



**Cris Moreno, Managing Director and CEO**  
**Annual General Meeting**

**28 May 2025**

**ASX/FSE: VUL**

**DETERMINED FOR A  
BETTER TOMORROW**



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**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): <sup>1</sup> This slide contains a summary of the applicable disclaimers, the full disclaimer in relation to this presentation is contained in Appendix 1.*

# AGENDA

## 1. Company overview

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## 2. Year in review

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## 3. Lithium market

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## 4. Strategic direction

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## 5. Targets 2025







## 1. Company overview

# EMPOWERING A CARBON NEUTRAL FUTURE

## High quality strategic shareholders

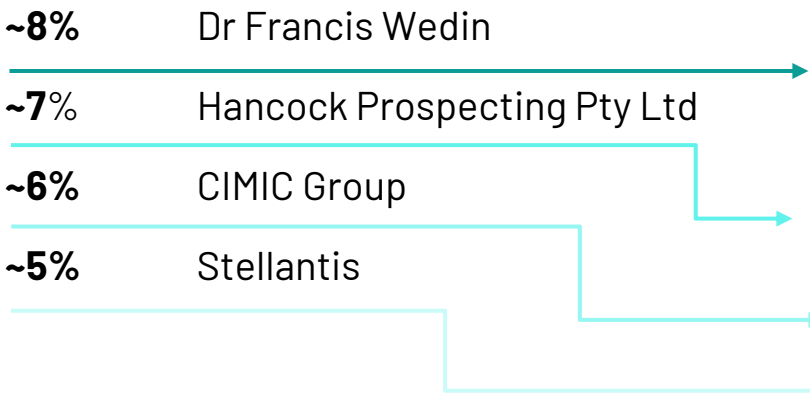
ASX/FSE Prime Standard / **VUL**

Shares on issue / **~218m**

Market Capitalisation<sup>1</sup> / **ca. €506m (A\$889.9m)<sup>2</sup>**

Cash<sup>3</sup> / **€78.8m (~A\$141m)**

### High quality strategic shareholders



Note(s): 1. As at 26 May 2025 ASX closing price A\$4.06/sh, 2. Converted at €0.56/A\$1.00. 3. Cash as at 31 March 2025

# Vulcan values



CLIMATE CHAMPION

DETERMINED

INSPIRING





# VULCAN COMPANY IN A SNAPSHOT - PHASE ONE PROJECT: LIONHEART

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



**LION HEART**

**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** Schleiberg - Vulcan's next production well site



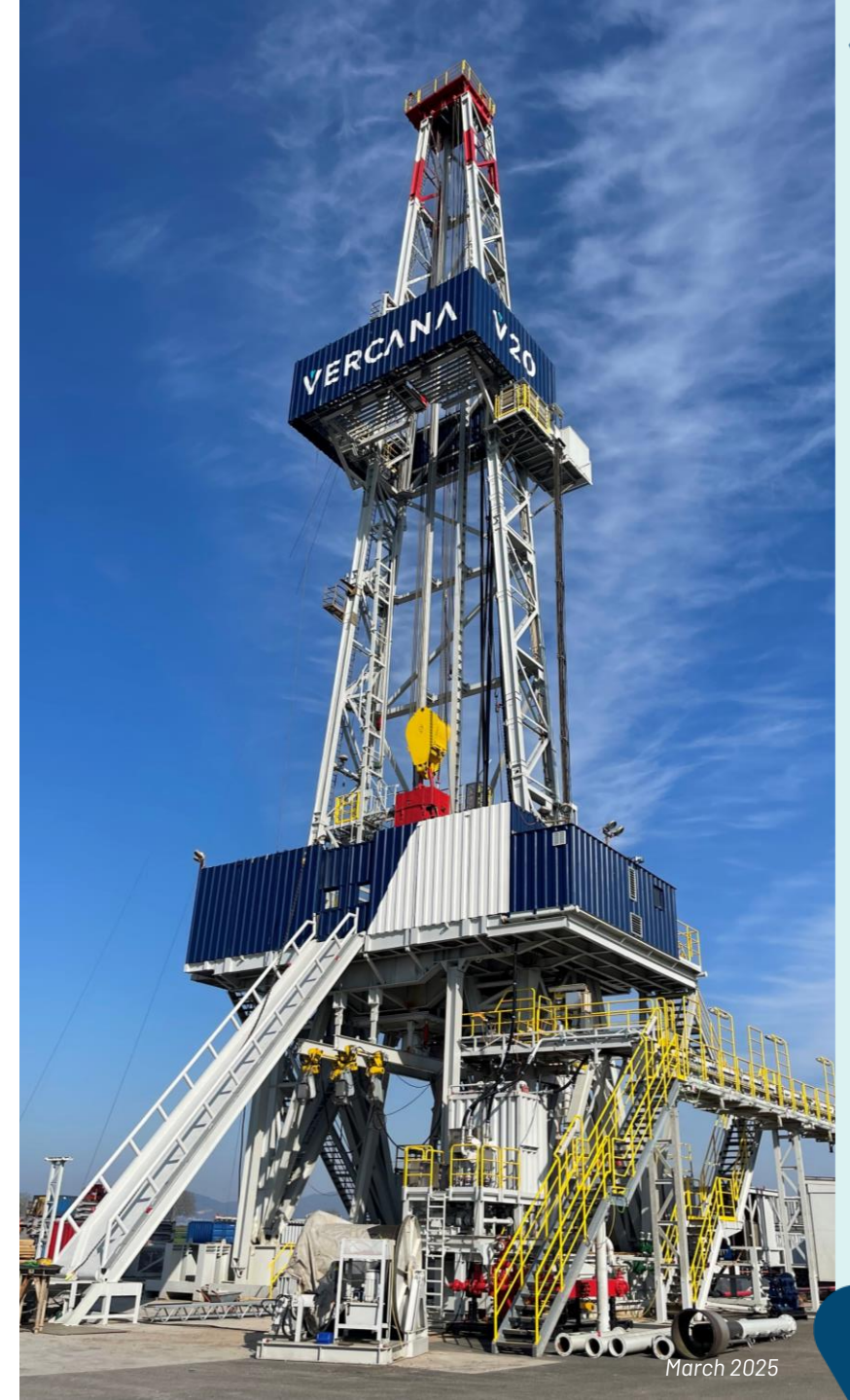


**2. Year in review**

# RECENT KEY ACHIEVEMENTS

## Transformational period for Phase One Lionheart Project

- 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 & BASF partner to reduce CO<sub>2</sub> emissions** at world's largest chemical complex ✓
- EIB Board approves participation in Phase One** financing potentially amounting to up to €500m (~A\$819m) ✓
- Successful €100m** (~A\$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 ✓
- Production of battery-quality lithium hydroxide monohydrate (LHM)** demonstrating Europe's first domestically battery-quality LHM, from raw material to final product ✓
- Start of drilling at Schleidberg**, the first new production well site for Phase One ✓
- Lol signed with premium German automaker** ✓
- KfW Raw Material Fund has entered Sequana investment process - €150m equity investment targeted** conditional to successful due diligence ✓
- Vulcan awarded EU Strategic Project** under Critical Raw Materials Act (CRMA) ✓





# AWARDING OF EU STRATEGIC PROJECT STATUS

## Major signal of the importance of Phase One Lionheart Project

The European Commission awarded Vulcan Energy with Strategic Project status in March 2025, reflecting the **Phase One Lionheart Project's alignment with the objectives of the Critical Raw Materials Act (CRMA)**

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**The CRMA is designed to increase the EU's capacity to extract, process and recycle strategic raw materials**, including lithium, and diversify EU supplies from third countries

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The Company's commitment to **producing sustainable lithium is demonstrated through its advanced extraction and processing technologies**

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Strategic Project status **unlocks access to EU funds and potential state aid**, expedites permit-granting processes, and enables priority treatment in regulatory processes

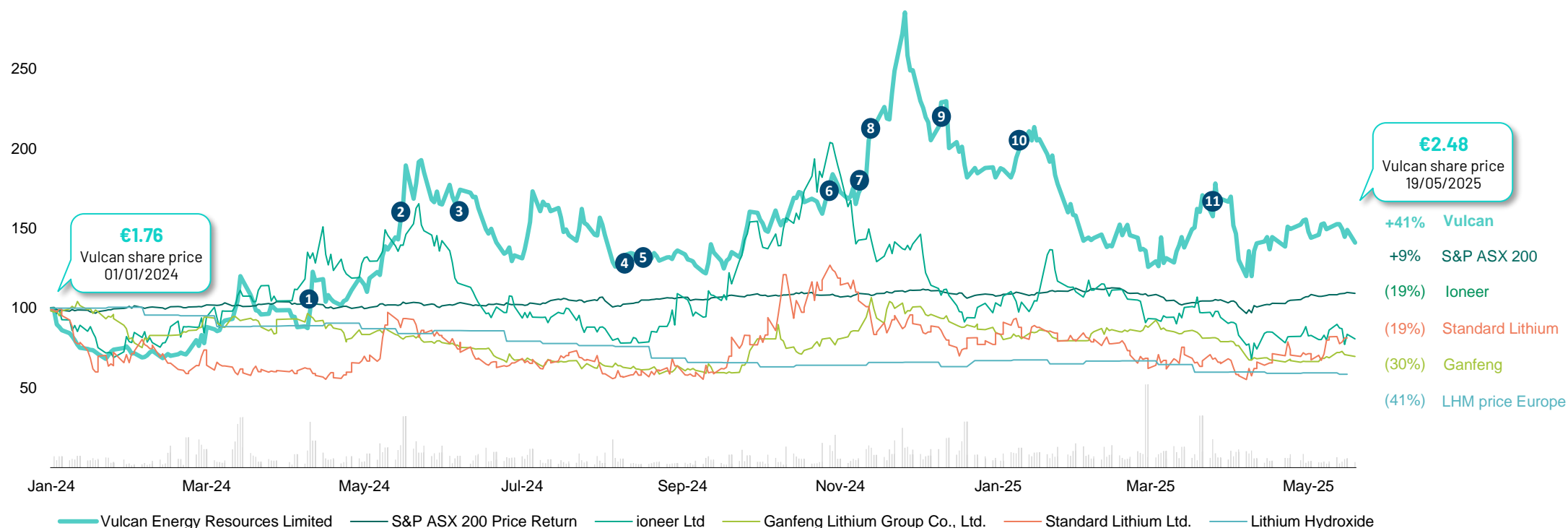


# HIGH PERFORMER

## Best performing lithium stock since 2024

1 <b>11 Apr-24</b> LEOP start of production	2 <b>17 May-24</b> Announce final phase of Vulcan's Project-level financing process	3 <b>3 Jun-24</b> Vulcan receives €40m investment by CIMIC Group and HPPL	4 <b>8 Aug-24</b> CLEOP start of commissioning	5 <b>9 Aug-24</b> Announcement of the Arcadium Lithium acquisition by Rio Tinto	6 <b>25 Oct-24</b> Vulcan awarded a Dark Green rating by S&P Global	7 <b>8 Nov-24</b> CLEOP opening and start of production	8 <b>12 Nov-24</b> Vulcan awarded €100m funding from the German Recovery and Resilience Plan (the BEW Funding)	9 <b>12 Dec-24</b> Vulcan raised €100m equity from OMV, CIMIC Group and institutional investors	10 <b>13 Jan-25</b> Production of battery-quality lithium hydroxide monohydrate	11 <b>25 Mar-25</b> Vulcan awarded EU Strategic Project status under Critical Raw Materials Act
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300 **Relative share price performance (VUL-AU & peers) since January 2024 – rebased to 100<sup>(1)</sup>**





# STRONG POLICY TAILWINDS

## European and German policy initiatives

- EU Battery Passport<sup>1</sup>** – adopted July 2023 ✓

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- Critical Raw Materials Act (CRMA)<sup>2</sup>**– entered into force 23 May 2024 ✓

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- Net Zero Industry Act (NZIA)<sup>3</sup>** – entered into force 29 June 2024 ✓

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- Strategic Project Status<sup>4</sup>** – awarded 26 March 2025 ✓

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- A competitive compass for EU<sup>5</sup>** – 29 January 2025 (including) ✓
  - Clean Industrial Deal initiative – Affordable energy Q1 2025 ✓
  - Sustainable Transport Investment Plan – Q3, 2025
  - Industrial Decarbonisation Accelerator Act – Q4, 2025

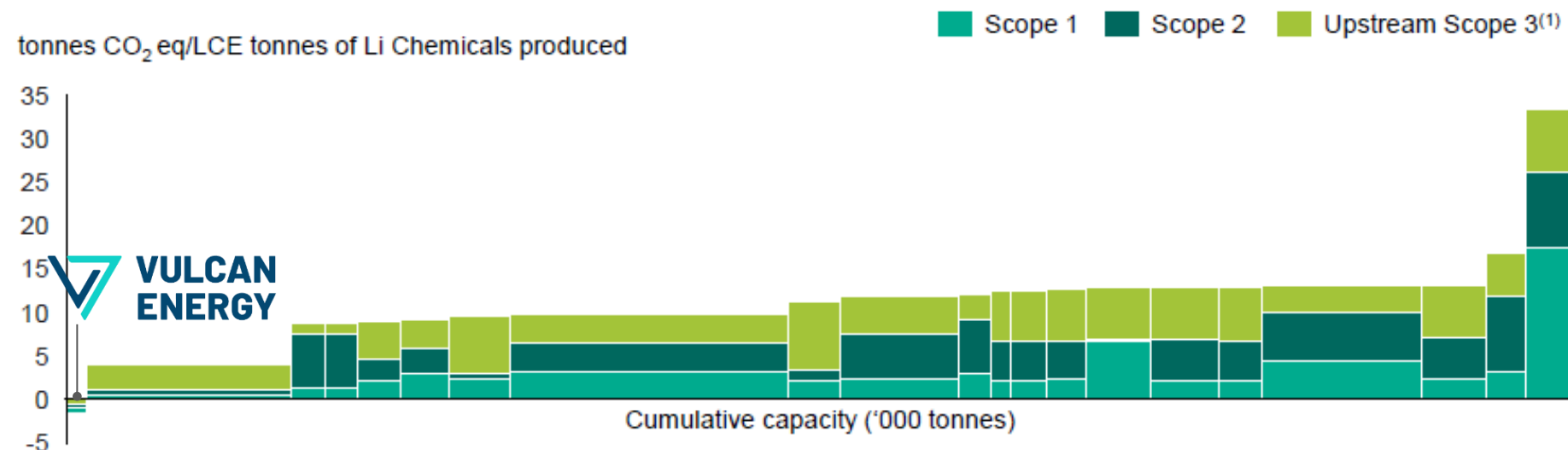
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### Germany’s Geothermal Acceleration Law<sup>6</sup>, European Geothermal Strategy – 2025

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](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](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](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](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>.

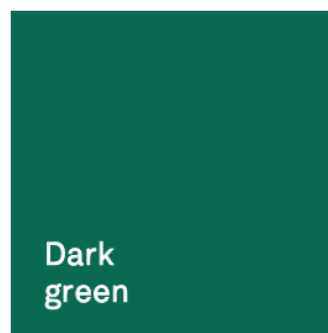


## GHG emissions intensity of lithium chemicals production in 2030



**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**<sup>5</sup>



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

**S&P Global**  
Ratings

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

### Phase One targets:

Produce enough lithium for ca. **500,000 electric vehicles p.a.**<sup>2</sup>

Avoid 10Mt CO<sub>2</sub> eq. through **decarbonising** the lithium supply chain<sup>3</sup>

Targeting **renewable heat** for ca. **90,000 people**<sup>4</sup>

Consume only tiny amounts of water, due to recycling



# UNIQUELY POSITIONED

## Poised to capture the next phase of growth<sup>1</sup>

**Strong customer relationships:** Vulcan has offtake agreements with tier-one European counterparties covering majority of first ten years of production<sup>2</sup>, reduces pricing and market risk

**Tier-one asset:** 30-year project life, large, scalable lithium resource, largest in EU<sup>3</sup> 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 Tinto

**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.



# OPTIMISATION AND QUALIFICATION: UPSTREAM

## Europe's first fully-domestic production of lithium chemicals<sup>1</sup>

Start of Production of LiCl began in April 2024, using Adsorption-Type DLE

**Up to 95%** lithium extraction efficiency, already producing to specification using Vulcan's proprietary adsorbent  **VULSORB®**

**Operational readiness:** LEOP is currently training staff and optimising product in a pre-commercial environment

LEOP is sending upstream product (LiCl concentrate) to the Central Lithium Electrolysis Optimisation Plant (CLEOP) to make battery-quality lithium chemicals



Vulcan's operational upstream Lithium Extraction Optimisation Plant

Note(s): 1. See ASX Announcement 11 April 2024





# OPTIMISATION AND QUALIFICATION: DOWNSTREAM

## Operations team training and fast-tracking product qualification

Start of production of lithium hydroxide at CLEOP commenced in parallel with the official opening of the plant in November 2024

Located in Industrie-Park Höchst, Vulcan's downstream optimisation plant will focus on training and optimisation during the construction of the commercial-sized lithium plant, in the same location

Product from CLEOP is **Europe's first fully integrated lithium battery chemicals** and produced with a by-product of renewable energy

CLEOP **has started sending battery-quality lithium chemicals to offtake partners for pre-qualification testing**, ahead of commercial production, potentially accelerating the qualification process



**LEOP and CLEOP are now operating, representing Europe's first domestic resource-to-LHM supply chain**



# 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

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

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

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

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





# PHASE ONE FINANCING<sup>1</sup>

## Strong support from public and private sector

**€879m (~A\$1.45bn) conditional debt commitment letter** signed in December with Export Finance Australia and a 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





### 3. Lithium market



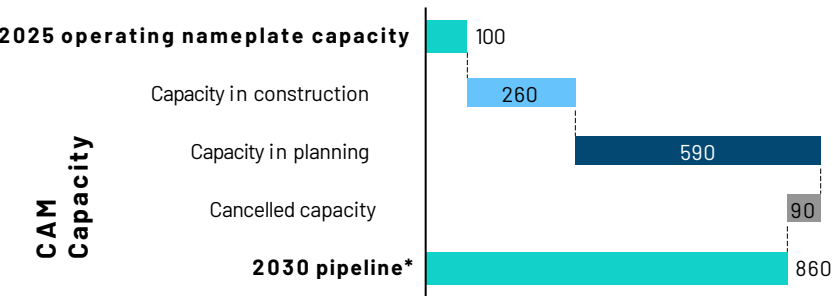
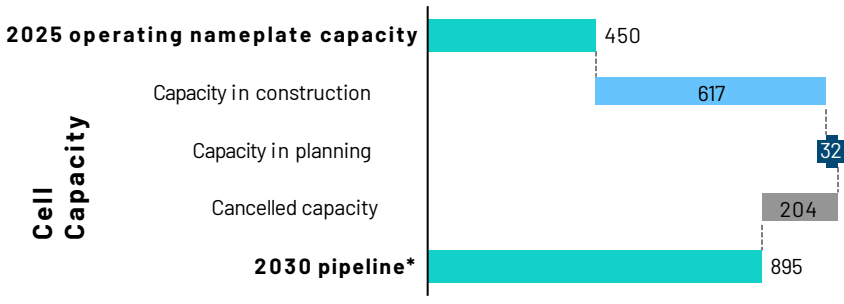
# POWERING AHEAD: EUROPE'S BATTERY PROJECTS ON THE RISE

## No existing supply of lithium from Europe – Vulcan critical to secure local supply

The **European battery industry** is robust and continues to grow at a rapid rate

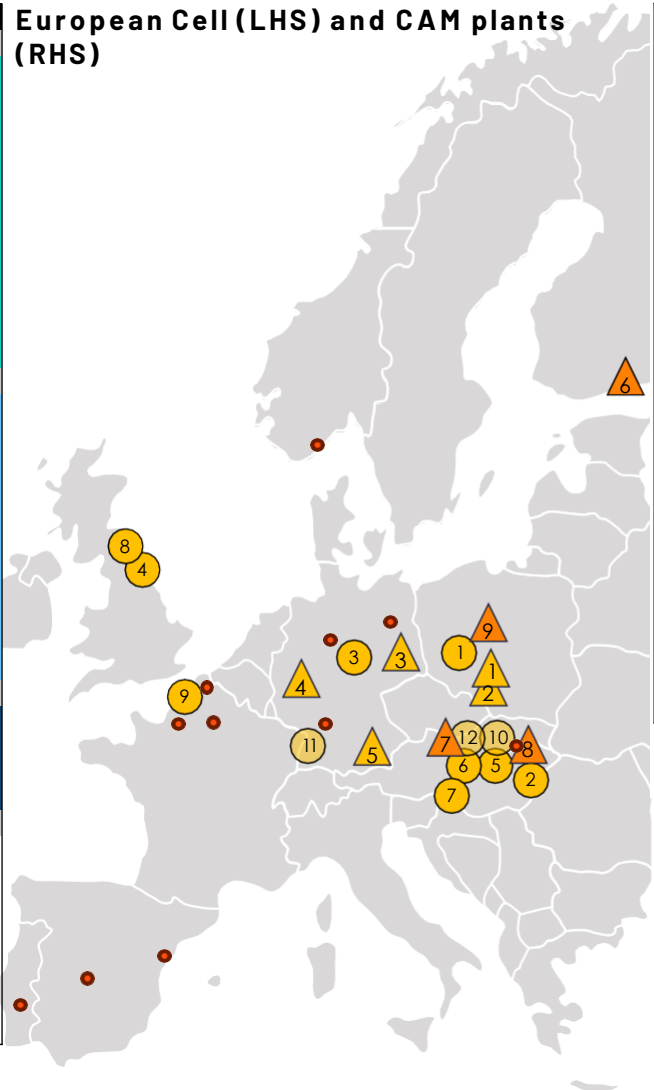
The **cell project pipeline is equivalent to a doubling in GWh capacity by 2030**, almost all of which is in construction now (see below).

European Cell & CAM pipeline (GWh)\*



#	Owner	Status
Operating cell plants		
1	LGES	Operating
2	CATL	Operating
3	CATL	Operating
4	AESC/Nissan	Operating
5	Samsung SDI	Operating
6	SK On	Operating
7	SK On	Operating
8	Envision AESC	Operating
9	ACC	Operating
10	MES	Operating
11	Leclanché	Operating
12	InoBat Auto	Operating
In Construction		
	AESC, Spain	2025
	AESC/Renault, France	2025
	Tesla, Germany	2025
	VW, Germany	2025
	Cellforce, Germany	2025
	CALB, Portugal	2026
	EVE Energy, France	2026
	Verkor/Renault, Fr.	2026
	Morrow, Norway	2026
	Prologium, France	2026
	VW, Spain	2027
In Planning (not mapped)**		
	CATL/Stellantis	2026
	Tata	2026
	Gotion/Inobat	2026
	VW	2028
Cancelled (not mapped)		
	Northvolt/Volvo	Halted
	ACC, Germany	Halted
	ACC, Italy	Halted
	Northvolt Ett	Closed
	Northvolt Drei	Cancelled
	SVOLT, Saarland	Cancelled
	SVOLT, Lauchhammer	Cancelled
	Freyr, Norway	Cancelled

European Cell (LHS) and CAM plants (RHS)



#	Owner	Status
Operating CAM plants		
1	LG Chem	Operating
2	Umicore	Operating
3	BASF	Operating
4	IBU-tec	Operating
5	Epsilon	Operating
In Construction		
6	Easpring/FMG	2026
7	Huayou	2026
8	EcoPro	2025
9	Ronbay	2023
In Planning (not mapped)		
	Xiamen Tungsten, France	2026
	Umicore/VW, Poland	2026
	Freyr/FMG, Finland	2027
	Altium, UK	2027
	Yuneng New Energy, Spain	2027
	Axens, France	2028
Cancelled (not mapped)		
	EV Metals, Poland	Cancelled
	Northvolt, Sweden	Cancelled
	Freyr/Aleees	Halted

860 GWh by 2030 = ca. 600,000t LCE of demand p.a. just in Europe, with zero local supply. Vulcan’s Phase One to supply 24,000 tonnes per annum, ca. 4% of this market

Source: Benchmark Mineral Intelligence  
\* Not risk-weighted \*\* Projects at very early stages of planning, or of insignificant volume, have been excluded

# RIO TINTO STRONGLY COMMITTED TO A-DLE IN LITHIUM BRINES

Rio has recently invested ~US\$ 11.3bn (~A\$ 17.2bn) in A-DLE related projects and technologies

Counterparties				
Rio's A-DLE play	Acquisition/Investment <sup>1,2</sup>	Acquisition <sup>3,4,5</sup>	Joint Venture <sup>6</sup>	Joint Venture <sup>7</sup>
Transaction/ investment summary	<ul style="list-style-type: none"> <li>In March 2022, Rio completed the acquisition of the Rincon lithium project from Sentient for <b>US\$825m</b> and subsequently, in December 2024, committed <b>US\$2.5bn</b> to expand the Argentinian operation</li> <li>Rio noted the DLE technologies proposed for use at the Rincon project had potential to significantly increase recoveries compared to solar evaporation ponds</li> </ul>			
Quantum committed/ invested <sup>8</sup>	<b>US\$ 3,325m (~A\$ 5,000m)</b>	<b>US\$ 6,700m (~A\$ 10,150m)</b>	<b>US\$ 900m (~A\$ 1,360m)</b>	<b>US\$ 425m (~A\$ 640m)</b>

1. Rio Tinto completes acquisition of Rincon Lithium <<https://stocknessmonster.com/announcements/rio-asx-3A590605/>>  
2. "Rio Tinto to invest \$2.5 billion to expand Rincon Lithium project capacity to 60,000 tonnes per year" <Announcement>  
3. Rio Tinto completes acquisition of Arcadium Lithium | Global  
4. <https://www.listcorp.com/asx/rio/rio-tinto/news/rio-presentation-on-acquisition-of-arcadium-lithium-3097561.html>  
5. Arcadium-Lithium-Investor-Day-Presentation-Draft-v\_Master-Q4.pdf  
6. Rio Tinto partners with Codelco to develop lithium project in Chile's Salar de Maricunga | Global  
7. Rio Tinto confirmed as preferred partner on world-class Salares Altoandinos lithium project | Global  
8. All US\$ converted at USD:AUD 1 : 0.66

**Vulcan is the only other Australian company outside of Rio Tinto with bankable A-DLE technology in-house, and a large project growth pipeline for low-cost lithium brine production**



# VULSORB® – THE KEY TO UNLOCK LOW-COST WESTERN A-DLE LITHIUM GLOBALLY

Opportunity to grow VULSORB® technology business – a high-performance bankable A-DLE technology offering several sustainability benefits in a growing lithium brine market



## High performance Western-owned A-DLE

- ✓ Superior extraction rate: > 95%
- ✓ High adsorption capacity: ~3 g/l
- ✓ Highly selective towards lithium ions
- ✓ Tuned structure allows wide range of operational temperatures
- ✓ 100% owned by Vulcan Energy and Western-made
- ✓ Limited field of competitors
- ✓ Applicable to all brine types

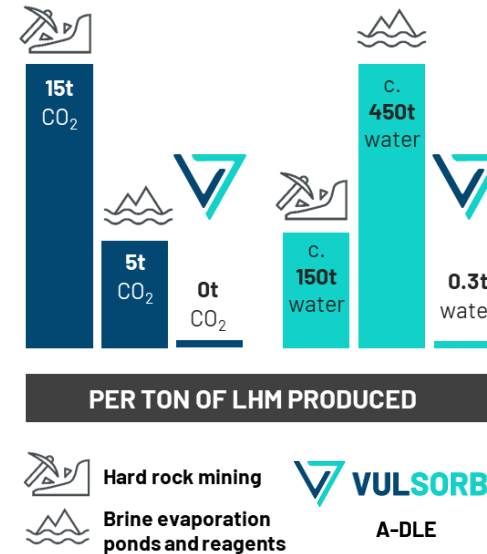


## Commercially bankable

- ✓ Extensive work completed in development, testing and optimisation of VULSORB®, including:
  - Four years of successful test work and piloting
  - Two optimisation plants in operation (representing €60m/A\$100m investment)
- ✓ Due diligence on VULSORB®'s commercial scalability has been successfully conducted as part of Vulcan Phase One debt funding process



## Environmentally sustainable



## Favourable market position

- ✓ Brine supply is forecast to increase by +400% in a few years<sup>1</sup>
- ✓ A-DLE is commercially tested while alternatives are still in development and R&D phase
- ✓ Chinese restrictions on export of A-DLE technologies favours Western-owned A-DLE
- ✓ Vulcan is only Australian company, outside of Rio Tinto with proprietary A-DLE technology

1. Supply curve derived with reference to publicly available project data and adjusting for in-house view of project production and expansion timelines  
 2. VULSORB® applied to Vulcan's Phase One Lionheart project. Results will vary with other projects



## 4. Strategic direction

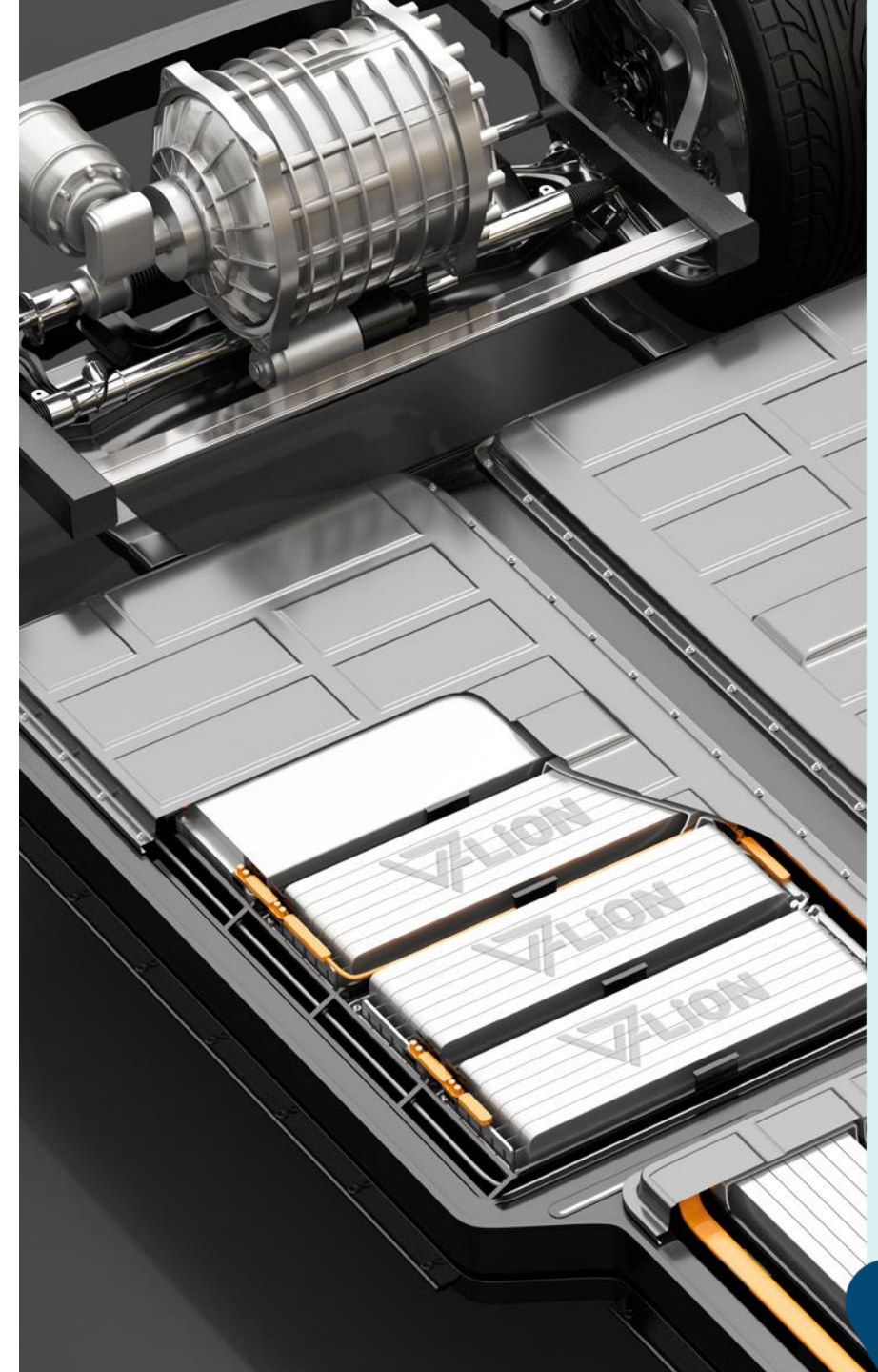




## A premium industry-leading lithium product for battery electric vehicles

- V** is for Vulcan. We strive to be climate champions
- Li** is for high purity, sustainable\* and versatile, battery-quality 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.



# FOCUS AREAS FOR VALUE CREATION

Phase One creates base for a leading lithium, renewable energy and technology company

Division	Li Lithium	Ren Renewable energy	Tech Technology
Phase One	24,000 tonnes p.a. of sustainable lithium hydroxide for Europe's electric vehicle supply chain	275GWh p.a. of renewable power and 560 GWh p.a. of renewable heat generated by Phase One to reduce costs and create byproduct revenue	Having shown industry-leading performance in test work, VULSORB® will be toll manufactured and used in the Phase One Lithium Extraction Plant
Growth Initiatives	Our tier-one, heated lithium brine resource in the URVBF can support multiple future phases of a similar size to Phase One	Partnering with local industry to co-develop Vulcan's geothermal energy resource to decarbonise operations and contribute to European energy security	VULSORB® has been successfully tested with multiple brines from multiple continents, providing basis for global technology licensing opportunities
Products			
Vulcan Values	<p><b>DETERMINED</b> We will use lessons learnt from Phase One to improve future phases</p> <p><b>INSPIRING</b> We will deliver sustainable products to customers and contribute to the global energy transition</p> <p><b>CLIMATE CHAMPIONS</b> We will continue to reduce environmental impact while ensuring cost advantage</p>		



# 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 URVBF<sup>1</sup>

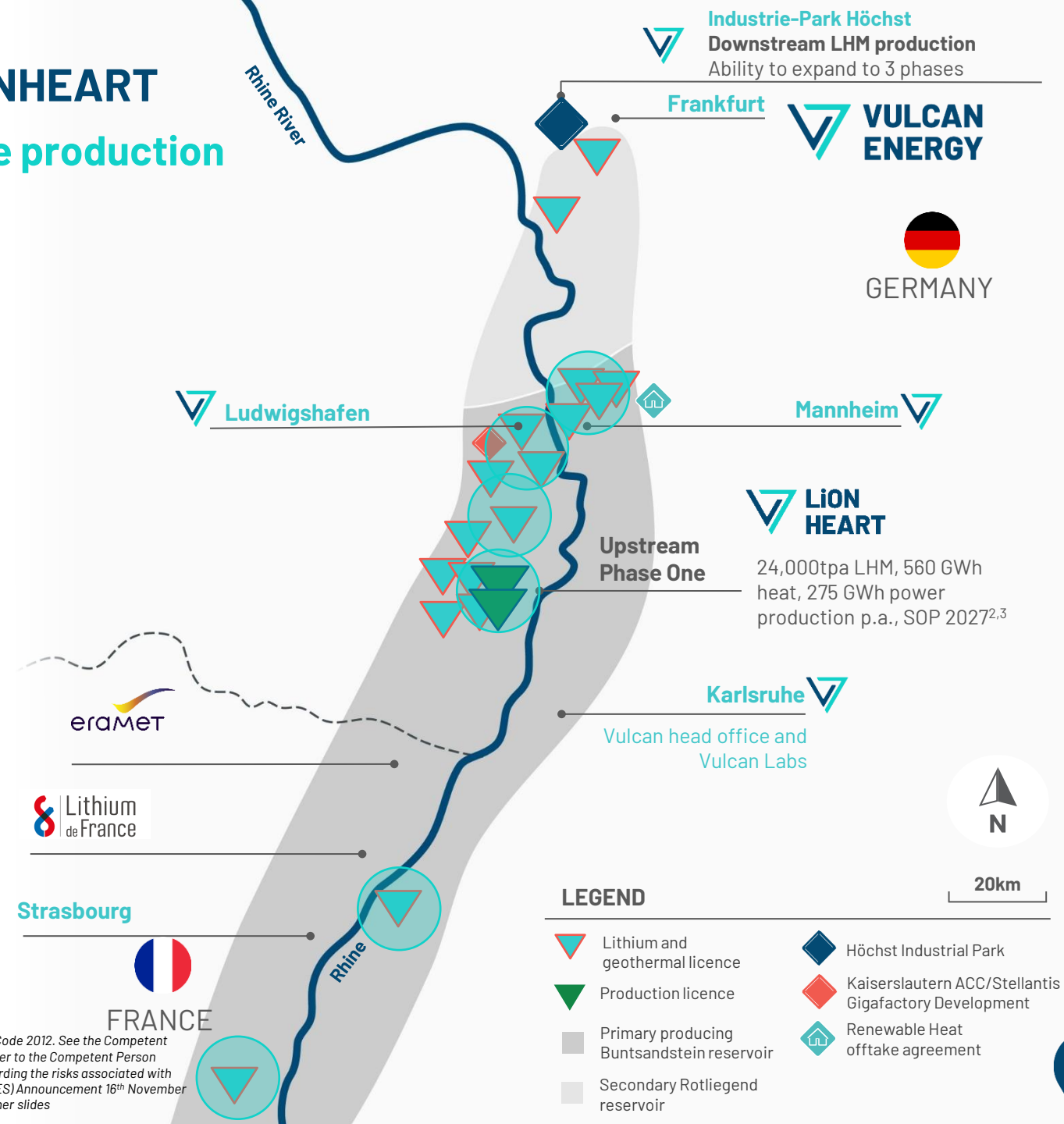
**Low impurity, high quality,** consistent brine composition reduces CAPEX and OPEX

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

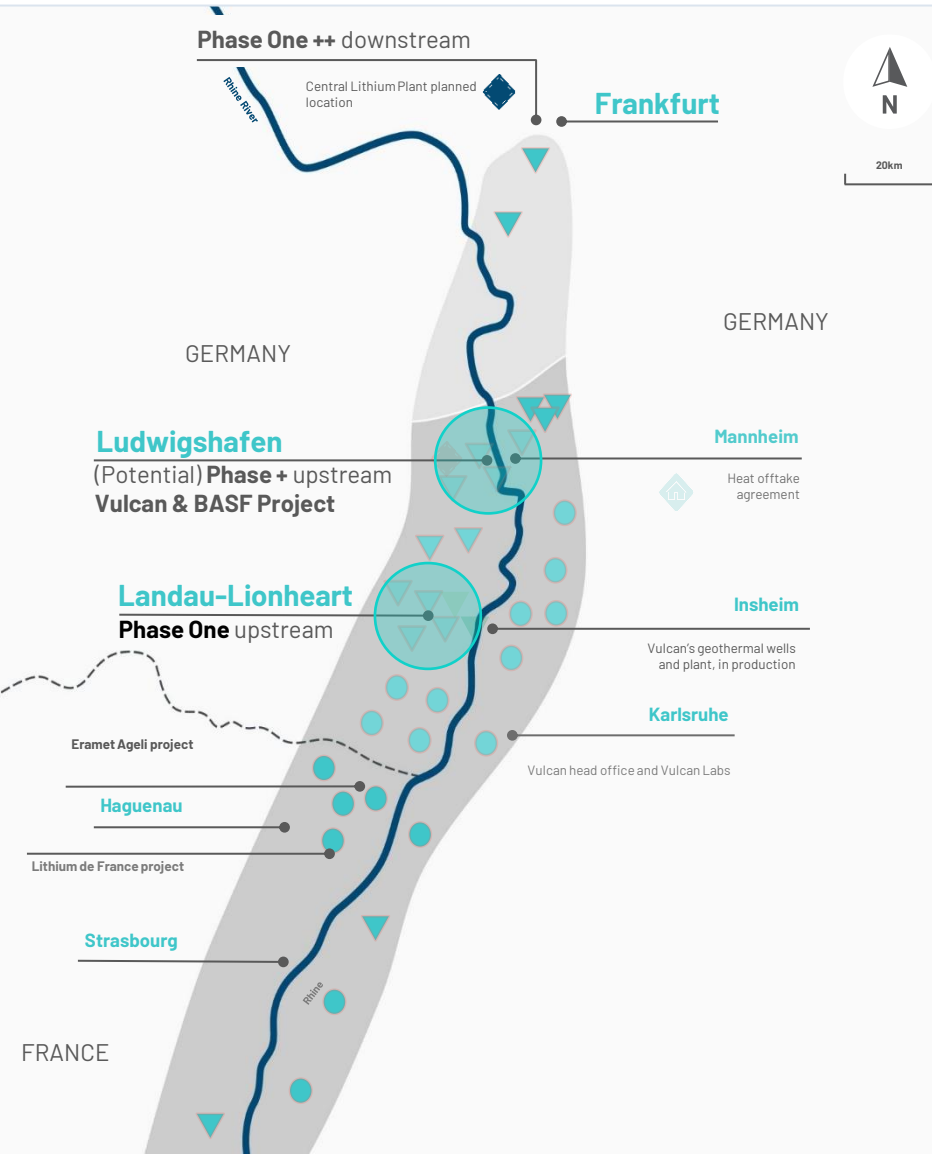
**Strategic location and compact 130km supply chain drive substantial cost/ carbon benefits**



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 16<sup>th</sup> November 2023 and Vulcan internal estimated average EV battery size and chemistry in Europe. Refer to the Competent Person Statement within the Disclaimer slides

# PHASE + DECARBONISING THE WORLD'S LARGEST CHEMICAL SITE<sup>1</sup>

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.

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





## 5. Targets 2025



**MAY 27, 2025: START OF DRILLING FOR  
NEW PHASE ONE PRODUCTION WELLS  
NEAR LANDAU, GERMANY**



# KEY TARGETS FOR 2025

## Focus on maintaining strong momentum

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



EU Strategic Project status



Commencement of well execution



Decision(s) on government funding approval processes

Finalising project financing package<sup>1</sup>

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 business growth including licencing of VULSORB® technology

Note(s): Refer to page 17 of this presentation for further information on Phase One financing.







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# 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.

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**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.

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## 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.