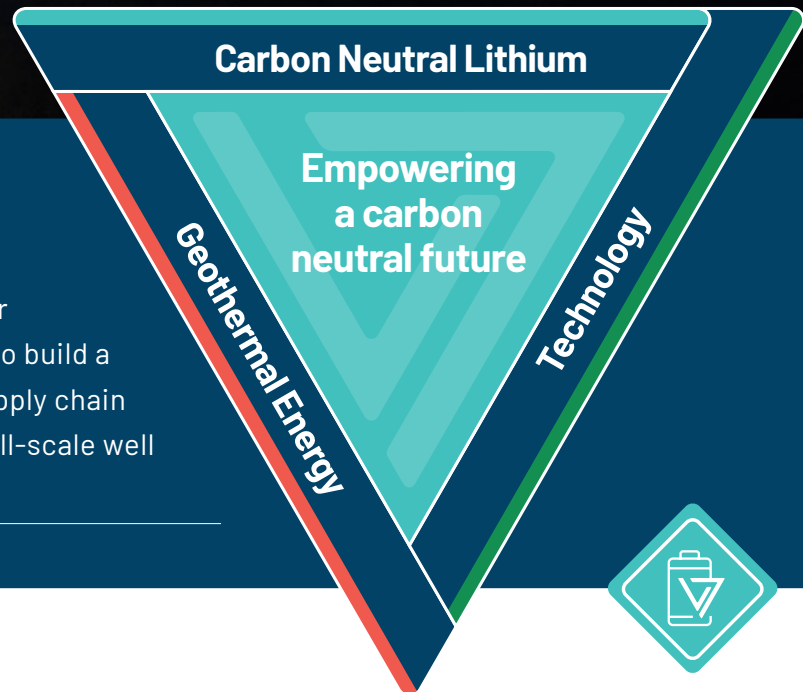


Vulcan aims to become Europe's first producer of domestically produced lithium, and the world's first producer of carbon neutral lithium hydroxide for electrical vehicle batteries. We aim to build a fully domestic, sustainable lithium supply chain in Europe, for Europe, starting with full-scale well delivery capability.



## THE IMPORTANCE OF LITHIUM

Lithium is a critical raw material indispensable as a component of batteries for e-mobility. However, to date there is no domestic supply of lithium hydroxide in Europe to meet demands. Strategically placed in the heart of the European electric vehicle market, Vulcan is rapidly advancing its Phase One integrated renewable energy and ZERO CARBON LITHIUM™ Project, aiming to meet timely market entry and decarbonise the lithium supply chain.

## SUSTAINABILITY IS OUR PURPOSE

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 from 45 nations in the fields of lithium chemicals and geothermal renewable energy.

Conventional methods for lithium extraction often have a significant CO<sub>2</sub>-footprint and require immense amounts of water and land resources. Unlike conventional lithium mining, Vulcan's Project will not burn fossil fuels in lithium production and is environmentally and socially responsible due to very low water consumption and land use. Vulcan's **ESIA** for Phase One of the Project has been successfully completed, noting there are multiple positive impacts of the Project, including renewable heating provision for local communities, and carbon neutral lithium production to decarbonise the lithium supply chain.

**PHASE ONE  
LIOHEART**

**24,000 tonnes LHM**

p. a. production planned from Vulcan's  
Phase One, enough for

**500,000 EVs**

p.a.

# ENABLING A CARBON NEUTRAL FUTURE



## DE-RISKING THE ZERO CARBON LITHIUM™ PROJECT: OPTIMISATION PLANTS FOR COMMERCIAL READINESS

Two facilities replicating the full process:

### Lithium Extraction Optimisation Plant (LEOP):

- Adsorption-Type Direct Lithium Extraction (A-DLE) and production of Lithium Chloride (LiCl).
- LEOP started production in April 2024.

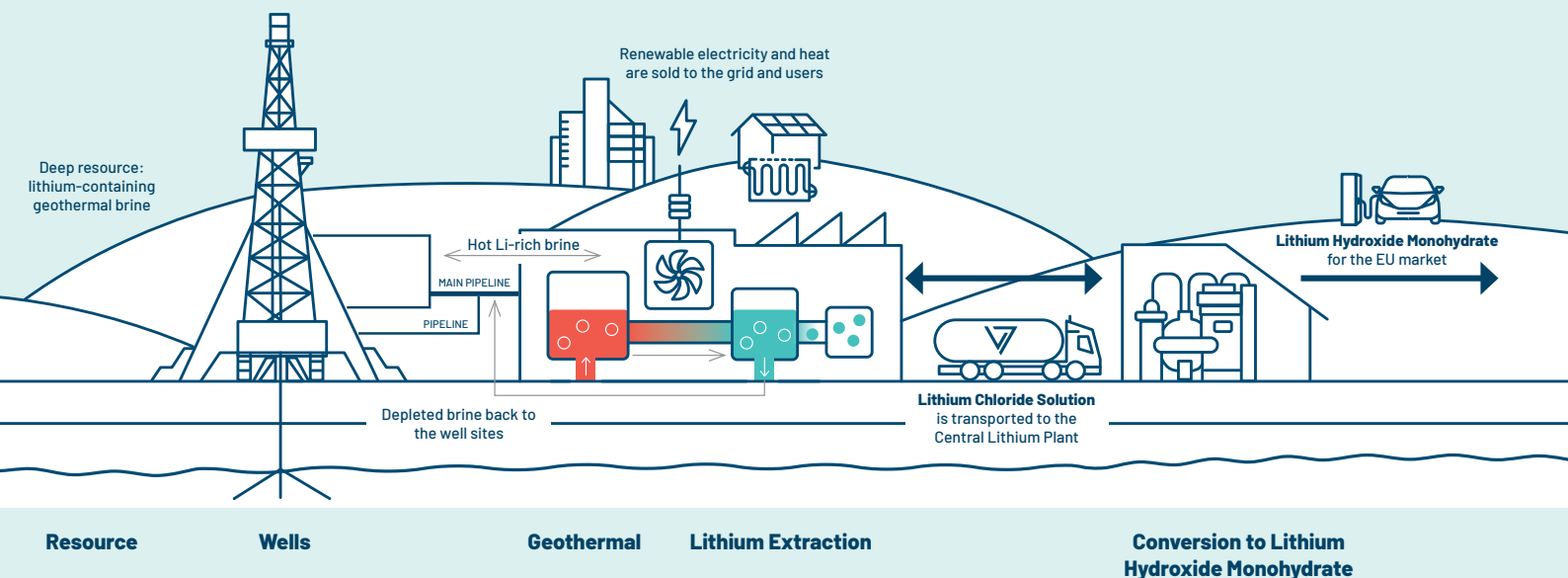
### Central Lithium Electrolysis Optimisation Plant (CLEOP):

- Conversion and production of LiCl to Lithium Hydroxide Monohydrate (LHM) and testing facility for its offtake partners.
- CLEOP will start production in 03 2024.

LEOP and CLEOP will serve as training facilities for its production team, ensuring operational readiness for the start of commercial production in 2027.

Vulcan's optimisation plants are the precursor to Vulcan's Phase One commercial plants: **Lithium Extraction Plant (LEP)** & **Central Lithium Plant (CLP)**.

## VULCAN'S PRODUCTION SUPPLY CHAIN: FULLY PRODUCED IN EUROPE, FOR EUROPE



To find out more:

✉ [IR@v-er.eu](mailto:IR@v-er.eu)

[www.v-er.eu](http://www.v-er.eu)

