

## Zero Carbon Lithium™ Project Update

Vulcan Energy Resources Limited (Vulcan; ASX: VUL, FSE: VUL, the Company), the renewable energy producer and carbon neutral lithium developer, is pleased to provide a project progress update, for its Zero Carbon Lithium™ Project in the Upper Rhine Valley Brine Field, Germany.

### Highlights:

#### Lithium Extraction Optimisation Plant (LEOP)

- Crystallizer developed by Novopro has been successfully installed in the Vulcan Lithium Extraction Optimisation Plant (LEOP) in Landau. The crystallizer represents the final process step in the lithium extraction (concentration after purification) in our Optimisation Plant to produce the LiCl concentrate product from Vulcan's renewable-heated brine.
- Once operational and producing lithium chloride, LEOP will herald the birth of a new domestic lithium industry in Germany and Europe, produced sustainably with zero fossil fuels used in the production process. Vulcan's Upper Rhine Valley Brine Field in Germany represents the largest lithium Resource in Europe, and a globally significant Resource, with the potential to grow to supply domestic battery electric vehicle production. Vulcan's binding lithium offtake agreements include some of the largest auto and battery manufacturers globally, and represents the start of onshoring of Europe's battery critical raw materials supply chain.



New crystallizer at Vulcan's Lithium Extraction Optimisation Plant

Brines lines being connected.

### Contact

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### Renewable energy operations

- The maintenance workover of the production well pump at Vulcan's production/re-injection well site at its Insheim production site has been completed on time, led by Vulcan's multi-disciplinary in-house team.
- Normal operations have been recommenced at the Insheim geothermal renewable energy plant, supplying renewable power to local communities.



*Cranes supporting Insheim pump change*

*Aerial shot of Insheim whilst pump change in action.*

### Phase One project execution

- Vulcan has successfully acquired its first land package for its Phase One commercial lithium and renewable energy development. Further acquisitions are expected in the coming weeks.
- Vulcan has initiated discussions with international EPC and EPCM contractors, as well as equipment and service providers, and is seeking to start entering into agreements in the coming weeks and months for the various parts of the Zero Carbon Lithium™ Project.
- Vulcan has engaged White and Case as Borrower's Legal Advisor, to work alongside BNP Paribas in Vulcan's debt financing process. Vulcan has already had positive feedback from a market sounding exercise from multiple commercial and development banks, and has secured letters of intent from government-backed Export Credit Agencies, including bpiFrance, which have classed Vulcan's project as being of strategic importance.
- Vulcan successfully raised A\$109m (€66m) before costs from institutional investors in Australia, Europe, the US and Hong Kong, with such funds to be put mainly towards purchasing of long lead items for the Phase One commercial project. Vulcan currently has €166m (\$270m) cash and no debt, and led by its approximate 300-strong team is rapidly advancing the project execution of its Phase One commercial project.



## About Vulcan

Founded in 2018, Vulcan's unique Zero Carbon Lithium™ Project aims to decarbonise lithium production, through developing the world's first net carbon neutral lithium business, with the co-production of renewable geothermal energy on a mass scale. By adapting existing technologies to efficiently extract lithium from geothermal brine, Vulcan aims to deliver a local source of sustainable lithium for Europe, built around a net zero carbon strategy with strict exclusion of fossil fuels. Already an operational renewable energy producer, Vulcan will also provide renewable electricity and heat to local communities.

Vulcan's combined geothermal energy and lithium resource is the largest in Europe<sup>1</sup>, with license areas focused on the Upper Rhine Valley, Germany. Strategically placed in the heart of the European electric vehicle market to decarbonise the supply chain, Vulcan is rapidly advancing the Zero Carbon Lithium™ Project to target timely market entry, with the ability to expand to meet the unprecedented demand that is building in the European markets.

Guided by our Values of Integrity, Leadership, Future-focused and Sustainability, and united by a passion for environmentalism and leveraging scientific solutions, Vulcan has a unique, world-leading scientific and commercial team in the fields of lithium chemicals and geothermal renewable energy. Vulcan is committed to partnering with organisations that share its decarbonisation ambitions and has binding lithium offtake agreements with some of the largest cathode, battery, and automakers in the world. As a motivated disruptor, Vulcan aims to leverage its multidisciplinary expert team, leading geothermal technology and position in the European EV supply chain to be a global leader in producing zero fossil fuel, net carbon neutral lithium while being nature positive. Vulcan aims to be the largest, most preferred, strategic supplier of lithium chemicals and renewable power and heating from Europe, for Europe; to empower a net zero carbon future.



<sup>1</sup> According to public, JORC-compliant data. See Phase One DFS announcement, 13 February 2023.

### Corporate Directory

Managing Director and CEO	Dr. Francis Wedin
Deputy CEO	Cris Moreno
Chairman	Gavin Rezos
Non-Executive Director	Ranya Alkadamani
Non-Executive Director	Annie Liu
Non-Executive Director	Dr. Heidi Grön
Non-Executive Director	Josephine Bush
Non-Executive Director	Dr. Günter Hilken
Non-Executive Director	Mark Skelton
Executive Director, Germany	Dr. Horst Kreuter
Company Secretary	Daniel Tydde

### For and on behalf of the Board

Daniel Tydde | Company Secretary

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### Reporting calendar

<b>29 May 2023</b>	Annual General meeting
<b>28 July 2023</b>	June Quarterly
<b>15 September 2023</b>	Half Year Report
<b>27 October 2023</b>	September Quarterly

## Disclaimer

Some of the statements appearing in this announcement may be in the nature of forward-looking statements. You should be aware that such statements are only predictions and are subject to inherent risks and uncertainties. Those risks and uncertainties include factors and risks specific to the industries in which Vulcan operates and proposes to operate as well as general economic conditions, prevailing exchange rates and interest rates and conditions in the financial markets, among other things. Actual events or results may differ materially from the events or results expressed or implied in any forward-looking statement. No forward-looking statement is a guarantee or representation as to future performance or any other future matters, which will be influenced by a number of factors and subject to various uncertainties and contingencies, many of which will be outside Vulcan's control.

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Vulcan has so far only carried out a pre-feasibility study (the results of which were announced to the ASX in the announcement "Positive PFS & Maiden JORC Ore Reserve: Zero Carbon Lithium™ Project" dated 15 January 2020) ('PFS') and a definitive feasibility study for Phase One of its Zero Carbon Lithium™ Project ('Project') (the results of which were announced to the ASX in the announcement "Zero Carbon Lithium Project Phase 1 DFS Results" dated 13 February 2023) ('DFS'), ('DFS Announcement'). Vulcan has not yet carried out a definitive feasibility study for Phase Two of its Project. This announcement includes certain information relating to both the PFS and DFS. Investors should not rely on the results of the PFS as Vulcan considers that the material assumptions underpinning that study are no longer correct in light of the additional studies undertaken in preparing the DFS.

The DFS is based on the material assumptions outlined elsewhere in the DFS Announcement. While Vulcan considers all of the material assumptions to be based on reasonable grounds, there is no certainty that they will prove to be correct or that the range of outcomes indicated by the DFS will be achieved.

### Competent Person Statement:

The information in this announcement that relates to Mineral Resources and Ore Reserves, and any Exploration Results and Production Targets, of Vulcan's Zero Carbon Lithium™ Project is extracted from the DFS Announcement, which is available to view on Vulcan's website at [www.v-er.eu](http://www.v-er.eu). Vulcan confirms that in respect of estimates of Mineral Resources and Ore Reserves, and any Exploration Results and Production Targets, included in this announcement:

- it is not aware of any new information or data that materially affects the information included in the original market announcement, and that all material assumptions and technical parameters underpinning the estimates in the original market announcement continue to apply and have not materially changed;
- the form and context in which the Competent Person's findings are presented have not been materially modified from the original market announcement; and
- all material assumptions underpinning any production targets (and any forecast financial information derived from such production targets) included in this announcement continue to apply and have not materially changed.