

COMPANY SPOTLIGHT - VULCAN ENERGY RESOURCES

Vulcan Energy Resources Limited (VUL) is a lithium battery materials and renewable energy company with a goal to become the world's first lithium and renewable energy producer with a net zero carbon footprint. Lithium chemicals are critical for manufacturing batteries in electric vehicles.

Vulcan's process is differentiated from current lithium extraction projects as it involves minimal disruption to communities or the environment. This means no mining, no evaporation ponds and no process plants running on fossil fuels. In addition, the project is expected produce some of the lowest-cost lithium globally.

The project uses an innovative approach, extracting hot brines to generate geothermal electricity and heat, then using Direct Lithium Extraction (DLE) and electrolysis to produce battery quality lithium hydroxide. Vulcan intends to develop the project over two phases and is currently piloting the DLE process before it delivers a definitive feasibility study (DFS) in 2022. Vulcan has secured a number of large clients including Renault and Volkswagen.

The German government recently committed to an accelerated target of 100% renewable power generation by 2035, as well as aiming for half of municipal heating to come from climate-neutral sources by the 2030s. Deep geothermal energy can make a major contribution to these objectives because it supplies local zero emissions energy regardless of the weather and takes up little space.

We believe that Vulcan's project represents an untapped lithium resource which represents a significant potential value accretive opportunity given accelerating policy shifts in Europe towards renewable electricity and heating, as well as energy security.

Melior regularly engages with the management team and directors of Vulcan and is advocating on a number of topics including pay gap disclosure and targets, safety targets and waste and recycling targets.



Vulcan's renewable energy and lithium project. Source: Vulcan

KPIs

- Granted licence area: 1000km²
- Forecast project investment: € 1,738m
- Lithium carbonate equivalent (LCE) resource: 15.85Mt
- CO₂ impact per EV battery produced: -238kg (due to lithium production from geothermal energy)



SDG Alignment:

SDG 7.2: VUL is a lithium developer that contributes to increasing “the share of renewable energy in the global energy mix” through its focus on producing zero carbon lithium from geothermal resources, as well as renewable electricity and heating.