



**Corporate Presentation  
September 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.*

# VULCAN ENERGY: A SNAPSHOT

Empowering a carbon neutral future through an integrated lithium and renewable energy business



## Renewable Energy



## Technology



## Lithium



Brine  
Resource



Geothermal  
plant



Lithium  
extraction plant



Central  
lithium plant



Lithium  
distribution

Support services:



**OUR VALUES: CLIMATE CHAMPION | DETERMINED | INSPIRING**

## Vulcan Executive Leadership



**Dr Francis Wedin**

**Executive Chair, Founder**

17+ years' experience in the resources industry, including 11 years in lithium; founder of Vulcan Energy



**Cris Moreno**

**Managing Director and CEO**

20+ years' project delivery experience in lithium and energy including Aurora Lithium, Santos and Shell



**Felicity Gooding**

**Executive Director and Group Chief Financial Officer**

20+ years' finance and commercial experience in mining and energy including Fortescue



# INVESTMENT HIGHLIGHTS

Low cost, sustainable and optimally positioned for EU market



**Globally significant project** with an initial 30-year project life just from Phase One, and **29.1 Mt LCE Resource**<sup>1</sup>



**Low-cost, energy-generative lithium** project benefiting from naturally-heated brine and **proprietary A-DLE technology** in the Upper Rhine Valley Brine Field



**Fully integrated, carbon neutral, brine-to-battery** solution utilising proprietary A-DLE technology, utilising Vercana services



**Highly advanced project with strong public and strategic investor support** while aligned with world-class partners



**Experienced leadership** expertise from O&G, chemicals and geothermal industries



**Offtake agreements** with leading Europe-focused customers, and unique market opportunity in Europe, underpin Vulcan's unique value proposition

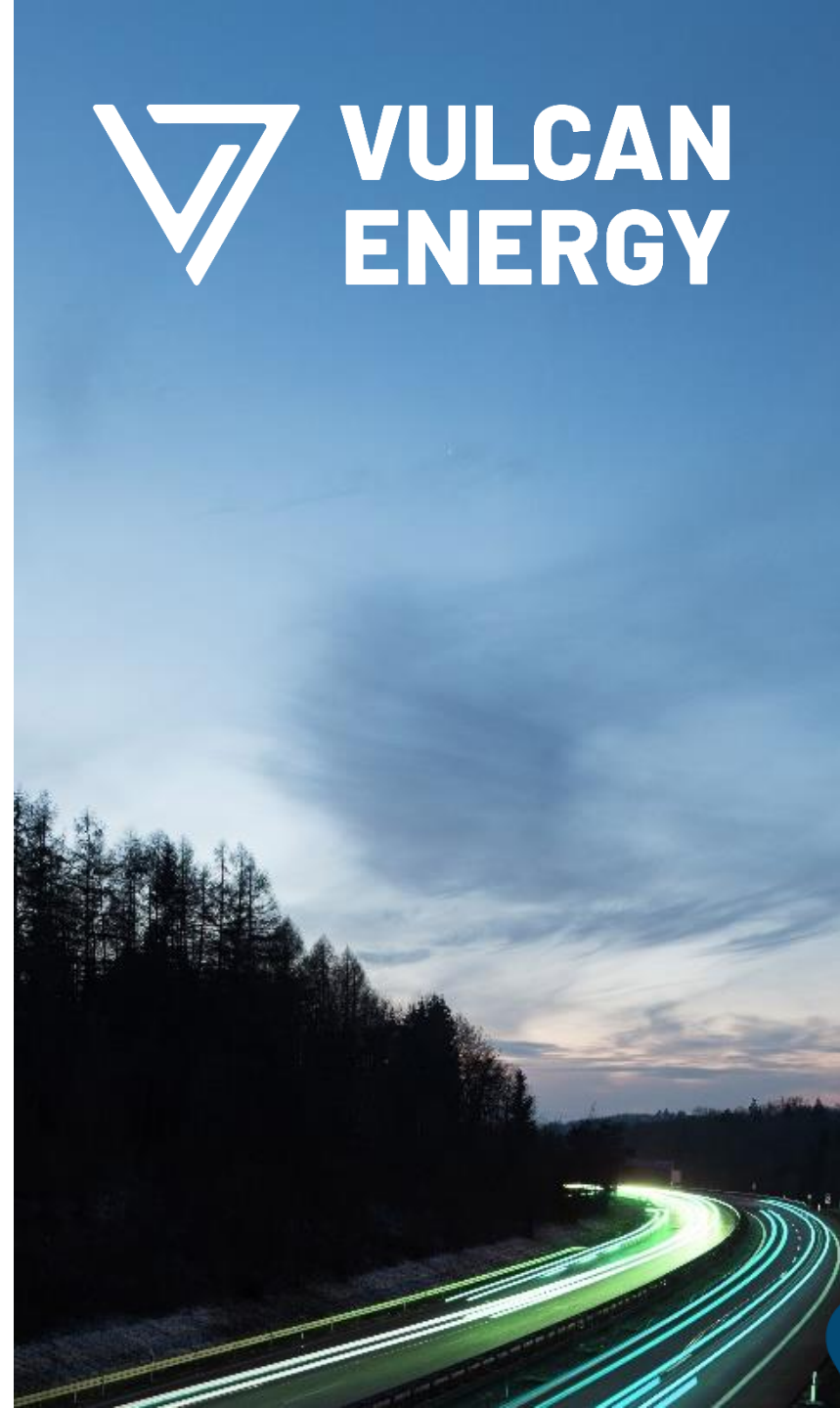


**Significant public funding backing** from EU and German governments, strategic project for Europe

1. Refer to the Competent Person Statement within the Disclaimer slides. The 29.1 Mt LCE total lithium Resource is comprised of 2.1 Mt LCE of Measured Resource @ 181 mg/L, 9.7 Mt LCE of Indicated Resource @ 177 mg/L and 17.3 Mt LCE of Inferred Resource @ 174 mg/L.



# VULCAN ENERGY

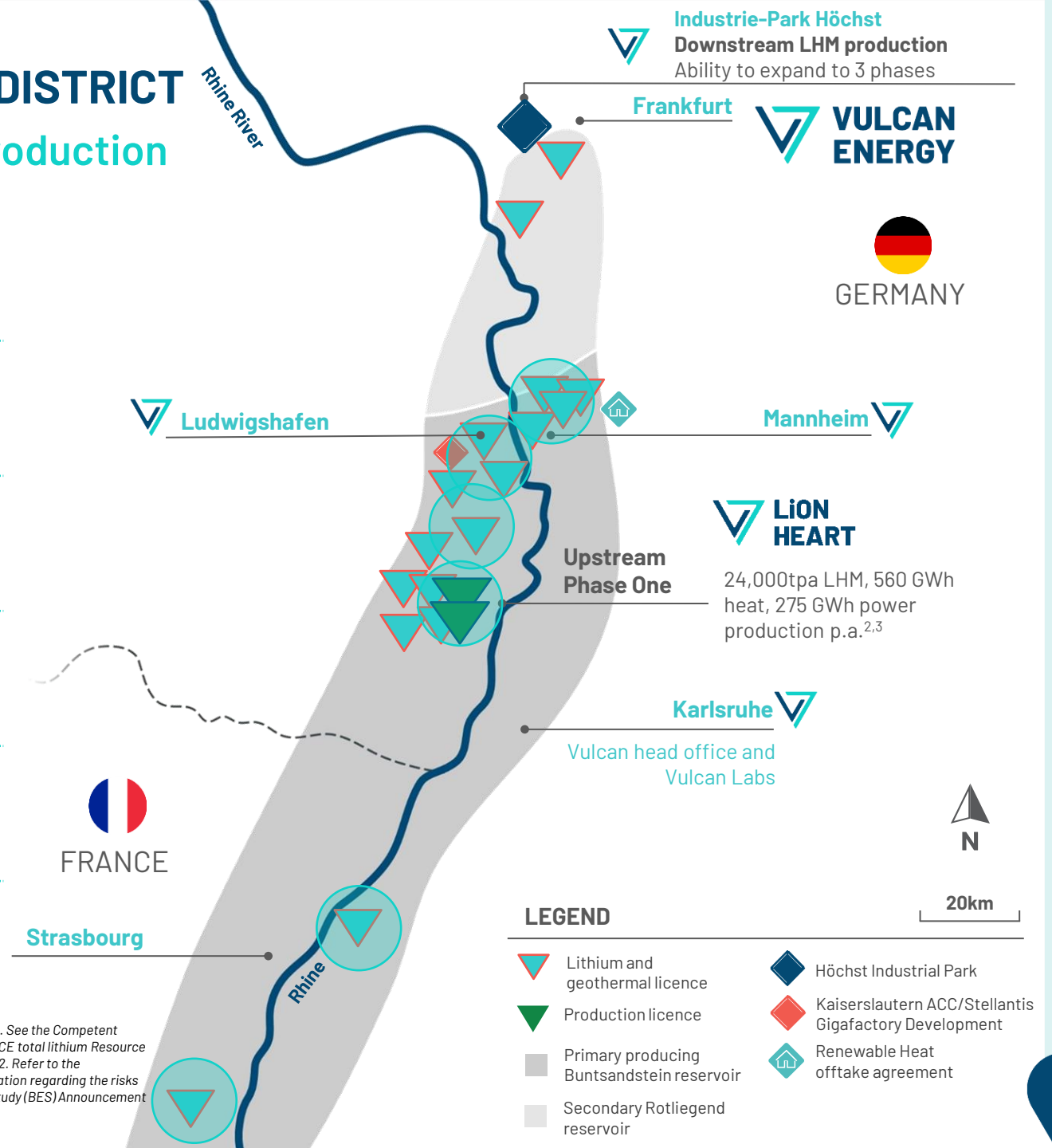


# WORLD-CLASS LITHIUM & GEOTHERMAL DISTRICT

## Ability to expand with low cost, sustainable production

- **Global tier-one lithium resource, and largest in Europe:** 29.1 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 and 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 this presentation and Appendix 4 of the Equity Raise Presentation dated 11 December 2024 for further information. The 29.1 Mt LCE total lithium Resource is comprised of 2.1 Mt LCE of Measured Resource @ 181 mg/L, 9.7 Mt LCE of Indicated Resource @ 177 mg/L and 17.3 Mt LCE of Inferred Resource @ 174mg/L. 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 November 2023.

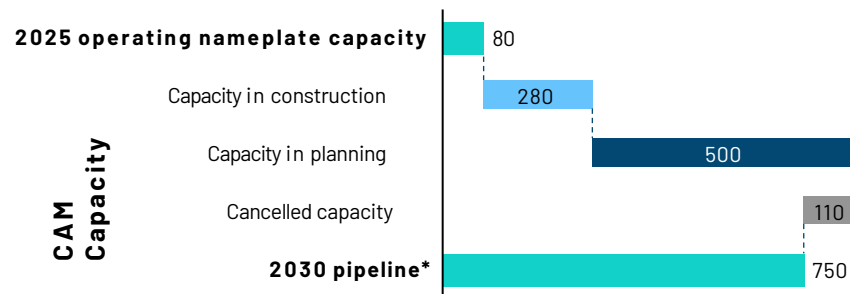
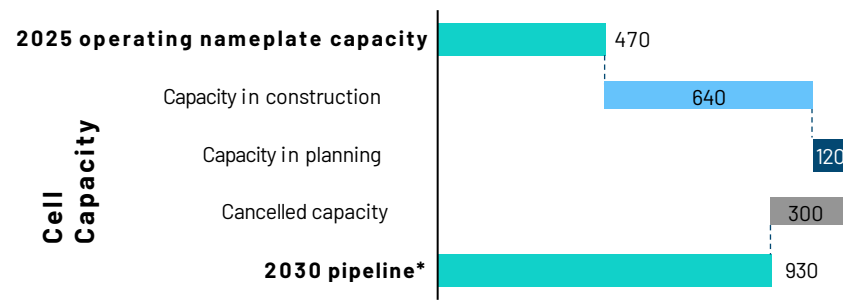
# POWERING AHEAD: EUROPE'S BATTERY PROJECTS ON THE RISE

## Vulcan vital to secure local supply of lithium chemicals from Europe

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

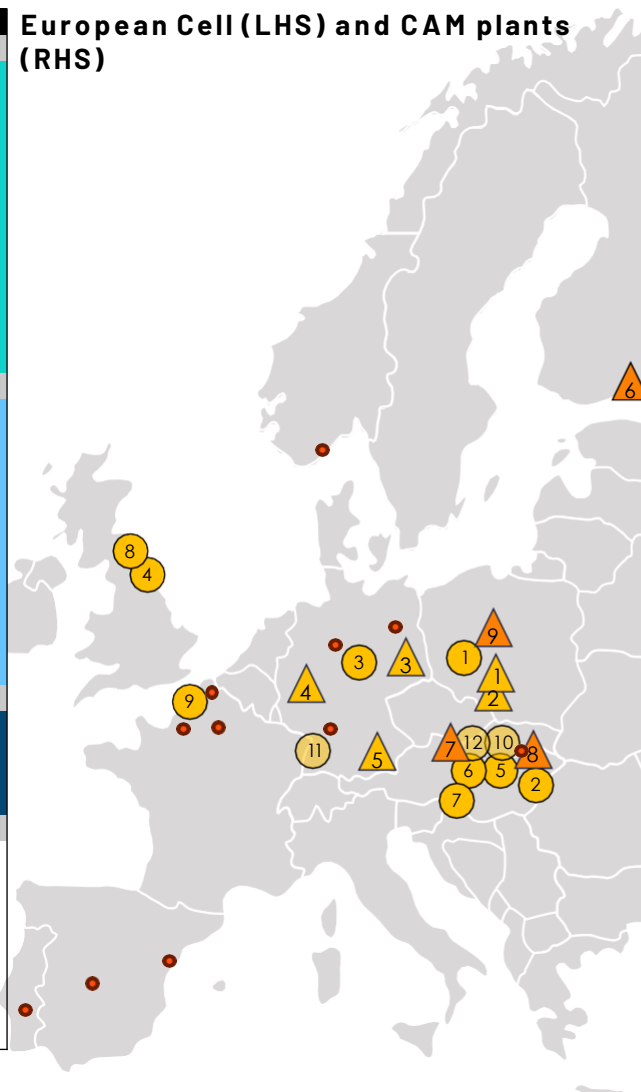
The **cell project pipeline is equivalent to a doubling in GWh capacity by 2030**, almost all of which is in construction now (see below).

### European Cell & CAM pipeline (GWh)\*



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

**750 GWh by 2030 = ca. 523,000t 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**

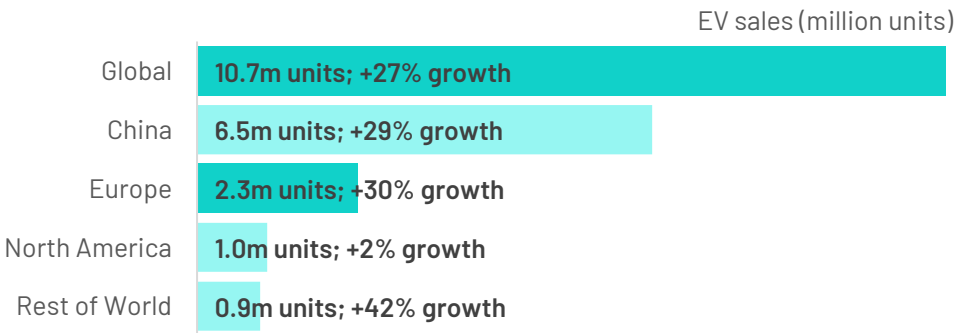
Source: Benchmark Mineral Intelligence

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

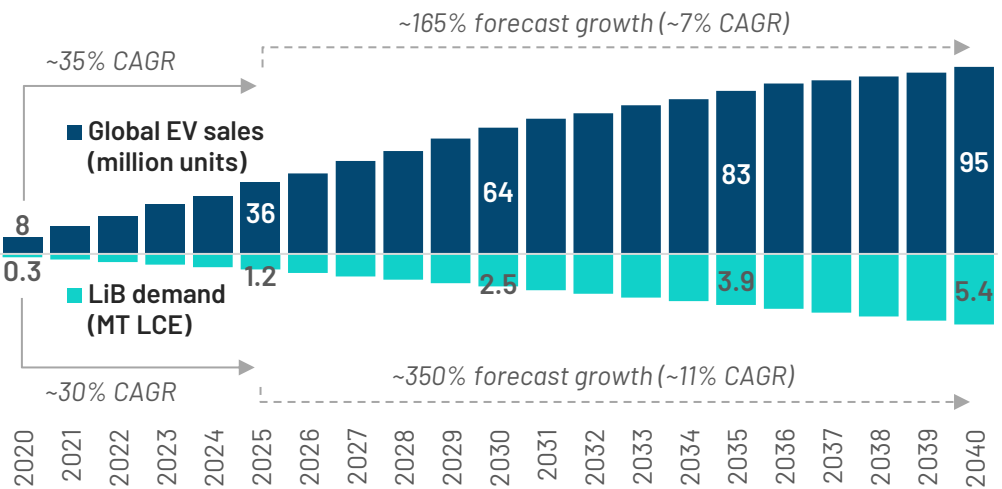
# EV AND BATTERY GROWTH ROARING AHEAD – BOTH GLOBALLY AND IN THE EU

- **EV sales in the first seven months of 2025** have grown by **+27% globally** and by **+30% in Europe**.<sup>1,2</sup>
- **EV sales** currently make up about **1:4 to 1:5 of all new car sales in Europe**.<sup>3</sup>
- **Germany and the UK are the two largest markets** for EV sales in Europe, with **year-on-year growth of 43% and 32%, respectively**.<sup>4</sup>

## EV sales growth to August 2025 YTD<sup>1,2</sup>



## Anticipated EV sales and lithium-ion battery demand<sup>7</sup>



### Recent headlines



Global BESS deployments in H1 2025 up 54%<sup>5</sup>



IEA: How Global EV Sales Are Soaring Despite Challenges<sup>3</sup>



EU Overtakes the Rest of the World (Except China) in EV Adoption<sup>6</sup>



Global EV sales surge in spite of US tariffs and subsidy withdrawals<sup>4</sup>



Global EV sales grow by 27% in the opening seven months of the year<sup>1</sup>

(1) Benchmark Source ([link](#)); (2) Compared to the first seven months of 2024; (3) EV Magazine ([link](#)); (4) Edie ([link](#)); (5) Energy Storage News ([link](#)); (6) Clean Technica ([link](#)); (7) Benchmark Minerals Intelligence June 2025.





## A SNAPSHOT Lionheart Phase One in figures<sup>1</sup>

Vulcan's **Lionheart** produces both baseload **geothermal energy** and **lithium hydroxide** for **electric vehicle (EV)** batteries from the same deep brine source in the Upper Rhine Valley, Germany

**€3.5bn**

Pre-tax NPV

**21.7%**

Pre-tax IRR

**€756m**

Average revenues p.a.

**24kt LHM**  
**275GWh power**  
**560GWh heat**

Phase One capacity p.a.<sup>2</sup>

**29.1 Mt LCE<sup>3</sup>**

Largest lithium resource in Europe<sup>4</sup>

**30 years**

Of proven reserves and probable minerals reserves

**€4,030/t**

Lithium hydroxide production costs, lowest in the industry

**€1.4bn**

CAPEX

**77%**

Average EBITDA margin



Renewable energy



Lithium



Technology

1. Refer to the Competent Person Statement contained in this presentation. Please also refer to the risk factors contained in the Prospectus regarding the risks associated with resource exploration and development projects. 2. Based on the Phase One production target capacity of 24ktpa from the BES Announcement. 3. The 29.1 Mt LCE total lithium Resource is comprised of 2.1 Mt LCE of Measured Resource @ 181 mg/L, 9.7 Mt LCE of Indicated Resource @ 177 mg/L and 17.3 Mt LCE of Inferred Resource @ 174 mg/L. 4. 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 this presentation and Appendix 4 of the Equity Raise Presentation dated 11 December 2024 for further information



# KEY RECENT LIONHEART PROJECT ACHIEVEMENTS

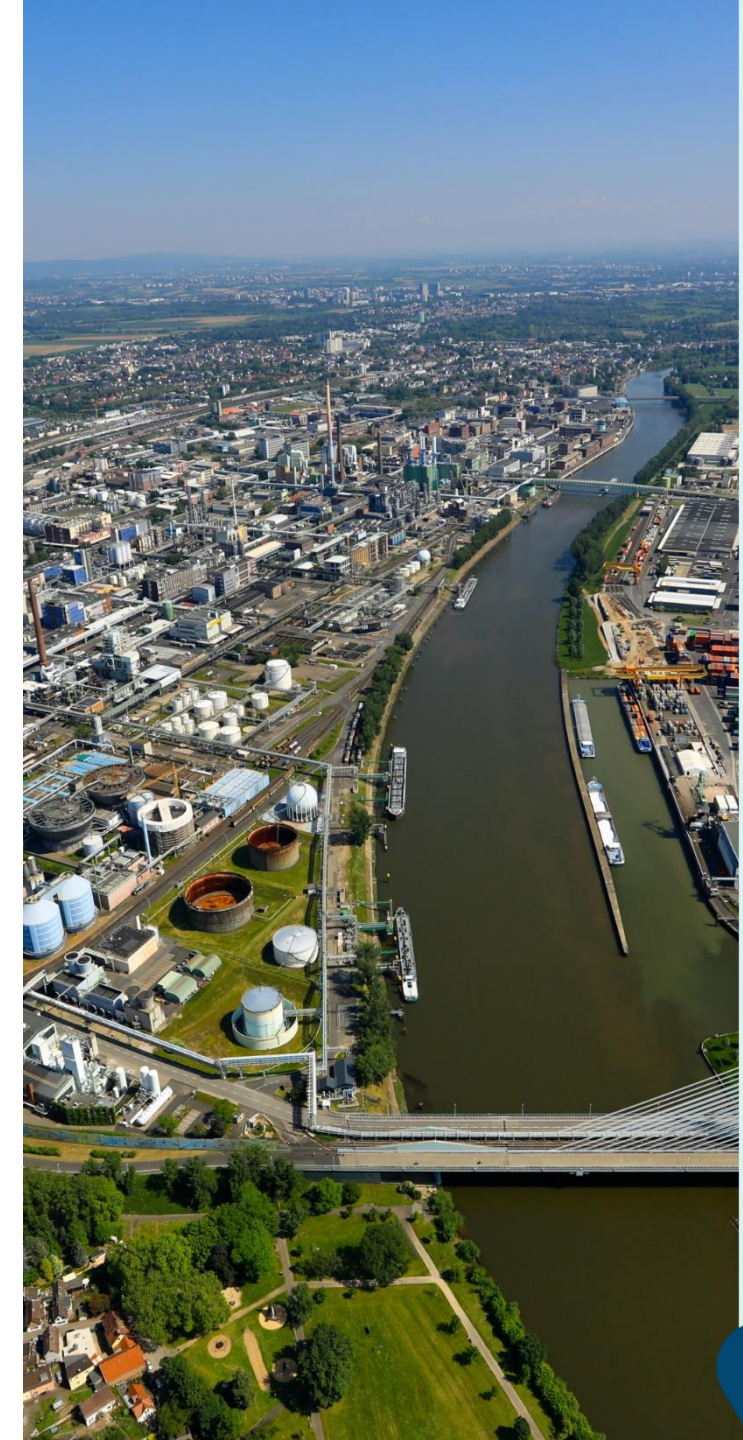
## A transformational period for the Project

### Project achievements

- ✓ **Production of battery-quality lithium** hydroxide monohydrate (LHM)
- ✓ **Vulcan awarded EU Strategic Project** status under the Critical Raw Materials Act
- ✓ Commenced the **first new production well** for Phase One
- ✓ **Main heat offtake agreement** signed with energy supplier, EnergieSüdwest AG (ESW)
- ✓ Major **supply contract signed** with NESI<sup>3</sup>
- ✓ **Secured permit** to build and **operate downstream lithium plant**<sup>4</sup>
- ✓ **Upstream geothermal and lithium extraction plant land acquisition approved**<sup>5</sup>

### Financing achievements

- ✓ **Vulcan awarded €100m BEW grant** by Germany's Federal Ministry of Economics and Climate Protection for the HEAT4LANDAU Project<sup>1</sup>
- ✓ **€104m (~A\$186m) in grants approved** by German federal and state governments<sup>2</sup> for lithium
- ✓ **EIB Board approved participation in Phase One financing, of up to €500m**
- ✓ **€879m conditional debt commitment letter** signed with EFA and a syndicate of seven commercial banks
- ✓ **Raw Materials Fund** entered the Phase One investment process, **targeting €150m equity investment**, subject to due diligence.

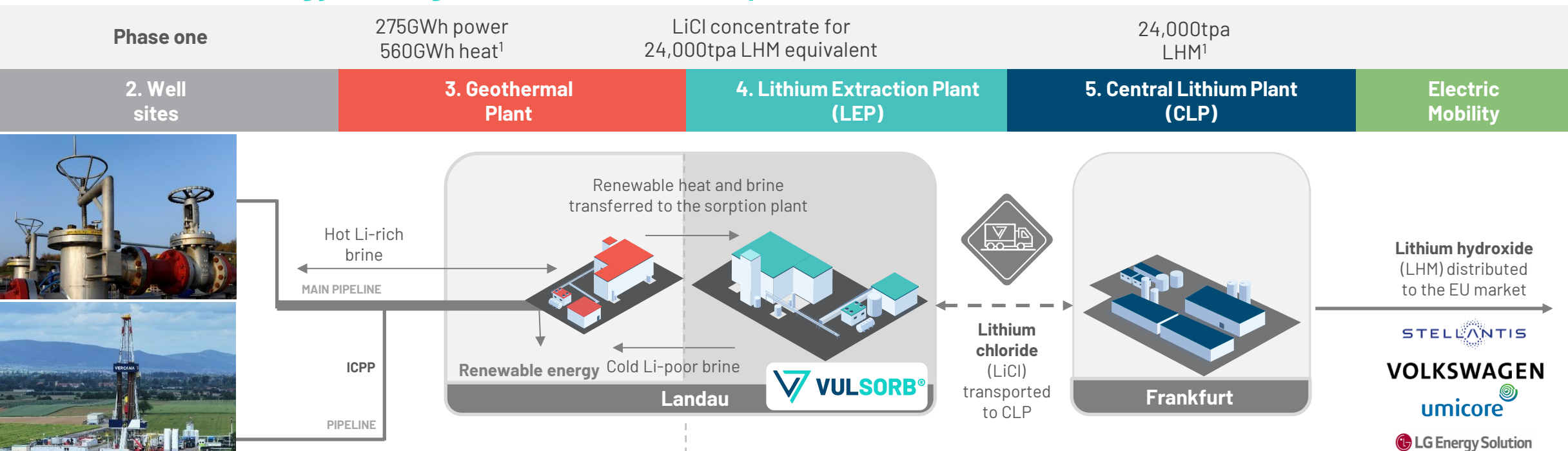


Notes: 1. Funded by the European Union - NextGenerationEU. The expressed views and opinions expressed are solely those of the author(s) and do not necessarily reflect the views of the European Union or the European Commission. Neither the European Union nor the European Commission can be held responsible for them. 2. See ASX announcement on 23 July 2025. Average AUD/ EUR exchange rate of 1:0.56. 3. See ASX announcement on 5 September 2025. 4. See ASX announcement on 10 September 2025. 5. See ASX announcement on 11 September 2025.



# INTEGRATED BRINE-TO-BATTERY SOLUTION

## Renewable energy driving sustainable lithium production



Geothermal and lithium brine field resource

**1. Resource:** 3km 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





# VULCAN'S 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

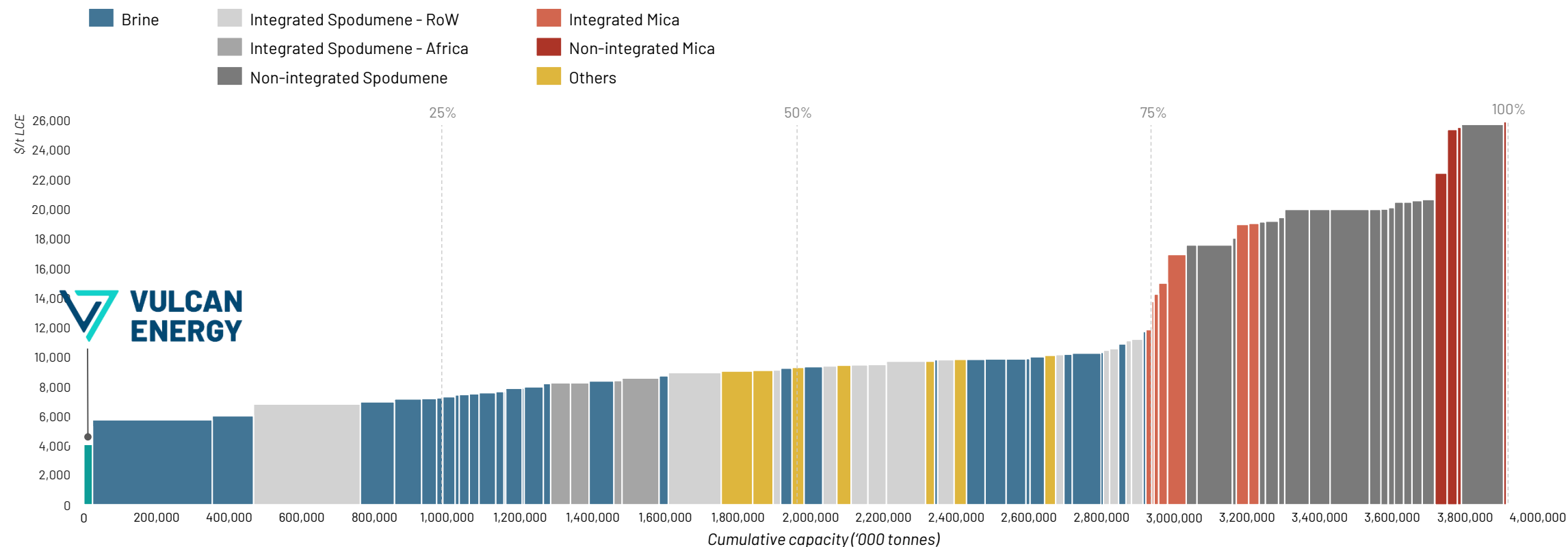
**4** Schleiberg - Vulcan's next production well site



# 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.

Source: Benchmark Mineral Intelligence



# V-LiON™ - SUPPLYING THE EUROPEAN AUTO INDUSTRY

## Fully contracted lithium production drives pricing stability<sup>1</sup>

- **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 stability<sup>2</sup>:** 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 investment<sup>3</sup>



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).



# EPCM PARTNER VALIDATION EXERCISE COMPLETED

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**



# MAJOR CONTRACT SIGNED

Supply contract signed ahead of FID, showing continued support for Phase One

**Exclusive technology supplier:** NESI will supply electrolysis technology, including NORSCAND® Electrolysers, for the Central Lithium Plant

**Green lithium production:** Technology enables production of high-purity, low-cost lithium hydroxide for the European EV market

**Strategic milestone:** Follows successful energisation of Vulcan's CLEOP facility and aligns with the Germany-Canada Joint Declaration on critical minerals

**Accelerating construction:** Contract supports final project financing and construction commencement targeted for H2 2025

**Robust agreement terms:** Includes performance guarantees, liquidated damages, engineering support, and indemnities to mitigate risks and ensure delivery



*"The signing of the contract with NESI is an important step ahead of the construction of our Central Lithium Plant. Our partnership with NESI to date has been key to our success at CLEOP, and its technology is a global leader in producing lithium hydroxide through electrolysis."*

*"This is yet another milestone in our aim to deliver a local, low-cost source of sustainable lithium for European EV batteries." - Cris Moreno*



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

Vulcan continues to see strong support from the public and private sector



**Total Project funding package ~€2.2bn  
(including capex of ~€1.4bn)**

## December 2024

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



## December 2024

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



## November 2024

Awarded €100m (A\$162m) from the Federal Ministry of Economics and Climate Protection of Germany



## July 2025<sup>2</sup>

Awarded €104m (~A\$186m) from Germany's federal and state governments

Gefördert durch:



aufgrund eines Beschlusses des Deutschen Bundestages



**Targeted FID  
H2 2025**



***"The Vulcan team continues towards FID in H2 2025 with several positive private and public sector discussions ongoing" – Cris Moreno***

**Financial advisor**

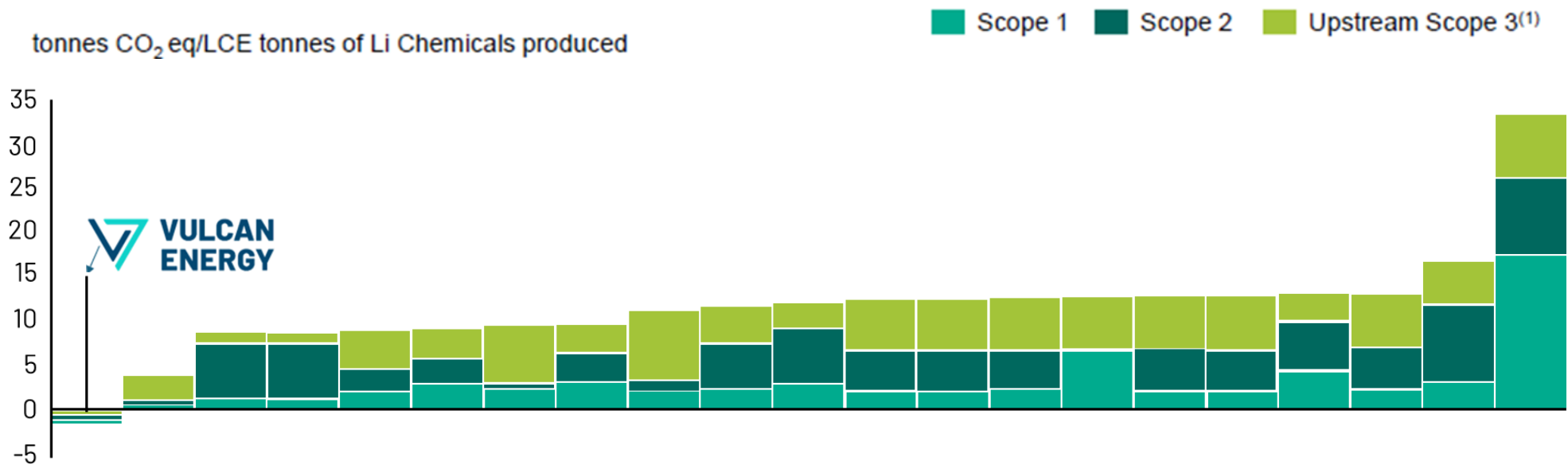


Note(s): 1. Refer to ASX announcement titled Vulcan Launches AUD164m Placement and Share Purchase Plan dated 11 December 2024 and section 8.1.3.5 of the Prospectus for further details regarding the Company's financing strategy for its Phase One Project. See also risk factors in Appendix 1 of this Presentation, 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. 2. Funded by the Hessian Ministry of Economic Affairs, Energy, Transport, Housing and Rural Areas on the basis of a resolution of the Hessian State Parliament and co-financed by the Ministry of Economic Affairs, Transport, Agriculture and Viticulture of Rhineland-Palatinate on the basis of a resolution of the Rhineland-Palatinate State Parliament. Average AUD/EUR exchange rate of 1:0.56.



# V-LiON™ SUSTAINABILITY EXCELLENCE: A KEY REQUIREMENT

## GHG emissions intensity of lithium chemicals production in 2030



Life Cycle Assessment (LCA) studies verify that Vulcan's Phase One Lionheart Project is expected to produce lithium with the smallest CO<sub>2</sub> footprint per tonne of Lithium Carbonate Equivalent (LCE) compared to lithium producers worldwide <sup>(2)</sup>

Vulcan issued its Green Financing Framework in October 2024 and was awarded Dark Green status from S&P Global Ratings, the highest rating ever received by a Metals and Mining company globally<sup>(3)</sup>



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

S&P Global  
Ratings

Notes: (1) Benchmark Minerals Intelligence - Upstream Scope 3 emissions include the production and transportation of raw materials, fuels, machinery and equipment, and waste treatment; (2) Minviro and internal estimates combined, using Innovation Fund methodology. Minviro 2023 Life Cycle Assessment results reported in 2023 Sustainability Report. Please also refer to Appendix 2 of this Presentation; (3) See ASX announcement of 8 October 2024

# LUDWIGSHAFEN: INTEGRATED RENEWABLE ENERGY & LITHIUM<sup>1</sup>

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



**Integrated** renewable energy, lithium salts and lithium hydroxide production from sub-surface brines in the Upper Rhine Valley. Targeting **24,000 tonnes p.a.**<sup>2</sup> lithium production: enough for 500,000 electric vehicles every year.

Targeting **2,000 – 2,500 GWh/a renewable heat production** capacity:

- BASF producing 4.0m tonnes of green steam, while saving 800,000 tCO<sub>2</sub> per year.
- Plus renewable heat supply to 15,000 households via the associated partners.

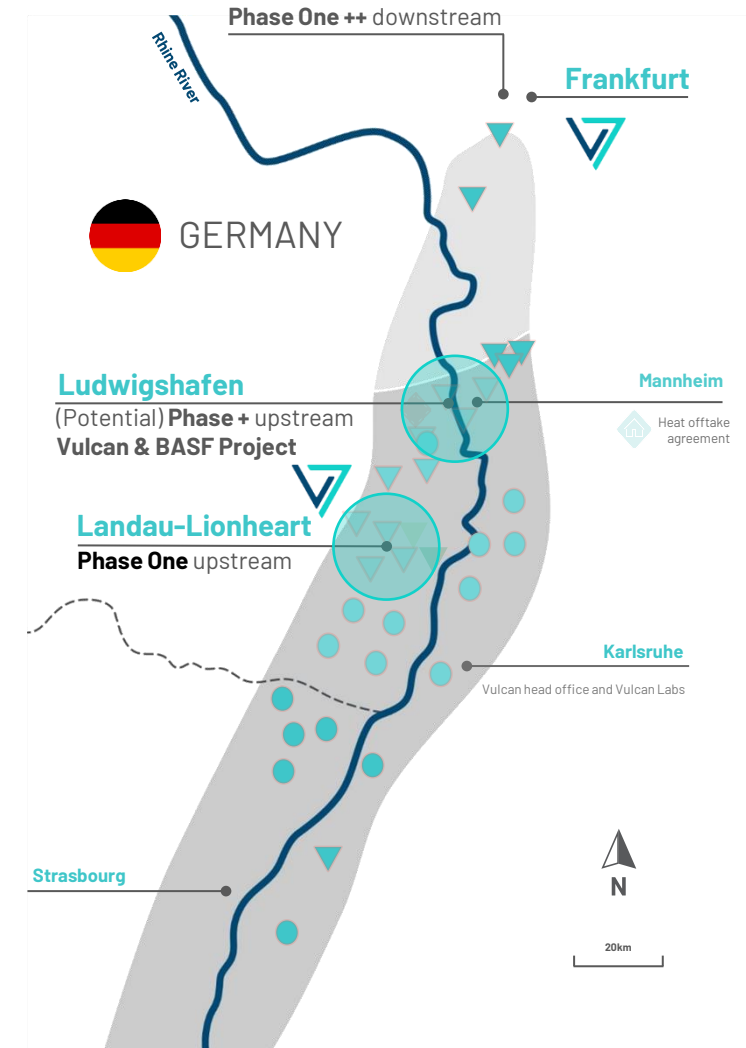
**Targeting first quartile lithium production costs:** integrated heat and power, compact supply chain and utilisation of existing infrastructure at Verbundsite or CLP train two has potential to drive even lower C1 production costs

**Aligned partners:** BASF intended to be heat offtake partner and project investor

**Experience and capability:** All lessons learnt from Phase One will be transferred to Phase Two

**Advanced and execution-ready:** specialised in-house expertise and strong execution team. MoU stage one binding commitment and 2D seismic executed below budget.

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/£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



# 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

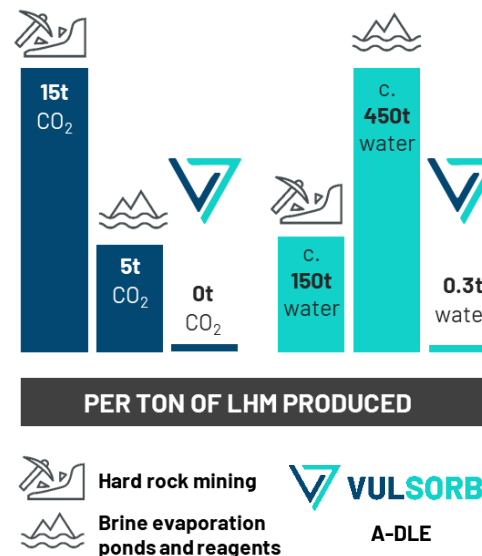


## Commercially bankable

- ✓ 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 the near future<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



# PHASE ONE FIELD DEVELOPMENT UPDATE

## Progress at well No.5 serving as blueprint to be replicated for rest of Phase One

Drilling preparation was successfully completed on time including permit approvals, HSE training, management plans sign-off, and drilling programme

Drilling successfully reached total depth at 3,530m, below budget (~18%), ahead of schedule estimate (~40%) and safely

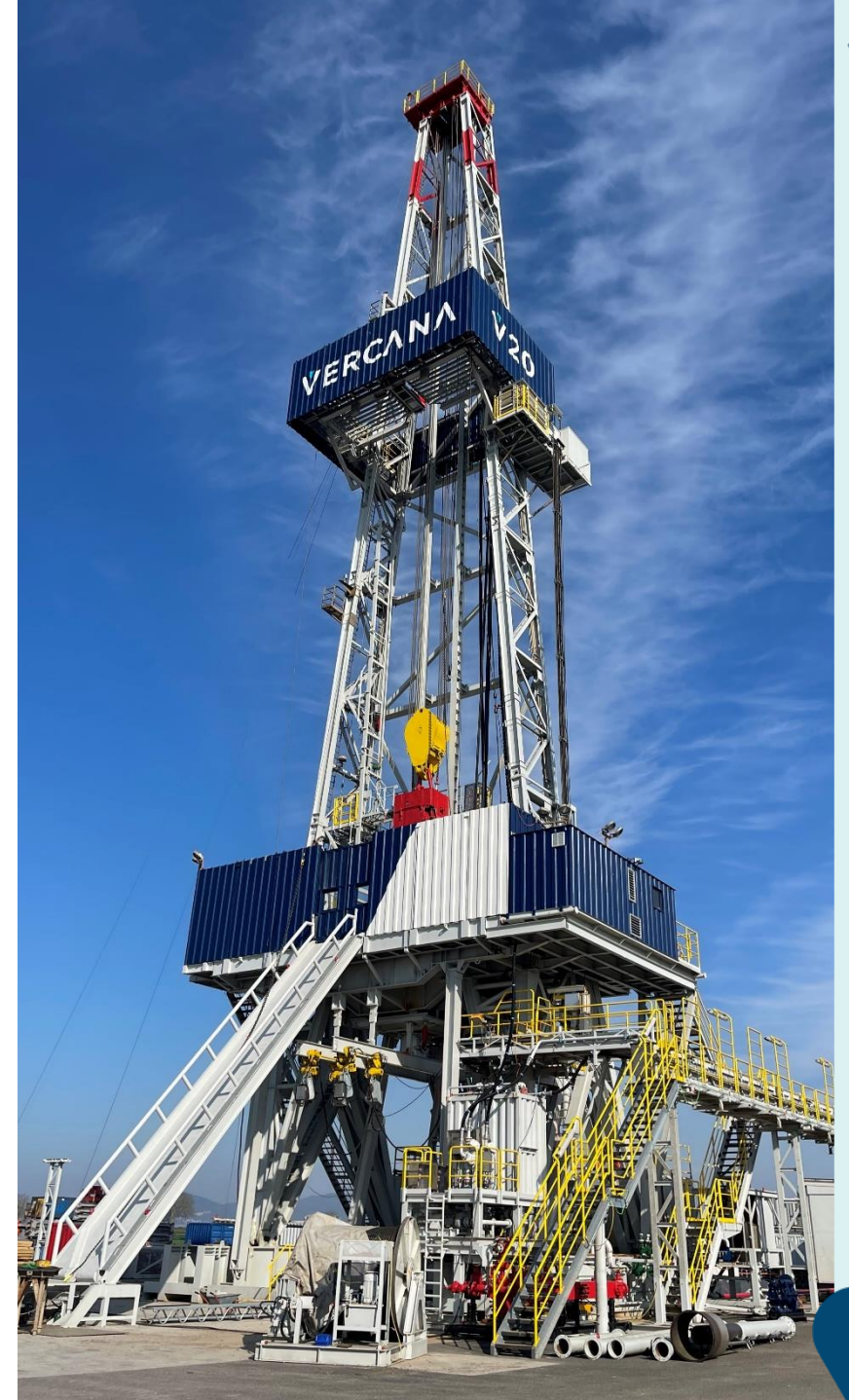
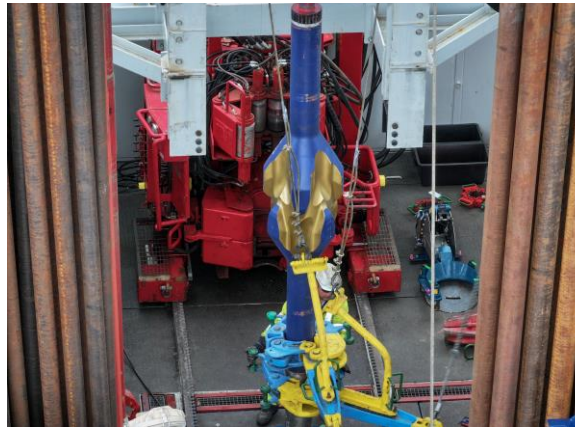
Comprehensive management plans in place for well sites and drilling activities, covering environmental, social, noise, traffic, waste, cultural heritage, emergency response, permitting, crisis management and stakeholder engagement

Next steps include a complete logging sequence of drilled well, side track on well-main bore, and drill new formation LSC-1a

**Vercana and well services teams**



**V20 drill rig**





# EUROPE'S FIRST DOMESTIC RESOURCE TO LHM SUPPLY CHAIN IS PROVEN

LEOP & CLEOP has produced battery quality LHM with first samples sent to offtakers

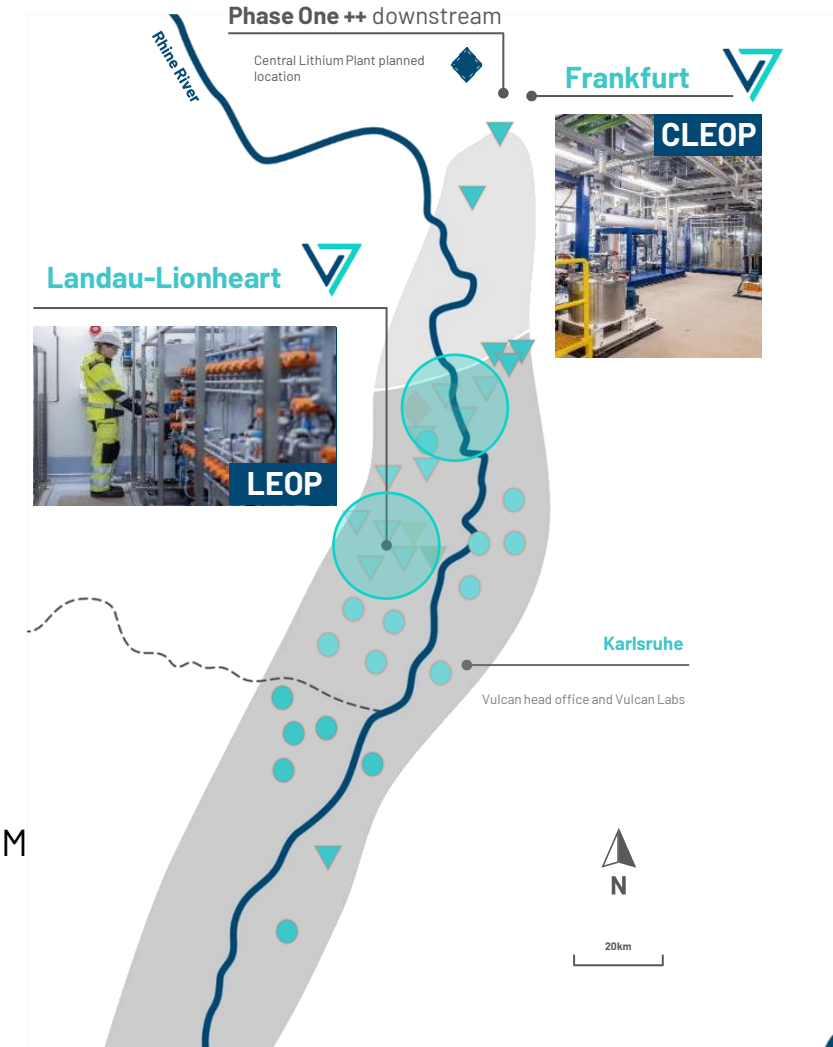
## CLEOP - Central Lithium Electrolysis Optimisation Plant - Frankfurt

- **Production began in November 2024**, with battery-quality LHM confirmed in January 2025
- **Current production using Vulcan's integrated supply chain**, confirmed high purity and consistent product quality
- **Qualifying strategy further developed** with support from industry experts
- **First samples sent to partners** to commence qualification testing

## LEOP - Lithium Extraction Optimisation Plant - Landau



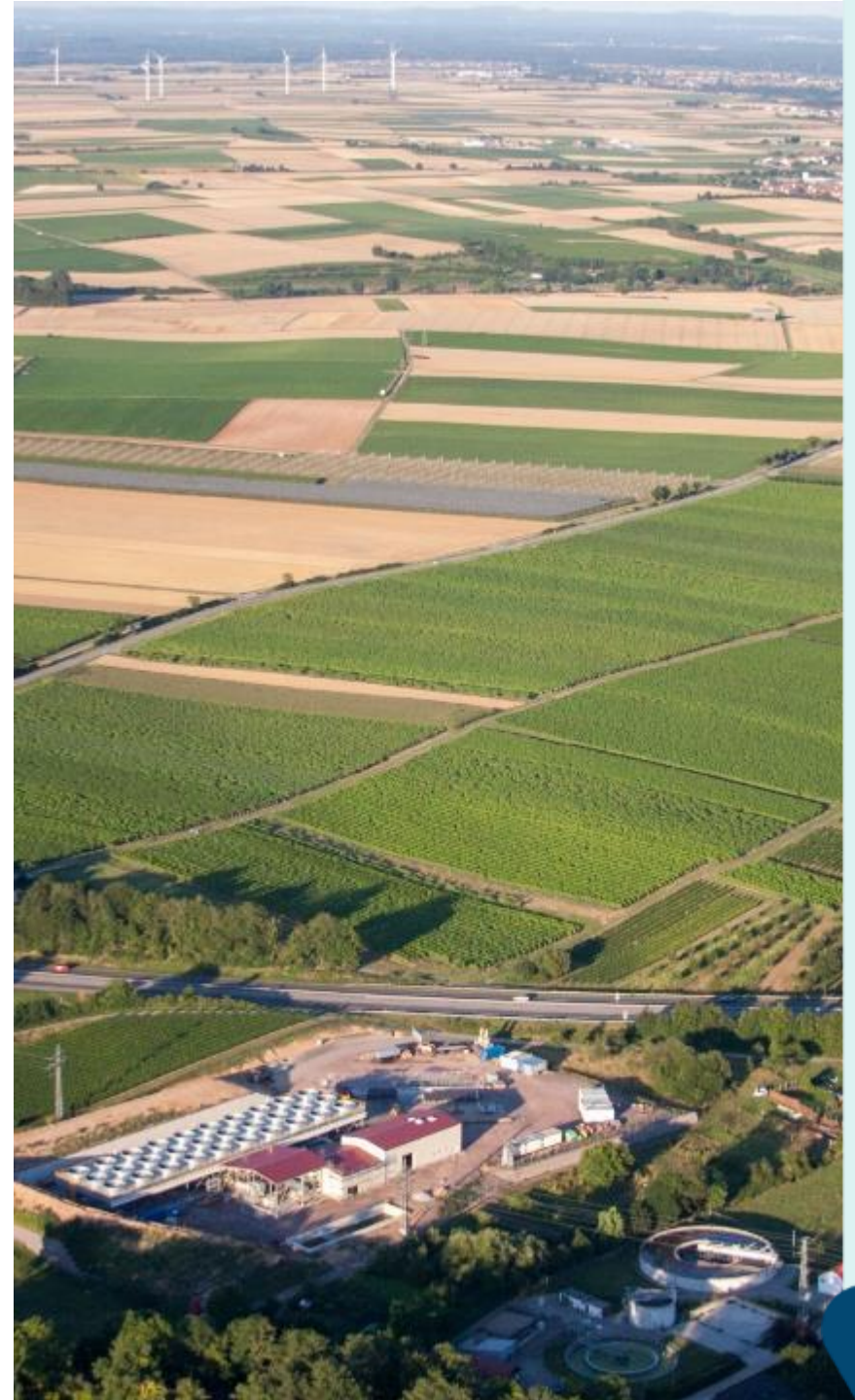
- **Production of LiCl began in April 2024**, using Adsorption-Type DLE
- **95% Extraction efficiency being achieved using Vulcan proprietary A-DLE technology - VULSORB®**, confirming ability to deliver on business case
- **LEOP is sending upstream product (LiCl 40% wt conc.)** to CLEOP to make battery-quality LHM
- **Onshored entire A-DLE technology and production supply chain into Germany & France** (regarded as a major project derisk with other projects potentially impacted by China Technology Import/ Export Controls)



# 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 on lithium-related grant<sup>1</sup>
- Awarding/ signing of major contracts
- Final decision on German Raw Materials fund equity participation
- Finalising project financing package<sup>2</sup>
- **Start of commercial construction of Phase One**
- Progress on future phases, including at Ludwigshafen with BASF
- Further business growth including licencing of VULSORB® technology







# NEW PHASE ONE PRODUCTION WELLS NEAR LANDAU, GERMANY

@VulcanEnergyRes

<http://v-er.eu>

# BOARD OF DIRECTORS

Major project, technical and finance experience at Board and Executive level

## Executive Directors



**Dr Francis Wedin**  
Executive Chair, Founder



**Cris Moreno**  
Managing Director and  
Group CEO



**Felicity Gooding**  
Executive Director and  
Group CFO

## Non-Executive Directors



**Angus Baker**  
Lead Independent Director,  
Deputy Chair



**Josephine Bush**  
Non-Executive  
Director



**Dr Heidi Grön**  
Non-Executive  
Director



**Dr Günter Hilken**  
Non-Executive  
Director





**APPENDICES**



# 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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# 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 Engineering Study Results announcement on 16 November 2023 and the Future Phase Pipeline – Mannheim Resources Growth announcement on 9 July 2025, both of which are available to view on Vulcan's website at <http://v-er.eu>. Vulcan confirms, that in respect of the estimates of Mineral Resources and Ore Reserves included in this presentation: a) 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; and b) 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.

The information in this presentation that relates to production targets (and the forecast financial information derived from such production targets) is extracted from the End of Validation review contained in the Prospectus released on 18 December 2024 which is available to view on Vulcan's website at <http://v-er.eu>. Vulcan confirms that 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.