



Corporate Presentation
Q2 2025

ASX/FSE: VUL

**DETERMINED FOR A
BETTER TOMORROW**



DISCLAIMER¹

Disclaimer, acknowledgement and agreement. Vulcan, to the maximum extent permitted by law, expressly excludes and disclaims all liability (including, without limitation, any liability arising out of fault or negligence on the part of any person) for any direct, indirect, consequential or contingent loss or damage, or any costs or expenses, arising from the use of this Presentation or its contents, or otherwise arising in connection with it. By attending an investor presentation or briefing, or accepting, accessing or reviewing this Presentation, you acknowledge and agree to the terms set out in the "Disclaimer" sections of the Presentation.

No investment or financial product advice. This Presentation, and the information provided in it, does not constitute, and is not intended to constitute, financial product or investment advice, or a recommendation to acquire Vulcan Shares, nor does it constitute, and is not intended to constitute, accounting, legal or tax advice. This Presentation does not, and will not, form any part of any contract for the acquisition of Vulcan Shares. This Presentation has been prepared without taking into account the objectives, financial or tax situation or particular needs of any individual. Before making an investment decision (including any investment in Vulcan Shares or Vulcan generally), prospective investors should consider the appropriateness of the information having regard to their own objectives, financial and tax situation and needs, and seek professional advice from their legal, financial, taxation or other independent adviser (having regard to the requirements of all relevant jurisdictions).

Forward-looking statements. This Presentation contains certain forward-looking statements. Often, but not always, forward-looking statements may be identified by the use of forward-looking words such as "may", "will", "expect", "intend", "plan", "estimate", "target", "propose", "anticipate", "continue", "outlook" and "guidance", or other similar words. By their nature, forward-looking statements inherently involve known and unknown risks, uncertainties and other factors that may cause actual results, performance and achievements to be materially greater or less than estimated, including those generally associated with the lithium industry and/or resources exploration companies. Any such forward-looking statements, opinions and estimates in this Presentation (including any statements about market and industry trends) are based on assumptions and contingencies, all of which are subject to change without notice, and may ultimately prove to be materially incorrect. Forward-looking statements are provided as a general guide only and should not be relied upon as, and are not, an indication or guarantee of future performance. Neither Vulcan nor any of its directors, officers, agents, consultants, employees or advisors give any representation or warranty, express or implied, as to the fairness, accuracy, completeness or correctness of the information, opinions, forward looking statements and conclusions contained in this Presentation.

Investment risks. As previously noted, an investment in Vulcan is subject to both known and unknown risks, some of which are beyond the control of Vulcan. Vulcan does not guarantee any particular return or its performance, nor does it guarantee any particular tax treatment. Prospective investors should have regard to the Previous Disclosures, when making their investment decision, and should make their own enquires and investigations regarding all information in this Presentation, including, but not limited to, the assumptions, uncertainties and contingencies that may affect Vulcan's future operations, and the impact that different future outcomes may have on Vulcan.

Ore Reserves and Mineral Resources reporting. It is a requirement of the ASX Listing Rules that the reporting of ore reserves and mineral resources in Australia comply with the Joint Ore Reserves Committee's Australasian Code for Reporting of Mineral Resources and Ore Reserves ("JORC Code"). Investors outside Australia should note that while ore reserve and mineral resource estimates of the Company in this document comply with the JORC Code (such JORC Code-compliant ore reserves and mineral resources being "Ore Reserves" and "Mineral Resources" respectively), they may not comply with the relevant guidelines in other countries and, in particular, do not comply with (i) National Instrument 43-101 (Standards of Disclosure for Mineral Projects) of the Canadian Securities Administrators (the "Canadian NI 43-101 Standards"); or (ii) subpart 1300 of Regulation S-K under the US Securities Act of 1933, as amended (the "Securities Act"), which governs disclosures of mineral reserves in registration statements filed with the US Securities and Exchange Commission ("SEC"). Information contained in this Presentation describing mineral deposits may not be comparable to similar information made public by companies subject to the reporting and disclosure requirements of Canadian or US securities laws and investors are cautioned that there can be no assurance that the reserves and resources reported by the Company under the JORC Code would be the same had it prepared its reserve or resource estimates under the standards adopted under subpart 1300 of Regulation S-K.

Technical information. Vulcan has carried out a definitive feasibility study ("DFS") and bridging engineering study ("Bridging Study") for its Phase One Project, the results of which were announced to the ASX in the announcements Phase 1 DFS Results dated 13 February 2023 (DFS Announcement) and Positive Bridging Study Results on 16 November 2023 (Bridging Study Announcement). This presentation may include certain information relating to the DFS and the Bridging Study. The DFS and Bridging Study are based on the material assumptions and parameters outlined in their respective announcements. 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 or that the range of outcomes indicated by the Bridging Study or DFS will be achieved. This presentation may also include certain information relating to future phases of its Project. Vulcan has not yet carried out a definitive feasibility study for future phases of its Project.

Funding strategy. To achieve the range of outcomes indicated in the Bridging Study, additional funding will be required. Investors should note that there is no certainty that Vulcan will be able to raise the amount of funding when needed. It is also possible that such funding may only be available on terms that may be dilutive to or otherwise affect the value of Vulcan's existing shares. It is also possible that Vulcan could pursue other financing strategies such as a partial sale or joint venture of the Project. If it does, this could materially reduce Vulcan's proportionate ownership of the Project.

Competent Person Statement. Please see the Competent Person Statement slide in the Appendices.

Note(s): ¹ This slide contains a summary of the applicable disclaimers, the full disclaimer in relation to this presentation is contained in Appendix 1.

EMPOWERING A CARBON NEUTRAL FUTURE

High quality strategic shareholders

ASX/FSE Prime Standard / **VUL**

Shares on issue / **~218m**

Market Capitalisation¹ / **ca. €634m (A\$1.10bn)²**

Cash³ / **€97m (~A\$162m)**

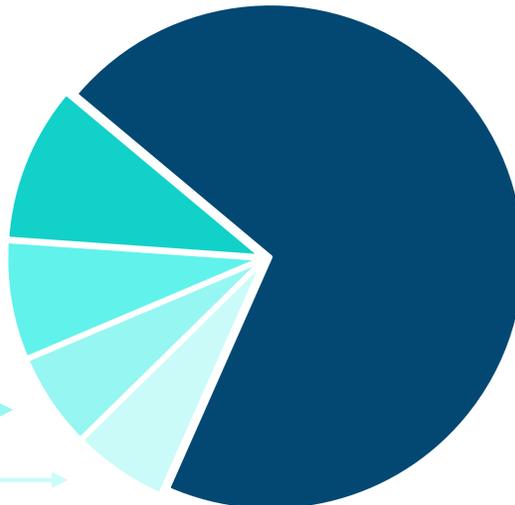
High quality strategic shareholders

~8% Dr Francis Wedin

~7% Hancock Prospecting Pty Ltd

~6% CIMIC Group

~5% Stellantis



Note(s): 1. As at 31 March 2025 ASX closing price A\$5.06/sh, 2. Converted at €0.57/A\$1.00. 3. Cash as at 31 December 2024

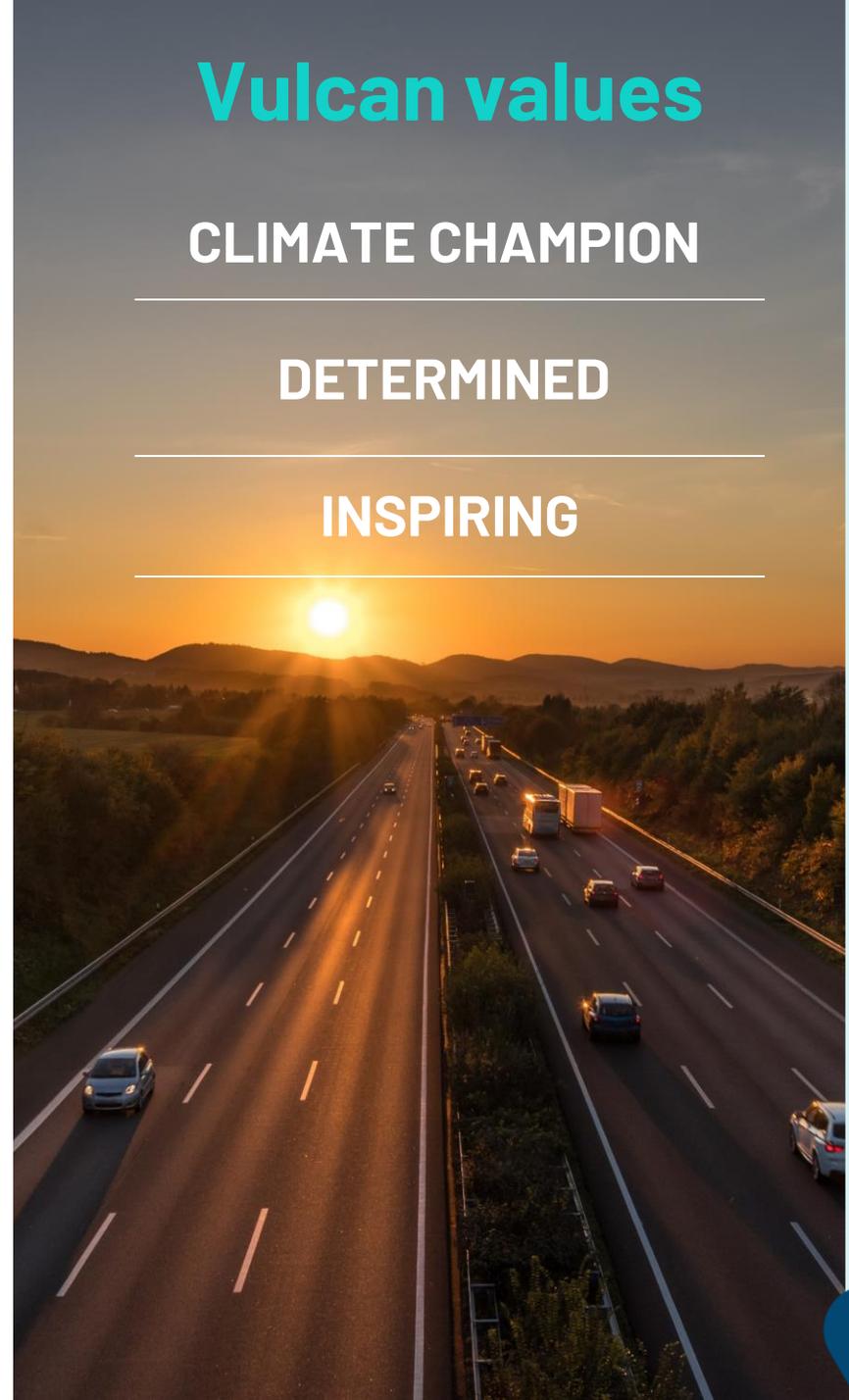
Vulcan values



CLIMATE CHAMPION

DETERMINED

INSPIRING





PRODUCT | PROJECT | TECHNOLOGY



A premium industry-leading lithium product for battery electric vehicles

- V** is for Vulcan. We strive to be climate champions
- Li** is for high purity, sustainable* and versatile, battery-grade lithium products
- O** is for zero fossil fuels directly used in our onsite process to produce lithium and the co-production of renewable energy for local communities
- N** is for no net greenhouse gas emissions across our project life

*Minviro 2023 Life Cycle Assessment results reported in 2023 Sustainability Report. Please also refer to Appendix 2 of this Presentation.



V-LION™ SUPPLYING THE EUROPEAN AUTO INDUSTRY

Fully contracted lithium production drives pricing stability¹

Low counterparty risk: high quality European-focused offtake partners

Long term relationships: all offtake agreements binding, take-or-pay, with agreed pricing mechanisms, 5-10 years in duration

Pricing stability²: pricing mechanisms are a basket of fixed, floor-ceiling and fully floating prices during payback period

Aligned interests: largest offtake partner Stellantis is also Vulcan's fourth largest shareholder through a €50m investment³



Note(s): 1. Refer to section 8.16.3 of the Prospectus dated 18 December 2024 (Prospectus), for further information regarding the terms of the Company's lithium offtake agreements, including conditions precedent and termination rights and the dates for commencement of commercial delivery. 2. Refer ASX announcement 16 November 2023 Bridging Engineering Study (BES). 3. ASX Announcement 31 May 2023. 4. Commercial delivery originally scheduled to start in 2026, however Vulcan expects to defer this to align with the targeted start of commercial production as part of planned discussions with Umicore. 5. Commercial delivery originally scheduled to start in 2026, but expected to be deferred to a future phase of production beyond Phase One (with timing yet to be defined).



EUROPEAN MARKET STRUCTURALLY SHORT OF LITHIUM

Lithium supply in a structurally short market

Global supply for LHM looks challenged relative to growth rates in lithium battery production

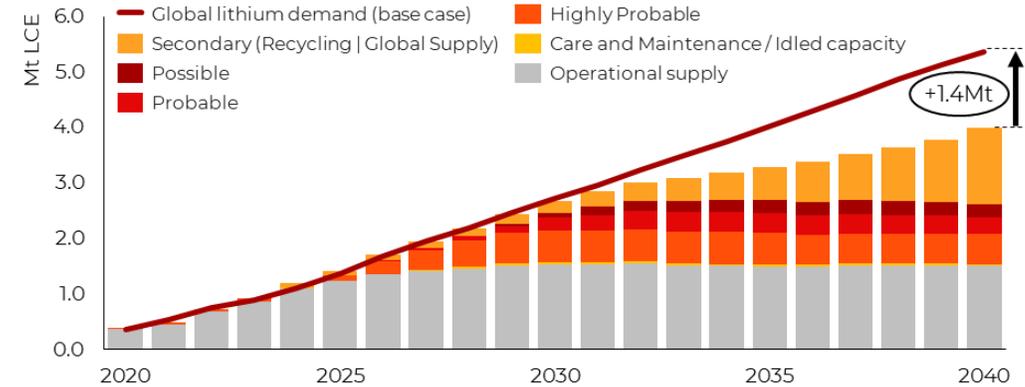
Supply/demand balance even more acute in Europe, which finds itself **structurally undersupplied**

Favourable public policy positioning in Europe, including the newly introduced **Critical Raw Materials Act (CRMA)**

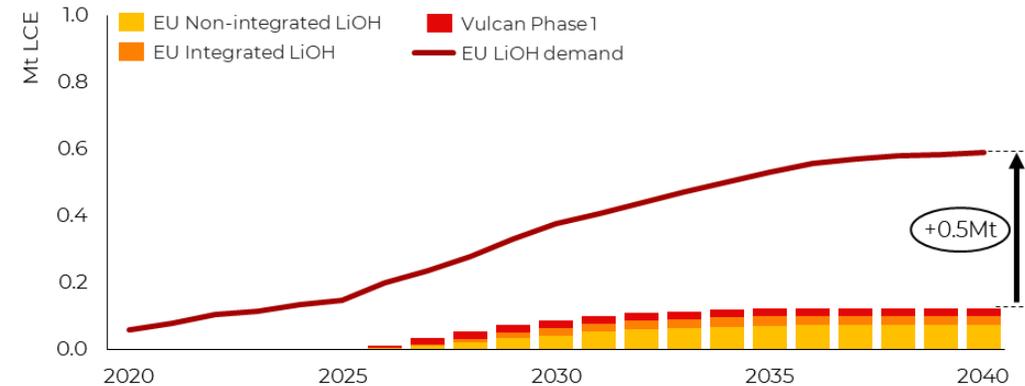
Lionheart Project designated a Strategic Project under the European Commission's CRMA in March 2025, reflecting the Project's alignment with the objectives of the CRMA

Vulcan is experiencing growing demand for its product from European automakers beyond Phase One

Global Supply / Demand Balance



European LiOH Supply vs. Demand



PRODUCT FLEXIBILITY

Well-positioned for the future

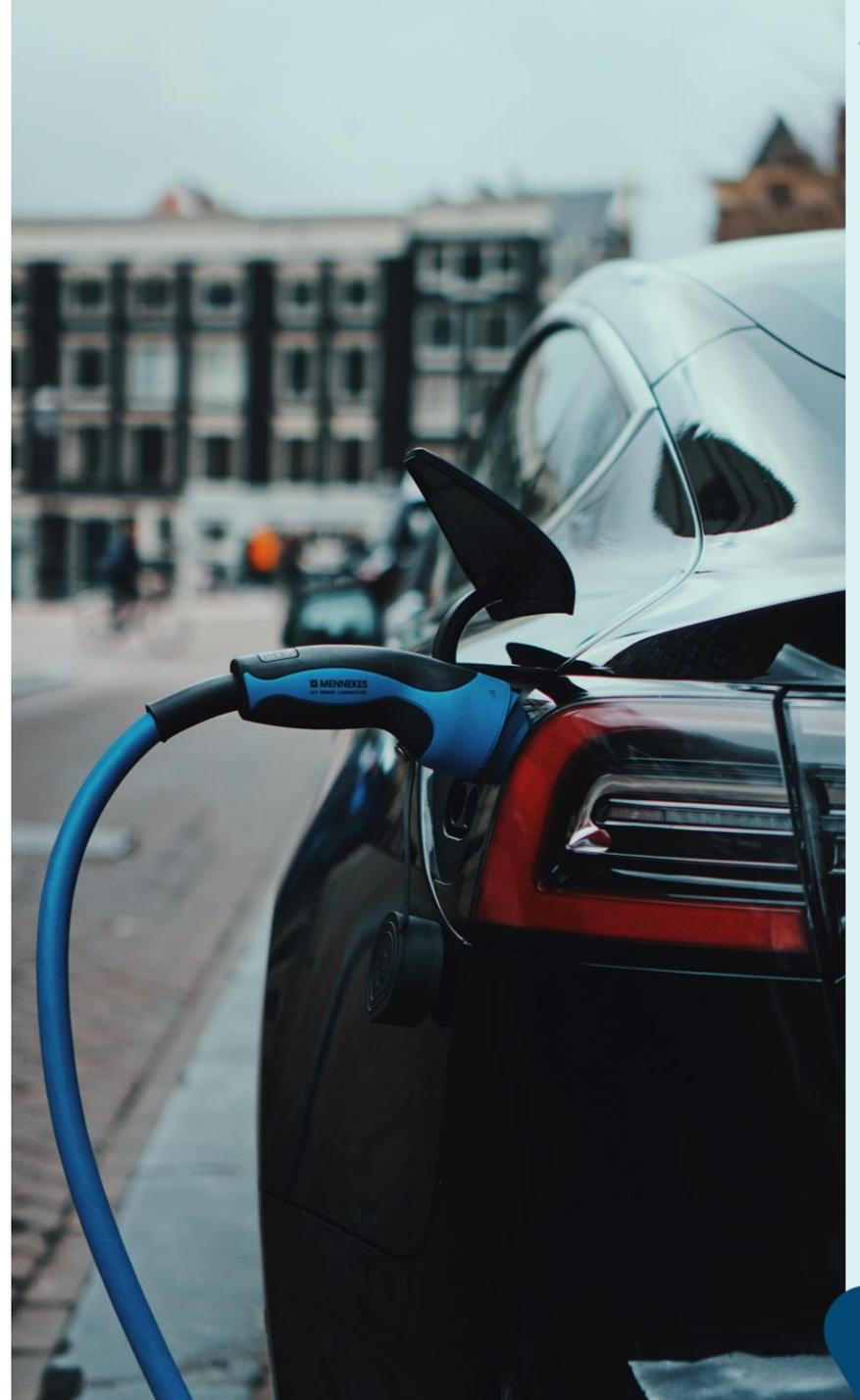


Vulcan's **high purity lithium chloride (LiCl)** precursor product is fully flexible, and can be converted according to customers' needs for the battery chemistries of the future:

Lithium hydroxide monohydrate (LHM) can be produced for high-performance NMC batteries, favoured by European customers

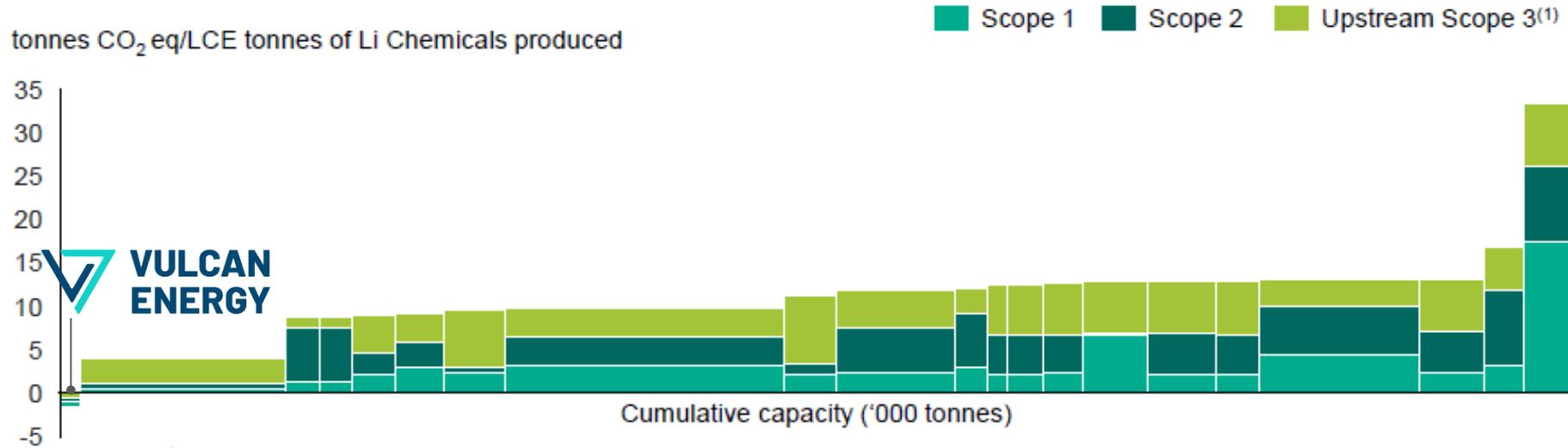
Lithium carbonate (LC), suitable for LFP batteries, popular with Asian customers, can be produced directly from the LiCl

Lithium metal, suitable for solid state batteries, which are expected to be produced commercially for electric vehicles within 5-10 years and dramatically increase performance and range





GHG emissions intensity of lithium chemicals production in 2030



Phase One targets:

Produce enough lithium for ca. **500,000 electric vehicles p.a.**²

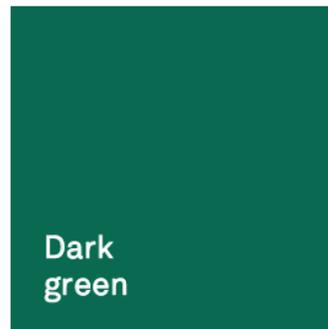
Avoid **10Mt CO2 eq.** through **decarbonising** the lithium supply chain³

Targeting **renewable heat** for ca. **90,000 people**⁴

Consume only tiny amounts of water, due to recycling

Environmental and Social Impact Assessment (ESIA) updated and published: confirmed no impact greater than minor post mitigation, and **several positive impacts** to people and planet

Green Financing Framework complete and awarded **Dark Green** status from S&P Global Ratings, **the highest rating ever received by a Metals and Mining company globally**⁵



Activities that correspond to the long-term vision of a low-carbon climate resilient future.

S&P Global Ratings

Note(s): ¹Benchmark Minerals Intelligence - Upstream Scope 3 emissions include the production and transportation of raw materials, fuels, machinery and equipment, and waste treatment. ²Based on the Phase One production target capacity of 24ktpa from Bridging Engineering Study (BES) Announcement 16th November 2023 and Vulcan internal estimated average EV battery size and chemistry in Europe. Refer to the Competent Person Statement within the Disclaimer slides, ³Minviro and internal estimates combined, using Innovation Fund methodology; ⁴Based on official feed-in numbers from grid operator and calculated with the latest local electricity mix emission factor; ⁵See ASX announcement of 8 October 2024.

BASE LOAD RENEWABLE HEAT AND POWER

Decarbonising local industry and communities



Commencing **baseload, renewable heat** supply

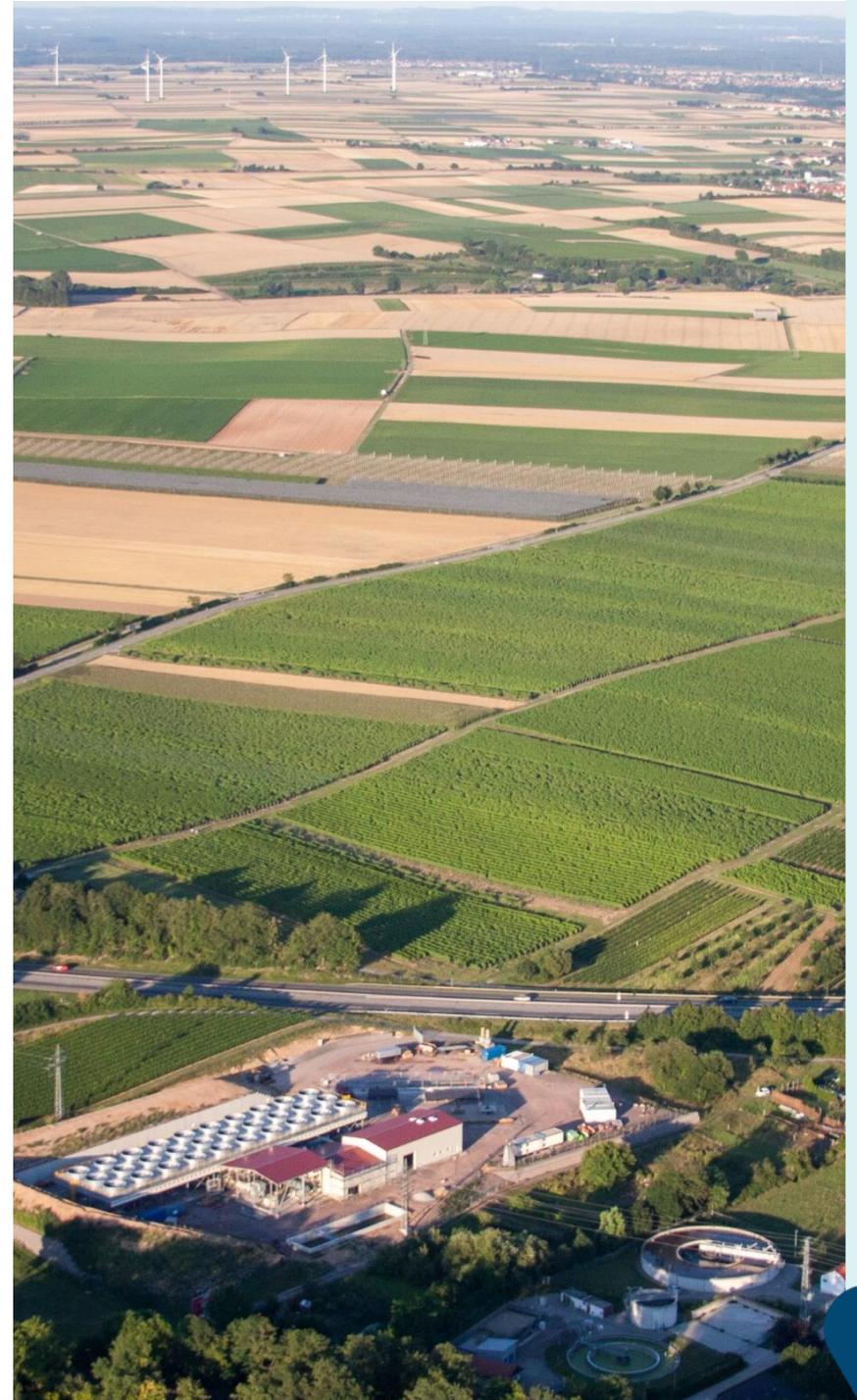
Providing stable, baseload green heat **for local communities**

Decarbonising industrial heat supply for large customers



Currently **producing stable, baseload renewable power** for the grid

Building increased supply of green power





PRODUCT | PROJECT | TECHNOLOGY

AWARDING OF EU STRATEGIC PROJECT STATUS

On 25 March 2025, the EU Commission announced **47 Strategic Projects to increase the European Union's (EU) capacity to extract, process and recycle strategic raw materials and diversify EU supplies from third countries**

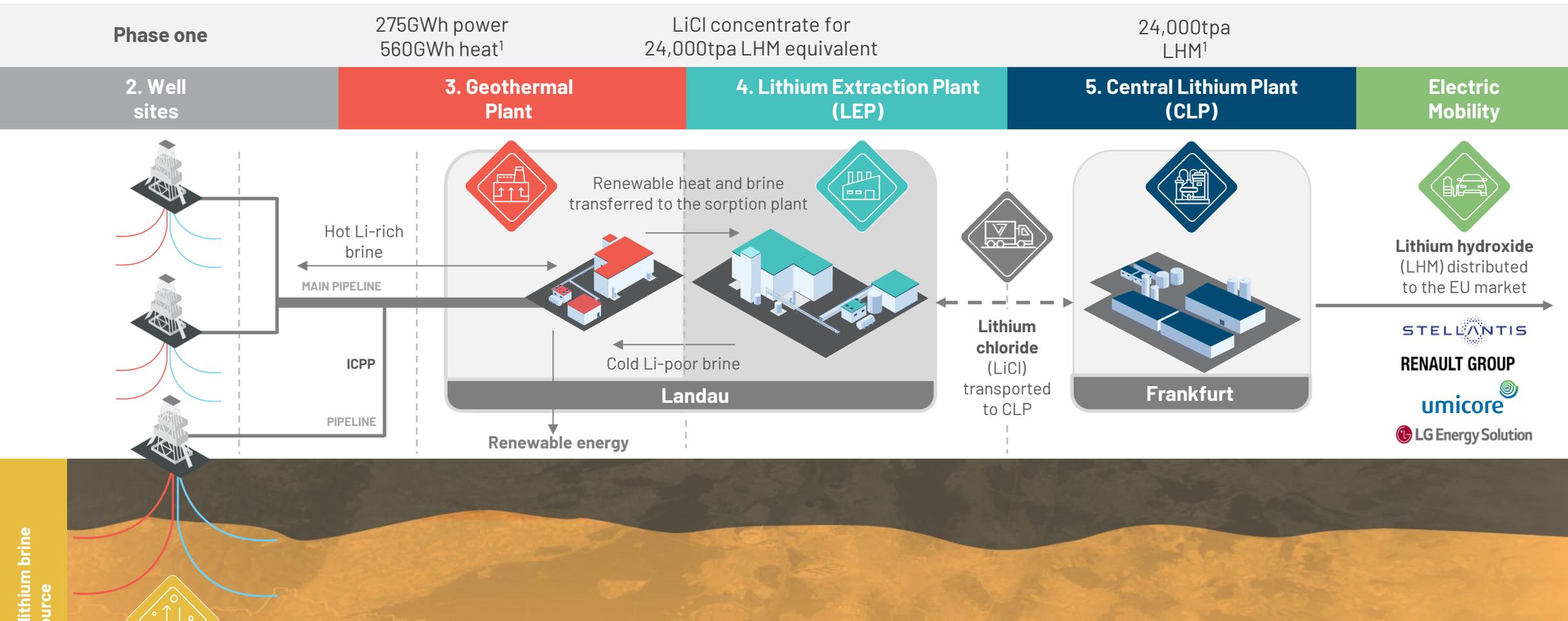
The awarding of Strategic Project status reflects **Phase One Lionheart Project's alignment with the objectives of the Critical Raw Materials Act (CRMA)**, which came into effect in May 2024 and is designed to secure a sustainable supply chain for critical raw materials, including lithium, across Europe

The Company's commitment to producing sustainable lithium is demonstrated through its advanced extraction and processing technologies, powered by geothermal renewable energy. **This integrated approach from Europe, for Europe formed the foundation of Vulcan's Strategic Project status application**

Strategic Project status aims to offer:

- Strong financing opportunities**
Strategic Project status unlocks **access to EU funds**, investment de-risking, and potential **state aid** – strengthening financial resilience
- Streamlined permitting**
Strategic Projects enjoy **expedited permit-granting processes** with fixed time limits – 27 months for extraction projects and 15 months for processing projects – **rapid and predictable** project execution
- Recognition as a European Strategic Project**
Priority treatment in regulatory processes and a **clear endorsement of Vulcan's role in EU supply security** – strengthening Vulcan's **credibility with offtakers, banks, and investors**

BUILDING RENEWABLE ENERGY AND LITHIUM CHEMICALS PRODUCTION



Geothermal and lithium brine field resource

1. Resource: 3 to 5km deep reservoir

Wells are drilled into the deep, hot, lithium-rich brine resource, which is pumped to the surface

Re-injection of brine. A closed loop, circular system

¹ Refer to the Competent Person Statement within the Appendix as well as the risk factors contained in the Prospectus including those risks associated with resource exploration and development projects.

UNIQUELY POSITIONED

Poised to capture the next phase of growth¹

Strong customer relationships: Vulcan has offtake agreements with tier-one European counterparties covering majority of first 10 years of production², reduces pricing and market risk

Tier-one asset: 30-year project life, large, scalable lithium resource, largest in EU³ and globally significant

Low impurities in the brine: Upper Rhine Valley Brine Field (URVBF) brine has very low impurities, and requires zero chemical pre-treatment, lowers OPEX

Cheap and renewable heat: URVBF is naturally heated, which drives lithium production, and excess heat can be sold as power with Feed-in Tariff

In-house technological A-DLE expertise: Vulcan now the only ASX-listed company with an in-house A-DLE technology division apart from RIO/LTM

Large project execution and operation expertise: Vulcan has a leading combination of expertise from O&G, chemicals and geothermal industries

Note(s) 1. There are a number of risks and uncertainty (known and unknown) that are associated with resources exploration and development, which are included in the risk factors contained in the Prospectus. 2. Refer to section 8.16.3 of the Prospectus for further information regarding the terms of the Company's offtake agreements. 3. On a lithium carbonate equivalent (LCE) basis, according to public information, as estimated and reported in accordance with the JORC Code 2012. See the Competent Person Report contained in the Prospectus and Appendix 4 of the Equity Raise Presentation dated 11 December 2024 for further information.



INTEGRATED RENEWABLE ENERGY & LITHIUM¹

Phase One: Lionheart

Integrated renewable energy, lithium salts and lithium hydroxide production from sub-surface brines in the Rhine Valley. Targeting **24,000 tonnes p.a²**. LHM production: enough for 500,000 electric vehicles every year⁶

Targeting **560 GWh renewable heat production** capacity: enough for 90,000 homes.⁴
Targeting **275 GWh** renewable power production capacity. Net generator of energy

First quartile target lithium production costs: integrated heat and power, compact supply chain, drive low Li production costs. **€4,030/t** LHM

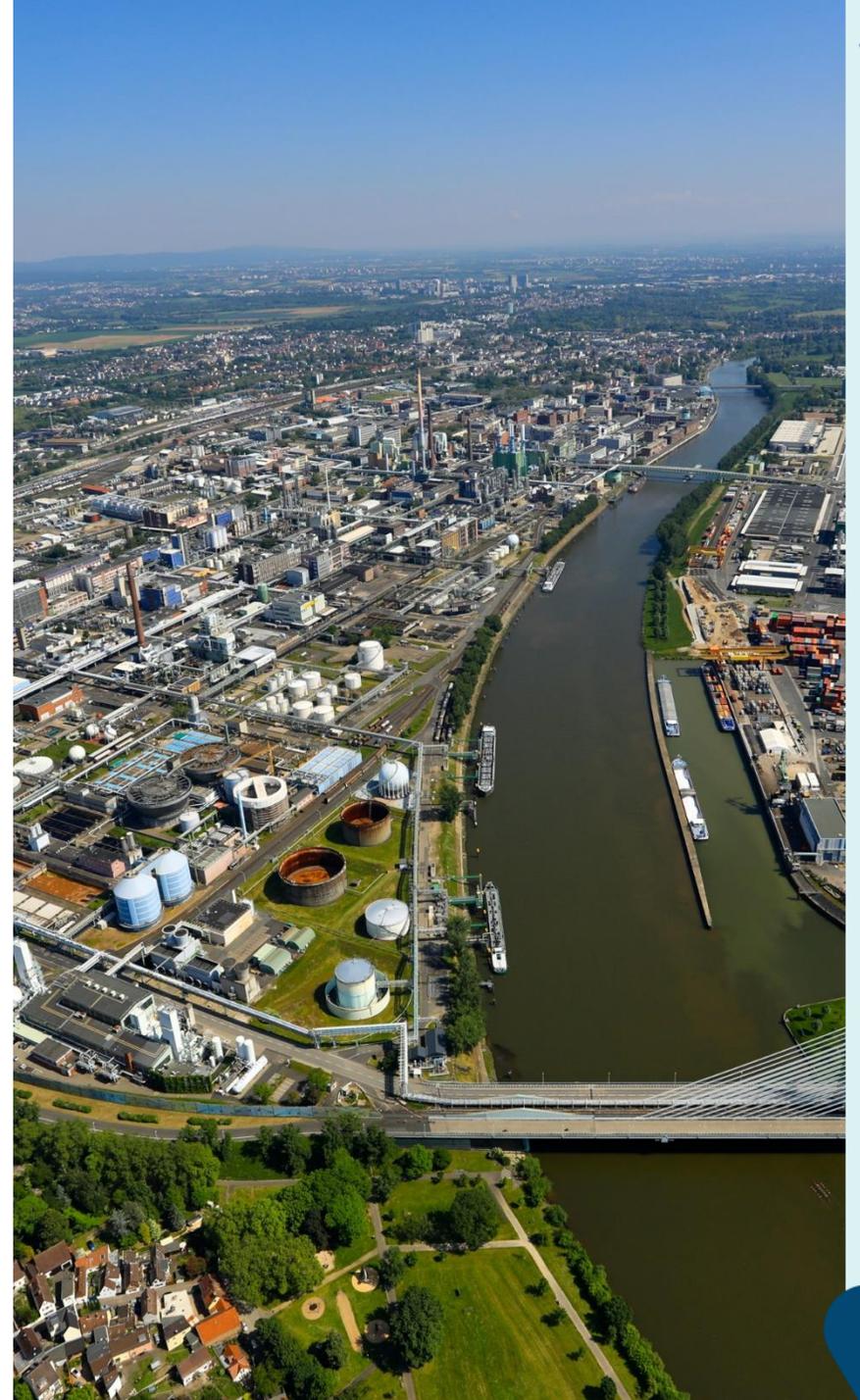
Pricing stability: offtakes with tier-one customers

Product pre-qualification capability: optimisation plants now in production

Advanced and execution-ready: specialised in-house expertise and strong execution team. Over €460m raised to date and shovel-ready

Decarbonising the EV supply chain: unique offering. Targeting **10Mt CO₂** avoided in Phase One alone⁵

Note(s): 1. All figures from Bridging Engineering Study (BES) announcement 16 November 2023. Vulcan confirms that all the material technical assumptions underpinning the forecast financial information in the Bridging Study Announcement continue to apply and have not materially changed; 2. Refer to the Competent Person Statement within the Disclaimer slides 3. Converted at €0.60/AS\$1.00. 4. Based on official feed-in numbers from grid operator and calculated with the latest local electricity mix emission factor; 5. Minviro and Vulcan internal estimates; 6. Based on the Phase One production target capacity of 24ktpa from Bridging Engineering Study (BES) Announcement 16th November 2023 and Vulcan internal estimated average EV battery size and chemistry in Europe. Refer to the Competent Person Statement within the Disclaimer slides



WORLD-CLASS LITHIUM DISTRICT: LIONHEART

Ability to expand with low cost, sustainable production

Global tier-one lithium resource, and largest in Europe: 27.7 Mt LCE estimated in 10 of Vulcan's 17 licences alone, in URVBF¹

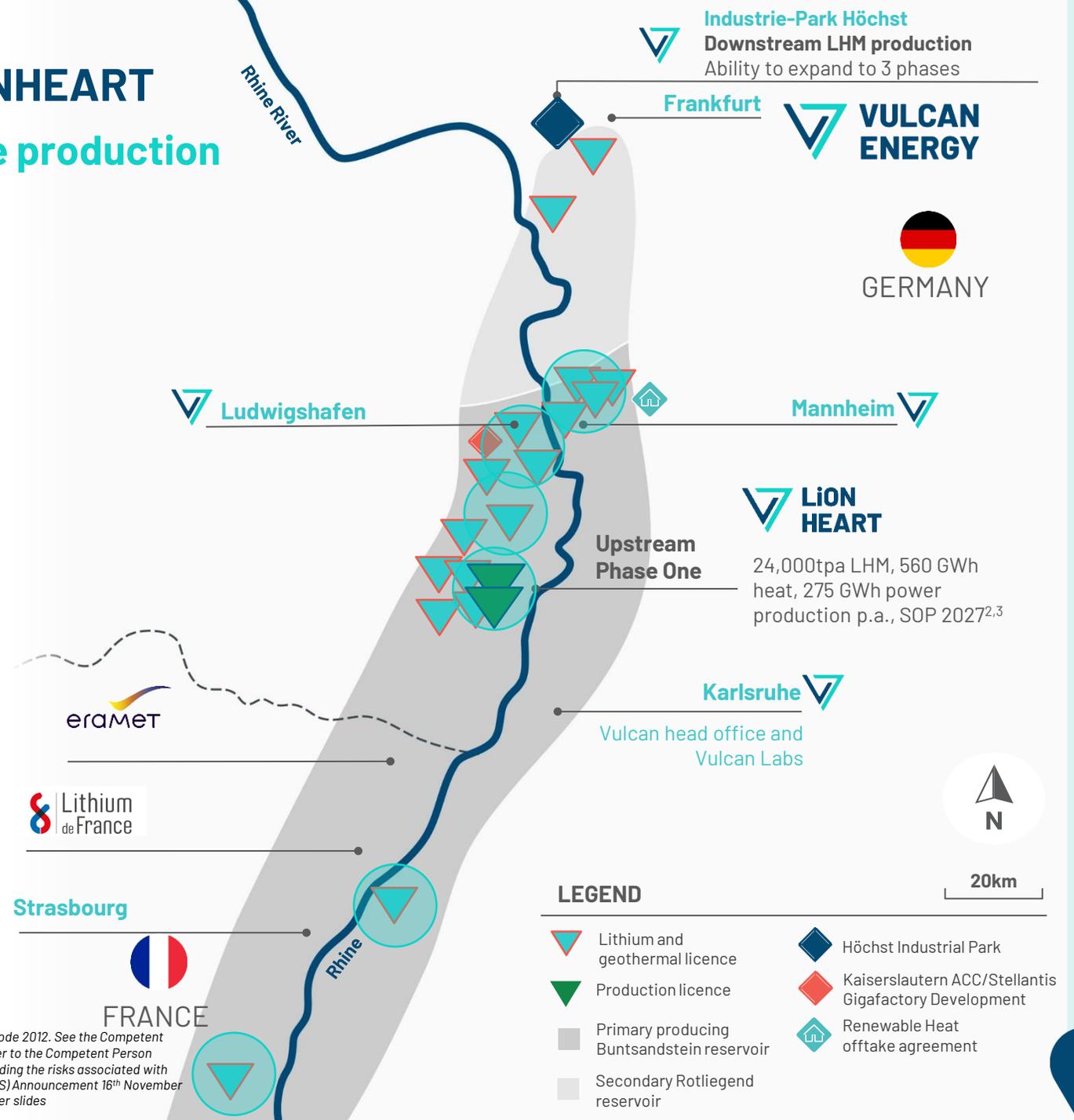
Low impurity, high quality, consistent brine composition reduces CAPEX and OPEX

Well-supported by infrastructure. Multiple chemical parks, >1,000 existing wells, mature, producing field

Ability to expand with modular plants in the upstream, and add further trains of production to downstream

Leveraging renewable heat co-production to reduce field development cost and provide benefits to local industry and communities

Strategic location and compact 130km supply chain drive substantial cost/ carbon benefits



Note(s) 1. On a lithium carbonate equivalent (LCE) basis, according to public information, as estimated and reported in accordance with the JORC Code 2012. See the Competent Person Report contained in the Prospectus and Appendix 4 of the Equity Raise Presentation dated 11 December 2024 for further information. 2. Refer to the Competent Person Statement within the Disclaimer slides. 3. Please also refer to the risk factors contained in the Prospectus and Appendix 1 of this Presentation regarding the risks associated with resource exploration and development projects. Based on the Phase One production target capacity of 24ktpa from Bridging Engineering Study (BES) Announcement 16th November 2023 and Vulcan internal estimated average EV battery size and chemistry in Europe. Refer to the Competent Person Statement within the Disclaimer slides

VULCAN'S PHASE ONE PROJECT: LIONHEART

Low cost, sustainable integrated lithium and energy production from Europe, for Europe



1 Vulcan's 100% owned Insheim Geothermal Power Plant and wells (operating)

2 Operating well site and Lithium Extraction Optimisation Plant

3 G-LEP - Option agreement signed to secure site

4 Schleidberg - Vulcan's next production well site

EUROPE'S FIRST FULLY DOMESTIC LITHIUM CHEMICALS SUPPLY CHAIN

Combined €60m investment by Vulcan in two Optimisation/Qualification Plants



LEOP: Vulcan's operational lithium extraction optimisation plant



CLEOP: Vulcan's operational lithium electrolysis optimisation plant

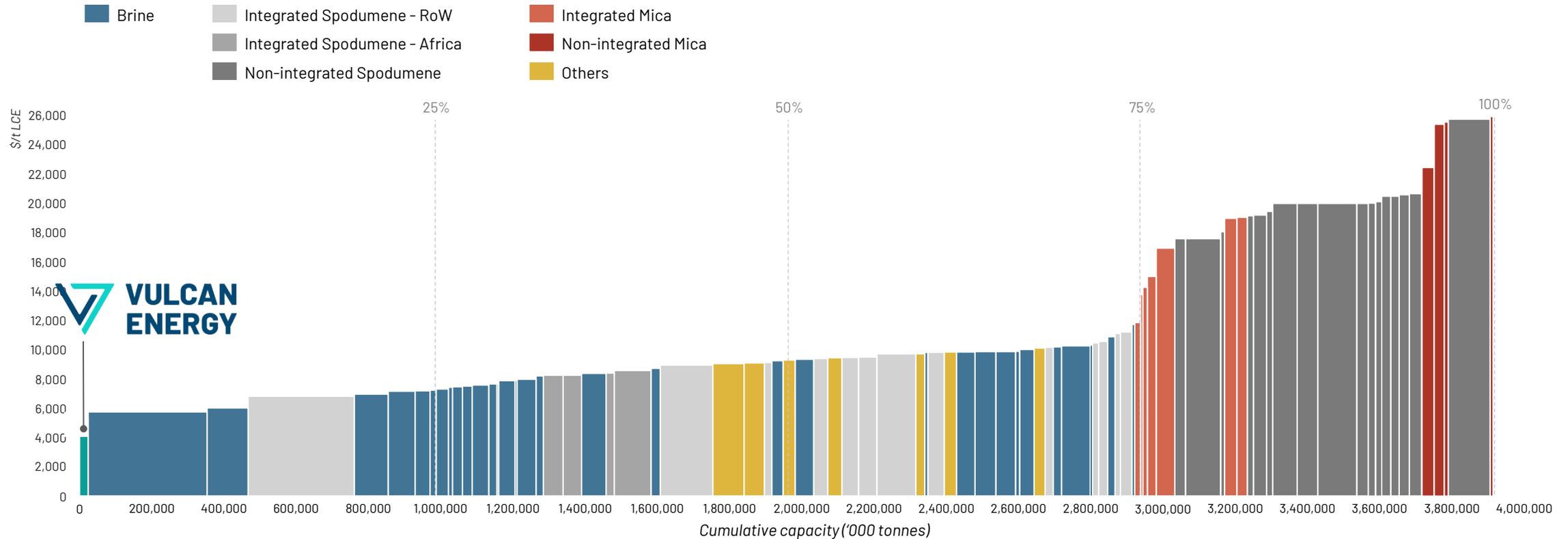
- **High quality** LiCl is being produced to spec since June 2024, **95% Extraction efficiency**
- **Onshored entire A-DLE technology** and production supply chain into Germany & France
- **Battery-quality LHM** material confirmed end of Dec 2024.
- CLEOP will start sending battery grade product to off takers for pre-qualification testing

Operational readiness: train staff and optimise product in a pre-commercial environment
fast tracking product qualification

VULCAN WILL BE TARGETING THE LOWEST QUARTILE OF THE LITHIUM COST CURVE

Powered by low cost, highly efficient A-DLE production that leverages renewable heat

Global projected lithium hydroxide C1 cost curve



Vulcan's C1 costs are estimated at €4,030/t LHM, which sits in the lowest cost quartile for highly competitive supply – driven by A-DLE lithium recoveries and low-cost energy.

EPCM PARTNER VALIDATION EXERCISE COMPLETED

Much improved scope definition leading to reduced uncertainty and risk during execution, all with no material change to CAPEX

EPCM/ integrator: review of scope, cost and schedule, validating the BES, with no material increase in capital requirement allowing finalisation of preparations for EPCM award

Process technology partnerships: flowsheet integration and firm offers in place for optimised flowsheet, updated modular execution model, integration of multi-discipline delivery

ORC delivery partner: final EPC lump-sum turnkey firm offer received including civils. Further increases cost certainty

De-risking: pipelines (ICPP) engineering maturity improved, further cost certainty improvements on well sites, stable well costs

Much improved scope definition since BES, reflected in reduced risk and uncertainty across the Phase One integrated project

SEDGMAN



PHASE ONE FINANCING¹

Strong support from public and private sector

€879m (~A\$1.45bn) conditional debt commitment letter signed in December with Export Finance Australia and commercial lending group of seven banks

European Investment Bank Board approval received for up to €500m financing

Vulcan has also applied for significant public grant funding and **was awarded €100m (A\$162m) from the Federal Ministry of Economics and Climate Protection of Germany** in November 2024

CRMA Strategic Project status will allow a streamlined progression through a CRM financing board subgroup

Vulcan's Green Financing Framework has been rated the highest possible rating - Dark Green - by S&P Global Ratings. The Framework is aligned with International Capital Market Association and Loan Market Association principles and guidance

Updated Environmental and Social Impact Assessment (ESIA) published on 16 September 2024, a pre-requisite for Export Credit Agencies' Credit Committee approval

Note(s): 1. Refer to ASX announcement titled Vulcan Launches AUD164m Placement and Share Purchase Plan dated 11 December 2024 and section 8.1.3.5 of the Prospectus for further details regarding the Company's financing strategy for its Phase One Project. See also risk factors in Appendix 1 of this Presentation, and the risk factors in the Prospectus and the Equity Raise Presentation in relation to the future funding requirements. As at the date of the Presentation, the Company has not yet entered into binding agreements for its required debt and equity financing for its Phase One Project, and accordingly there is no certainty as to the availability of terms of such financing. See the Company's announcement \$1.45bn conditional debt commitment letter for Phase One of 18 December 2024 for further information.

Structuring banks



Major ECA/ EIB support



Financial advisor



KEY MILESTONES ACHIEVED IN 2024

Transformational period for Phase One Lionheart Project

First LiCl production from upstream optimisation plant



Start of production at downstream lithium hydroxide optimisation plant



Vulcan awarded €100m (A\$162m) from the Federal Ministry of Economics and Climate Protection for its HEAT4LANDAU Project



Vulcan and BASF partner to reduce CO2 emissions at world's largest integrated chemical complex



Evolution of Company Board including appointment of Felicity Gooding as Group Chief Financial Officer and Executive Director



EIB Board approves participation in Phase One financing potentially amounting to up to €500m (~A\$819m)



Successful \$164m Placement to fund start of project execution



€879m (~A\$1.45bn) conditional debt commitment letter signed with EFA and commercial lending group of seven banks



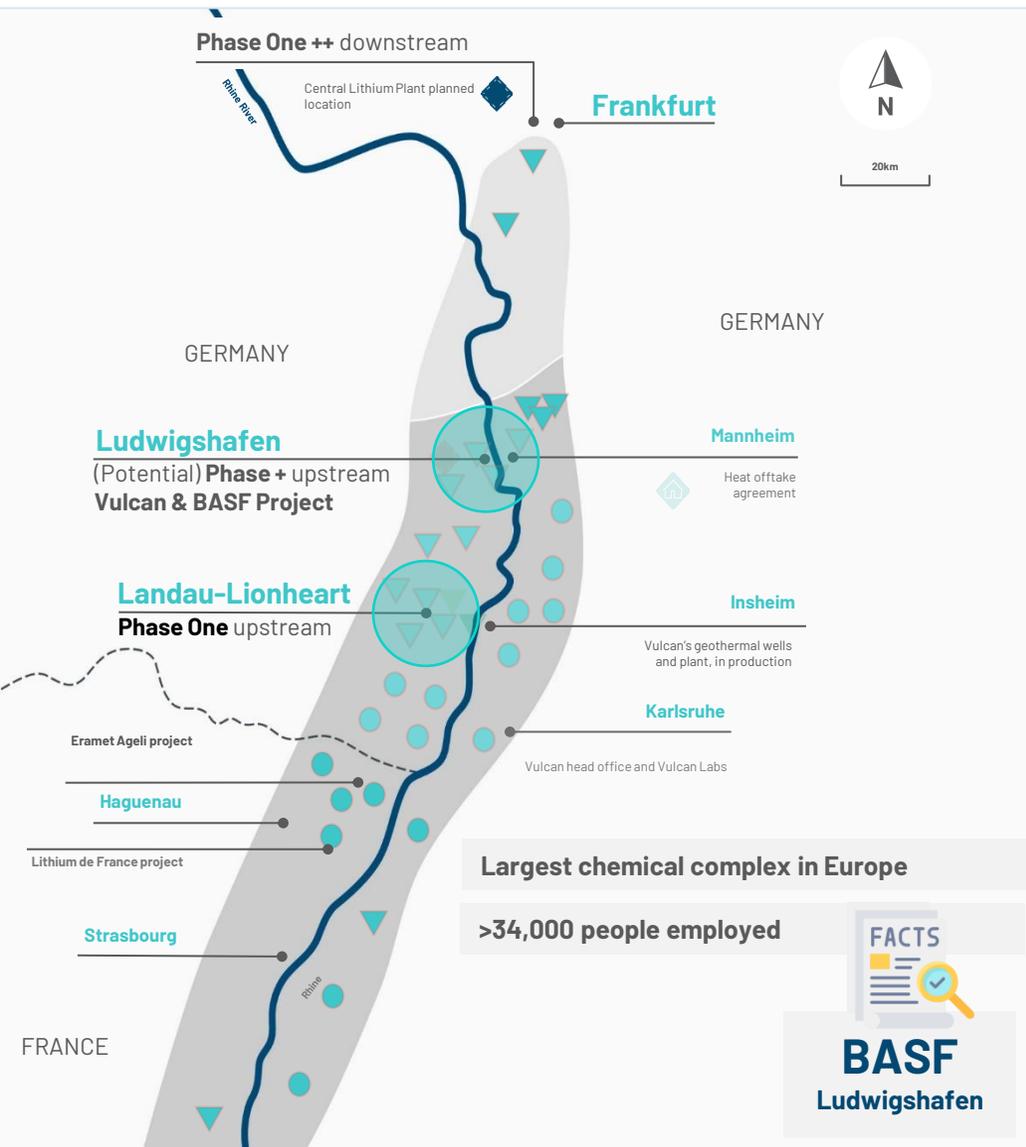


**RECENT HIGHLIGHT: MOBILISATION OF RIG
IN MARCH 2025 FOR NEW PHASE ONE
PRODUCTION WELLS**



PHASE + DECARBONISING THE WORLD'S LARGEST CHEMICAL SITE¹

A blueprint for Vulcan's future phase developments to support Europe's energy transition



- Owner of lithium production
- Co-develops geothermal project
- Operator of integrated heat and lithium facilities

- Future heat offtaker co-develops geothermal project
- Examine provision of construction area for lithium extraction plant
- Local stakeholder engagement

Renewable heat project: Jointly develop geothermal heat system at BASF's Ludwigshafen complex targeting 2,000–2,500 GWh/year

Lithium plant: Intention for Vulcan to construct and operate a Lithium Extraction Plant at the Ludwigshafen site. Produced lithium then further processed at Vulcan's Central Lithium Plant to produce battery-grade lithium hydroxide

Community heating: Opportunity for district heating of nearby communities, including partnerships with local energy providers in Ludwigshafen and Frankenthal

Next steps: 2D and 3D seismic surveys (2025–2026) will identify optimal well sites, with BASF funding up to €5m. Subject to positive results and public funding, Vulcan and BASF to drill additional wells to produce heat and lithium, sharing costs.

Largest chemical complex in Europe

>34,000 people employed

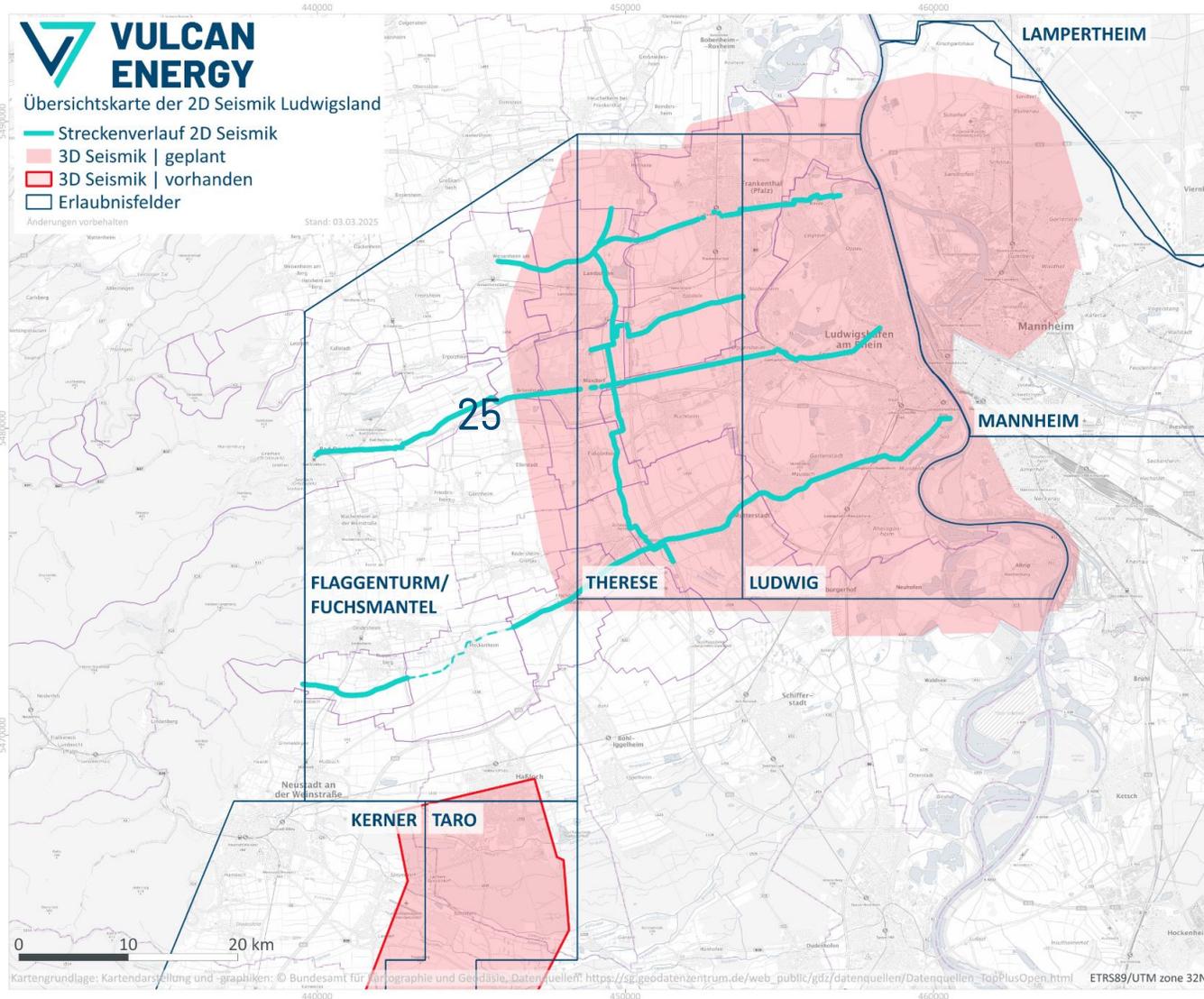


BASF
Ludwigshafen

1. See ASX announcement Vulcan and BASF announce partnership agreement dated 21 November 2024 for further information.

BASF JOINT PROJECT FIRST PHASE ALREADY COMPLETED

Ludwigsland seismic surveys



- 2D seismic survey concluded in March 2025
- 70 km of 2D seismic measured
- Will assist with optimisation of 3D survey
- Next steps will be planning and execution of new brine wells for geothermal renewable heat and lithium production.



PRODUCT | PROJECT | TECHNOLOGY

VULSORB® A NEW WAVE OF LITHIUM IS BUILDING

Defined by low cost, scalable, high-purity, and sustainable lithium production from brines using adsorption-type direct lithium extraction (A-DLE) technology

As the lithium market matures into its next phase of growth, major global companies like Rio Tinto and ExxonMobil are entering into lithium brine.^{1,2}

A-DLE is a preferred method of lithium production, due to its **faster time to market, low cost of production, scalability, product purity,** and **sustainability** credentials.

The market share for A-DLE currently sits at 10% of lithium production but is **forecast to grow by 280% over the next 10 years**, representing a compound annual growth rate of 13%.³

With the expected recovery of lithium prices and favourable policy headwinds, **global lithium production is expected to enter a new round of capacity expansion, from which Vulcan stands to benefit**, as one of only a few western lithium companies with in-house A-DLE expertise.



Direct Lithium Extraction: A Game-Changer for Mining Brines⁴

By Chloe Williment
October 30, 2024

THE AUSTRALIAN*

DLE: The technologies moving the needle on lithium production⁵

By Jessica Cummins
22 January 2025



Rise of DLE will open up new sources of lithium supply this decade⁶

23 July 2024



Rio Tinto commits to buy Arcadium Lithium for \$6.7 billion⁷

9 October 2024



Equinor takes stake in Standard Lithium Smackover direct lithium extraction projects⁸

9 May 2024

¹ Rio Tinto, Rio Tinto completes acquisition of Arcadium Lithium, dated 6 March 2025, < <https://www.riotinto.com/en/news/releases/2025/rio-tinto-completes-acquisition-of-arcadium-lithium> >.

² ExxonMobil, ExxonMobil Drilling First Lithium Well in Arkansas, announced 31 November 2023, < <https://investor.exxonmobil.com/news-events/press-releases/detail/1152/exxonmobil-drilling-first-lithium-well-in-arkansas-aims-to> >.

³ Benchmark Minerals Intelligence, Lenders' Market Report Part 2: Market & Supply Chain Overview, dated 7 October 2024.

⁴ EV Magazine, Direct Lithium Extraction: A Game-Changer for Mining Brines, dated 30 October 2024, < <https://evmagazine.com/articles/direct-lithium-extraction-a-game-changer-for-the->

⁵ The Australian, DLE: The technologies moving the needle on lithium production, dated 22 January 2025, < <https://www.theaustralian.com.au/business/stockhead/news/dle-the-technologies-moving-the-needle-on-lithium-production/news-story/69be75e2d753c7f078ee25faf0cb5ab4?btr=4a7a85412cc25b5820c27eb1b82846be> >.

⁶ Benchmark Source, Equinor takes stake in Standard Lithium Smackover direct lithium extraction projects, dated 9 May 2024, < <https://source.benchmarkminerals.com/article/equinor-takes-stake-in-standard-lithium-smackover-direct-lithium-extraction-projects> >.

⁷ Benchmark Source, Rio Tinto commits to buy Arcadium Lithium for \$6.7 billion, dated 9 October 2024, < <https://source.benchmarkminerals.com/article/rio-tinto-commits-to-buy-arcadium-lithium-for-6-7-billion> >.

⁸ Benchmark Source, Rise of DLE will open up new sources of lithium supply this decade, 23 July 2024, < <https://source.benchmarkminerals.com/article/rise-of-dle-will-open-up-new-sources-of-lithium-supply-this-decade> >.

Superior extraction rate: > 95%.

High adsorption capacity: ~3 g/l, porous structure of the extraction material enable high surface area and adsorption capacity

Main inputs for operation: heat and salinity, naturally occurring in many brines. **Lowers cost and CO₂ footprint of operation:** no acid/base required for loading/unloading

Highly selective: adsorbent chemical structure is selective towards the lithium ions due to its small radius; ions such as magnesium, sodium and calcium cannot enter

Tuned structure: allows high performance in a wide range of operational temperature - from room temperature to over 70°C

Western supply chain: technology is 100%-owned by Vulcan; manufactured in Germany and France

Limited field of competitors: only western players with comparable technology position are Rio Tinto / Arcadium and Eramet; other suppliers are from China

Applicable to all brine types: VULSORB® has been successfully tested with salars, oil field brines and geothermal brines. Being licensed to developers in the Americas (north and south)



Granular particles

Particle size range	450 - 1,050
Temperature	up to 75°C
Adsorption capacity	3 g/l

China dominates A-DLE technology; limited western options

Global lithium projects that use, or plan to use, proprietary A-DLE technology

Company	Project	Project location	A-DLE adsorbent provider	Origin of adsorbent
Rio Tinto	Fénix / Rincon		Proprietary ^{1,2}	
Eramet	Centenario-Ratonos		Proprietary ¹	
Vulcan Energy	Lionheart (Phase One)		Proprietary  VULSORB®	

Selection of global lithium projects that use, or plan to use, A-DLE adsorbents from third-party providers

Company	Project	Project location	A-DLE adsorbent provider	Origin of adsorbent
Tibet Summit Resources	Sal de Los Angeles		SunResin ¹	
Lanke Lithium	Yiliping Lake		SunResin ¹	
Zangge Lithium	Chalkhan Lake		SunResin ¹	
Jintai Lithium	Mahai Lake		SunResin ¹	
Tibet National	Qinghai		SunResin ¹	
Yiwei Lithium	Qinghai Salt Lake		SunResin ¹	
Various juniors	e.g. Cleantech, Anson etc.		SunResin ¹	
Equinor / Standard Lithium	South West Arkansas (Smackover) ³		Lanshen / Koch ⁴	
ExxonMobil	Exxon Lithium Brine (Smackover) ⁵		n.q.	n.q.
EAU Lithium	Salar de Coipasa / Pastos Grandes		Vulcan Energy ⁶  VULSORB®	
Rosatom (via Uranium One Group)	Uyuni		Rosatom (via Uranium One) ⁷	

Main global A-DLE technology providers

Company and origin of technology

	SunResin ¹
	Lanshen (via Koch Technology Solutions) ^{1,8}
	Vulcan Energy  VULSORB®
	Rosatom ⁷ & Axion ⁹

+ Vulcan is tracking dozens of other A-DLE project developers

n.q. = not quantified / information is not publicly available.

¹ Goldman Sachs, Direct Lithium Extraction: A potential game changing technology, dated 27 April 2023, < <https://www.goldmansachs.com/pdfs/insights/pages/gs-research/direct-lithium-extraction/report.pdf> >.

² Rio Tinto to invest \$2.5 billion to expand Rincon lithium project capacity, dated 12 December 2024, < https://www.riotinto.com/en/news/releases/2024/rio-tinto-to-invest-2_5-billion-to-expand-rincon-lithium-project-capacity-to-60000-tonnes-per-year >.

³ Standard Lithium, Arkansas Smackover Project, < <https://www.standardlithium.com/projects/arkansas-smackover> >.

⁴ Standard Lithium, Standard Lithium Successfully Commissions First Commercial-Scale DLE Column in North America, dated 24 April 2024, < <https://www.standardlithium.com/investors/news-events/press-releases/detail/170/standard-lithium-successfully-commissions-first> >.

⁵ ExxonMobil drilling first lithium well in Arkansas, aims to be a leading supplier for electric vehicles by 2030, dated 13 November 2024, < https://corporate.exxonmobil.com/news/news-releases/2023/1113_exxonmobil-drilling-first-lithium-well-in-Arkansas >.

⁶ EAU Lithium, Brine samples enroute to Vulcan in Germany for testing with Vulcorb technology, < <https://eam.investorhub.com/activity-updates/brine-samples-enroute-to-vulcan-in-germany-for-testing-with-vulcorb-technology> >.

⁷ Global Flow Control, Uranium One to Develop Bolivia's First DLE Plant, dated 12 September 2024, < <https://globalflowcontrol.com/newsroom/uranium-one-to-develop-bolivia-s-first-direct-lithium-extraction-dle-plant/> >.

⁸ Koch's adsorbent originates from China following its long-term agreement with Lanshen, < <https://www.kochtechsolutions.com/2023/10/02/koch-technology-solutions-reaches-lithium-selective-sorption-media-exclusivity-agreement-with-xian-lanshen-new-material-technology-co-ltd/> >.

⁹ bnamericas, Revolutionizing lithium production: Russian firm's breakthrough DLE technology explored, dated 21 November 2023, < <https://www.bnamericas.com/en/interviews/the-proposal-of-russian-company-axion-for-direct-extraction-of-lithium-in-chile> >.

Tier One European Rig Contractor, Drilling, Well Engineering, Well Construction and Well Delivery for geothermal renewable energy projects

Strategic asset for Vulcan

- VERCANA owns **two electric drill rigs, ca. €60m invested by Vulcan to date**
- **Strategic asset** for Vulcan as land rig market is significantly affected by downturn
- Rising demand from **geothermal/ E&P companies**

Managed by a highly experienced team

- **Highly experienced well construction team**, with the full scale well delivery process and drilling operations with **25+ years of experience from supervisor to management level**
- **85 employees** as of November 2024

Ready to deliver Phase One Project

- Setup of the organisation is complete **to run all required workload for service delivery to Vulcan Phase One Project**
- The close out of the final Intercompany Contract **between VERCANA and Phase One SPV**, is in final form





OUTLOOK

KEY TARGETS FOR 2025

Focus on maintaining strong momentum

Production of battery quality Lithium Hydroxide Monohydrate (LHM) at CLEOP



EU Strategic Project status



Decision(s) on government funding approval processes

Commencement of well execution

Finalising project financing package¹

Awarding/ signing of major contracts

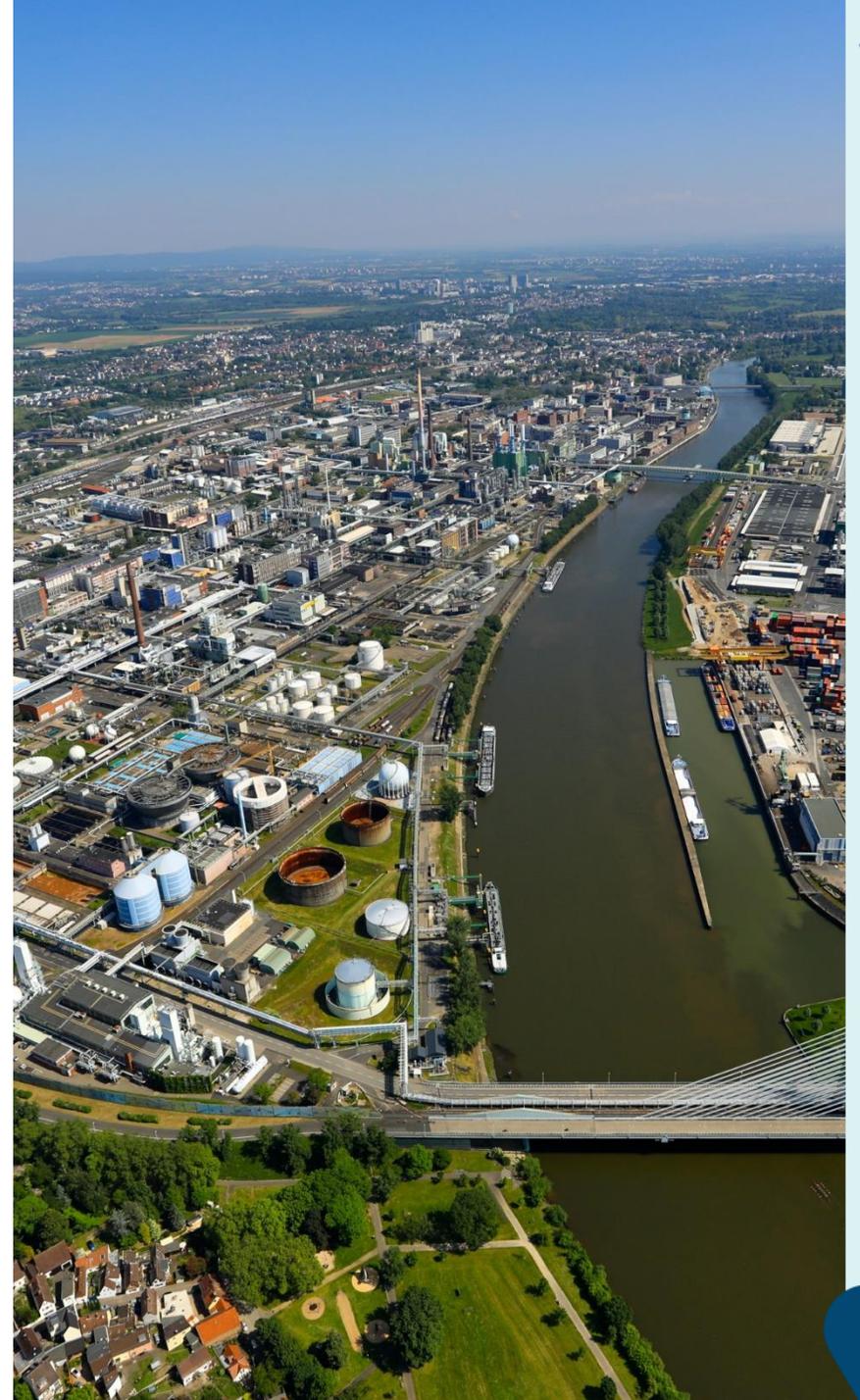
Start of commercial construction of Phase One

Start LHM qualification process

Progress on future phases, including at Ludwigshafen with BASF

Further growth of the business, including VULSORB® technology licencing

Note(s): Refer to page 21 of this presentation for further information on Phase One financing.



STRONG POLICY TAILWINDS

European and German policy initiatives

EU Battery Passport¹ – adopted July 2023



Critical Raw Materials Act (CRMA)²– entered into force 23 May 2024



Net Zero Industry Act (NZIA)³– entered into force 29 June 2024



Strategic Project Status⁴ – awarded 26 March 2025



A competitive compass for EU⁵ – 29 January 2025 (including)



- Clean Industrial Deal initiative – Affordable energy Q1 2025



- Sustainable Transport Investment Plan – Q3, 2025

- Industrial Decarbonisation Accelerator Act – Q4, 2025

Germany's Geothermal Acceleration Law⁶, European Geothermal Strategy – 2025

Note(s) 1. Implementing the EU digital battery passport <https://circulareconomy.europa.eu/platform/sites/default/files/2024-03/1qp5rxiz-CEPS-InDepthAnalysis-2024-05-Implementing-the-EU-digital-battery-passport.pdf> 2. Critical raw Materials Act https://single-market-economy.ec.europa.eu/sectors/raw-materials/areas-specific-interest/critical-raw-materials/critical-raw-materials-act_en

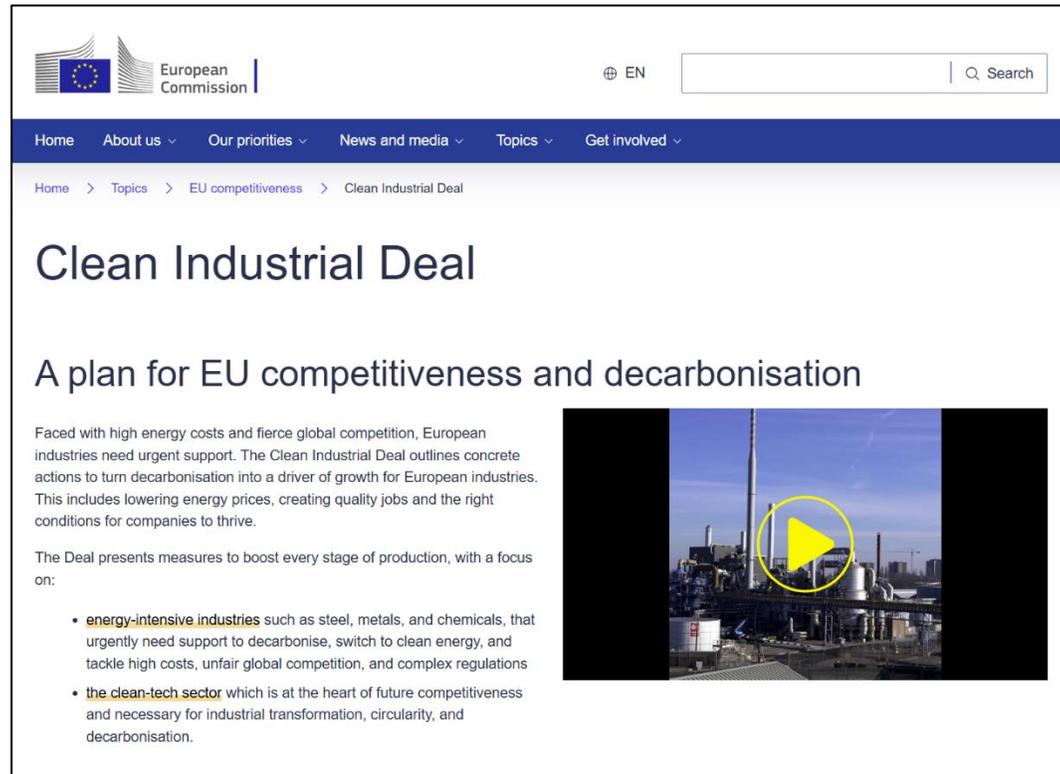
3. NZIA https://commission.europa.eu/strategy-and-policy/priorities-2019-2024/european-green-deal/green-deal-industrial-plan/net-zero-industry-act_en.html 4. <https://single-market-economy.ec.europa.eu/sectors/raw-materials/areas-specific-interest/critical-raw-materials/strategic-projects-under-crma> 5. A competitive compass for the EU: Brussels, 29.1.2025 https://commission.europa.eu/document/download/10017eb1-4722-4333-add2-e0ed18105a34_en 6. Geothermal Acceleration Act <https://www.bmwk.de/Redaktion/DE/Pressemitteilungen/2024/09/20240904-umsetzung-der-waermewende>.



LEVERAGING POLICY: VULCAN & THE CLEAN INDUSTRIAL DEAL

EU incentives for green leaders: funding and supply chain benefits

Clean Industrial Deal



The screenshot shows the European Commission website page for the Clean Industrial Deal. The page title is "Clean Industrial Deal" and the subtitle is "A plan for EU competitiveness and decarbonisation". The main text describes the deal as a plan to support European industries with high energy costs and fierce global competition. It outlines concrete actions to turn decarbonisation into a driver of growth, including lowering energy prices, creating quality jobs, and providing the right conditions for companies to thrive. The deal presents measures to boost every stage of production, with a focus on:

- **energy-intensive industries** such as steel, metals, and chemicals, that urgently need support to decarbonise, switch to clean energy, and tackle high costs, unfair global competition, and complex regulations
- **the clean-tech sector** which is at the heart of future competitiveness and necessary for industrial transformation, circularity, and decarbonisation.

A video player is visible on the right side of the page, showing an industrial facility with a yellow play button overlay.

Potential relevance to Vulcan

 €100bn Green Industry Support – unlocking new financing opportunities to accelerate investment in sustainable projects across Europe

 Faster project approvals for future phases – less bureaucracy means streamlined execution for green tech projects like Vulcan’s phased development

 Joint procurement platform strengthens demand for locally sourced lithium – reinforcing Vulcan’s role in Europe’s clean energy transition



HIGHLY EXPERIENCED LEADERSHIP

Outstanding major project, technical and finance experience at the Executive and Board level

Vulcan Executive Leadership



Dr Francis Wedin
Executive Chair, Founder



Cris Moreno
Managing Director and CEO



Felicity Gooding
Executive Director and Group
Chief Financial Officer

Development

Execution

Production



Thorsten Weimann
Chief Development Officer



Carsten Bachg
Chief Operations Officer



Dr Christian Tragut
Vice President Production



Dr Stefan Brand
Chief Technology Officer



Christian Freitag
Chief Commercial Officer



Samantha Langley
Head of Sustainability



Doris Prokosch
Chief People Officer



Marc Cleuziou
Vice President Execution



Marcus Süllmann
Vice President Finance - Germany

Vulcan Board



Angus Barker
Lead Non-Executive Director,
Deputy Chair Director



Josephine Bush
Non-Executive Director



Dr Günter Hilken
Non-Executive Director



Dr Heidi Grön
Non-Executive Director

Special advisory to the Board



Dr Horst Kreuter
Chief Representative Germany,
Co-Founder, Board Advisor



@VulcanEnergyRes

<http://v-er.eu>



APPENDIX 1: DISCLAIMER

No investment or financial product advice. This Presentation, and the information provided in it, does not constitute, and is not intended to constitute, financial product or investment advice, or a recommendation to acquire Vulcan Shares, nor does it constitute, and is not intended to constitute, accounting, legal or tax advice. This Presentation does not, and will not, form any part of any contract for the acquisition of Vulcan Shares. This Presentation has been prepared without taking into account the objectives, financial or tax situation or particular needs of any individual. Before making an investment decision (including any investment in Vulcan Shares or Vulcan generally), prospective investors should consider the appropriateness of the information having regard to their own objectives, financial and tax situation and needs, and seek professional advice from their legal, financial, taxation or other independent adviser (having regard to the requirements of all relevant jurisdictions). Vulcan is not licensed to provide financial product advice in respect of an investment in shares. Any investment in any publicly-traded company, including Vulcan, is subject to significant risks of loss of income and capital.

Forward-looking statements. This Presentation contains certain forward-looking statements. Often, but not always, forward-looking statements can be identified by the use of forward-looking words such as "may", "will", "expect", "intend", "plan", "estimate", "target", "propose", "anticipate", "continue", "outlook" and "guidance", or other similar words. Such forward-looking statements may include, but are not limited to, statements regarding: the proposed use of funds; estimated mineral resources and ore reserves; forecast financial information (including revenue and EBITDA); permits and approvals; production targets; forecast lithium prices; expected future demand for lithium products; planned production and operating costs; planned capital requirements; planned strategies and corporate objectives; and expected construction and production commencement dates. By their nature, forward-looking statements inherently involve known and unknown risks, uncertainties and other factors that may cause actual results, performance and achievements to be materially greater or less than estimated, including those generally associated with the lithium industry and/or resources exploration companies, including but not limited to the risks listed in the Equity Raise Presentation dated 11 December 2024 (Equity Raise Presentation) as well as the risks contained in the Prospectus dated 18 December 2024 (Prospectus). These factors may include, but are not limited to, changes in commodity and renewable energy prices, foreign exchange fluctuations and general economic conditions, increased costs and demand for production inputs lithium, the speculative nature of exploration and project development (including the risks of obtaining necessary licences and permits and diminishing quantities or grades of reserves), political and social risks, changes to the regulatory framework within which Vulcan operates or may in the future operate, environmental conditions including climate change and extreme weather conditions, geological and geotechnical events, environmental issues, the recruitment and retention of key personnel, industrial relations issues and litigation. Any such forward-looking statements, opinions and estimates in this Presentation (including any statements about market and industry trends) are based on assumptions and contingencies, all of which are subject to change without notice, and may ultimately prove to be materially incorrect. Accordingly, prospective investors should consider any forward-looking statements in this Presentation in light of those disclosures, and not place undue reliance on any forward-looking statements (particularly in light of the current economic climate and significant volatility, uncertainty and disruption caused by the COVID-19 pandemic and the Russian invasion of Ukraine). Forward-looking statements are provided as a general guide only and should not be relied upon as, and are not, an indication or guarantee of future performance. All forward-looking statements involve significant elements of subjective judgement, assumptions as to future events that may not be correct, known and unknown risks, uncertainties and other factors – many of which are outside the control of Vulcan. Except as required by applicable law or regulation (including the ASX Listing Rules), Vulcan does not make any representations, and provides no warranties, concerning the accuracy of any forward-looking statements, and disclaims any obligation to update or revise any forward-looking statements, whether as a result of new information, future events or results, or otherwise. Neither Vulcan nor any of its directors, officers, agents, employees or advisors give any representation or warranty, express or implied, as to the fairness, accuracy, completeness or correctness of the information, opinions and conclusions contained in this Presentation.

Investment Risks. As noted above and contained in the Previous Disclosures, an investment in Vulcan is subject to both known and unknown risks, some of which are beyond the control of Vulcan. Vulcan does not guarantee any particular rate of return or its performance, nor does it guarantee any particular tax treatment. Prospective investors should have regard to the risks in the Previous Disclosures, when making their investment decision, and should make their own enquires and investigations regarding all information in this Presentation, including, but not limited to, the assumptions, uncertainties and contingencies that may affect Vulcan's future operations, and the impact that different future outcomes may have on Vulcan. There is no guarantee that any investment in Vulcan will make a return on the capital invested, that dividends will be paid on any fully paid ordinary shares in Vulcan, or that there will be an increase in the value of Vulcan in the future. Accordingly, an investment in Vulcan and Vulcan Shares should be considered highly speculative, and potential investors should consult their professional advisers before deciding whether to invest in Vulcan.

Disclaimer. Vulcan, to the maximum extent permitted by law, expressly excludes and disclaims all liability (including, without limitation, any liability arising out of fault or negligence on the part of any person) for any direct, indirect, consequential or contingent loss or damage, or any costs or expenses, arising from the use of this Presentation or its contents, or otherwise arising in connection with it.

Industry data. Certain market and industry data used in connection with or referenced in this Presentation may have been obtained from public filings, research, surveys or studies made or conducted by third parties, including as published in industry-specific or general publications. Neither Vulcan nor its advisers, nor their respective representatives, have independently verified any such market or industry data. To the maximum extent permitted by law, each of these persons expressly disclaims any responsibility or liability in connection with such data.



APPENDIX 1: DISCLAIMER CONT.

Ore Reserves and Mineral Resources Reporting. It is a requirement of the ASX Listing Rules that the reporting of ore reserves and mineral resources in Australia comply with the Joint Ore Reserves Committee's Australasian Code for Reporting of Mineral Resources and Ore Reserves ("**JORC Code**"). Investors outside Australia should note that while ore reserve and mineral resource estimates of the Company in this document comply with the JORC Code (such JORC Code-compliant ore reserves and mineral resources being "Ore Reserves" and "Mineral Resources" respectively), they may not comply with the relevant guidelines in other countries and, in particular, do not comply with (i) National Instrument 43-101 (Standards of Disclosure for Mineral Projects) of the Canadian Securities Administrators (the "Canadian NI 43-101 Standards"); or (ii) subpart 1300 of Regulation S-K under the US Securities Act of 1933, as amended (the "Securities Act"), which governs disclosures of mineral reserves in registration statements filed with the US Securities and Exchange Commission ("SEC"). Information contained in this Presentation describing mineral deposits may not be comparable to similar information made public by companies subject to the reporting and disclosure requirements of Canadian or US securities laws. On 31 October 2018, the SEC adopted amendments to its disclosure rules to modernise the mineral property disclosure requirements for issuers whose securities are registered with the SEC under the US Exchange Act of 1934, as amended (the "**Exchange Act**"). These amendments became effective 25 February 2019, with compliance required for the first fiscal year beginning on or after 1 January 2021. Under these amendments, the historical property disclosure requirements for mining registrants included in Industry Guide 7 under the Securities Act were rescinded and replaced with disclosure requirements in subpart 1300 of Regulation S-K. As a result of the adoption of subpart 1300 of Regulation S-K, the SEC's standards for mining property disclosures are now more closely aligned to the JORC Code's requirements. For example, the SEC now recognises estimates of "measured mineral resources", "indicated mineral resources" and "inferred mineral resources." In addition, the SEC has amended its definitions of "proven mineral reserves" and "probable mineral reserves" to be "substantially similar" to the corresponding standards under the JORC Code. However, despite these similarities, SEC standards are still not identical to the JORC Code. Accordingly, investors are cautioned that there can be no assurance that the reserves and resources reported by the Company under the JORC Code would be the same had it prepared its reserve or resource estimates under the standards adopted under subpart 1300 of Regulation S-K.

Competent Person statement. The information in this presentation that relates to estimates of Mineral Resources and Ore Reserves is extracted from the Bridging Study Announcement which is available to view on Vulcan's website at <http://v-er.eu> Vulcan confirms, that in respect of any estimates of Mineral Resources and Ore Reserves included in this announcement (1) 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; (2) the form and context in which the Competent Persons' findings are presented in this announcement have not been materially modified from the original market announcement; and (3) all material assumptions underpinning the production targets (and the forecast financial information derived from such production targets) included in this announcement continue to apply and have not materially changed.

Financial data. All monetary values expressed as "\$" or "A\$" in this Presentation are in Australian dollars, unless stated otherwise. All monetary values expressed as EUR or € in this Presentation are in Euros, unless stated otherwise. All monetary values expressed as "US\$" in this Presentation are in US dollars, unless stated otherwise. The assumed exchange rate to convert Euros into Australian dollars or US dollars (as applicable) is shown in the footnote to each respective slide. In addition, prospective investors should be aware that financial data in this Presentation includes "non-IFRS financial information" under ASIC Regulatory Guide 230 'Disclosing non-IFRS financial information' published by ASIC and also 'non-GAAP financial measures' within the meaning of Regulation G under the U.S. Securities Exchange Act of 1934. The non-IFRS financial measures do not have standardised meanings prescribed by Australian Accounting Standards and, therefore, may not be comparable to similarly titled measures presented by other entities, nor should they be construed as an alternative to other financial measures determined in accordance with Australian Accounting Standards. Although Vulcan believes the non-IFRS financial information (and non-IFRS financial measures) provide useful information to readers of this Presentation, readers are cautioned not to place any undue reliance on any non-IFRS financial information (or non-IFRS financial measures). Similarly, non-GAAP financial measures do not have a standardised meaning prescribed by Australian Accounting Standards or International Financial Reporting Standards and therefore may not be comparable to similarly titled measures presented by other entities, nor should they be construed as an alternative to other financial measures determined in accordance with Australian Accounting Standards or International Financial Reporting Standards. Although Vulcan believes that these non-GAAP financial measures provide useful information to readers of this Presentation, readers are cautioned not to place undue reliance on any such measures.

Funding Strategy. To achieve the range of outcomes indicated in the DFS and the Bridging Study, additional funding will be required. Investors should note that there is no certainty that Vulcan will be able to raise the amount of funding when needed. It is also possible that such funding may only be available on terms that may be dilutive to or otherwise affect the value of Vulcan's existing shares. It is also possible that Vulcan could pursue other financing strategies such as a partial sale or joint venture of the Project. If it does, this could materially reduce Vulcan's proportionate ownership of the Project.

Effect of rounding. A number of figures, amounts, percentages, estimates, calculations of value and fractions in this Presentation are subject to the effect of rounding. Accordingly, the actual calculation of these figures may differ from the figures set out in this Presentation.

Acknowledgement and agreement. By attending an investor presentation or briefing, or accepting, accessing or reviewing this Presentation, you acknowledge and agree to the terms set out in this "Disclaimer" section of the Presentation.



APPENDIX 2: LCA ASSUMPTIONS

All foreground data for the ISO compliant Life Cycle Assessment (LCA) is sourced from Vulcan's 2023 Bridging Engineering Study. The process design is assumed to be fully electrified. No fossil fuels are directly burned on site in the lithium production process. All background data is sourced from Ecoinvent Database 3.9.1. Electricity used at the geothermal plants and central lithium plants is assumed for 50% to be sourced from the German average grid market mix, and for 50% from additional wind electricity purchased via "green" PPA. Vulcan is in discussions to source any power it needs from 100% renewable sources, so considers the 50% average grid mix to be a conservative assumption. All electricity that is produced at the geothermal plants is assumed in the LCA to be exported to the German electrical grid. All saleable thermal energy that is produced from the geothermal brine is exported for regional district heating, with waste heat used in the process to extract the lithium. When used for regional district heating, it is assumed that it replaces average use of natural gas in the area. Only transport of intermediate products is accounted for, being transport of lithium chloride concentrate from the lithium extraction plant to the central lithium plant, and transport of recycling streams from the central lithium plant to the lithium extraction plant. Overland transport assumes transport in a 16-32 metric tonne EURO3 compliant internal combustion engine lorry. Electric transportation is being explored but not included in the LCA. The LCA is conducted using preoperational average data points. This means the LCA results represent a static point in time based on the 2023 Bridging Engineering Study. The LCA was a cradle to gate study, meaning the downstream use phase of the lithium hydroxide monohydrate product was not studied.