VULCAN ENERGY

ZERO CARBON LITHIUM™

Annual General Meeting

Tuesday, 29 November 2022

Dr Francis Wedin, Managing Director and CEO

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OUR TARGET : 1 MILLION

We are aiming to become the world's first integrated lithium chemicals and renewable energy producer with net zero greenhouse gas emissions.

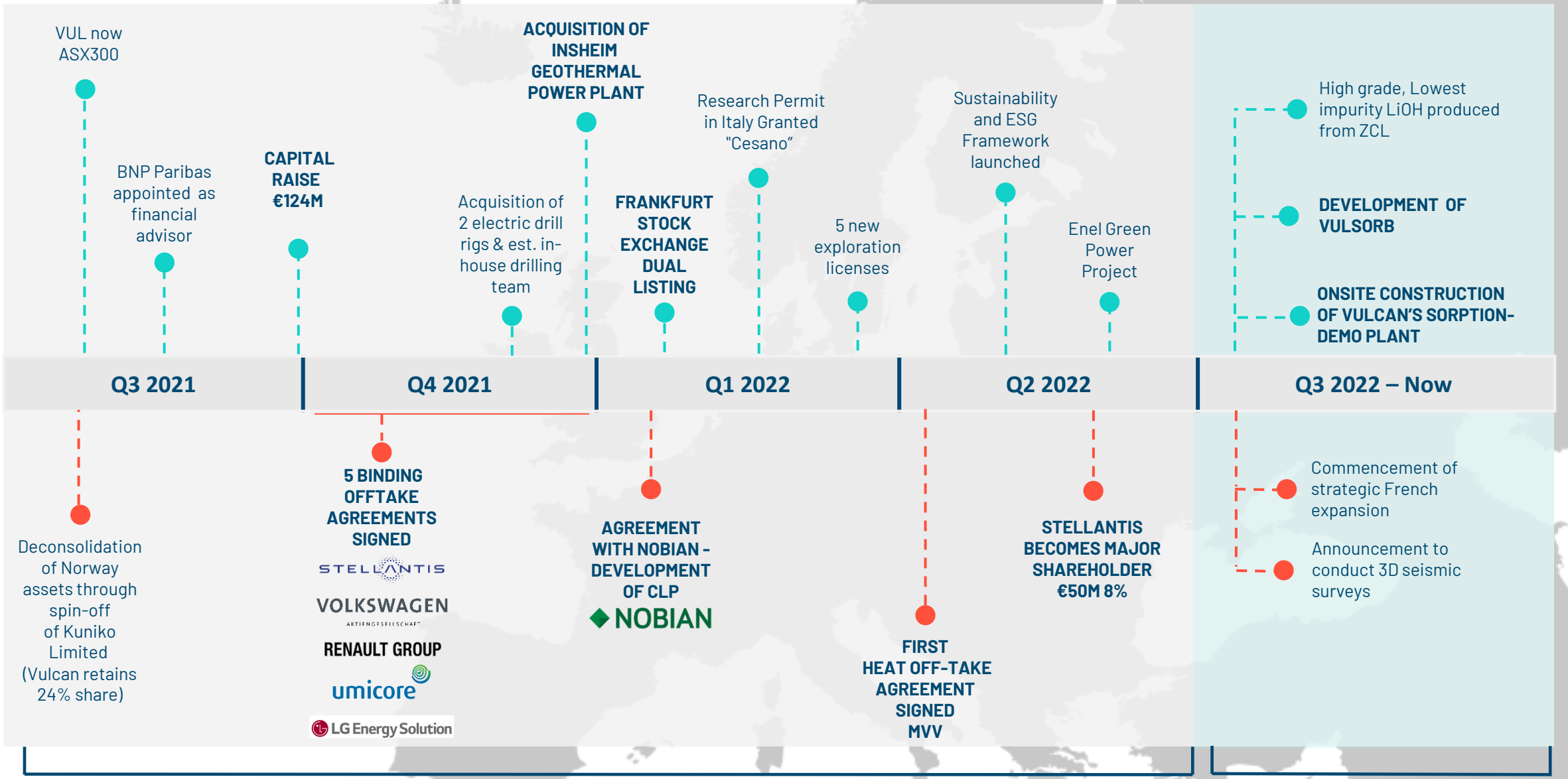
Vulcan's unique **Zero Carbon Lithium™** Project aims to produce both renewable geothermal energy, and lithium hydroxide for Electric Vehicle (EV) batteries, from the same deep brine source in the Upper Rhine Valley, Germany.

Renewable heat production for more than **1 million** people by 2030

Enough **lithium hydroxide** production for **1 million** EVs per annum

1 million tonnes of CO_2 emissions to be avoided per annum

KEY ACHIEVEMENTS H2 2021-NOW

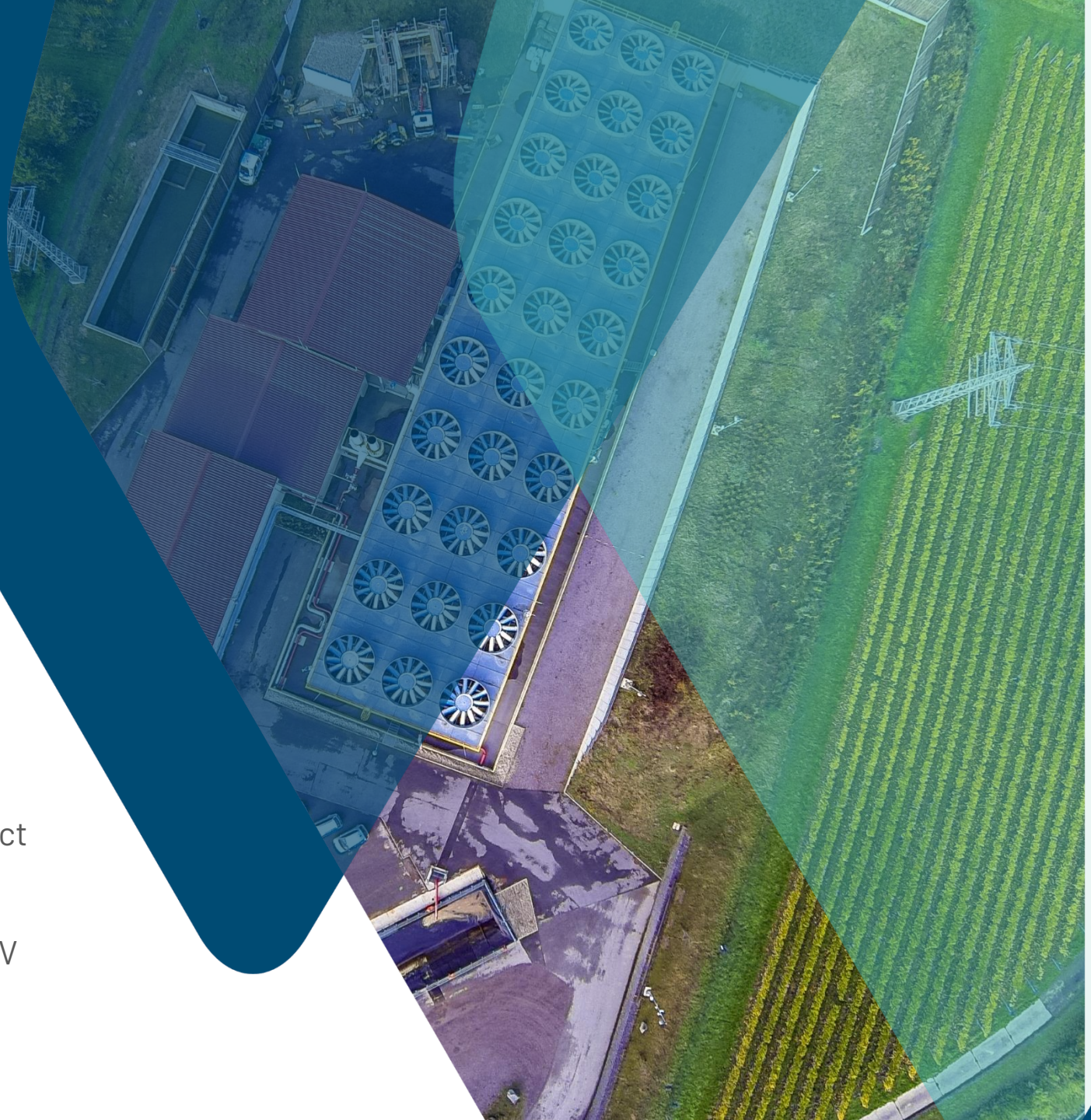


ZERO CARBON LITHIUM™ PROJECT

RIGHT PLACE, RIGHT TIME

Rapidly advancing the Zero Carbon Lithium™ Project to ensure timely market entry

Strategically placed in the heart of the European EV market to decarbonise the supply chain



LITHIUM IN EUROPE: AVERTING A CRISIS FOR THE AUTO INDUSTRY

EU cars 100% electric by 2035

1,300GWh li-ion battery manufacturing capacity by 2030[1] for EV transition

Fastest growing lithium market in the world[2]

Zero local supply of lithium hydroxide. 90% reliant on China

Current supply of lithium is CO_2 intensive. Automakers want low carbon sources

Vulcan has offtake agreements with the largest battery, cathode and EV producers in Europe

RENAULT GROUP · VOLKSWAGEN GROUP · LG Energy Solution · STELLANTIS · umicore

Vulcan is developing the only CO_2 neutral, zero fossil fuel lithium project in the world

Modular design allows for the project to grow in a phased approach as demand grows

Vulcan is producing lithium from Europe, for Europe

Vulcan's Zero Carbon Lithium™ Project is the largest lithium resource in Europe

ZERO CARBON LITHIUM™ PROJECT

ENERGY IN EUROPE: AVERTING A CRISIS FOR ALL

Fraunhofer: Geothermal renewable energy can meet a quarter of Germany's heating needs

German government to provide support for renewable heating projects

The Upper Rhine Valley Brine Field has the hottest geothermal resource in central Europe

Vulcan is already commercially producing geothermal, baseload energy in Germany

Vulcan's is ramping up with the aim to supply a million households with renewable energy by 2030

EU to be climate neutral by 2050. Germany to be fully renewable by 2035

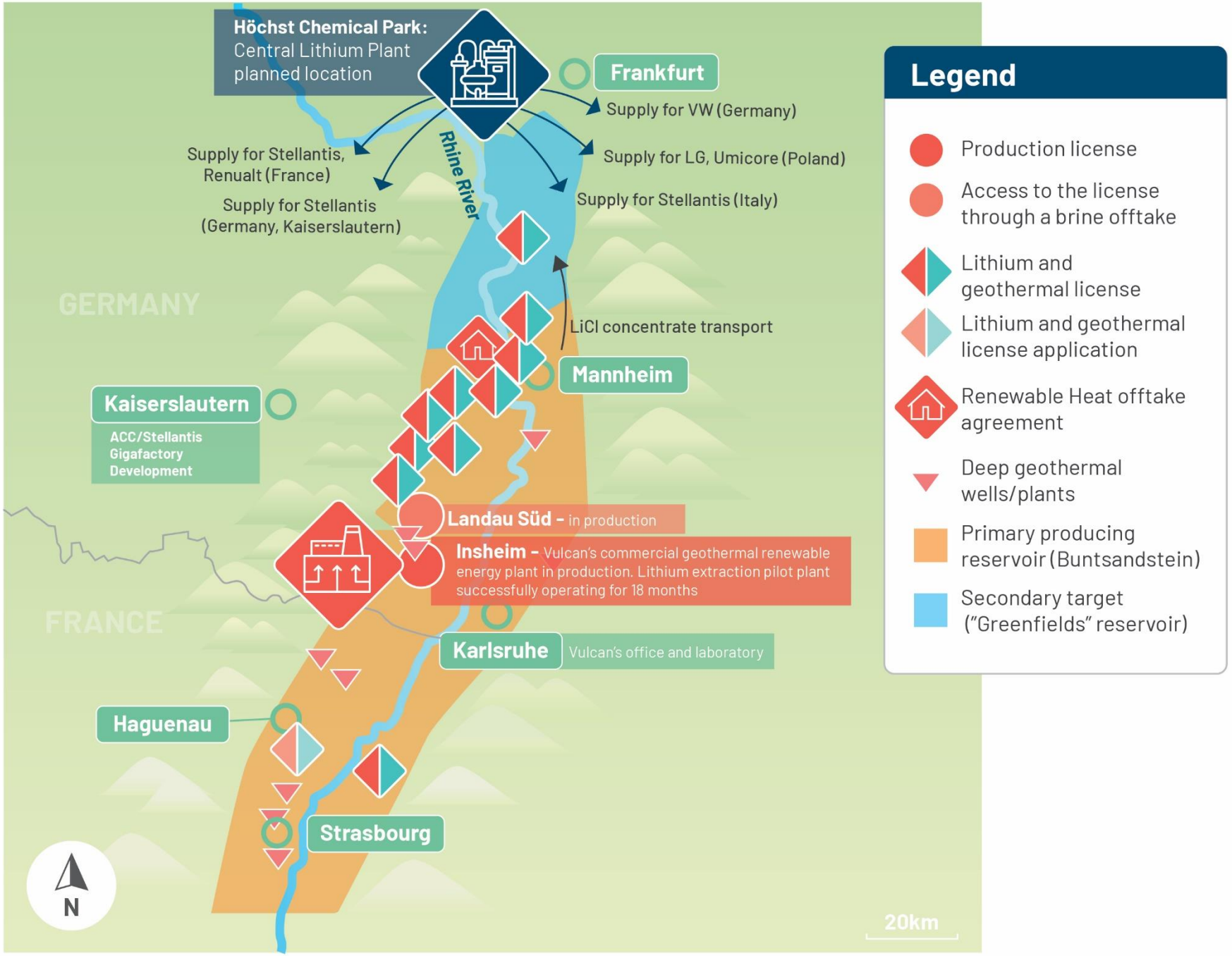
EU is in an energy crisis with gas pipelines to Russia now permanently closed

50% of Germany's gas came from Russia pre-Ukraine invasion

European emissions need to fall dramatically to avoid climate breakdown

THE SOLUTION: ZERO CARBON LITHIUM™ PROJECT

- Large, **300km-long** graben system containing very consistent geothermal-lithium reservoir, average lithium grade 181 mg/l Li, **Europe's largest lithium resource**.
- Vulcan's Zero Carbon Lithium™ Project contains **multiple project areas**, which can grow in a modular fashion as the market grows.
- **Strategically located** in the middle of the European battery industry.
- **Phased growth approach**, starting from core of field where Vulcan already owns production/re-injection geothermal wells in operation.



THE PROCESS

Delivering a fully integrated renewable energy and sustainable lithium chemicals business in Europe

THE ZERO CARBON LITHIUM PROJECT™: A WORLD FIRST

Lithium Offtakers

Renault Group · STELLANTIS · umicore · LG Energy Solution · VOLKSWAGEN GROUP

Höchst Chemical Park: Central Lithium Plant planned location

Central Lithium Plant

Sorption Plant

Geothermal plant

Wells

Geothermal and lithium brine field resource

Local Stakeholders

- Electric VehicleTransition
- Renewable Power
- Human Capital
- Local Supply Chain
- Training & Employment

Supply for VW (Germany)

Supply for Stellantis, Renault (France)

Supply for Stellantis (Germany, Kaiserslautern)

Supply for LG, Umicore (Poland)

Supply for Stellantis (Italy)

Sustainable Environment

- Rewilding Initiatives
- Better Air Quality
- Improved Biodiversity
- Sequestered & Avoided CO_2
- Ecosystem Services

Frankfurt

Mannheim

Karlsruhe

Kaiserslautern

Renewable power to CLP

Rhine River

ZERO CARBON LITHIUM™ PROJECT

VULCAN'S RENEWABLE ENERGY AND LITHIUM CHEMICALS PROJECT

Electric Mobility

Central Lithium Plant

Sorption Plant

Geothermal plant

Wells

Geothermal and lithium brine field resource

Lithium hydroxide distributed to the EU market

6

ONE Central Lithium Plant in Frankfurt converting LiCl to LiOH

Renewable electricity and/or heat sold to the grid

2

MULTIPLE existing and new geothermal plants

Renewable heat, electricity and brine transferred to the sorption plant

3

Lithium chloride transported to the central lithium plant

5

MULTIPLE Sorption plants adjacent to geothermal plants

Reservoir

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

1

Wells

4

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

Geothermal and lithium brine field resource

ZERO CARBON LITHIUM™ PROJECT

Electric Mobility

Central Lithium Plant

Sorption Plant

Geothermal plant

Wells

Geothermal and lithium brine field resource

UPPER RHINE VALLEY BRINE FIELD GEOTHERMAL-LITHIUM RESOURCE

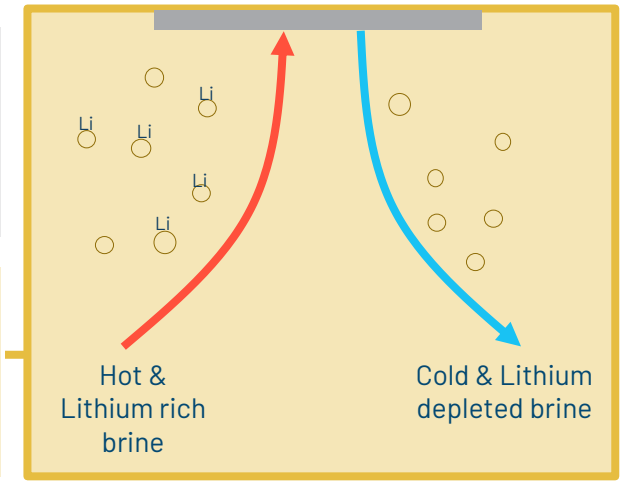
Sub-surface reservoir in Vulcan's URVBF includes **Europe's largest lithium resource** (15.85Mt LCE[1]), and the highest geothermal renewable energy potential in central Europe.

ACHIEVED:

- **12 exploration and production licenses** secured covering >1,400km^2
- **Extensive existing data acquired** from one of the most well-explored graben systems in the world
- New data acquisition from recent surveys successfully conducted over the year, including **3D seismic surveys** and extensive analysis of brine over time, from producing geothermal wells.
- **Lithium grades and heat highly consistent** over space and time within reservoir.

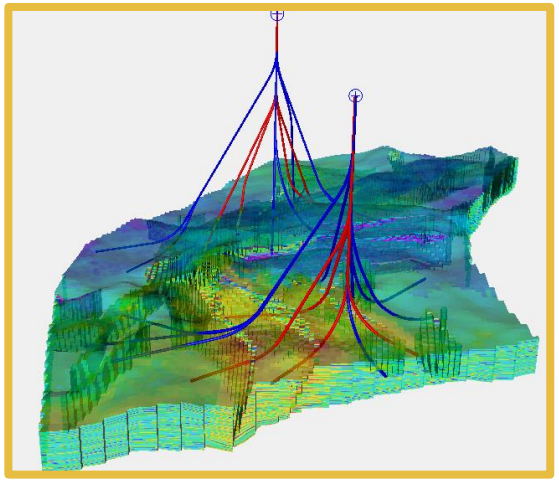
NEXT STEPS:

- **Field development planning** and simulation of lithium production wells from reservoir is advancing for Phase 1 DFS.
- **3D seismic** surveys commencing in **Phase 2** areas, including Mannheim, for further well planning.



VULCAN ENERGY SUBSURFACE SOLUTIONS

Tobias Hochschild
CEO VES



ZERO CARBON LITHIUM™ PROJECT

Electric Mobility

Central Lithium Plant

Sorption Plant

Geothermal plant

Wells

Geothermal and lithium brine field resource

DEVELOPMENT DRILLING

Vulcan has **established its own in-house geothermal drilling company**, Vercana, due to a high demand for geothermal drilling for renewable energy projects and tightness of rig supply.

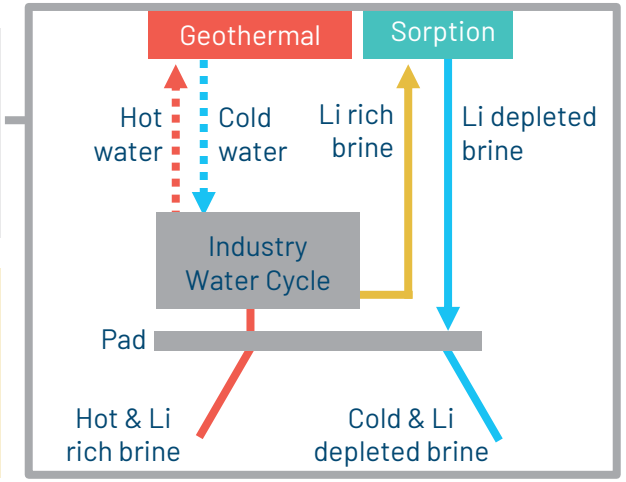
Vercana is a highly strategic asset for Vulcan as Germany calls for **100 new geothermal projects by 2030**.

ACHIEVED:

- Vulcan has acquired **two electric drill rigs.**

NEXT STEPS

- Extensive development **drilling campaign planned to expand current brine production rates** for Phase 1 areas.
- Refurbishment for first rig due to be completed end Q1 '23, **ready to start drilling in Q2 '23**.
- **Growing drilling team** to carry projects out at multiple locations and in parallel.



VERCANA

Thorsten Weimann
COO
Vulcan

ZERO CARBON LITHIUM™ PROJECT

Electric Mobility

Central Lithium Plant

Sorption Plant

Geothermal plant

Wells

Geothermal and lithium brine field resource

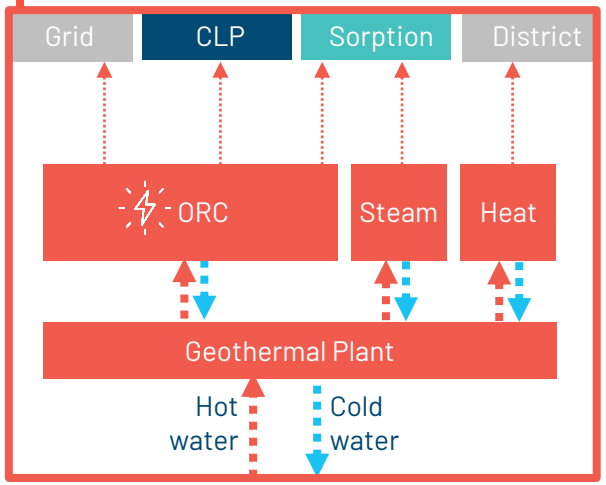
GEOTHERMAL RENEWABLE ENERGY: CURRENT PRODUCTION

ACHIEVED:

- During the year, **Vulcan acquired an existing geothermal renewable energy plant** with proven lithium-in-brine grades over 10 years of successful production.
- The plant, named Natür^{3}Lich Insheim, generated €4.5m in YTD revenue by the September Quarter, **supplying ~6,500 households with renewable power**.
- The plant currently has the technical ability to produce a maximum of 4.8MW renewable power, equivalent to the power usage of approximately 8,000 households, with an additional ability to produce heating.

NEXT STEPS:

- Natür^{3}Lich Insheim's producing wells have been **integrated into Vulcan's DFS** to form part of Vulcan's planned Phase 1 geothermal-lithium development.
- Development also plans to **supply renewable heat to local communities**.



Natür^{3}Lich Insheim

Markus Cechovsky
R&D Manager Insheim Plant

CO_2

Between January and June 2022, 5kT CO_2 was avoided from renewable energy generated at Natür^{3}Lich Insheim

ZERO CARBON LITHIUM™ PROJECT

Electric Mobility

Central Lithium Plant

Sorption Plant

Geothermal plant

Wells

Geothermal and lithium brine field resource

DEVELOPING RENEWABLE ENERGY INFRASTRUCTURE ON A MASS SCALE

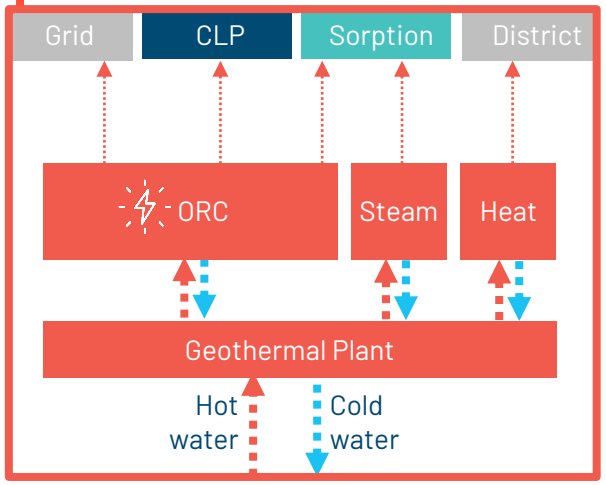
As well as running an existing geothermal plant, Vulcan is aiming to build and operate multiple geothermal assets across its licenses and produce both electricity and heat.

ACHIEVED:

- During the year, Vulcan and **MVV Energie AG (MVV)** executed a 20-year, binding purchase agreement for minimum 240 GWh per year of renewable heat from 2025, a first for Germany
- The heat will be supplied from Vulcan's planned geothermal wells in the area surrounding the **City of Mannheim**, as part of Vulcan's Phase 2 (PFS under way).

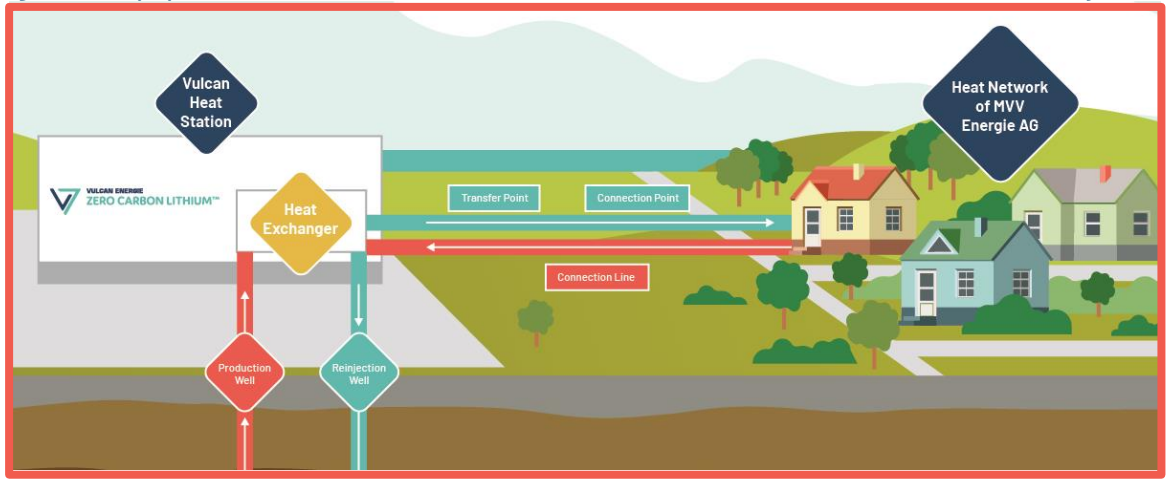
NEXT STEPS:

- Vulcan's expert surface geothermal engineering team, VEE, acquired in 2021, is **designing two phases of expansion** for geothermal brine production, for dual heat and lithium extraction use.
- **Phase 1 DFS studies well advanced**, centred on producing core of the Zero Carbon Lithium™ Project development.
- Heat will be transferred via heating grids and a series of underground pipes that deliver hot water or steam to the local community



VULCAN ENERGY ENGINEERING

Markus Ruff
CEO
Vulcan Energy Engineering



ZERO CARBON LITHIUM™ PROJECT

Electric Mobility

Central Lithium Plant

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Geothermal plant

Wells

Geothermal and lithium brine field resource

LITHIUM CHLORIDE EXTRACTION: SORPTION PLANT

Lithium sorption used commercially for 26 years. Currently used by 5 commercial projects in China and South America, with many more being built.

Lithium adsorbs onto an aluminate-based resin, desorbed using water, then concentrated with geothermal steam to produce very pure LiCl.

Key advantages compared to legacy brine evaporation:

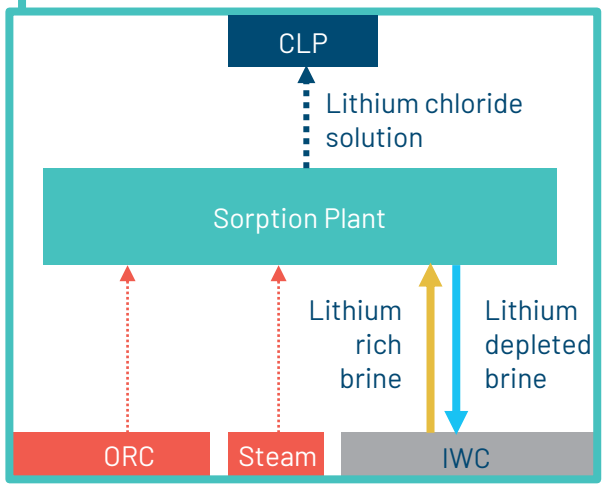
1. Higher lithium recovery;
2. Lower water and chemicals consumption;
3. Shorter lead time to production;
4. Minimal footprint

Sorption associated with geothermal brine advantages:

1. No need to heat the brine with natural gas.
2. Potential for no carbon emissions.
3. Additional revenue stream from energy

ACHIEVED:

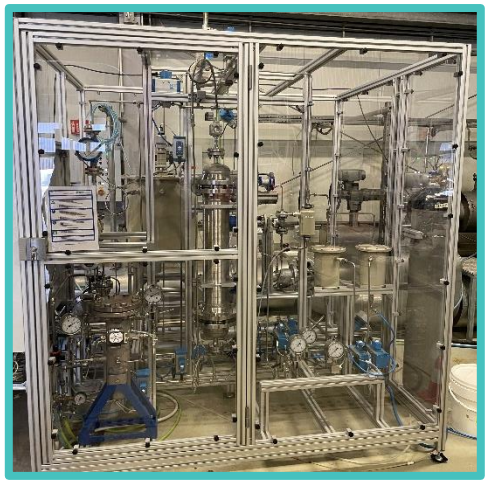
- Vulcan has developed its **own high-performing sorbent, VULSORB™**. Significant in-house expertise at Vulcan.
- **19-month pilot plant operation** has successfully produced data for DFS, using live geothermal brine from Vulcan's wells.
- Second pilot built and testing high pressure option for potential CAPEX/OPEX savings.



VULCAN ENERGY

VULSORB™

Dr Angela Digennaro
Lab Manager



ZERO CARBON LITHIUM™ PROJECT

Electric Mobility

Central Lithium Plant

Sorption Plant

Geothermal plant

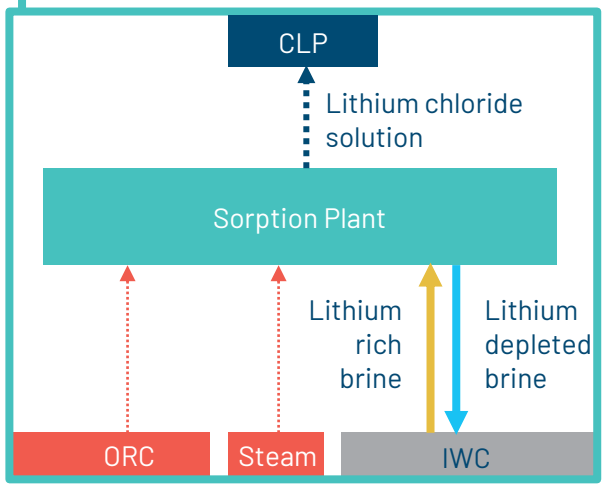
Wells

Geothermal and lithium brine field resource

LITHIUM CHLORIDE EXTRACTION: SORPTION PLANT

NEXT STEPS:

- **Second pilot plant** started operating **under pressure** (20 bar) – potentially a significant upside for CAPEX/OPEX savings.
- **Demonstration Plant to operate in 2023** to train operations team in pre-commercial environment
  - Commissioning H1 2023
  - All process steps of Vulcan's sorption process with option to run at atmospheric pressure and under pressure
  - Production of high purity LiCl solution (several tonnes per month)
  - Provide engineering data for commercial plants
- Commercial Sorption Plant **long lead item ordering** to commence in H1 2023 after DFS published.
- Bridging and **detailed engineering.**



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VULSORB™

Benoit Girard
Plant Manager

ZERO CARBON LITHIUM™ PROJECT

NEW LITHIUM BRINE PROJECTS CHOOSING SORPTION

Company	Livent	Lanke Lithium	Zangge Lithium	Jintai Lithium	Eramet/ Tsingshan	Vulcan Energy	Rio Tinto	Compass Minerals	Berkshire Hathaway	Energy Source Minerals	CTR	Standard Lithium	Lake Resources/ Lilac	E3 Metals
Asset name	Hombre Muerto	Qinghai	Qinghai	Qinghai	Centenario-Ratones	Zero Carbon Lithium™	Rincon	Great Salt Lake	Salton Sea	ATLiS	Hell's Kitchen	Smackover	Kachi	Clearwater Lithium
Jurisdiction														
Lithium extraction technology	Sorption	Sorption	Sorption	Sorption	Sorption	Sorption	Sorption	Sorption	Sorption	Sorption	IX	IX	IX	IX
Technology provider	Proprietary	Undisclosed	Undisclosed	Undisclosed	Proprietary	Proprietary: VULSORB	Axion	ILiAD	Proprietary	Proprietary ILiAD	Lilac	Proprietary LiSTR	Lilac	Proprietary
Tech origin														
Resource (Mt LCE)	Undisclosed	Undisclosed	Undisclosed	Undisclosed	10	16	12	2	Undisclosed	Undisclosed	3	3	4	7
Geothermal	✗	✗	✗	✗	✗	✓	✗	✗	✓	✓	✓	✗	✗	✗
Start date	1998	2017	2018	2019	Construction	Development	Development	Feasibility	Feasibility	Feasibility	Development	Development	Development	Feasibility
Capacity (ktpa LCE)	20	20	20	7	24	40	50	20-25	90	20	20	21	25	20
Zero fossil fuels in flow sheet	✗	✗	✗	✗	✗	✓	✗	✗	✗	✗	✗	✗	✗	✗
Institutional Investments					Tsingshan $375M 11/2021	Institutional Investors $320M 2021 Stellantis A$76m	Rio Tinto $825M 12/2021				GM $?M 07/2021	Koch $100M 11/2021	Lilac Up to $50M 09/2021	
Offtakes (announced publicly)	TESLA, BMW	✗	✗	✗	✗	VOLKSWAGEN GROUP, STELLANTIS, GROUPE RENAULT, umicore, LG Energy Solution	✗	✗	✗	✗	gm, STELLANTIS	✗	✗	✗

Note 1: Resources are rounded to 0p. Refer to Appendix 4: Lithium Brine Projects and Assets - References

Electric Mobility

Central Lithium Plant

Sorption Plant

Geothermal plant

Wells

Geothermal and lithium brine field resource

LITHIUM HYDROXIDE PRODUCTION: CENTRAL LITHIUM PLANT

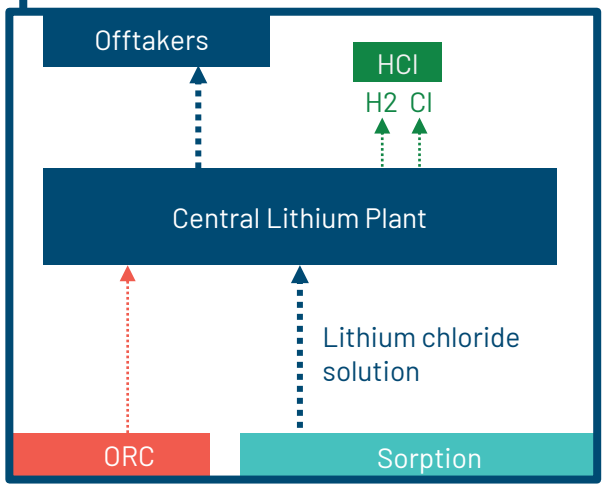
Conversion of lithium chloride to battery grade lithium hydroxide using **electrolysis, powered by green electricity.**
Process uses same technology used in the **chlor-alkali industry**, which has been producing for over a century. Significant in-house expertise at Vulcan.

ACHIEVED:

- **Site secured at Hoechst Chemical Park** for Central Lithium Plant (CLP) in 2021.
- **Extensive test-work** successfully completed during 2021-22 to inform DFS, which is approaching completion.
- **Collaboration partnership with major chlor-alkali producer Nobian**, formerly Akzo-Nobel, also located at Hoechst – multiple operational synergies.

NEXT STEPS:

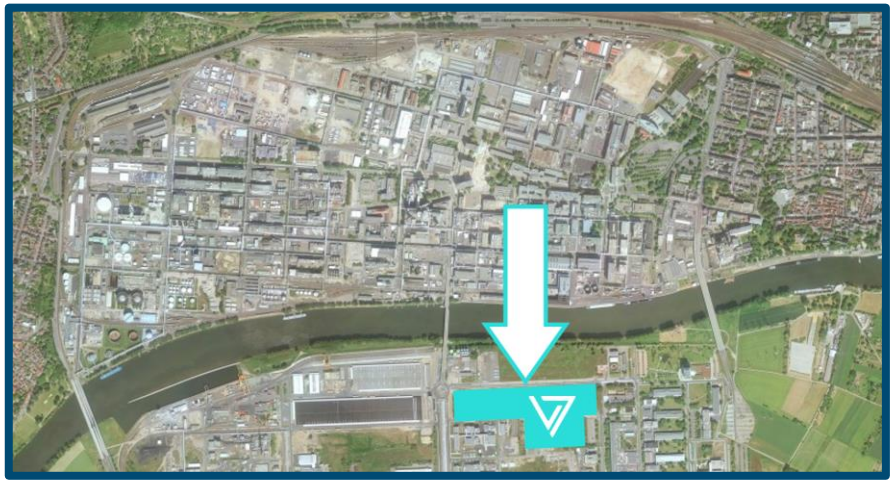
- **Demonstration Plant "LiLy" under development**, to operate in 2023 to train operations team in pre-commercial environment.
- Bridging phase and ordering long lead items for commercial plant in 2023.



VULCAN ENERGY
ZERO CARBON LITHIUM™

Dr. Stephen Harrison
CTO

NOBIAN



ZERO CARBON LITHIUM™ PROJECT

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LONG TERM LITHIUM SUPPLY CONTRACTS SECURED

ACHIEVED:

STELLANTIS ✓ **Binding lithium hydroxide offtake agreement, 10-year term.**

A$76M (€50M) equity investment from Stellantis. This represents the **world's first upstream investment in a listed lithium company by a top tier automaker**. Stellantis is now Vulcan's second largest shareholder with 8% shareholding.

VOLKSWAGEN ✓ **Binding lithium hydroxide offtake agreement,** initial 5-year term.

RENAULT GROUP ✓ **Binding lithium hydroxide offtake agreement**, initial 6-year term.

LG Energy Solution ✓ **Binding lithium hydroxide offtake agreement**, initial 5-year term.

umicore ✓ **Binding lithium hydroxide offtake agreement,** initial 5-year term.

ZERO CARBON LITHIUM™ PROJECT

OUR EXPANSION PLAN – THE UPPER RHINE VALLEY BRINE FIELD

Electric Mobility

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Wells

Geothermal and lithium brine field resource

Lithium offtake agreements

Production volume & CAPEX to be included in the DFS

PHASE 1 – €XBn CAPEX

Central Lithium Plant Phase 1: LiOH

Sorption Plant 1 LiCl

Sorption Plant 2 LiCl

Geothermal
Natür[3]Lich Insheim
OPERATING

Geothermal
New Plant 1
DEVELOPMENT

Geothermal
New Plant 2
DEVELOPMENT

Wells

Wells

Wells

Production volume & CAPEX to be included in updated PFS

PHASE 2 – €XBn CAPEX

Central Lithium Plant Phase 2: LiOH

Sorption Plant 3 LiCl

Sorption Plant 4 LiCl

Sorption Plant 5 LiCl

Geothermal
New Plant 3
DEVELOPMENT

Geothermal
New Plant 4
DEVELOPMENT

Geothermal
New Plant 5
DEVELOPMENT

Wells

Wells

Wells

PHASE +

ADDITIONAL LICENCES
Available to add capacity

>1,000km^2 of licenses in the Upper Rhine Valley presenting opportunities to develop additional assets

Reservoir

ZERO CARBON LITHIUM™ PROJECT

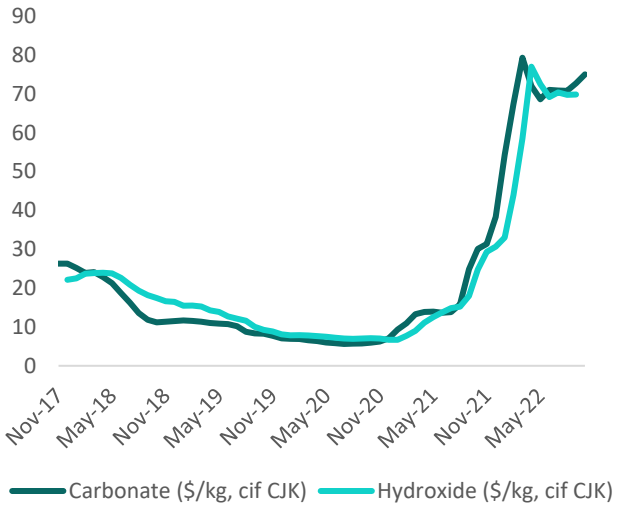
ATTRACTIVE MARKET AND FINANCIAL METRICS

It doesn’t need to cost more to be “green”

LITHIUM PRICE ENVIRONMENT

Historical lithium prices

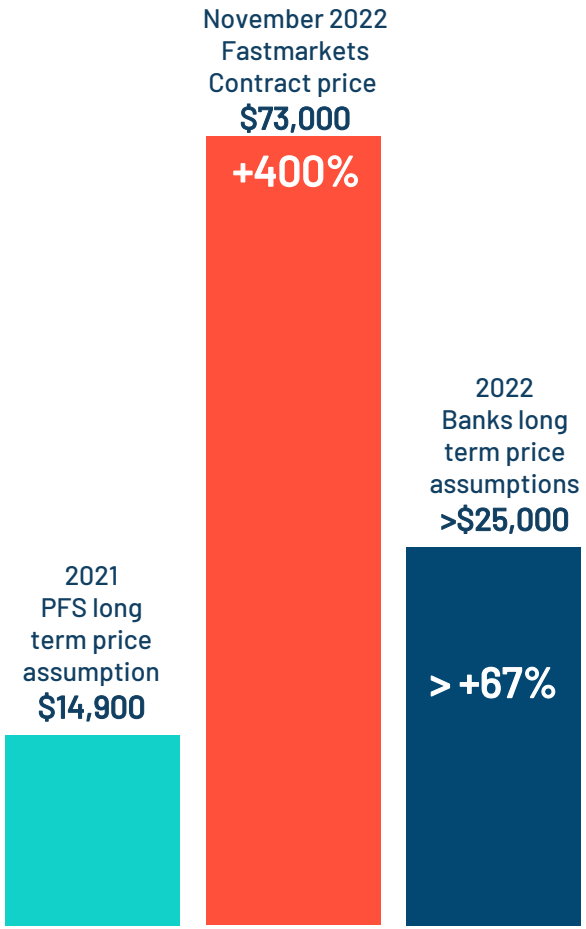
January 2018-August 2022 ($/tonne, monthly average)



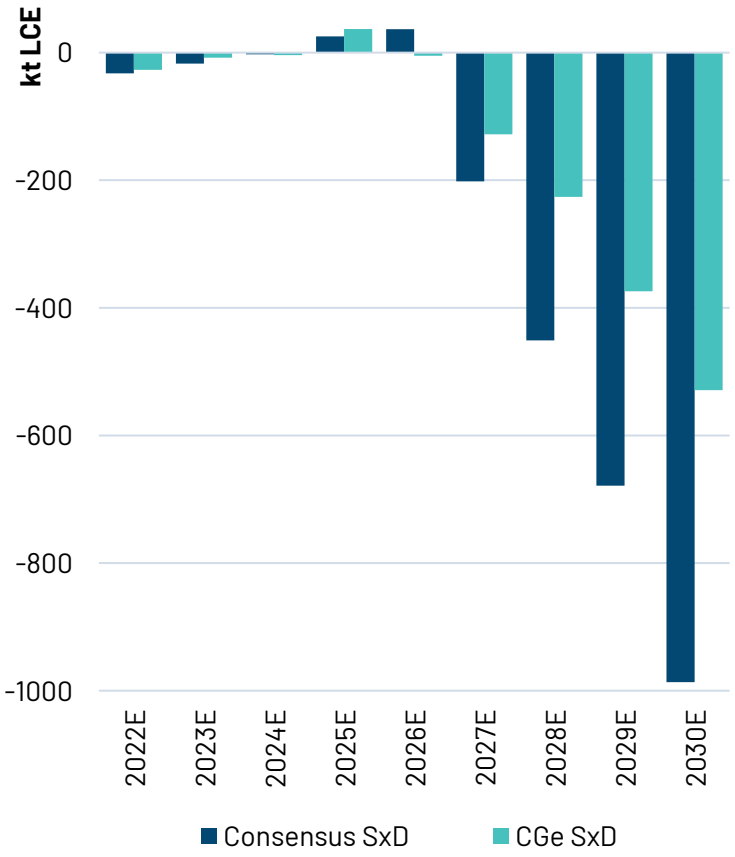
Source: Fastmarkets

Long-term price outlook

Fastmarkets	>$30k/t
cg Canaccord Genuity	$22.5k/t
Goldman Sachs	$16.5k/t



Market balance outlook -> Deficit



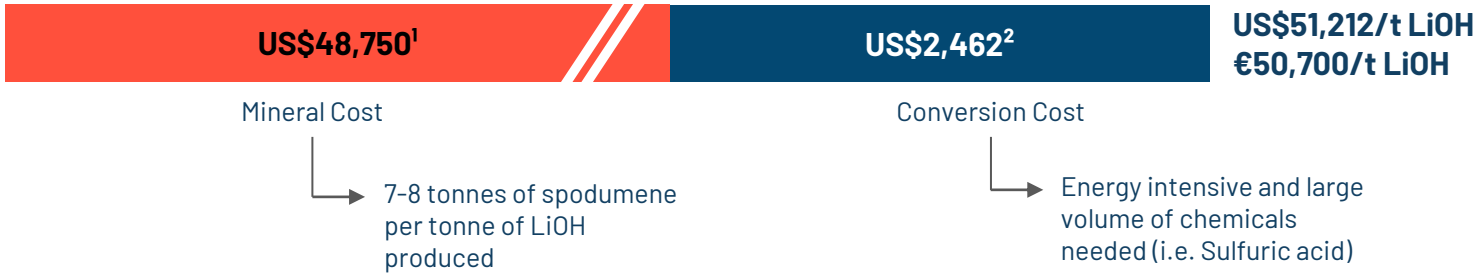
Source: Canaccord Genuity, Lithium Recharge 2022

ZERO CARBON LITHIUM™ PROJECT

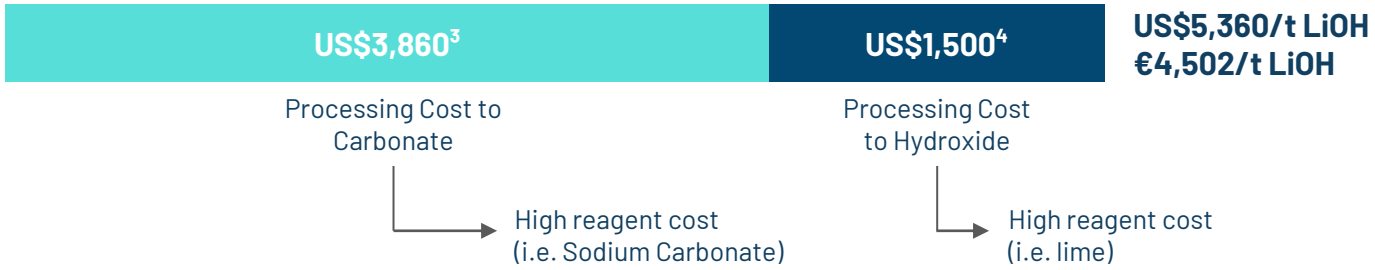
POTENTIAL FOR VERY LOW OPEX OPERATION

Select South American brine and Australian/Chinese mineral conversion vs Vulcan's process

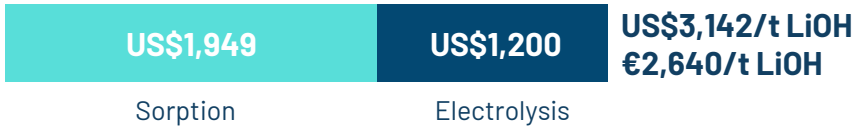
LiOH VIA HARD-ROCK PROCESSING



LiOH VIA BRINE PROCESSING



VULCAN'S PROCESS[5]



Currently being updated as part of DFS

Feedstock

Vulcan's "feedstock" is expected to be low cost and have a dual purpose: lithium extraction and energy production in the form of renewable electricity.

Processing

Vulcan plans to use sorption to isolate lithium as opposed to using large volumes of chemicals such as sulfuric acid to dissolve a rock feedstock or soda ash for brine. Vulcan intends to use low-cost energy coming from its geothermal operation.

Upgrading

Vulcan plans to use electrolysis to upgrade chloride into a high purity hydroxide using renewable energy. No heavy reagent usage such as sodium hydroxide or lime.

ZERO CARBON LITHIUM™ PROJECT

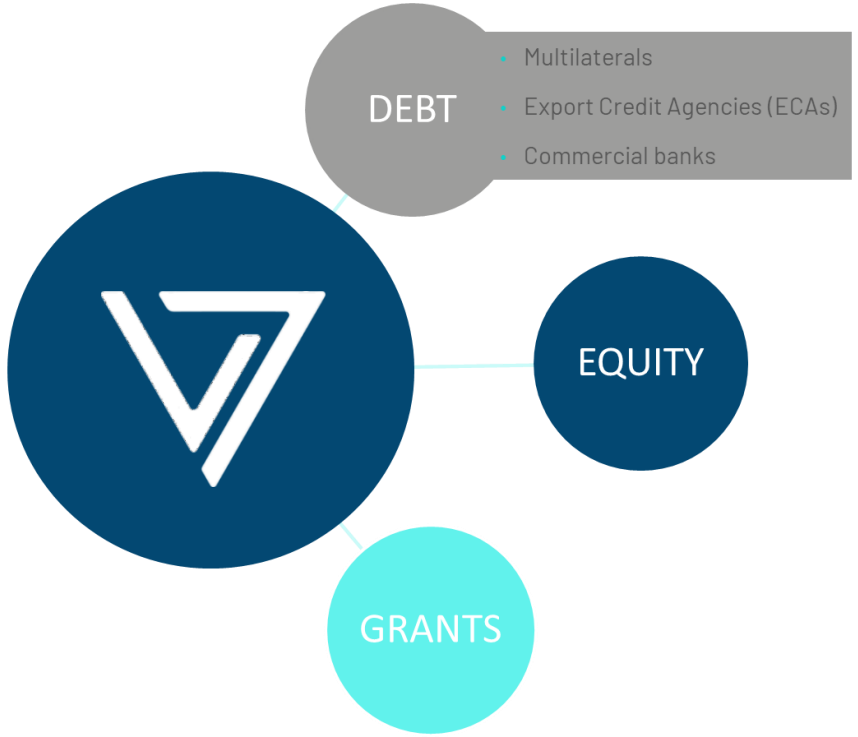
ZERO CARBON FOOTPRINT

Note 1: Fastmarkets Spodumene min 6% Li2O, spot price, cif China, $/tonne 11 July 2022
Note 2: Kidman Resources PFS announcement, October 2018, contingency on Refinery OPEX of 15%. Cash operating cost including royalties.
Note 3: Cash operating costs lithium carbonate, Orocobre 2021 Annual report
Note 4: Orocobre 2020 Corporate Presentation – Naraha Lithium Hydroxide plant, Japan

Note 5: Figures in this slide assume an exchange rate of €0.84/US$1.00
Note 6: Vulcan notes that the comparison operating cost figures above are actual results from lithium hydroxide projects that are currently in production, whereas the above data for Vulcan's process is based on estimates in the PFS. As the Project is still at an early exploration and development stage, there is a high level of inherent uncertainty associated with the Project. A comprehensive list of risks is flagged in the PFS under "Project Risks and Opportunities"

ROBUST TARGET PROJECT FINANCIALS AND PRODUCTION METRICS FROM PFS – UPDATE IN DFS UNDERWAY

FUNDING TO COME FROM A MIX OF EQUITY, DEBT AND GRANTS



LITHIUM BUSINESS

40,000tpy LiOH

€2.8Bn NPV Pre-tax

31% IRR Pre-tax

€2,681/t LiOH OPEX

Payback: 4 years

€1.9Bn NPV Post-tax

26% IRR Post-tax

€474M CAPEX Phase I

Based on 2021 PFS long term price assumption $14,900

Numbers are based on the PFS published in 2021 and are subject to change in DFS

BNP PARIBAS appointed as Financial Advisor toward financing the Zero Carbon Lithium™ Project

ZERO CARBON LITHIUM™ PROJECT

SUSTAINABILITY

OUR APPROACH TO SUSTAINABILITY

PURPOSE
To empower a net zero-carbon future

STRATEGY
To be global leaders in the production of zero fossil fuel, carbon neutral lithium whilst being nature positive

MISSION
To decarbonise the EV supply chain

ZERO CARBON RENEWABLE HEAT & ENERGY

ZERO CARBON LITHIUM™

TEAM
A world-leading scientific & commercial team in the fields of lithium & geothermal energy

INNOVATION
Adapting existing technologies to efficiently extract lithium from geothermal brine

SUPPLY CHAIN
Strategically placed in the heart of the European EV market to decarbonise the supply chain

VULCAN VALUES

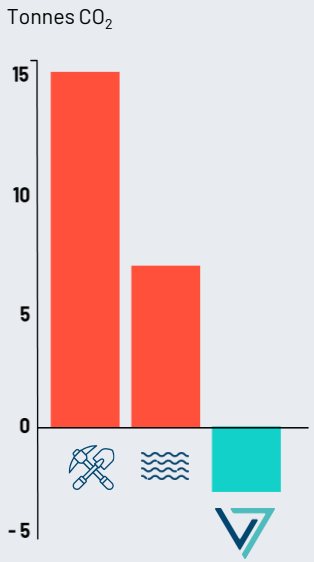
- INTEGRITY
- LEADERSHIP
- FUTURE-FOCUSED
- SUSTAINABILITY

LEADING ENVIRONMENTAL CREDENTIALS

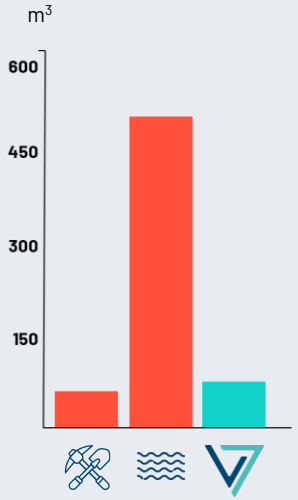
Storm Taylor
ESG Lead

Per tonne of lithium hydroxide produced

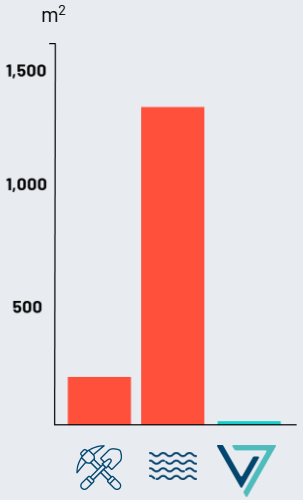
CARBON EMISSIONS (Scope 1,2,3)



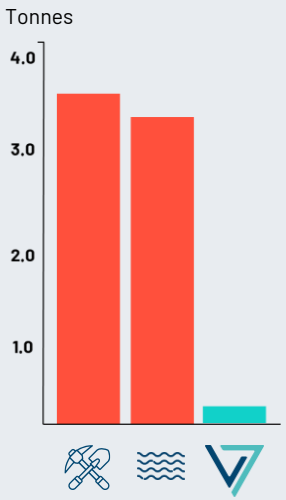
WATER CONSUMPTION



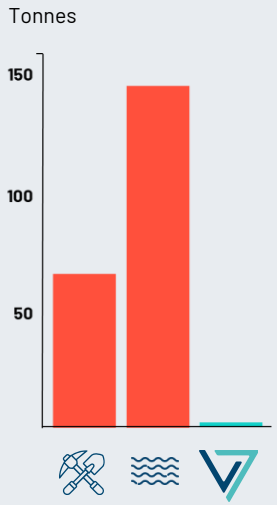
LAND USE



REAGENTS CONSUMPTION



WASTE GENERATION



Hard rock mining
60% of world lithium production

Evaporation ponds
40% of world lithium production

VULCAN ENERGIE
ZERO CARBON LITHIUM™

21 roadshows and 2 information events for local community engagement and education completed during the year

TNFD Forum Member assisting with framework development. Funds allocated for a biodiversity project

UNGC member (since February 2022)

Certified Carbon Neutral International Organisation from 2021

Source: Minviro Life Cycle Analysis 2021 & Vulcan Energy's Pre-Feasibility Study
Note 1: The Company's environmental credentials set out in this slide (and elsewhere in this Presentation) are based on the Company's Pre-Feasibility Study.
There is no guarantee that the Company will be able to achieve the targeted metrics.

GOVERNMENT RELATIONS

MACRO POLICY SETTINGS IN OUR FAVOUR

"Geothermal energy is reliably available to us year-round: it is weather-independent, crisis-secure, and nearly inexhaustible. That is why it is right to continue to advance the use of geothermal energy in Germany."

Robert Habeck, Vice Chancellor of Germany & Federal Minister for Economic Affairs & Climate Action

"Geothermal can be a relevant contribution towards climate protection and heat system transition in this country. In ten to twelve years, we therefore have to ensure that many projects are rolled out and fully realized in the Upper Rhine region of Baden."

Andre Baumann, Baden-Württemberg State Secretary in the Ministry of the Environment, Climate Protection, & the Energy Sector

We need to get our act together in terms of Geothermal in the Upper Rhine, the potential is huge! Geothermal, energy, and Lithium for battery manufacturing in one process. The task now is to quickly draw up a roadmap in order to harness the opportunities here in our country.

Manuel Hagel, Chairman of the CDU Parliamentary Group in the State Parliament of Baden-Württemberg.

Dr. Horst Kreuter

Executive Director Germany

COMMUNITY

AT THE HEART OF EVERYTHING WE DO

Vulcan Energie @VulcanEnergie · 2. Aug.

Hoher Besuch in #Insheim: Transformations- und Arbeitsministe
@Soziales_RLP, Herr @Alex_Schweitzer, war gestern bei uns zu B
Unser CEO @HorstKreuter erklärte unser Gewinnungsverfahren f
regenerativen Strom 🔋🔌 sowie unsere Anlage für die
#Lithiumgewinnung. @spdrlp

Vulcan Energie @VulcanEnergie · 26. Apr.

Strahlende Gesichter beim gestrigen Besuch des Landtagsabgeordneten
@andrebaumann. Wir danken für den regen und offenen Austausch!
@GrueneBW @gjbw @FraktionGruenBW @LVBWBerlin @HorstKreuter
#ZeroCarbonLithium #ZeroCarbonFuture #Wärmewende

Vulcan Energie @VulcanEnergie · 1. Sep.

Politische Sommertour bei unserer #Lithium-Anlage in Insheim. Die
rheinland-pfälzische Wirtschaftsministerin @Schmitt_FDP des
@MWVLW_RLP war bei uns zu Besuch. Begleitet wurde sie dabei von
Medienvertretern von @SWRpresse, @AntenneLandau und @rheinpf

Vulcan Energie @VulcanEnergie · 10. Juli

Ente gut, alles gut: Letzte Woche fand zum 7. Mal das #Entenrennen mit
1400 Gummienten 🦆 in #Haßloch statt. Die @spdde-Fraktion aus
Haßloch war Veranstalter und @IsabelMackensen eröffnete das Rennen.
Wir unterstützten das tolle #Event und sponserten das Zielbanner 🏁.

Vulcan Energie @VulcanEnergie · 20. Mai

🇪🇺 und 🇩🇪 stehen vor einer Jahrhundertaufgabe: Beschleunigung der
#Energiewende und massive Reduzierung der Abhängigkeit fossiler
Energieimporte. Hierzu sind pol. Entscheider gefragt: @DanielKarrais von
der @fdpdvpfraktion in einem eindrucksvollen Video ▼

youtube.com

"Geothermie- Was hat es damit auf sich?" mit Daniel Karrais

Was hat es mit Geothermie auf sich? Und welchen Standortvorteil
haben wir hier in Baden-Württemberg?Unser klimapolitischer Spreche...

THE RIGHT TEAM FOR THE JOB

OUR MAIN STRENGTH: OUR PEOPLE

- 180 FTE within the Vulcan Group
- Top scientists, engineers and professionals within the fields of lithium chemistry, chemical engineering, geothermal energy, drilling, reservoir engineering and geology.
- Highly motivated team dedicated to creating shareholder value through decarbonising energy and lithium.

89% of employees like the working culture in their team following first satisfaction survey

ESG linked KPIs for Executive team

Supporting the Just Transition by employing a number of ex-oil and gas industry experts

180 FTE equivalent Vulcan team members, up from 9 in 2021

BOARD OF DIRECTORS

Dr. Francis Wedin

Managing Director & CEO

Founder of Vulcan Zero Carbon Lithium™ Project. Lithium industry executive since 2014. Previously Executive Director of ASX-listed Exore Resources Ltd. Track record of success in lithium industry as an executive since 2014, including the discovery of three resources on two continents. PhD in Geology, MBA in Renewable Energy, global experience in battery metals sector.

Annie Liu

Non-Executive Director

Former Tesla Head of Battery and Energy Supply Chain. Led and managed Tesla's multi-billion-dollar strategic partnerships and sourcing portfolios that support Tesla's Energy and Battery business units including Battery, Battery Raw Material, Energy Storage, Solar and Solar Glass, including raw materials sourcing efforts such as lithium for battery cells. 20 years' experience with Tesla and Microsoft.

A wealth of multi-disciplinary experience across the span of industries that we cover

Gender-balanced, majority-independent Board of Directors

Gavin Rezos

Chair

Executive Chair/CEO positions of three companies that grew from start-ups to the ASX 300. Extensive international investment banking experience. Investment banking Director of HSBC with senior multi-regional roles in investment banking, legal and compliance functions. Currently Chair of Resource and Energy Group, principal of Viaticus Capital, Non-Executive Director of Kuniko Limited and Non-Executive Chair Resources & Energy Group Limited.

Dr. Heidi Grön

Non-Executive Director

Dr. Grön is a chemical engineer by background with 20 years' experience in the chemicals industry. Since 2007, Dr. Grön has been a senior executive with Evonik, one of the largest specialty chemicals companies in the world, with a market capitalization of €14B and 32,000 employees.

Dr Günter Hilken

Non-Executive Director

Dr Hilken has over 35 years' experience in and a deep understanding of the German chemicals, renewables and infrastructure investment sectors and, through leading industry advocacy associations, the German Government at the State and Federal level. Dr Hilken is a Senior Advisor to Macquarie Asset Management, Director of Currenta and President and Chairman of the Board of the German Federation of Industrial Energy Consumers (VIK).

Ranya Alkadamani

Non-Executive Director

Founder of Impact Group International. A communications strategist, focused on amplifying the work of companies that have a positive social or environmental impact. Experience in working across media markets and for high profile people, including one of Australia's leading philanthropists, Andrew Forrest and Australia's former Foreign Minister and former Prime Minister, Kevin Rudd.

Josephine Bush

Non-Executive Director

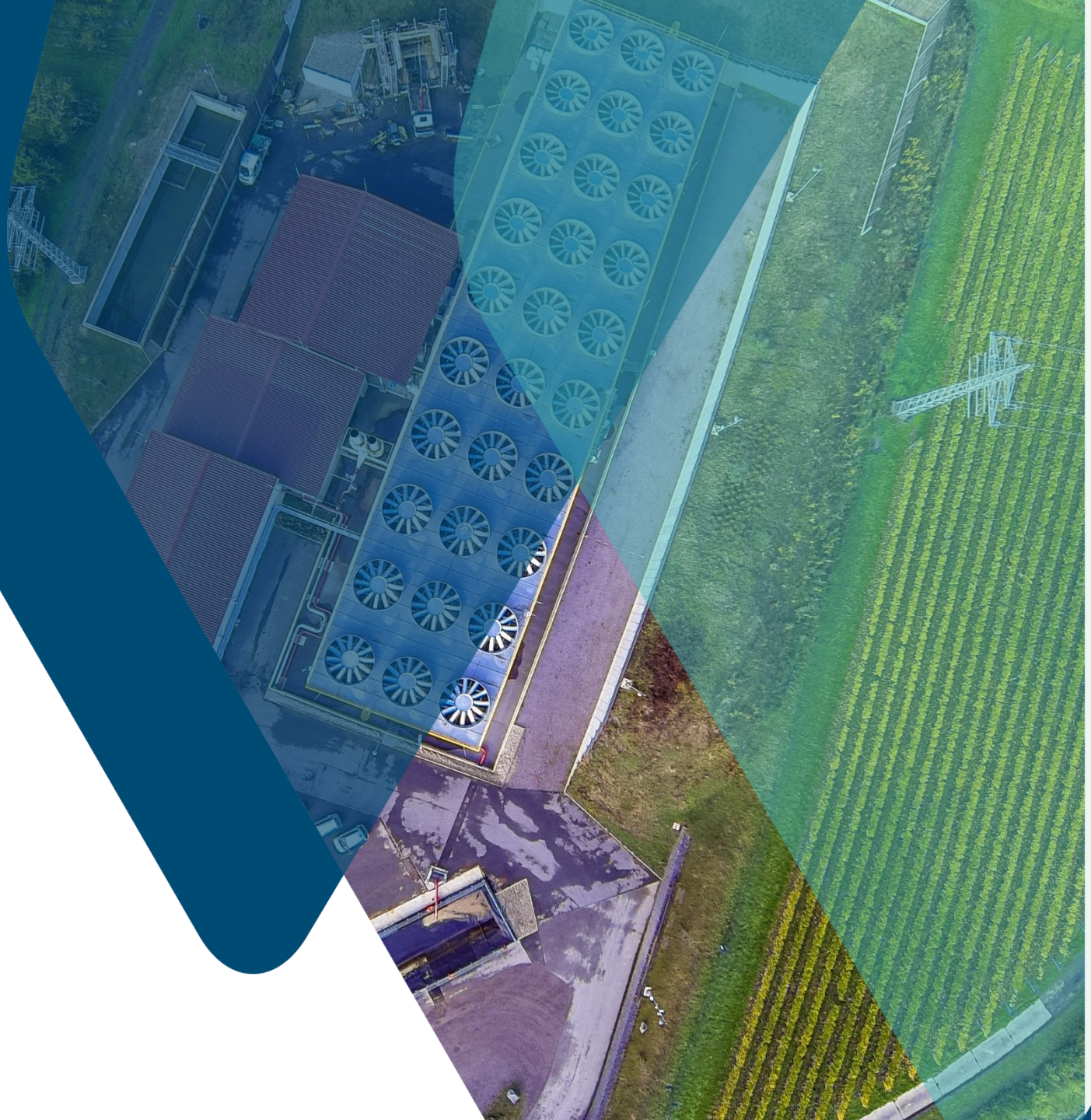
Member of the EY Power and Utilities Board. Led and delivered the EY Global Renewables and Sustainable Business Plan and spearheaded a series of major Renewable Market Transactions. Successfully advised on the first environmental yieldco London Stock Exchange listing, Greencoat UK Wind PLC. Ms. Bush is a Chartered Tax Advisor, holds an MA Law degree from St Catharine's College, Cambridge, and brings a wealth of experience in ESG strategic advisory.

Mark Skelton

Non-Executive Director

Mr Skelton has more than 35 years' experience including a 29-year tenure at BP and then at Fortescue Metals Group (Fortescue) as Project Director, and Director of Projects. A senior leader and advisor with a proven record in delivering major projects, business transformation and developing organisational capability within the mining, energy and oil and gas industries, Mr Skelton has extensive project experience in Australia and internationally.

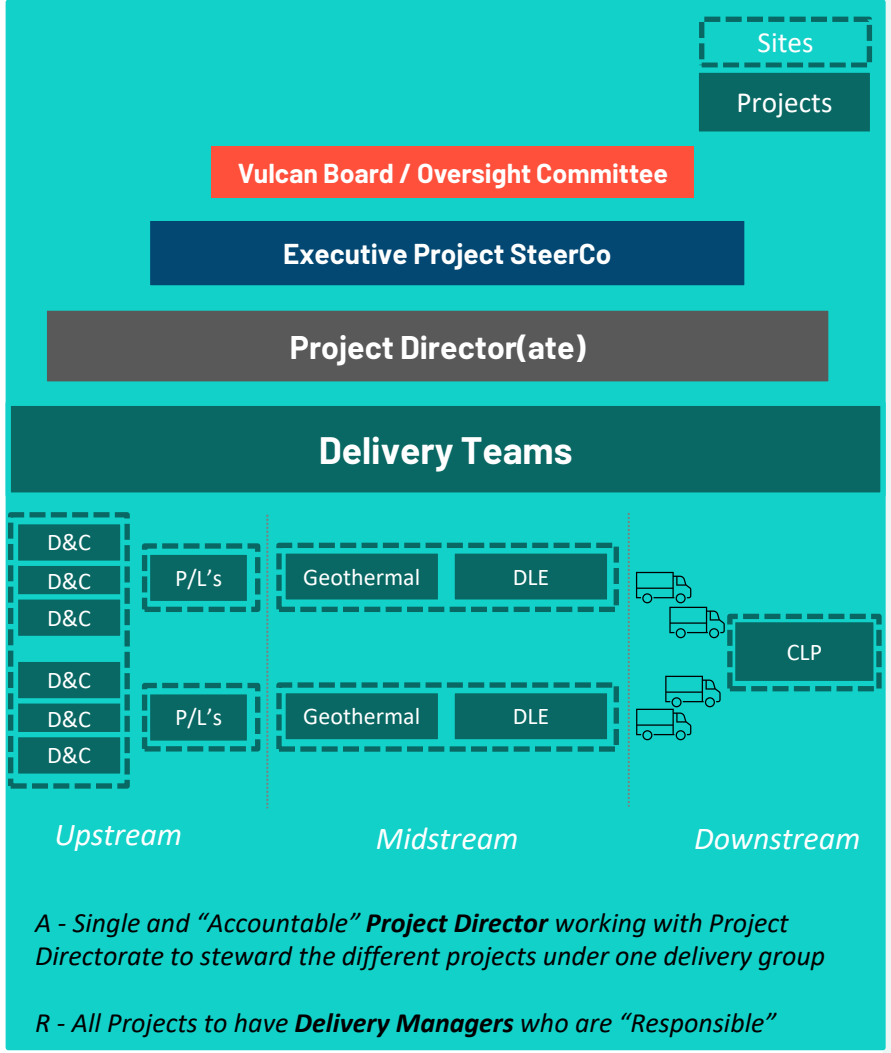
PROJECT EXECUTION



PROJECT EXECUTION & DELIVERY CAPABILITY

Portfolio Approach - Executing different projects to achieve one goal

- Vulcan Energy is transitioning from a Development Company to an Integrated Project Execution & Production Company.
- Projects to be delivered under single integrated projects group, providing a consistent approach to:
  - **Delivery** (Project Execution, Contract Strategy, Engineering Standards, Strategic Sourcing)
  - **Integrating** schedules and visibility of critical path.
  - **Interfaces** being managed.
  - **Risks** managed and opportunities.
  - **Controlling** of projects giving early warning and insights into decision makers.
- Building a German centric delivery team, on the ground leadership and managing of all delivery scopes.
- Strong Project Governance applied via Executive Project SteerCo to support and steer Project Directorate.



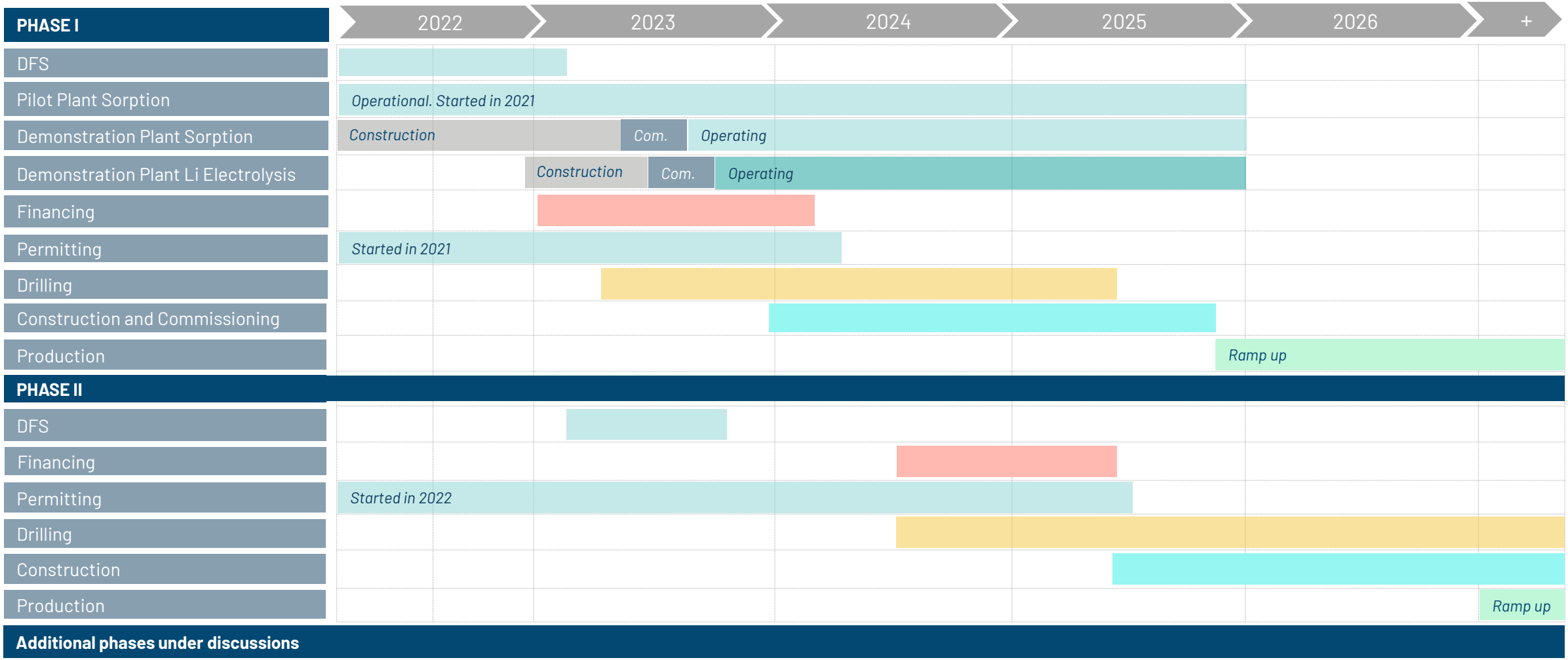
*A - Single and "Accountable" **Project Director** working with Project Directorate to steward the different projects under one delivery group*

*R - All Projects to have **Delivery Managers** who are "Responsible"*

Cris Moreno
Deputy CEO

ZERO CARBON LITHIUM™ PROJECT

TARGET PROJECT TIMELINE



Phase 1 DFS approaching completion. 2023 to be focused on bridging phase, ordering commercial long lead items, and developing project execution and delivery capability.

SHARE PRICE AND CAPITAL STRUCTURE

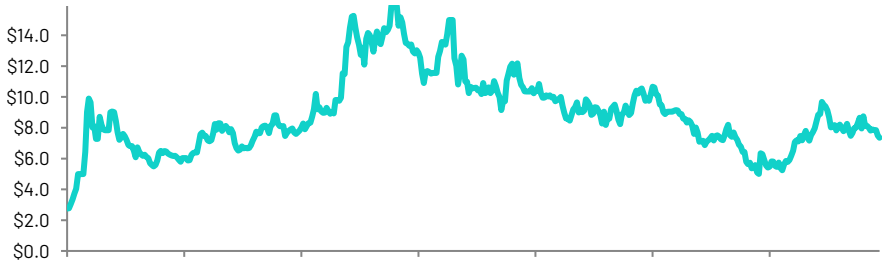
ASX : VUL

Shares on Issue	143,335,301
Performance Shares	91,174
Performance Rights	8,627,427
Market Capitalisation at $7.05 (undiluted)	~$1.01B
Cash Position (as at 30 Sep 2022)	€158M
Top 20 Stakeholders	~60%
Management (undiluted)	~17%
Frankfurt: VUL	

KEY SHAREHOLDERS

Dr. Francis Wedin and related parties	11.50%
Stellantis Group (PSA Automobiles)	8.00%
Vivien Enterprises Pte Ltd	5.77%
Hancock Prospecting Pty Ltd	5.64%

VUL SHARE PRICE (AUD) (1 JANUARY 2021 – 26 SEPTEMBER 2022)



Markus Ritzauer
Chief Financial Officer (Germany)

Rob Ierace
Chief Financial Officer (Australia)

ZERO CARBON LITHIUM™ PROJECT

Thank you

Media and Investor Relations

Annabel Roedhammer
aroedhammer@v-er.eu

@VulcanEnergyRes | www.v-er.eu | info@v-er.eu
ASX:VUL
FSE:VUL

Annabel Roedhammer
Head of Investor Relations (Global) (PR and Comms APAC)

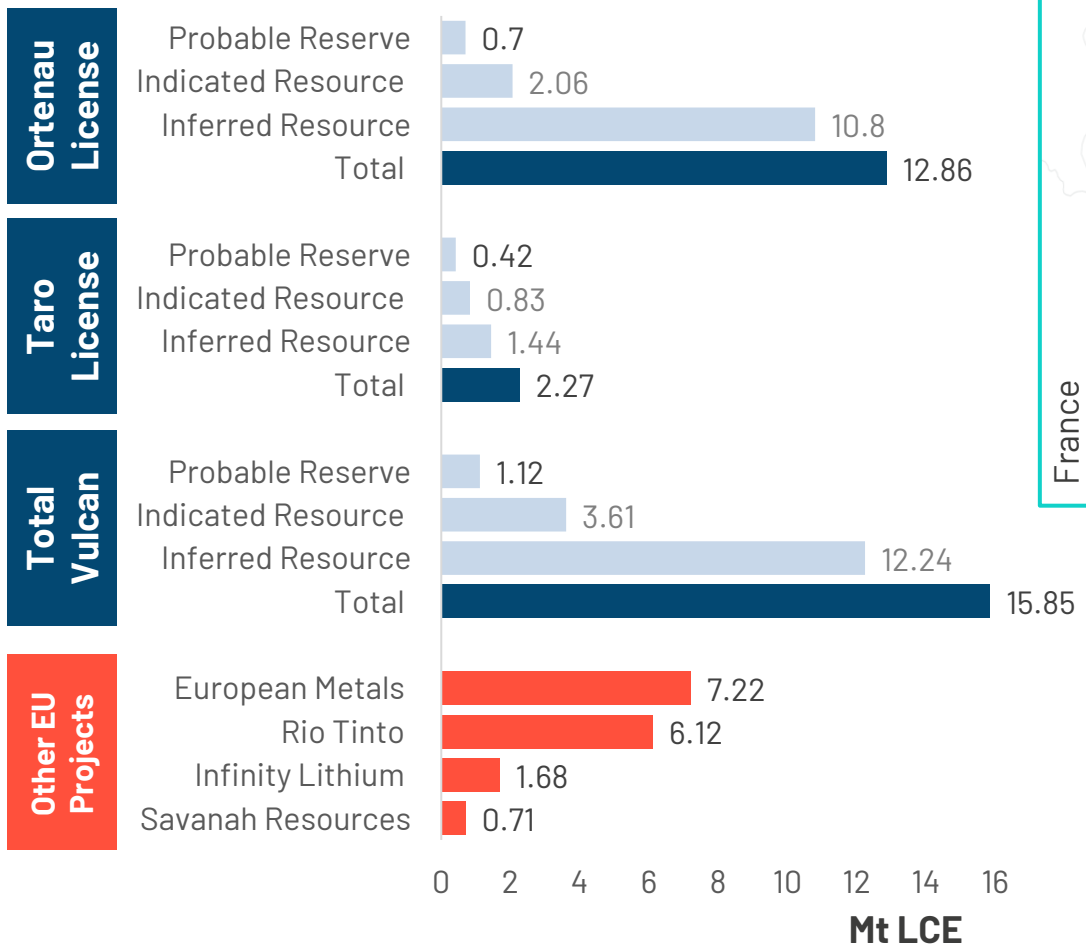
Daniel Tydde
Company Secretary & In-House Legal Counsel (Australia)

Dr. Meinhard Grodde
Justiziar, In-House Legal Counsel (Germany)

ZERO CARBON LITHIUM™ PROJECT

APPENDICES

APPENDIX 1: LARGEST JORC LITHIUM RESOURCE IN EUROPE



- **1 exploitation permit granted**
- **11 exploration permits granted** and several applications
- Largest lithium resource in Europe: **15.85Mt LCE**

Note 1: Vulcan's URVP Li-Brine resource and reserve area in Europe. Mineral resources are not ore reserves and do not have demonstrated economic viability. Refer to the ASX Announcement entitled "Updated Ortenau Indicated and Inferred Resource" dated 15 December 2020 and the ASX Announcement entitled "Positive Pre-Feasibility Study" dated 15 January 2021, which refer to the Company's Mineral Resources and Ore Reserves (respectively) included in this Presentation, available on the Company's website and www.asx.com. The Company confirms that it is not aware of any new information or data that materially affects the information including in the original market announcements and that all material assumptions and technical parameters underpinning the estimates in the relevant market announcements continue to apply and have not materially changed. The Company confirms that the form and context in which the Competent Person's findings are presented in this Presentation have not been materially modified from the original market announcements

APPENDIX 2: EUROPE-FOCUSED AND LITHIUM BRINE PROJECTS PEER COMPARISON REFERENCES

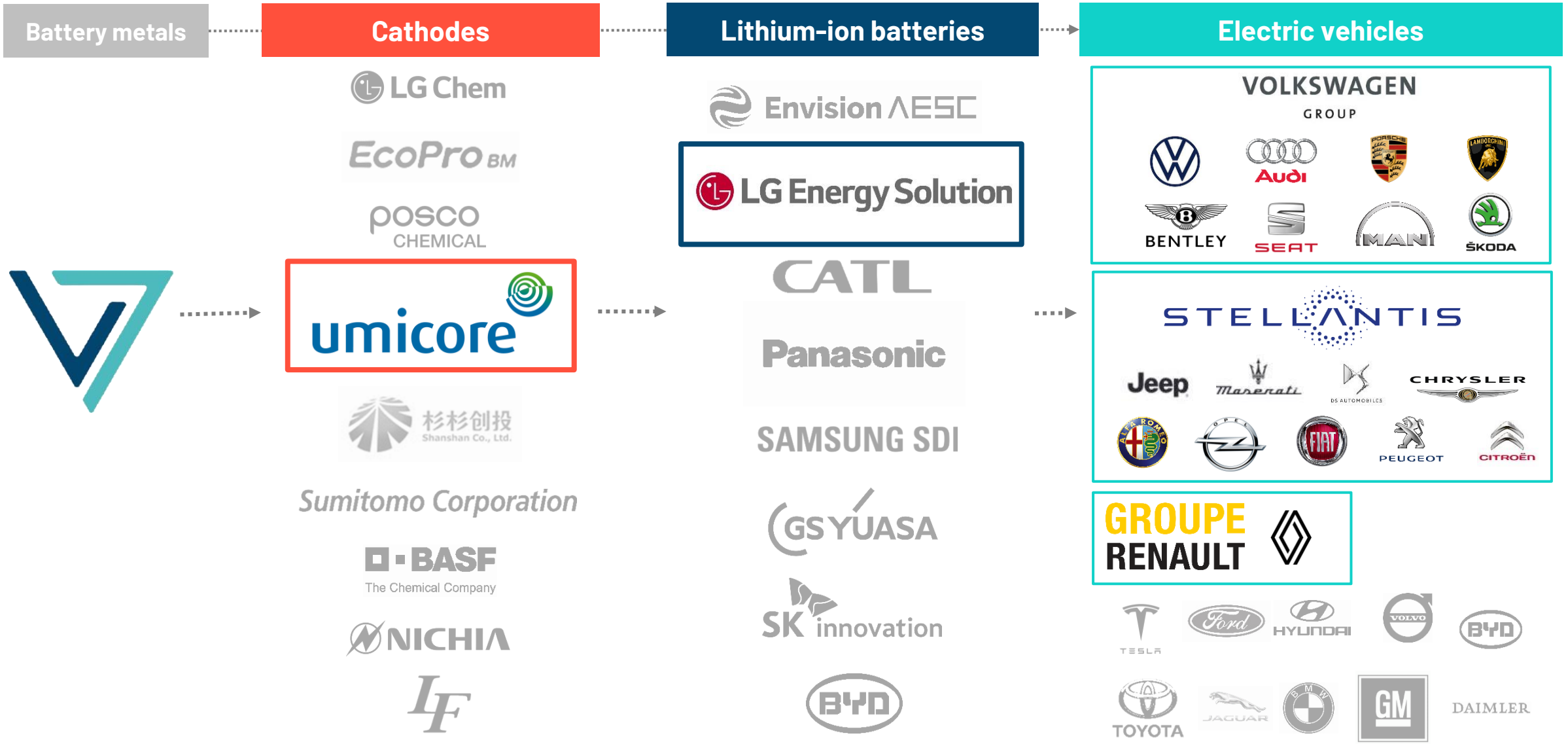
COMPANY[1]	CODE	PROJECT	STAGE	RESOURCE CATEGORY	RESOURCES M TONNES	RESOURCE GRADE (LI2O)	CONTAINED MT LCE TONNES	INFORMATION SOURCE
European Metals	ASX: EMH	Cinovec	PFS Complete	Indicated & Inferred	695.9	0.42	7.22	Corporate Presentation July 2021 - Company Website
Rio Tinto	ASX: RIO	Jadar	PFS Complete	Indicated & Inferred	139.3	1.78	6.12	ASX Announcement Released 10 December 2020
Infinity Lithium	ASX: INF	San Jose	PFS Complete	Indicated & Inferred	111.3	0.61	1.68	Company Presentation Released to ASX 16 February 2021
Savannah Resources	AIM: SAV	Barroso	DFS Underway	Measured, Indicated & Inferred	27.0	1.00	0.71	Corporate Presentation September 2021 – Company Website

COMPANY	PROJECT	STAGE	RESOURCE CATEGORY	BRINE VOLUME	RESOURCE GRADE	CONTAINED MT LCE TONNES	INFORMATION SOURCE
Controlled Thermal Resources	Hell's Kitchen	PEA Completed	Inferred	Unknown	181mg/l Li	2.7	Company Website
E3 Metals	Clearwater, Rocky and Exshaw	PEA Completed	Inferred	5.5 billion m^3	74.6mg/l Li	2.2	PEA released in December 2020

Elders, W., Cohen, L., (1983) The Salton Sea Geothermal Field, California, Technical Report. Institute of Geophysics and Planetary Physics, University of California
GeORG (2013) Projektteam Geopotenziale des tieferen Untergrundes im Oberrheingraben Fachlich-Technischer Abschlussbericht des INTERREG-Projekts GeORG. Teil 2: Geologische Ergebnisse und Nutzungsmöglichkeiten
Pauwels, H., Fouillac, C., Brach M. (1989) Secondary production from geothermal fluids processes for Lithium recovery 2nd progress report. Bureau de Recherches Geologiques et Minieres Service Geologique National
Pauwels, H. and Fouillac, C. (1993) Chemistry and isotopes of deep geothermal saline fluids in the Upper Rhine Graben: Origin of compounds and water-rock interactions. Geochimica et Cosmochimica Acro Vol. 51, pp. 2737-2749
Sanjuan, B., Millot, R., Innocent, C., Dezayes, C., Scheiber, J., Brach, M., (2016) Major geochemical characteristics of geothermal brines from the Upper Rhine Graben granitic basement with constraints on temperature and circulation. Chemical Geology 428 (2016) 27–47

Note 1: Data provided for lithium focused peers with comparable project size and stage and published resource information
Note 2: The Company is not aware of any new information or data that materially affects the information contained in the above sources or the data contained in this Presentation

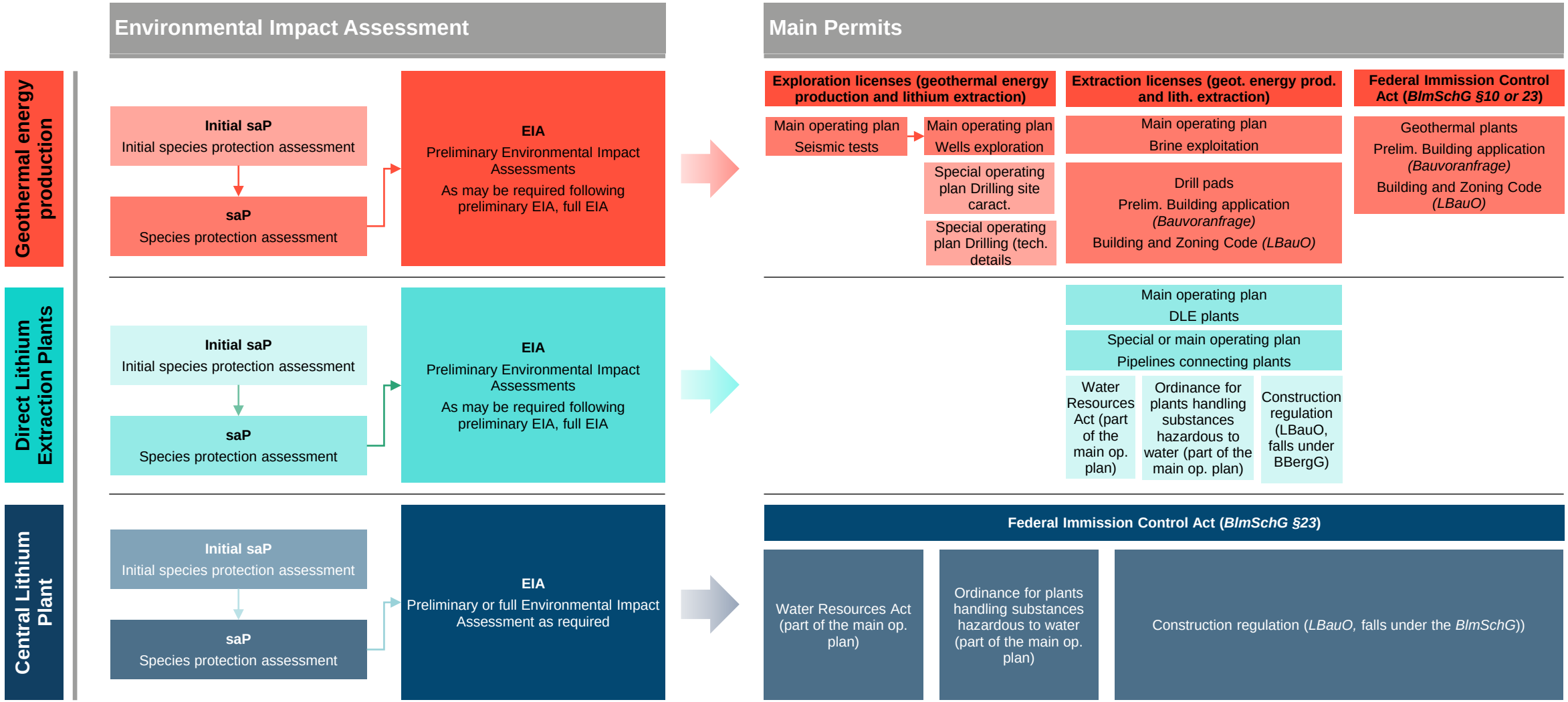
APPENDIX 3: VULCAN WILL SUPPLY LEADING ACTORS ACROSS THE LITHIUM-ION BATTERY SUPPLY CHAIN



APPENDIX 4: BRINE PROJECTS AND ASSETS – REFERENCES

Livent	https://s22.q4cdn.com/453302215/files/doc_presentations/2021/11/Livent-Investor-Presentation_for-website.pdf
Lanke Lithium	https://www.linkedin.com/pulse/from-catamarca-qinghai-commercial-scale-direct-lithium-alex-grant/ http://www.asianmetal.com/news/1665421/Lanke-lithium-plans-to-launch-commercial-production-of-battery-grade-lithium-carbonate
Zangge Lithium	https://www.linkedin.com/pulse/from-catamarca-qinghai-commercial-scale-direct-lithium-alex-grant/
Jintai Lithium	https://www.linkedin.com/pulse/from-catamarca-qinghai-commercial-scale-direct-lithium-alex-grant/
Eramet/Tsingshan	https://www.eramet.com/sites/default/files/2021-11/IR%20presentation_Lithium_VF.pdf
Standard Lithium	https://www.standardlithium.com/projects/arkansas-smackover
Vulcan Energy	https://v-er.eu/wp-content/uploads/2021/12/2021-AGM-MD-presentation.pdf
Rio Tinto	https://www.rinconmining.com/wp-content/uploads/2021/10/Rincon-FINAL-E-210921-FINAL.pdf
CTR	CTR's NI 43 101 inferred mineral resource estimate contains ~2.7 million
Berkshire Hathaway	https://www.ft.com/content/c9760a4e-1a76-11e9-9e64-d150b3105d21
Lake Resources/Lilac	https://lakeresources.com.au/wp-content/uploads/2021/11/lke_noosa-presentation_12-nov-21.pdf http://lilacsolutions.com/2021/09/lake-resources-partners-with-lilac-solutions-for-technology-and-funding-to-develop-the-kachi-lithium-brine-project-in-argentina/
Compass Minerals	https://investors.compassminerals.com/investors-relations/investor-news/press-release-details/2021/Compass-Minerals-Identifies-Approximately-2.4-Million-Metric-Ton-Sustainable-Lithium-Resource/default.aspx
E3 Metals	https://www.e3metalscorp.com/_resources/presentations/corporate-presentation.pdf?v=0.084

APPENDIX 5: PROJECT DEVELOPMENT TIMELINE: EXAMPLE FOR ONE PROJECT AREA



APPENDIX 6: BRINE FLOW RATES

Until we drill our first wells, risks around flow rate will remain. However, Vulcan believes it has an appropriate level of confidence around its flow rates assumptions, based on the experience of its team, and state-of-the-art scientific tools, data and studies

1. Vulcan is targeting high-flow fault zones within its sedimentary reservoir units, which are predominantly the Bunter Sandstone, using state-of-the-art seismic data. When exploration for geothermal brines first began in the Upper Rhine Valley, no seismic data was used, or the data was 2D seismic only, to get a picture of the sub-surface. The industry has seen a steady progression of understanding and improvements in exploration over time, including the use of 3D seismic, and a corresponding increase in flow rates, as would be expected. 3D seismic is now a standard for geothermal exploration in the Upper Rhine Valley and elsewhere

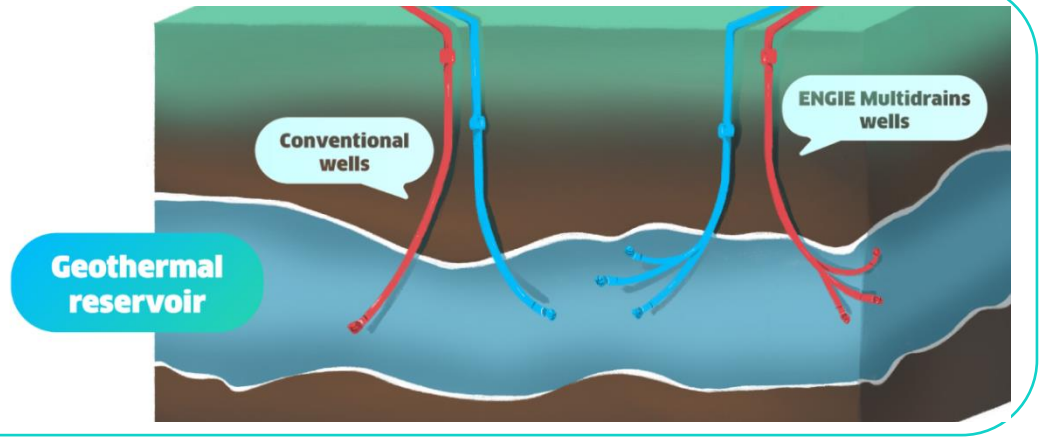
2. In our estimation of flow rates, we have conducted detailed studies using modelling information derived from seismic data in our areas. The Upper Rhine is a sedimentary graben system, geologically similar to hydrocarbon systems with permeable formations confined by impermeable rock. This differs to other types of geothermal plays, such as volcanic-hosted, where the systems are more complex, in general less permeable and seismic data is less useful

3. We also factor in techniques well known in the oil and gas industry to increase flow, such as double completion of wells and multi-reservoir completion as recently promoted by Schlumberger and Engie

Vulcan has, based on its detailed analysis and the various factors mentioned above, used between 100 and 120l/s as assumed flow rates for its projects in its PFS.

A public list of flow rates achieved at deep geothermal wells in and around Germany can be found in a 2014 report compiled for the German Federal Ministry of the Economy (BMWi) at the following link: https://www.grs.de/sites/default/files/pdf/grs-316_teilb.pdf.

Wells displaying flow rates at greater than 100l/s are common in the list, including at Brühl in the Upper Rhine Graben, with some projects reaching up to 150l/s.



Source: Engie

APPENDIX 7: POTENTIAL EUROPEAN EXPANSION IN ITALY

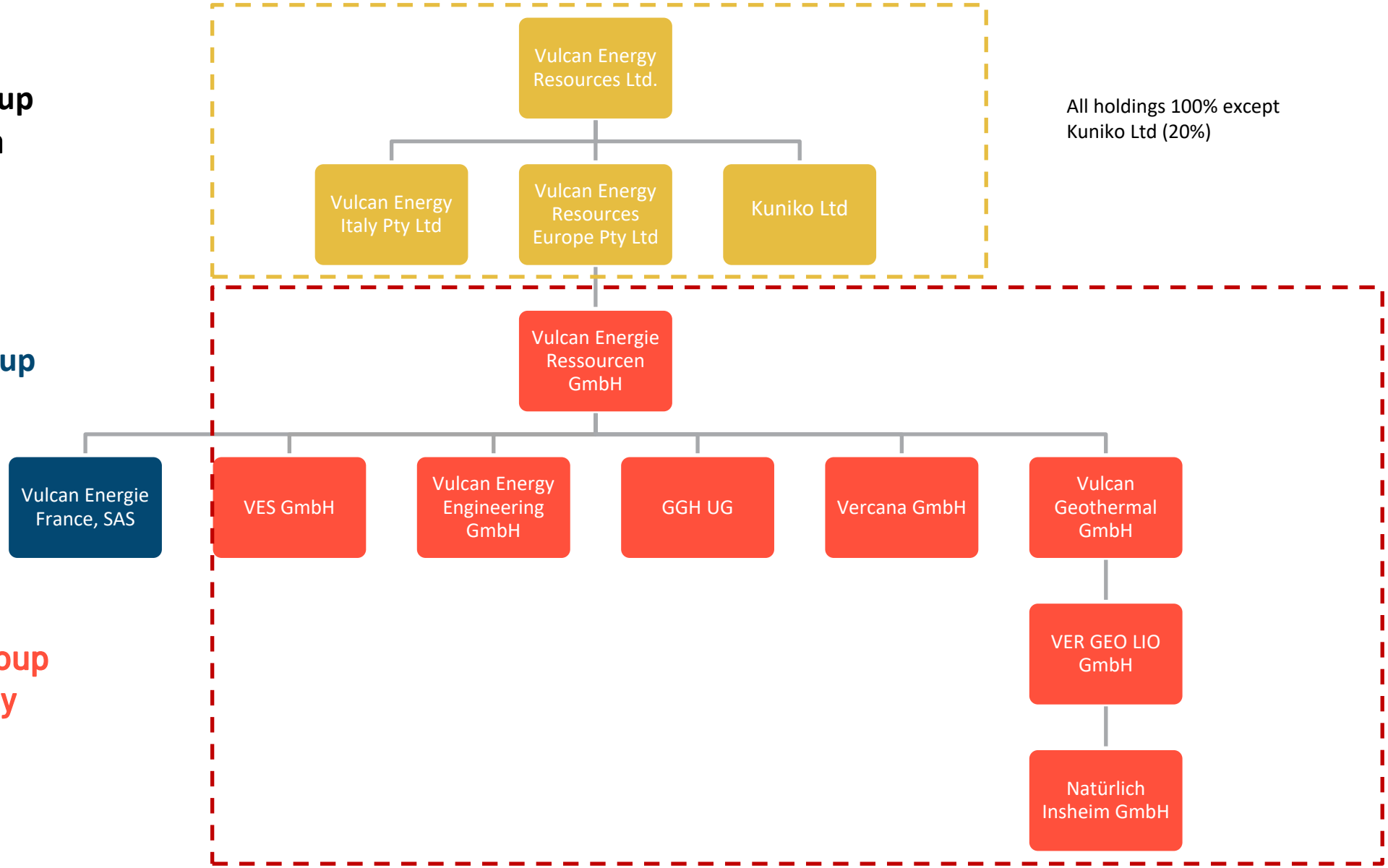
Vulcan and Enel Green Power have signed a binding collaboration agreement

- Vulcan and Enel Green Power have signed a binding collaboration agreement to explore and develop its Cesano license in Italy on a 50:50 basis
- The Parties aim to enter a Joint Venture agreement on completion of a joint positive Scoping Study
- Both companies also agreed to evaluate the opportunity to cooperate on other geothermal lithium projects in Italy
- Enel Green Power is part of the Enel Group and the largest geothermal energy producer in Italy
- Enel Green Power has already previously explored and drilled a number of wells in the Cesano area and gathered relevant data direct from local reservoirs

Figure 1: Location of A) Vulcan's Zero Carbon Lithium Project in the Upper Rhine Valley Brine Field, Germany, in relation to B) the Cesano license in Italy.

(See ASX announcements on 24 January 2022 and 8 July 2022 for more information).

APPENDIX 8: VULCAN GROUP – CORPORATE STRUCTURE



As at November 29, 2022

APPENDIX 9: FY22 FINANCIAL HIGHLIGHTS STRUCTURE

EUR 124 million capital raise

STELLANTIS

EUR 50 million equity investment
8% shareholding

Acquisition of 2 electric drill rigs

Acquisition of Insheim geothermal power plant

Completed acquisition of GeoT and Gec-co businesses

Deconsolidation of Norway assets through spin off of Kuniko Limited
(Vulcan retains 24% share)

APPENDIX 10: AUTO BATTERY AND CATHODE-MAKERS NEED CARBON NEUTRAL BATTERY METALS

RENAULT GROUP

'Reducing carbon footprint is not just reducing vehicle emissions while they are being operated, but also [...] from the company's resource extraction and production processes through to the end of the vehicle's life cycle'.

STELLANTIS

'We work in partnership to implement responsible procurement practices, to ensure sustainable progress throughout the entire supply chain, with specific emphasis on the wise use of natural resources.

VOLKSWAGEN GROUP

'By 2025, the company aims to reduce the carbon footprint of cars and light-commercial vehicles across the entire value chain by 30 percent compared to 2015 – and by 2050 to make the entire Group's balance sheet CO_2 neutral'.

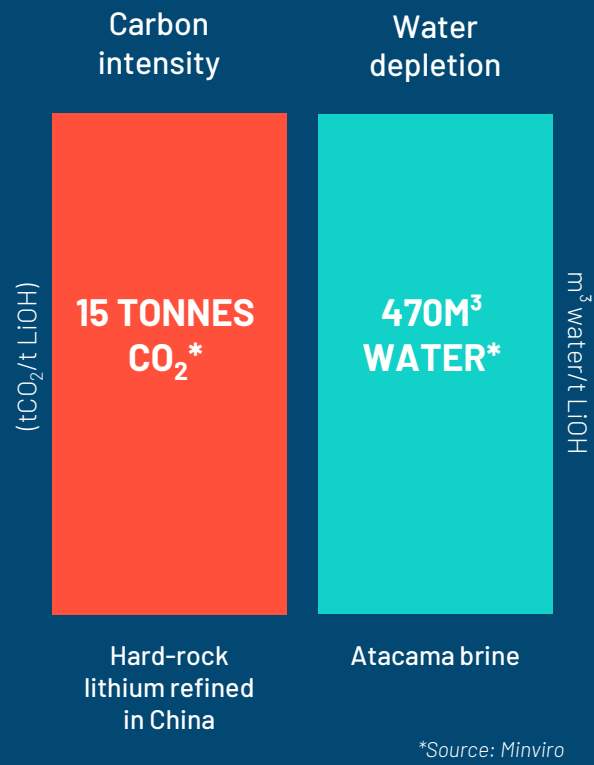
umicore

'Umicore commits to carbon neutrality for its Scope 1 and Scope 2 GHG emissions by 2035 ... Umicore pledges that its future growth, whether organic or through M&A, will be entirely carbon neutral'.

LG Energy Solution

'LG Energy Solution commits to be 100 percent carbon neutral by 2030. LG will set an example in cutting carbon emissions through battery production and promote the expansion of EVs'.

However, current lithium production has a significant environmental footprint:



*Source: Minviro

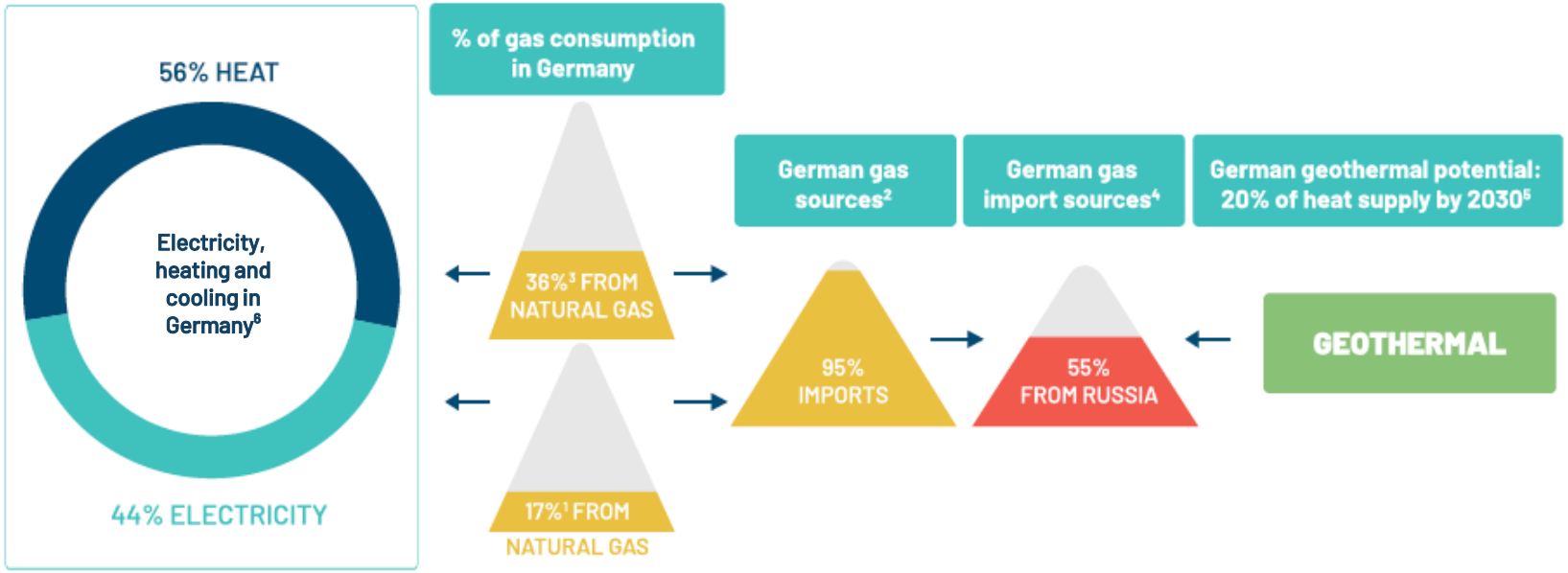
ZERO CARBON LITHIUM™ PROJECT

APPENDIX 11: GERMANY NEEDS RENEWABLE ENERGY ON AN EXTRAORDINARY SCALE

German Coalition Agreement includes **order to secure the goal of climate neutrality**

- Generate almost all the country's electricity from renewable sources by 2035
- Generate 50% of heat in a climate-neutral way by 2030

Geothermal energy can help fulfill this goal.



Fraunhofer geothermal roadmap[7]

- Installation of 70GWh of capacity, deep geothermal energy could cover more than a quarter of Germany's annual heat requirements
- Mobilisation of government assistance and the national economy, to enable the drilling of deep 2,000 geothermal wells by 2030, and at least 7,000 to 10,000 more by 2050
- Billion-Euro federal level funding to support the development

Federal Funding for Efficient Heating Networks

- Targeting investment to increase the share of renewable and climate-neutral heat sources in the heating networks to 25% by 2025 and 30% by 2030

Note 1: https://www.iea.org/countries/germany
Note 2: https://www.cleanenergywire.org/factsheets/germanys-dependence-imported-fossil-fuels#:~:text=Germany%20%2D%20GAS,imports%2C%20according%20to%20the%20BGR.
Note 3: https://iea.blob.core.windows.net/assets/60434f12-7891-4469-b3e4-1e82ff898212/Germany_2020_Energy_Policy_Review.pdf
Note 4: https://www.economist.com/europe/2022/01/29/how-will-europe-cope-if-russia-cuts-off-its-gas?gclid=Cj0KCQiAmpyRBhC-ARIsABs2EArS9KC3GxzZtyIdzOtrnOVJQS6W2LviP1EVXk6IrunwxMQ40avYzHoaAI6MEALw_wcB&gclsrc=aw.ds
Note 5: Klimaneutrale Wärme aus Geothermie 2030 / 2050 - Mai 2021 - Bundesverband Geothermie e. V. | www.geothermie.de.
Note 6: https://heatroadmap.eu/wp-content/uploads/2018/09/HRE4-Country_presentation-Germany-1.pdf
Note 7: Roadmap deep geothermal energy for Germany – recommendations for action for politics, business and science for a successful heat transition.

APPENDIX 12: EUROPEAN MACRO POLICY TAILWINDS IN VULCAN'S FAVOUR

European Commission President, Ursula von der Leyen

"Lithium and rare earths will soon be more important than oil and gas. Our demand for rare earths alone will increase fivefold by 2030. [...] We must avoid becoming dependent again, as we did with oil and gas. [...] We will identify strategic projects all along the supply chain, from extraction to refining, from processing to recycling. And we will build up strategic reserves where supply is at risk. This is why today I am announcing a European Critical Raw Materials Act."

Lithium production for EVs

- New EU Battery Regulation
- Carbon Border Adjustment Mechanism
- Battery Passport
- ISO/TC 333 Lithium
- European Battery Alliance
- Critical Raw Materials List
- EIB new energy lending policy
- European Raw Materials Alliance

EU Commissioner Thierry Breton

"It is therefore high time to act. It is time to enshrine in legislation which raw materials are critical or strategic for Europe. This list will be our compass and will provide a stable, agile and predictable legal framework in order - for example - to identify projects, facilitate investments, guide our international partnerships and direct the innovation agenda. This includes mining in Europe."

European Commission, Vice-President Maroš Šefčovič

"As a global power, we should not shy away from the responsibility to lead by example and start developing domestic projects according to the highest sustainability standards, including environmental, social and governance performance. This is especially true as Europe holds reserves of critical raw materials, that could be extracted and processed sustainably and in full respect of relevant standards."

https://www.ieg.fraunhofer.de/content/dam/ieg/documents/Roadmap%20Tiefe%20Geothermie%20in%20Deutschland%20FhG%20HGF%2002022022.pdf

APPENDIX 13: WORKING HARD TO DE-RISK THE PROJECT FURTHER AND ADDRESS ALL IDENTIFIED RISKS

Risk		Mitigation
Availability of key equipment	Drill rigs that can reach the deep geothermal reservoirs are in short supply in Germany. With Germany phasing out fossil fuels, rigs will likely be in short supply as there is a sharp increase in geothermal project development for heating.	Vulcan has agreed to acquire two electric drill rigs, re-purposed from the oil and gas industry, which can reach the target depths required to reach the deep geothermal reservoir in the Upper Rhine Valley. Vulcan is developing its own in-house drilling unit, VERCANA, which will provide approximately 30 jobs locally. This will be a strategic asset, as decarbonisation efforts in Germany and Europe continue to accelerate, and demand for renewable heat increases.
Brine flow rates	The amount of renewable energy and lithium that can be extracted will depend on the brine flow rate achieved at each site. The flow rate from each well will be verified once the well has been drilled.	Vulcan uses modern geothermal industry best practice by incorporating 3D seismic data and analysis into its geological modelling to target high-flow fault zones, and factors in state-of-the-art techniques to increase flow, such as double completion of wells and multi-reservoir completion, using the experience of its technical team.
Resources/ Reserves	Lithium resources and reserves indicated must be considered as estimates only until such reserves are actually extracted and processed. Vulcan's resources are based on limited data points because the reservoir is deep.	Vulcan utilises the considerable local geological expertise of its team, as well as state-of-the-art 3D seismic data, to construct the most accurate models it can. Vulcan reports on its estimates of Mineral Resources and Ore Reserves in compliance with the JORC Code, the ASX Listing Rules and applicable regulation. Vulcan's resource estimates and reserves are signed off by independent external consultants APEX Geoscience Ltd. and GLJ Ltd. respectively.
Sorption	Lithium extraction from brine using sorption is used commercially, but each brine chemistry is different, and risks remain when adapting to each brine.	We are testing multiple alumina-based sorbents at our pilot plant to find the best fit. Similar approaches are used at multiple locations around the world with existing lithium production. This and other types of similar DLE techniques are being used in numerous new lithium developments worldwide. We are adapting this technology to fit with our geothermal brine, in collaboration with companies such as Dupont, and with the experience of our team. Critically, we are testing on "live" geothermal brine, which so far has produced encouraging results.
Permitting	The project may be affected by delays in receiving the necessary approvals from all relevant authorities and parties.	We will continue to keep our stakeholders updated on the timetable, and if anything changes, we will inform the market. We have a team of experts in geothermal development who have developed numerous projects in the past. We have received encouragement from state and federal governments that renewable energy project permitting times will be reduced as a priority, and domestic production of strategic raw materials will also be prioritised.
Social acceptance	As with virtually any sort of new development especially for infrastructure projects, we expect some opposition - as has and has been seen with wind and solar in Germany.	This is normal and we will work to address these concerns. Vulcan has an experienced public relations team. We use geothermal industry best practice, and we are commencing community engagement in the various areas where we intend to develop projects. We think that by clearly and transparently explaining our process to develop renewable heat and power, combined with sustainable lithium extraction, we will achieve stakeholder acceptance.

Note1 : A comprehensive list of risks is flagged in the PFS under "Project Risks and Opportunities" and in the Risk Factors section of our presentation from September 2021 and in the Prospectus released on the ASX on 14 February 2022.
Refer to Appendix 5: Project development timeline: example for one project area; Appendix 6: Brine flow rates