation of its intellectual property rights by a third party, or the extent of any such infringement or other violation, or, to the extent discovered, may not be successful in any claims or litigations against that third party; and
- Vulcan's competitors from time to time may independently develop or otherwise acquire equivalent or superior technology or intellectual property rights.

In addition, Vulcan may inadvertently infringe the intellectual property rights of third parties.

The realisation of any of such risks, alone or in combination, could have a material adverse effect on Vulcan's operations or financial performance.

### 18. Taxation risk

Vulcan is subject to the tax laws and regulations of Australia and Germany. Vulcan's tax liability depends on various aspects of tax laws and regulations including Australian and German domestic tax laws and regulations and double taxation treaties concluded, in particular, between Australia and Germany. Due to Vulcan's international business activities, Vulcan is constantly exposed to risks arising from the application of international tax concepts used for the purpose of allocating taxing rights between countries – for example, the concept of permanent establishment as used in double taxation treaties. Changes to tax legislation, the interpretation of tax legislation by courts or the administration of tax legislation by the relevant tax authorities (in each case, in either or both of Australia and Germany) may have an adverse impact on Vulcan's tax liabilities and impact future expected cash flows.

In addition, changes to tax legislation, the interpretation of tax legislation by courts, the administration of tax legislation by the relevant tax authorities may have an adverse impact on the treatment of a shareholder's investment in New Shares or Vulcan generally, including on any tax applicable on holding or disposing of Shares.

### Risks related to the Offer and an investment in Shares (including New Shares)

#### 1. Underwriting risk

Vulcan has entered into a placement underwriting agreement with the Joint Lead Managers (“**Placement Agreement**”) under which the Joint Lead Managers have agreed to underwrite the Placement, subject to the terms and conditions of the Placement Agreement (refer to “Summary of Placement Agreement” in Appendix 9 for a summary of the key terms and conditions to the Placement Agreement). If certain conditions are not satisfied or certain events occur, the Joint Lead Managers may terminate the Placement Agreement. Termination of the Placement Agreement would have an adverse impact on the proceeds capable of being raised under the Placement.

## Appendix 7: Risk factors

### 2. Dilution risk

Existing shareholders who do not participate in the Placement (which will include all retail shareholders and those institutional shareholders who do not participate in the Placement) will be diluted by the Placement. In addition, shareholders who do not participate in the Share Purchase Plan (which is available only to eligible shareholders) will be diluted by the Share Purchase Plan.

The Company may also seek to raise additional capital in the future through the issue of additional Shares or other securities with conversion rights (e.g., options, performance rights, convertible bonds and other convertible securities), to implement future employee incentive plans, or to issue Shares or other securities as consideration for certain acquisitions or investments from time to time. An issue of additional Shares or securities with a right to convert into equity would dilute existing shareholders' shareholdings, to the extent they do not participate in such issue.

### 3. Share market conditions and economic conditions

As securities in a public, listed company, Shares are subject to the general market risk that is inherent in all securities listed on a securities exchange. This may result in fluctuations in Vulcan's Share price that are not explained by, and occur regardless of, Vulcan's operational and financial performance, and cannot be controlled or influenced by Vulcan or its directors.

The price at which Shares are quoted on ASX may rise or fall due to a number of factors. These factors may cause the Shares (including New Shares) to trade below the price paid for those Shares. There is no assurance or guarantee that the price of Shares will be maintained or increase, even if Vulcan's operational or financial performance is sustained or improves.

Some of the factors which may affect the price of the Shares include, but are not limited to:

- fluctuations in the domestic and international markets for listed securities;
- general economic conditions and outlook, including gross domestic product growth, interest rates, inflation rates, foreign currency fluctuations and unemployment rates;
- changes in fiscal, monetary or regulatory policies, legislation or regulation, including in relation to taxation or duties;
- variations in market sector performance or changes in investor sentiment towards particular market sectors, which can lead to investors exiting one market sector in preference for another;
- initiatives by other sector participants which may lead to investors switching from one traded security to another;
- recommendations by brokers or analysts (including in relation to Vulcan specifically, or in relation to market sectors such as the lithium sector or the resources exploration sector);
- the nature of the markets in which Vulcan operates;
- global hostilities, tensions, and acts of terrorism; and
- general operational and business risks.

Neither Vulcan nor any of its directors can guarantee the performance of Shares (including New Shares), or that the New Shares will trade at or above their issue price under the Offers.

### 4. Liquidity risk

There can be no guarantee that there will continue to be an active market for Shares or that the price of Shares will increase. There may be relatively few buyers or sellers of Shares on ASX at any given time, which may affect the volatility of the market price of Shares. It may also affect the prevailing market price at which shareholders are able to sell their Shares, which may result in shareholders receiving a market price for their Shares that is less or more than the price paid for New Shares under the Offer.

### 5. Dividend risk

Vulcan has historically not paid any dividends, and, due to the significant expenditure expected to be incurred in the evaluation and development of the Zero Carbon Lithium™ Project, does not expect to declare or pay any dividends in the near future.

Any future determination as to the payment of dividends by Vulcan will be at the discretion of Vulcan's directors and will depend on the financial condition of Vulcan, future capital requirements and general business and other factors considered relevant by Vulcan's directors. No assurance can be given by Vulcan as to any potential future dividends or the franking credits attaching to any such dividends.

## Appendix 8: International offer restrictions

This document does not constitute an offer of New Shares in any jurisdiction in which it would be unlawful. In particular, this document may not be distributed to any person, and the New Shares may not be offered or sold, in any country outside Australia except to the extent permitted below.

### Canada (British Columbia, Ontario and Quebec provinces)

This document constitutes an offering of New Shares only in the Provinces of British Columbia, Ontario and Quebec (the "**Provinces**"), only to persons to whom New Shares may be lawfully distributed in the Provinces, and only by persons permitted to sell such securities. This document is not a prospectus, an advertisement or a public offering of securities in the Provinces. This document may only be distributed in the Provinces to persons who are "accredited investors" within the meaning of National Instrument 45-106 – Prospectus Exemptions, of the Canadian Securities Administrators.

No securities commission or authority in the Provinces has reviewed or in any way passed upon this document, the merits of the New Shares or the offering of the New Shares and any representation to the contrary is an offence.

No prospectus has been, or will be, filed in the Provinces with respect to the offering of New Shares or the resale of such securities. Any person in the Provinces lawfully participating in the offer will not receive the information, legal rights or protections that would be afforded had a prospectus been filed and receipted by the securities regulator in the applicable Province. Furthermore, any resale of the New Shares in the Provinces must be made in accordance with applicable Canadian securities laws. While such resale restrictions generally do not apply to a first trade in a security of a foreign, non-Canadian reporting issuer that is made through an exchange or market outside Canada, Canadian purchasers should seek legal advice prior to any resale of the New Shares.

The Company as well as its directors and officers may be located outside Canada and, as a result, it may not be possible for purchasers to effect service of process within Canada upon the Company or its directors or officers. All or a substantial portion of the assets of the Company and such persons may be located outside Canada and, as a result, it may not be possible to satisfy a judgment against the Company or such persons in Canada or to enforce a judgment obtained in Canadian courts against the Company or such persons outside Canada.

Any financial information contained in this document has been prepared in accordance with Australian Accounting Standards and also comply with International Financial Reporting Standards and interpretations issued by the International Accounting Standards Board. Unless stated otherwise, all dollar amounts contained in this document are in Australian dollars.

Statutory rights of action for damages and rescission. Securities legislation in certain Provinces may provide a purchaser with remedies for rescission or damages if an offering memorandum contains a misrepresentation, provided the remedies for rescission or damages are exercised by the purchaser within the time limit prescribed by the securities legislation of the purchaser's Province. A purchaser may refer to any applicable provision of the securities legislation of the purchaser's Province for particulars of these rights or consult with a legal adviser.

Certain Canadian income tax considerations. Prospective purchasers of the New Shares should consult their own tax adviser with respect to any taxes payable in connection with the acquisition, holding or disposition of the New Shares as there are Canadian tax implications for investors in the Provinces.

Language of documents in Canada. Upon receipt of this document, each investor in Canada hereby confirms that it has expressly requested that all documents evidencing or relating in any way to the sale of the New Shares (including for greater certainty any purchase confirmation or any notice) be drawn up in the English language only. Par la réception de ce document, chaque investisseur canadien confirme par les présentes qu'il a expressément exigé que tous les documents faisant foi ou se rapportant de quelque manière que ce soit à la vente des valeurs mobilières décrites aux présentes (incluant, pour plus de certitude, toute confirmation d'achat ou tout avis) soient rédigés en anglais seulement.

### European Union

This document has not been, and will not be, registered with or approved by any securities regulator in the European Union. Accordingly, this document may not be made available, nor may the New Shares be offered for sale, in the European Union except in circumstances that do not require a prospectus under Article 1(4) of Regulation (EU) 2017/1129 of the European Parliament and the Council of the European Union (the "Prospectus Regulation").

In accordance with Article 1(4)(a) of the Prospectus Regulation, an offer of New Shares in the European Union is limited to persons who are "qualified investors" (as defined in Article 2(e) of the Prospectus Regulation).

## Appendix 8: International offer restrictions

### Hong Kong

WARNING: This document has not been, and will not be, registered as a prospectus under the Companies (Winding Up and Miscellaneous Provisions) Ordinance (Cap. 32) of Hong Kong, nor has it been authorised by the Securities and Futures Commission in Hong Kong pursuant to the Securities and Futures Ordinance (Cap. 571) of the Laws of Hong Kong (the "**SFO**"). No action has been taken in Hong Kong to authorise or register this document or to permit the distribution of this document or any documents issued in connection with it. Accordingly, the New Shares have not been and will not be offered or sold in Hong Kong other than to "professional investors" (as defined in the SFO and any rules made under that ordinance).

No advertisement, invitation or document relating to the New Shares has been or will be issued, or has been or will be in the possession of any person for the purpose of issue, in Hong Kong or elsewhere that is directed at, or the contents of which are likely to be accessed or read by, the public of Hong Kong (except if permitted to do so under the securities laws of Hong Kong) other than with respect to New Shares that are or are intended to be disposed of only to persons outside Hong Kong or only to professional investors. No person allotted New Shares may sell, or offer to sell, such securities in circumstances that amount to an offer to the public in Hong Kong within six months following the date of issue of such securities.

The contents of this document have not been reviewed by any Hong Kong regulatory authority. You are advised to exercise caution in relation to the offer. If you are in doubt about any contents of this document, you should obtain independent professional advice.

### New Zealand

This document has not been registered, filed with or approved by any New Zealand regulatory authority under the Financial Markets Conduct Act 2013 (the "FMC Act"). The New Shares are not being offered or sold in New Zealand (or allotted with a view to being offered for sale in New Zealand) other than to a person who:

- is an investment business within the meaning of clause 37 of Schedule 1 of the FMC Act;
- meets the investment activity criteria specified in clause 38 of Schedule 1 of the FMC Act;
- is large within the meaning of clause 39 of Schedule 1 of the FMC Act;
- is a government agency within the meaning of clause 40 of Schedule 1 of the FMC Act; or
- is an eligible investor within the meaning of clause 41 of Schedule 1 of the FMC Act.

### Singapore

This document and any other materials relating to the New Shares have not been, and will not be, lodged or registered as a prospectus in Singapore with the Monetary Authority of Singapore. Accordingly, this document and any other document or materials in connection with the offer or sale, or invitation for subscription or purchase, of New Shares, may not be issued, circulated or distributed, nor may the New Shares be offered or sold, or be made the subject of an invitation for subscription or purchase, whether directly or indirectly, to persons in Singapore except pursuant to and in accordance with exemptions in Subdivision (4) Division 1, Part XIII of the Securities and Futures Act, Chapter 289 of Singapore (the "**SFA**"), or as otherwise pursuant to, and in accordance with the conditions of any other applicable provisions of the SFA.

This document has been given to you on the basis that you are (i) an "institutional investor" (as defined in the SFA) or (ii) an "accredited investor" (as defined in the SFA). If you are not an investor falling within one of these categories, please return this document immediately. You may not forward or circulate this document to any other person in Singapore.

Any offer is not made to you with a view to the New Shares being subsequently offered for sale to any other party. There are on-sale restrictions in Singapore that may be applicable to investors who acquire New Shares. As such, investors are advised to acquaint themselves with the SFA provisions relating to resale restrictions in Singapore and comply accordingly.

## Appendix 8: International offer restrictions

### Switzerland

The New Shares may not be publicly offered in Switzerland and will not be listed on the SIX Swiss Exchange or on any other stock exchange or regulated trading facility in Switzerland. Neither this document nor any other offering or marketing material relating to the New Shares constitutes a prospectus or a similar notice, as such terms are understood under art. 35 of the Swiss Financial Services Act or the listing rules of any stock exchange or regulated trading facility in Switzerland.

No offering or marketing material relating to the New Shares has been, nor will be, filed with or approved by any Swiss regulatory authority or authorised review body. In particular, this document will not be filed with, and the offer of New Shares will not be supervised by, the Swiss Financial Market Supervisory Authority (FINMA).

Neither this document nor any other offering or marketing material relating to the New Shares may be publicly distributed or otherwise made publicly available in Switzerland. The New Shares will only be offered to investors who qualify as "professional clients" (as defined in the Swiss Financial Services Act). This document is personal to the recipient and not for general circulation in Switzerland.

### United Kingdom

Neither this document nor any other document relating to the offer has been delivered for approval to the Financial Conduct Authority in the United Kingdom and no prospectus (within the meaning of section 85 of the Financial Services and Markets Act 2000, as amended ("**FSMA**")) has been published or is intended to be published in respect of the New Shares.

The New Shares may not be offered or sold in the United Kingdom by means of this document or any other document, except in circumstances that do not require the publication of a prospectus under section 86(1) of the FSMA. This document is issued on a confidential basis in the United Kingdom to "qualified investors" within the meaning of Article 2(e) of the UK Prospectus Regulation. This document may not be distributed or reproduced, in whole or in part, nor may its contents be disclosed by recipients, to any other person in the United Kingdom.

Any invitation or inducement to engage in investment activity (within the meaning of section 21 of the FSMA) received in connection with the issue or sale of the New Shares has only been communicated or caused to be communicated and will only be communicated or caused to be communicated in the United Kingdom in circumstances in which section 21(1) of the FSMA does not apply to the Company.

In the United Kingdom, this document is being distributed only to, and is directed at, persons (i) who have professional experience in matters relating to investments falling within Article 19(5) (investment professionals) of the Financial Services and Markets Act 2000 (Financial Promotions) Order 2005 ("**FPO**"), (ii) who fall within the categories of persons referred to in Article 49(2)(a) to (d) (high net worth companies, unincorporated associations, etc.) of the FPO or (iii) to whom it may otherwise be lawfully communicated (together "relevant persons"). The investment to which this document relates is available only to relevant persons. Any person who is not a relevant person should not act or rely on this document.

### United States

This document does not constitute an offer to sell, or a solicitation of an offer to buy, securities in the United States. The New Shares have not been, and will not be, registered under the US Securities Act of 1933 or the securities laws of any state or other jurisdiction of the United States. Accordingly, the New Shares may not be offered or sold in the United States except in transactions exempt from, or not subject to, the registration requirements of the US Securities Act and applicable US state securities laws.

The New Shares to be offered and sold under the Placement will only be offered and sold in the United States to:

- "qualified institutional buyers" (as defined in Rule 144A under the US Securities Act); and
- dealers or other professional fiduciaries organized or incorporated in the United States that are acting for a discretionary or similar account (other than an estate or trust) held for the benefit or account of persons that are not US persons and for which they exercise investment discretion, within the meaning of Rule 902(k)(2)(i) of Regulation S under the US Securities Act.

## Appendix 9: Summary of Placement Agreement

Vulcan has entered into a Placement Agreement with the Joint Lead Managers, under which the Joint Lead Managers have agreed to act as joint lead managers, bookrunners and underwriters in connection with the Placement (Placement Agreement), subject to the terms and conditions of the Placement Agreement. The Joint Lead Managers may terminate the Placement Agreement if certain conditions contemplated by the Placement Agreement are not satisfied or if certain events occur. The conditions and termination events in the Placement Agreement are not uncommon for an arrangement of this nature.

In summary, either Joint Lead Manager may terminate the Placement Agreement if any of the following events occur:

- in the bona fide opinion of the Joint Lead Manager, one or more of the following events have or are likely to have (a) a material adverse effect on the marketing, success or settlement of the Placement, the willingness of persons to subscribe for the New Shares, the market price of Shares or the business, financial position or prospects of the Company and its related bodies corporate or (b) has given rise to or is likely to give rise to a contravention by a Joint Lead Manager or its affiliates incurring a liability under, or contravening, the Company's Constitution, the Corporations Act or ASX Listing Rules, as applicable:
  - an outbreak or escalation of hostilities or a state of emergency declaration involving any of Australia, the United Kingdom, the United States, Japan, Hong Kong, or a member of the European Union, or a major act of terrorism anywhere in the world;
  - a general moratorium on commercial banking activities in Australia, the United States or the United Kingdom, is declared by the relevant banking authority in any of those countries, or there is a material disruption in commercial banking or security settlement or clearance services in any of those countries;
  - trading in all securities quoted or listed on ASX, the London Stock Exchange or the New York Stock Exchange is suspended or limited in a material respect for one day on which that exchange is open for trading ("Trading Day"), or substantially all of a Trading Day, excluding any suspension or limitation of trading caused by or in connection with any technical or systems failure, or a Level 3 "market-wide circuit breaker" is implemented by the New York Stock Exchange upon a 20% decrease against the prior day's closing price of the S&P 500 Index only;
  - an adverse change or disruption to the political conditions or financial markets of Australia, the United Kingdom, the United States, Hong Kong, Japan, Germany or the international financial markets or any change or development involving a prospective adverse change in national or international political, financial or economic conditions;
  - Vulcan is in breach of any term, condition, undertaking, representation, warranty or agreement of the Placement Agreement;
  - a new or materially revised law is introduced in Australia or any new regulation is made under any law, or a Government Agency adopts a policy, or there is any official public announcement that such a law or regulation will be introduced or policy adopted (as the case may be);
  - a change in senior management of Vulcan or board of directors of Vulcan is announced or occurs; or
  - the certificate ("**Certificate**") required to be delivered by Vulcan under the Placement Agreement (certifying Vulcan's compliance with its obligations under the Placement Agreement, that Vulcan has not defaulted under the Placement Agreement, that the representations and warranties given by Vulcan are true and correct in all respects and not misleading or deceptive and no termination events under the Placement Agreement have occurred), is not true or correct;
- the S&P/ASX 200 Index is at any time during the period from 9.00am on Tuesday, 14 September 2021 until the close of trading on Tuesday, 21 September 2021, at a level that is 10% or more below the level as at the close of trading on Monday, 13 September 2021;
- a condition to the Placement Agreement is not satisfied or waived by its applicable deadline;
- any event specified in the timetable in the Placement Agreement is delayed for more than two business days without the prior written approval of the Joint Lead Manager;
- the Certificate is not delivered to the Joint Lead Managers in accordance with the Placement Agreement;
- there is an event, occurrence or non-occurrence which makes it illegal or commercially impossible for the Joint Lead Manager to satisfy a material obligation under the Placement Agreement, or to market, promote or settle the Placement, or that causes the Joint Lead Manager to delay satisfying a material obligation under the Placement Agreement;
- Vulcan withdraws the Placement or indicates that it does not intend to or is unable to proceed with the Placement;
- there is an application to a government agency for an order, declaration or other remedy, or a government agency commences any investigation or hearing or announces its intention to do so, in each case in connection with the Placement or any agreement entered into in respect of the Placement;

## Appendix 9: Summary of Placement Agreement

- there is a material adverse change, or in the Joint Lead Managers' reasonable opinion, a development involving a potential material adverse change, in the condition, assets, liabilities, financial or trading position or performance, profits, losses, management or prospects of Vulcan or any of its related bodies corporate (in so far as the position in relation to related bodies corporate affects the overall position of Vulcan);
- proceedings are commenced or there is a public announcement of an intention to commence proceedings before a court or tribunal of competent jurisdiction in Australia seeking an injunction or other order in relation to the Placement;
- Vulcan breaches, or defaults under, any provision, undertaking, covenant or ratio of a material financing agreement which has a material adverse effect, or a lender or financier fails to agree a waiver or amendment to a material financing agreement in relation to any breach, default or review event under that a material financing agreement and that failure to agree would, in the Joint Lead Manager's reasonable opinion, have a material adverse effect;
- Vulcan commits a material breach of the Corporations Act, its Constitution, the ASX Listing Rules or other applicable laws or has failed to comply with its continuous disclosure obligations under the Corporations Act or ASX Listing Rules;
- Vulcan alters its capital structure or its Constitution without the prior consent of the Joint Lead Manager;
- ASIC issues, or threatens to issue, proceedings in relation to the Placement, or commences any inquiry or investigation in relation to the Placement (or gives notice of its intention to do either of those things);
- ASX makes any official statement to any person, or indicates to Vulcan or the Joint Lead Managers that (a) it will not grant official quotation of the New Shares before 9.30am on Wednesday, 22 September 2021, or if such approval is granted, the approval is withdrawn or qualified (other than by customary conditions), (b) Shares will be suspended from quotation by ASX, or (c) Vulcan will be removed from the official list of ASX, or any of those things actually occur;
- a director or officer (as that term is defined in the Corporations Act) of Vulcan is charged with an indictable offence or disqualified from managing a corporation under Part 2D.6 of the Corporations Act, or certain other actions are taken against a director in relation to any fraudulent conduct or activity (whether or not in connection with the Placement or the SPP) or Vulcan engages in any fraudulent activity; or
- Vulcan or any of its related bodies corporate is, or becomes, insolvent.

Vulcan will pay the Joint Lead Managers, in their respective proportions (being 50% each), an underwriting fee of 2.80% and a management fee of 0.70% of the monies raised under the Placement. No fees are payable to the Joint Lead Managers in respect of the SPP.



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# Thank You

PUBLIC RELATIONS

EU/Germany

Australia



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