

## Grant of further licenses significantly grows Zero Carbon Lithium™ Project

- Vulcan Energy Resources Ltd. (Vulcan, the Company, ASX: VUL), has been granted five new exploration licenses for geothermal energy, and lithium in the Upper Rhine Valley, Germany.
- The licenses cover 325km<sup>2</sup> of area which is considered by Vulcan to be prospective for deep geothermal and lithium brine, and increases Vulcan's granted license area by nearly 50% to over 1,000km<sup>2</sup>.
- Vulcan's license holding stretches across three states in the Upper Rhine Valley, with the latest licenses in the states of Rhineland-Pfalz complementing existing licenses in this state, as well as in Hessen and Baden-Württemberg.
- The Company is targeting completion of its Phase 1 Definitive Feasibility Study (DFS) in H2 2022 and first commercial production of lithium by 2024.
- Vulcan is seeking to grow its Zero Carbon Lithium™ Project to service the European market, following strong demand from offtake customers for both lithium chemicals and renewable heating. These licenses will potentially provide a larger pipeline of projects, as Vulcan works to integrate further production capacity and additional project areas into its Phase 1 and 2 plans.

Vulcan's Managing Director Dr. Francis Wedin commented: *"Our core mission is to build shareholder value by having a materially decarbonising effect on the lithium supply chain for battery electric vehicles, and on energy production in Europe. To do this, we aim to further grow our Zero Carbon Lithium™ Project.*

*"Following the signing of binding lithium offtake agreements with Volkswagen Group, Stellantis, Renault Group and Umicore, as well as a binding term sheet with LG Energy Solution, Vulcan's current plans for lithium production are now fully booked for the first five to six years of planned operation, a unique achievement which is testament to our team and the uncompromising environmental credentials of the Zero Carbon Lithium™ Project. We have increasing demand from our customers for further supply. These new exploration licenses give us significant potential to further scale up our project as the market continues to grow, whilst also meeting the increasing demand for renewable heat and power.*

### Highlights

Globally unique **Zero Carbon Lithium™** Project.

**Combined lithium chemicals & renewable energy project** in the Upper Rhine Valley of Germany.

EU's **largest** lithium resource.

Located at the heart of the EU Li-ion battery industry.

Fast-track development towards supplying the EU's battery & electric vehicle industry.

### Corporate Directory

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Chairman  
Gavin Rezos

Executive Director Germany  
Dr Horst Kreuter

Non-Executive Director  
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Non-Executive Director  
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*“The new exploration licenses are consistent with our strategy to leverage the unique experience of our in-house team, notably the geological expertise of our in-house geothermal engineering and geology company GeoT, to identify areas which have potential for combined geothermal renewable energy and lithium developments in the Upper Rhine Valley.”*

*“It is encouraging to see license approvals progressing efficiently, in line with the German State Governments’ commitment to expedite planning and approval timelines for new renewable energy projects and their general support for sustainable approaches to lithium production and deep geothermal energy technologies.”*

**Location of new licenses**



- Production license
- Access to the license through a brine offtake
- Granted exploration license
- Newly granted exploration license

Figure 1: Newly granted licenses Ludwig, Therese, Kerner and Löwenherz, relative to Vulcan’s existing renewable energy operation, and planned geothermal-lithium operations, at the Zero Carbon Lithium™ Project, Germany.



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**Zero Carbon Lithium™ Project licenses**

License	State	Status	Vulcan interest	Area (km <sup>2</sup> )
Insheim	Rheinland-Pfalz	Production license	100%	19
Taro/Lisbeth	Rheinland-Pfalz	Exploration license	100%	32.68
Ortenau	Baden-Württemberg	Exploration license	100%	373.6
Mannheim	Baden-Württemberg	Exploration license	100%	144.27
Lampertheim	Hessen	Exploration license	100%	108.03
<b>Therese</b>	<b>Rheinland-Pfalz</b>	<b>Exploration license (newly granted)</b>	<b>100%</b>	<b>81.12</b>
<b>Ludwig</b>	<b>Rheinland-Pfalz</b>	<b>Exploration license (newly granted)</b>	<b>100%</b>	<b>96.34</b>
<b>Kerner</b>	<b>Rheinland-Pfalz</b>	<b>Exploration license (newly granted)</b>	<b>100%</b>	<b>72.26</b>
<b>Löwenherz</b>	<b>Rheinland-Pfalz</b>	<b>Exploration license (newly granted)</b>	<b>100%</b>	<b>75.43</b>
Landau	Rheinland-Pfalz	Production license	Brine offtake agreement with owner/operator	

**For and on behalf of the Board**

Daniel Tydde | Company Secretary

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# VULCAN ENERGY ZERO CARBON LITHIUM™

## About Vulcan

Vulcan is aiming to become the world's first lithium producer with net zero greenhouse gas emissions. Its ZERO CARBON LITHIUM™ Project intends to produce a battery-quality lithium hydroxide chemical product from its combined geothermal energy and lithium resource, which is Europe's largest lithium resource, in Germany. Vulcan's unique, ZERO CARBON LITHIUM™ Project aims to produce both renewable geothermal energy, and lithium hydroxide, from the same deep brine source. In doing so, Vulcan intends to address lithium's EU market requirements by reducing the high carbon and water footprint of production, and total reliance on imports. Vulcan aims to supply the lithium-ion battery and electric vehicle market in Europe, which is the fastest growing in the world. The Vulcan Zero Carbon Lithium™ project has a resource which could satisfy Europe's needs for the electric vehicle transition, from a source with net zero greenhouse gas emissions, for many years to come.



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#### Competent Person Statement:

The information in this report that relates to Mineral Resources and Ore Reserves (respectively) of the Company's Zero Carbon Lithium™ is extracted from the ASX announcements made by Vulcan on 15 December 2020 ("Updated Ortenau Indicated and Inferred Resource") and 15 January 2021 ("Positive Pre-Feasibility Study"), which are available on [www.v-er.eu](http://www.v-er.eu). The information in this report that relates to Insheim's Mineral Resources is extracted from the ASX announcement made by Vulcan on 20 January 2020 ("Maiden Indicated Resource Insheim Vulcan Zero Carbon Lithium"), which is available on [www.v-er.eu](http://www.v-er.eu). The Company confirms that it is not aware of any new information or data that materially affects the information included in the original market announcements 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 have not been materially modified from the original market announcements.