

ASX:VUL FSE:VUL

Fast Facts

Issued Capital: 168,335,301 Market Cap (@\$3.41): \$574m

Robust progress in Phase One of Zero Carbon Lithium™ Project On track for full project financing to commence in November

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 $^{\text{TM}}$ Project in the Upper Rhine Valley Brine Field (URVBF), Germany.

Phase One project progress highlights:

- The **Phase One Bridging Study is 80% complete**, and on track for October completion.
 - The Bridging Study is being completed together with Hatch, who also completed the PFS and DFS. Several key value improvements not included in the DFS from February have been identified, including driving further economies of scale through reduction of the planned two Lithium Extraction Plants (LEPs) and two geothermal power plants, to one central LEP and geothermal power plant with 24 ktpa lithium hydroxide equivalent capacity.
 - The Bridging Study is maturing the current key deliverables and engineering definition to target a Class 2 estimate and Level 3 schedule. These deliverables will be further validated by key potential EPCM contractors for the Phase One project execution.
 - o As part of the Bridging Study, the revised Field Development Plant (FDP) is approaching conclusion, targeting increased production from the core, proven area around Vulcan's current production/re-injection wells. A revised Resource/Reserve update is due in September as part of this revised FDP. Vulcan has already defined Europe's largest lithium Resource within its Zero Carbon Lithium™ Project area.¹
- **Environmental and Social Impact Assessment (ESIA)** towards debt financing lender requirements progressing on track with ERM Ltd. The ESIA is due for completion in October.
- Main land packages secured for core Phase One production areas, with final key land package for LEP currently under negotiation, expected to conclude in November.
- **Building permit received** for the Central Lithium Electrolysis Optimisation Plant (CLEOP) at the Frankfurt Hoechst chemical park.
 - One Central Lithium Plant (CLP) is being constructed in the same chemical park.
 - o CLEOP has been built off site, consisting of pre-assembled packaged units completed and tested ready to be shipped for onsite integration and connection.
 - Site preparation works are in progress and start of commissioning is targeted for Q4 2023.
 - The Lithium Extraction Optimisation Plant (LEOP) is already in the commissioning phase, which is targeted for completion in October.

 $^{^{\}rm 1}$ According to public, JORC-compliant data. See Phase One DFS announcement, 13 February 2023.



- Both LEOP and CLEOP follow Vulcan's three-year piloting and laboratory test work campaign and will be available for inspection by lenders during the financing process.
- Full project financing is targeted to commence in November, following completion of the Bridging Study, completion of the ESIA and securing the final critical land package, (Figure 1).
 - Debt financing will be led by BNP Paribas, after the successful market sounding process conducted earlier in the year, which resulted in significant in-principle support from European Export Credit Agencies (ECAs).
 - Equity financing will be targeted at the project level, following interest from multiple strategic corporates from the energy, chemicals and automotive sectors.
 - Public funding is also in the process of being applied for, to assist with the overall funding requirement.

TARGET PROJECT TIMELINE - PHASE ONE

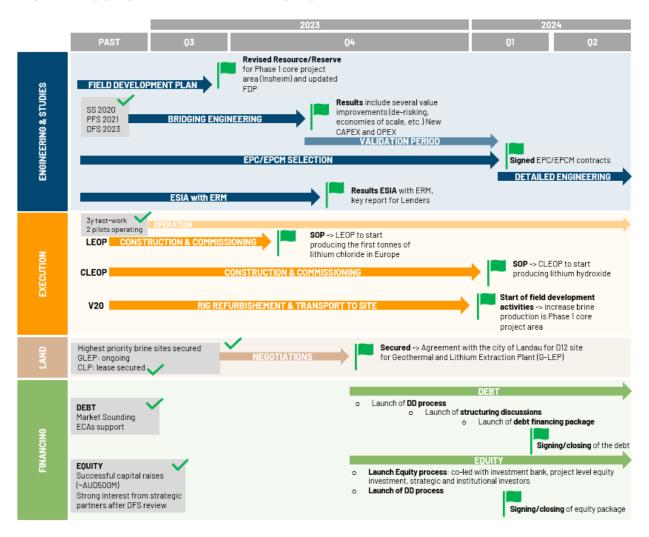


Figure 1: Target Project Timeline over next three quarters for Phase One

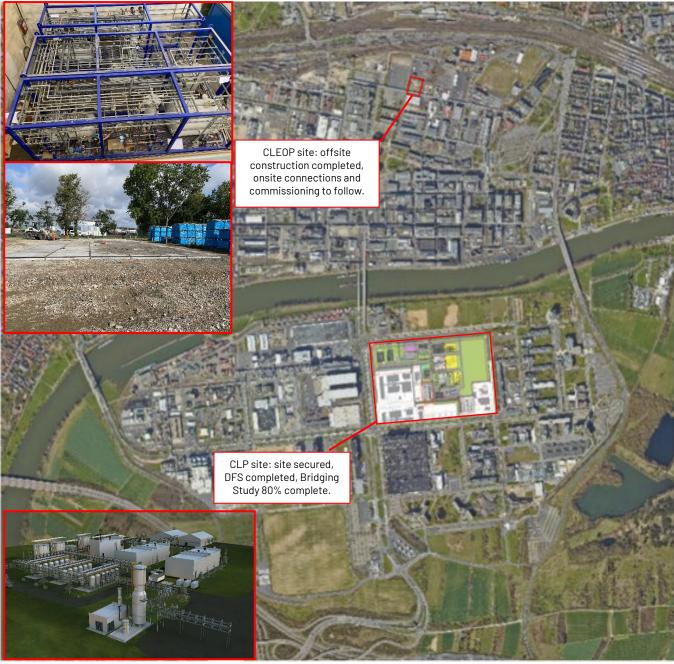


Figure 2: Construction of the preparation area at CLEOP for storage containers.



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 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 Europe², 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 Climate Champion, Determined and Inspiring, and united by a passion for the environment 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.



² According to public, JORC-compliant data. See Phase One DFS announcement, 13 February 2023.



Corporate Directory

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Managing Director and CEO Cris Moreno
Deputy Chairman Gavin Rezos

Non-Executive Director Ranya Alkadamani

Non-Executive Director Annie Liu

Non-Executive Director Dr. Heidi Grön

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Non-Executive Director Mark Skelton

Executive Director, Germany Dr. Horst Kreuter
Company Secretary Daniel Tydde

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Please contact Vulcan's Legal Counsel Germany, Dr. Meinhard Grodde, for matters relating to the Frankfurt Stock Exchange listing on mgrodde@v-er.eu.

Reporting calendar

13 September 2023	Half Year Report
27 October 2023	September Quarterly
29 January 2024	December Quarterly Report
28 March 2024	Annual Report



Disclaimer

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Vulcan has carried out 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'). This announcement may include certain information relating to the DFS. The DFS is based on the material assumptions outlined in the DFS Announcement (see "Competent Person Statement" below). 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 of that the range of outcomes indicated by the DFS will be achieved. This announcement may also include certain information relating to Phase 2 of its Project, Vulcan has not yet carried out a definitive feasibility study for Phase Two of its Project.

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. 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.