

Fast Facts

Issued Capital: 131,607,598
Market Cap (@\$10.10): \$1.3b

Agreement with Nobian for the development of the Central Lithium Plant

Including chlorine and hydrogen by-products of lithium hydroxide

Highlights

- Vulcan Energy Resources Ltd. (Vulcan, the Company; ASX: VUL) has signed an MOU and a term sheet (“Agreement”) with Nobian, a European leader in the production of essential chemicals, which employs approximately 1,600 people and had revenues in 2020 of €1 billion.
- Nobian is the fourth largest chlor-alkali producer in Europe after Inovyn, Dow and Covestro¹, and has extensive electrolysis operational experience. Chlor-alkali uses an electrolysis process which is similar to part of Vulcan’s flowsheet.
- Advantageously, one of Nobian’s operations is located at the Höchst chemical park near Frankfurt, where Vulcan has secured a plot for the construction of its Central Lithium Plant (CLP).
- Vulcan and Nobian will assess the feasibility of a joint project for the development, construction and operation of the CLP, including the electrochemical conversion process of lithium chloride to battery quality lithium hydroxide.
- The joint development project is phased, accompanied by a joint progress decision at the end of the second phase. Project investment from Nobian will be discussed on market terms following the conclusion of the Definitive Feasibility Study (DFS):
 - Phase 1: joint DFS for the development, construction and operation of the CLP.
 - Phase 2: operation of Vulcan’s electrolysis Demonstration Plant at Nobian’s existing site at Höchst, Frankfurt.
 - Phase 3: partly in parallel with Phase 2, design/engineering, construction, start-up and joint operation of the CLP at commercial scale. Vulcan and Nobian will also discuss chlorine and hydrogen offtakes (via pipe), which are planned by-products of Vulcan’s CLP.

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.

Operational **renewable energy business**.

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

Managing Director
Dr Francis Wedin

Chairman
Gavin Rezos

Executive Director Germany
Dr Horst Kreuter

Non-Executive Director
Ranya Alkadamani

Non-Executive Director
Annie Liu

Non-Executive Director
Dr Heidi Grön

Non-Executive Director
Josephine Bush

Company Secretary
Daniel Tydde

¹ Eurochlor Chlor-alkali industry review 2020-2021

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Nobian is located at the same chemical park as Vulcan and consumes both chlorine and hydrogen as part of its derivatives production. Both products can be transported via an existing pipe network.

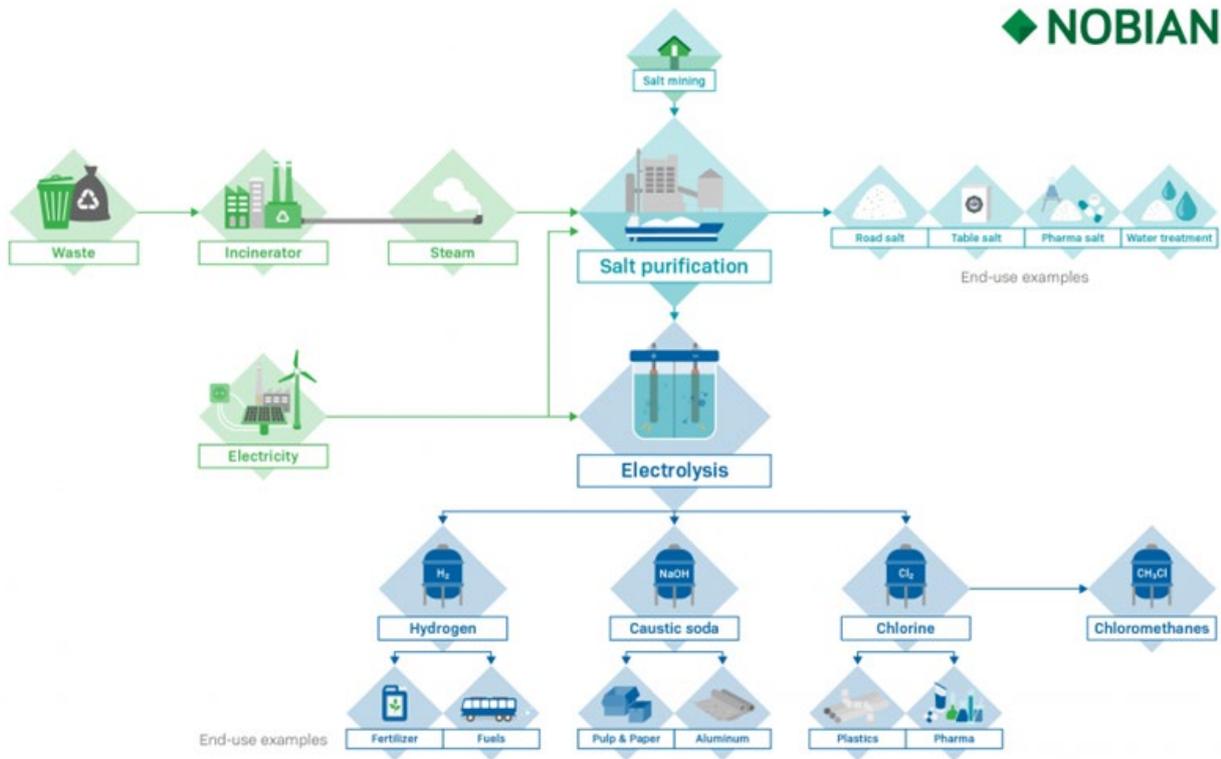
Vulcan's Managing Director Dr. Francis Wedin commented: *"This agreement, with one of the largest chlor-alkali producers in Europe, bolsters the operational experience and expertise in electrolysis production within the Zero Carbon Lithium™ Project team. Lithium electrolysis, for environmental, infrastructure and economic reasons, is Vulcan's selected process for lithium hydroxide production for battery electric vehicles. Our partnership with Nobian is consistent with our strategy to capitalise on the synergies that are available to us with existing chemical producers, due to our location in Germany, the largest chemical producing country in Europe. Nobian's experience will contribute to de-risking our planned scale-up and build-out, towards our goal of starting production from our Zero Carbon Lithium™ Project in 2024. We look forward to a long and productive relationship with Nobian and their skilled operations and development team."*

Dr. Jürgen Baune, Vice President Chlor-Alkali and Managing Director at Nobian in Germany said: *"We are really excited about our cooperation with Vulcan. It will allow Nobian to become a key player in supplying raw materials to the battery industry and to further strengthen its battery raw materials portfolio. Including also caustic, HCL and hypo chlorite, with strong market positions to commercialize the chlorine and hydrogen by-product."*



About Nobian

Nobian is a European leader in the production of essential chemicals for industries ranging from construction and cleaning to pharmaceuticals and water treatment. We excel in the safe and reliable supply of high-purity salt, chlor-alkali, chloromethanes and hydrogen, thanks to our integrated value chain with modern production sites in the Netherlands, Germany, and Denmark. We have a strong heritage of salt production of over 100 years dating back to 1918. Our 1,600 employees are committed to become safer, more efficient, and sustainable, to ensure that the essential products of today will keep enriching our lives tomorrow with chemistry you can count on. Nobian is wholly owned by The Carlyle Group and GIC.



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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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Correction: we note that in our last announcement, four new licenses were shown to be granted in the map and table, but the text read that “five” were granted. This was a typographic error; the correct number is four, as per the published map and table.

For and on behalf of the Board | **Daniel Tydde** | **Company Secretary**

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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. 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. 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.