



SUSTAINABILITY REPORT

FY
22

CONTENTS

About This Report	01	Social.....	30
Audit, Risk, Esg Committee Chair Message	02	Health, Safety and Wellbeing	30
Sustainability Highlights	04	Diversity, Equity and Inclusion	34
About Vulcan.....	05	Talent Attraction and Retention	35
Our Circular Zero Carbon Business Model.....	06	Community Engagement	36
Our Approach to Sustainability	08	Human Rights.....	38
Sustainability Framework.....	09	Governance	43
Vulcan Values.....	10	Governance.....	44
Materiality Assessment	11	Transparency	48
Environment.....	14	Business Ethics.....	49
Climate Change and Energy	15	Innovation.....	50
Environmental Impacts	17	Value Chain	53
Governance.....	18	Digitisation and Cyber Security	54
Strategy.....	20	Appendix	56
Risk Management.....	24	Group Structure	56
Metrics and Targets.....	25	Material Topics Matrix and Definitions	57
Biodiversity.....	28	Gri Content Index	59
Circular Economy.....	29	United Nations Guiding Principles	
Water.....	29	Initial Assessment.....	66
Waste	29	TCFD Disclosures Table.....	67



ABOUT THIS REPORT

Vulcan are a team of sustainability champions, doing what we can to help green the electric vehicle value chain, decarbonise the energy grid, and pivot Europe towards a better future. We recognise that transformational change does not happen overnight, but setting bold goals, breaking down the interim steps, and staying accountable makes radical achievements possible. Transparency, reporting, and disclosure is a fundamental part of this journey. We are proud to share our inaugural, standalone Sustainability Report (Report), which captures the progress we made in FY22 and outlines our aspirations for the coming years.

This Report outlines our strategic approach to sustainability, including our management of the key environmental, social and governance (ESG) risks and opportunities facing our company and our key stakeholders.

Our Sustainability and ESG strategy has been developed with reference to industry standards including the Global Reporting Initiative Standards (GRI) and the recommendations of the Taskforce on Climate-related Financial Disclosure (TCFD). Vulcan is a signatory to the United Nations Global Compact (UNGC). In this report we outline the Company's ongoing commitment to report progress towards the principles of the UNGC. As part of this report, we present our sustainability strategy, including the objectives and sustainability targets that provide the framework for reporting on our annual progress.

Our Materiality Assessment, conducted in 2022, maps our 17 material issues to our strategic priorities and the United Nations Sustainable Development Goals (UNSDGs).

All data included in our FY22 Sustainability Report refers to Vulcan Energy Resources Limited (Vulcan) during the Financial Year 1 July 2021 to 30 June 2022 (FY22) unless stated otherwise. All references to Vulcan Energy Resources, Vulcan, the Company, Vulcan Group or the Group, as well as 'we, us and our' are in reference to Vulcan Energy Resources Limited and its subsidiaries. See Group Structure in the [appendix](#) of this report for an overview of the Vulcan Group's subsidiaries¹.

This report should be read in conjunction with Vulcan's Annual Reporting Suite which includes our FY22 Annual Report, FY22 Group Management Report (Konzernlagebericht) and our FY22 Corporate Governance Statement. Vulcan's reporting suite is available on our website at <https://v-er.eu>.

The Materiality Assessment and structure of this report, which is in accordance with the GRI Standards has been achieved with the assistance of global consultancy firm ERM. The TCFD component has been completed with the assistance of consultancy firm, Baringa. The sustainability data provided in this report has not been externally assured. For any questions about our FY22 Sustainability Report, please contact info@v-er.eu.

¹ Although Vulcan Group retains an approximate 25% share of Kuniko Ltd, our sustainability reporting does not include this entity.

AUDIT, RISK, ESG COMMITTEE CHAIR MESSAGE

VULCAN IS A COMPANY OF OUR GREEN AGE, DEVELOPING SOLUTIONS TO THE DECARBONISATION OF OUR ECONOMY WITH THE GENERATION OF RENEWABLE ELECTRICITY THROUGH A GEOTHERMAL BRINE RESOURCE AND THE PRODUCTION OF A CRITICAL RAW INGREDIENT, LITHIUM HYDROXIDE MONOHYDRATE, FOR THE ELECTRIC VEHICLE MARKET.

FY22 PERFORMANCE SUMMARY

Ours is a unique story and I am proud to share this FY22 Sustainability Report with you. Following the release of our Sustainability and ESG Framework in June 2022, we present to you in the following pages all the actions that have been taken to date by our team to embed sustainability into everything we do and stand for.

The FY22 Sustainability Report should be read in conjunction with the Annual Report, the Management Report and the Corporate Governance Statement, which have been released at the same time to provide investors with material information across both financial and non financial data.

We continue to build out our ESG initiatives as we also scale up our ambitious Zero Carbon Lithium™ Project and are committed to continually expanding our sustainability performance for the benefit of our shareholders, employees, stakeholders and the communities in which we operate.



JOSEPHINE BUSH

Independent Non-Executive Director

Although we are only a few years into our journey, I am proud to share that we have already made a lot of progress, no small feat for a company who are growing at an exponential rate whilst scaling up to production on a commercial scale. This year showcases our first standalone report, referenced to the GRI Standards and backed by our first Materiality Assessment where we interviewed key internal and external stakeholders to inform our focus and ensure we are addressing prioritised sustainability topics. Transparency and authenticity of our ESG aspirations are critical as we work to deliver a prosperous business, one in which shareholder value is linked with positive climate impacts, without compromising the needs of future generations.

We are building a collaborative, multidisciplinary team, many of whom have come together from legacy oil and gas, as part of the Just Transition to turn their knowledge towards tackling climate change. During the year, two new Non-Executive Directors joined our Board, complementing the skillset and knowledge of our Directors. FY22 also saw Vulcan acquire our first geothermal, renewable energy plant, Natür³Lich Insheim, a key milestone towards executing on our project. Given the current geopolitical events in Europe, this is an important asset to assist Germany's pivot away from reliance on energy imports.

We are also pleased to announce that we have certified our businesses in Australia and Germany as carbon neutral for the calendar year 2021, a target that was highlighted in our FY21 Annual Report.

Looking ahead, we are in a process of continuous improvement and are focused on integrating ESG further in the coming years. Delivering on our targets will include expanded Taskforce for Climate-Related Financial Disclosures (TCFD), pilot testing the Taskforce for Nature-Related Financial Disclosures as part of our Forum membership (TNFD) and publishing our first Communication on Progress as part of our UN Global Compact membership.

On behalf of the Board, I welcome your feedback and as the Chair of the Audit, Risk and ESG Committee, I want to thank the Vulcan team for their commitment and hard work towards delivering the Zero Carbon Lithium™ Project. They are an example of a much needed, dynamic, forward-thinking team; passionate about the environment and focused on delivering value to Vulcan shareholders.

Josephine Bush

Chair Audit, Risk and ESG Committee



SUSTAINABILITY HIGHLIGHTS



Certified Carbon Neutral
International Organisation
from 2021



129 FTE Vulcan team
members up from 9 in 2021



ESG linked KPI's including
individual and shared targets



5 Binding Lithium Offtakes and 1
Binding Renewable Heat Purchase
Agreement



Gender balanced majority
Independent Board of Directors



UNGC member
(since February 2022)



Supporting the Just Transition by
employing a number of ex-Oil and
Gas industry experts



Beneficiary of first upstream
investment in a lithium company by
top tier automaker, Stellantis



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



Between January and June
2022, 5kT CO₂ was avoided from
renewable energy generated at
Natur³Lich Insheim



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



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



ABOUT VULCAN

FOUNDED IN 2018, VULCAN ENERGY RESOURCES AIMS TO SUPPORT DECARBONISATION EFFORTS, NOT JUST IN THE TRANSITION TO ELECTRIC MOBILITY THROUGH OUR WORLD-FIRST ZERO CARBON LITHIUM™ PROJECT FOR ELECTRIC VEHICLE BATTERIES, BUT ALSO WITH OUR RENEWABLE ENERGY AND HEAT BUSINESS.

Whilst Vulcan will use zero fossil fuels to power its process, the Company recognises that across any industrial plant development it is impossible to truly have zero greenhouse gas (GHG) emissions, especially during construction. Vulcan's strategy is to be as close to "real zero" GHG emissions as possible, whilst using the Company's excess renewable energy generation to ensure its net zero carbon position is always maintained. Vulcan therefore defines "Zero Carbon" as being net zero greenhouse gas emissions across all Vulcan's operations for Scopes 1, 2 and 3. This includes a net offset effect by being a net producer of renewable energy, and decarbonising the German energy grid. It also includes a commitment to use zero fossil fuels to power the lithium production process, i.e. to use only renewable energy. Net zero carbon also means that Vulcan will continue working to mitigate, reduce and offset emissions across all other aspects of the business including value chain and employee specific.

By adapting existing technologies to efficiently extract lithium from geothermal brine, our aim is to deliver a local source of sustainable lithium for Europe, built around a "net zero carbon" strategy with a strict exclusion of fossil fuels from process development flowsheets. We are already an operational renewable energy producer and are committed to providing renewable electricity and heat to local communities.

Our combined geothermal energy and lithium resource is the largest in Europe, with licensed areas in the Upper Rhine Valley (Germany) and in Italy as well as offices in Perth (Western Australia), Karlsruhe and Augsburg (Germany). Strategically placed in the heart of the European electric vehicle market to decarbonise the supply chain, we are rapidly advancing the Zero Carbon Lithium™ Project to ensure timely market entry. Crucially, we have the ability to expand to meet the unprecedented lithium demand that is building in the European markets, as well as the ability to grow our baseload renewable heat and power production to meet Europe's needs at a time of energy and climate crisis in Europe.

Guided by our Values of *Integrity, Leadership, Future-focused* and *Sustainability*, and united by a passion for environmentalism and leveraging scientific solutions, Vulcan has a world-class scientific and commercial team in the fields of lithium chemicals and geothermal renewable energy. We partner with organisations who share our decarbonisation ambitions and have binding lithium offtake agreements with some of the largest cathode, battery and automakers in the world.

Our Circular Zero Carbon Business Model

Vulcan's ambitious, circular net zero carbon business model is designed to work in harmony with the environment and the community, providing interdependent opportunities and positive impacts, aligned with the United Nations Sustainable Development Goals (UNSDGs). We aim to create prosperity for local communities whilst having a net positive impact on nature.

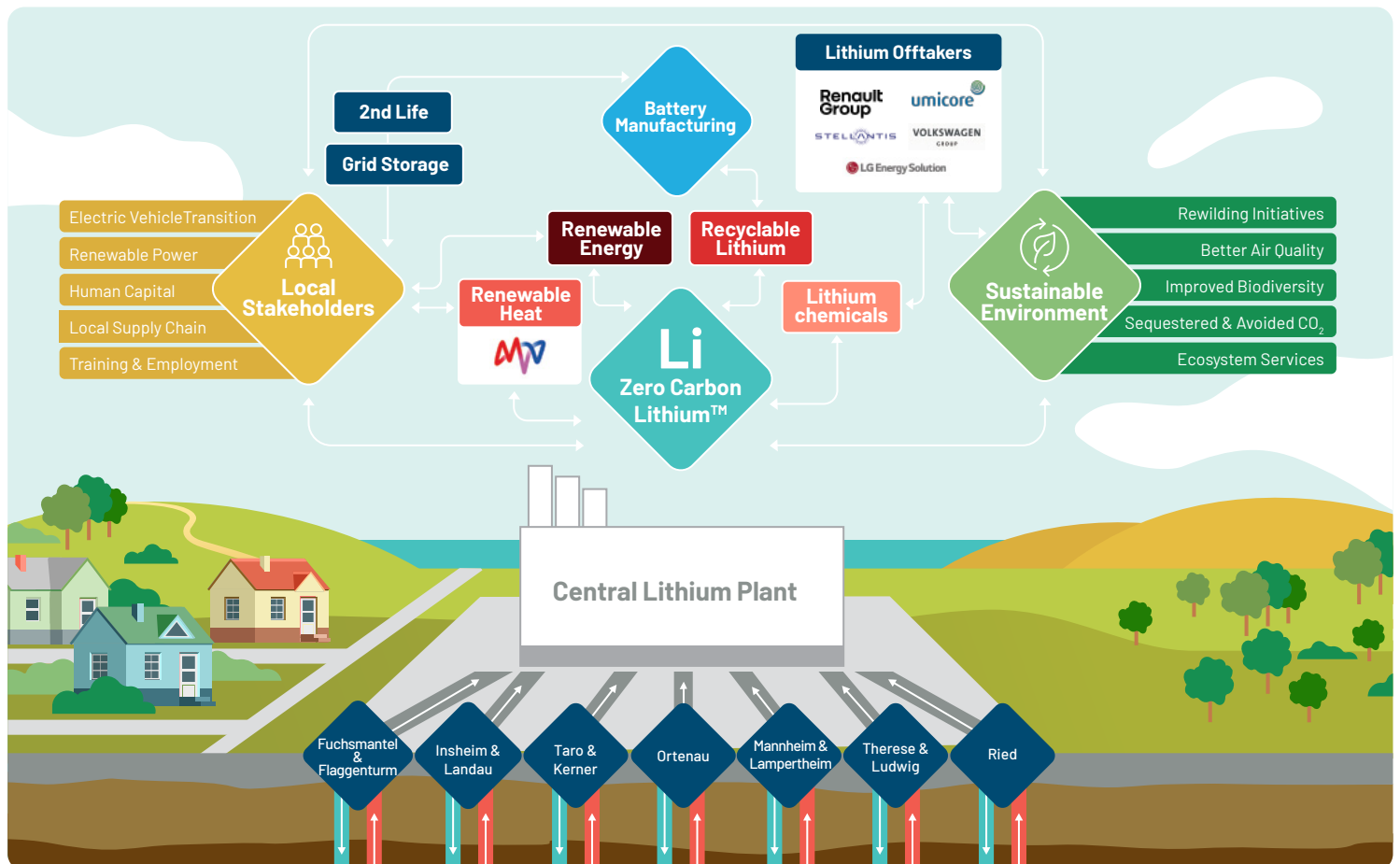
Our assets and technologies harness renewable geothermal energy to produce the world's most sustainably extracted lithium, local energy and heat.

EXPLORATION AND DEVELOPMENT

We have the largest lithium resource, compliant with the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves ("the JORC Code"), in Europe and we continue to expand our license footprint in the Upper Rhine Valley Brine Field (URVBF) in response to customer demand.

Vulcan's granted license area covers 1,465.38 km². This area has strategically expanded over the last 12 months, following the grant and acquisition of an additional eight exploration licenses and one production license in FY22.

Ultimately, our Zero Carbon Lithium™ Project will be based on a "hub and spoke" model. Multiple geothermal lithium projects across Vulcan's license areas in the URVBF will feed lithium chloride concentrate to our lithium hydroxide plant, planned for the Höchst chemical park outside Frankfurt. This will enable us to scale-up production as Europe's demand for sustainable lithium grows.



We are also looking at medium to longer-term opportunities on the French side of the Upper Rhine Valley, by growing and diversifying our project development portfolio – an initiative internally called “Project Rollo”

Vulcan also have our own, in-house drilling company, Vercana which we established following the acquisition of two electric drill rigs in 2021. The rigs can drill to the target depth required for deep geothermal energy wells. Headquartered in Karlsruhe, Germany, Vercana and its operations will create approximately 60 regional jobs.

RENEWABLE ENERGY AND GEOTHERMAL DIVISION

Geothermal, renewable energy is the nexus of the Zero Carbon Lithium™ Project. Our project will draw on naturally occurring, renewable geothermal energy to power the lithium extraction process and create a renewable energy by-product. This process uses no fossil fuels, requires very little water and has a small land footprint.

During FY22, Vulcan acquired an operational geothermal renewable energy power plant in the core of the producing URVBF at Insheim. A new German subsidiary of Vulcan, Natür³Lich Insheim, based in Karlsruhe, became the owner and operator of the Insheim Plant.

As an operating geothermal renewable energy plant, Natür³Lich Insheim is a key asset for Vulcan, generating €3.0 million in revenue since its acquisition in December 2021. Over the last six months, the power plant produced approximately 11,679,652 kWh of renewable electricity into the grid, supplying 6,500 households with power.

LITHIUM DIVISION

Vulcan's lithium division is focused on refining the process of our planned lithium production flowsheet to ensure it has a net zero carbon footprint. Our in-house laboratory has state-of-the-art equipment, including full in-house inductively coupled plasma optical emission spectrometry (ICP-OES) and Ion chromatography (IC) analytical capability.

We have been successfully operating a pilot plant since April 2021. The pilot plant was designed to use ‘live’ geothermal brine, which enables the team to demonstrate pre-treatment and sorption-type Direct Lithium Extraction (DLE) processes, while generating data needed for de-risking the lithium extraction process.

Our planned Central Lithium Plant (CLP) is a cornerstone of Vulcan's lithium development plans. In FY22 we were able to secure a site for the CLP at the Höchst Chemical Park (Industriepark Höchst), located just outside Frankfurt. The CLP is intended as the hub to process lithium chloride from multiple combined geothermal and lithium sorption plants into lithium hydroxide monohydrate (LiOH) suitable for batteries. Importantly, the location allows for low carbon transport options from Vulcan's nearby project areas, as well as being strategically placed for our offtakers.

More information about our Zero Carbon Lithium™ Project, including FY22 milestones can be found in our FY22 Annual Report on our website <https://v-er.eu>.



OUR APPROACH TO SUSTAINABILITY

Our Sustainability and ESG Framework helps us deliver on our strategic priorities. It is at the heart of everything we do. Our purpose is to empower a net zero carbon future.

Executing on this via our strategy to be global leaders in the production of zero fossil fuel, carbon neutral lithium whilst being nature positive means we will utilise our team, innovative technology and strategic position within the European supply chain.



As we grow, we will continue to embed our Sustainability and ESG Framework into our organisation by further definition of roles, responsibilities, and accountabilities, as well as targets setting and reporting on our performance and progress.

Sustainability and ESG Framework

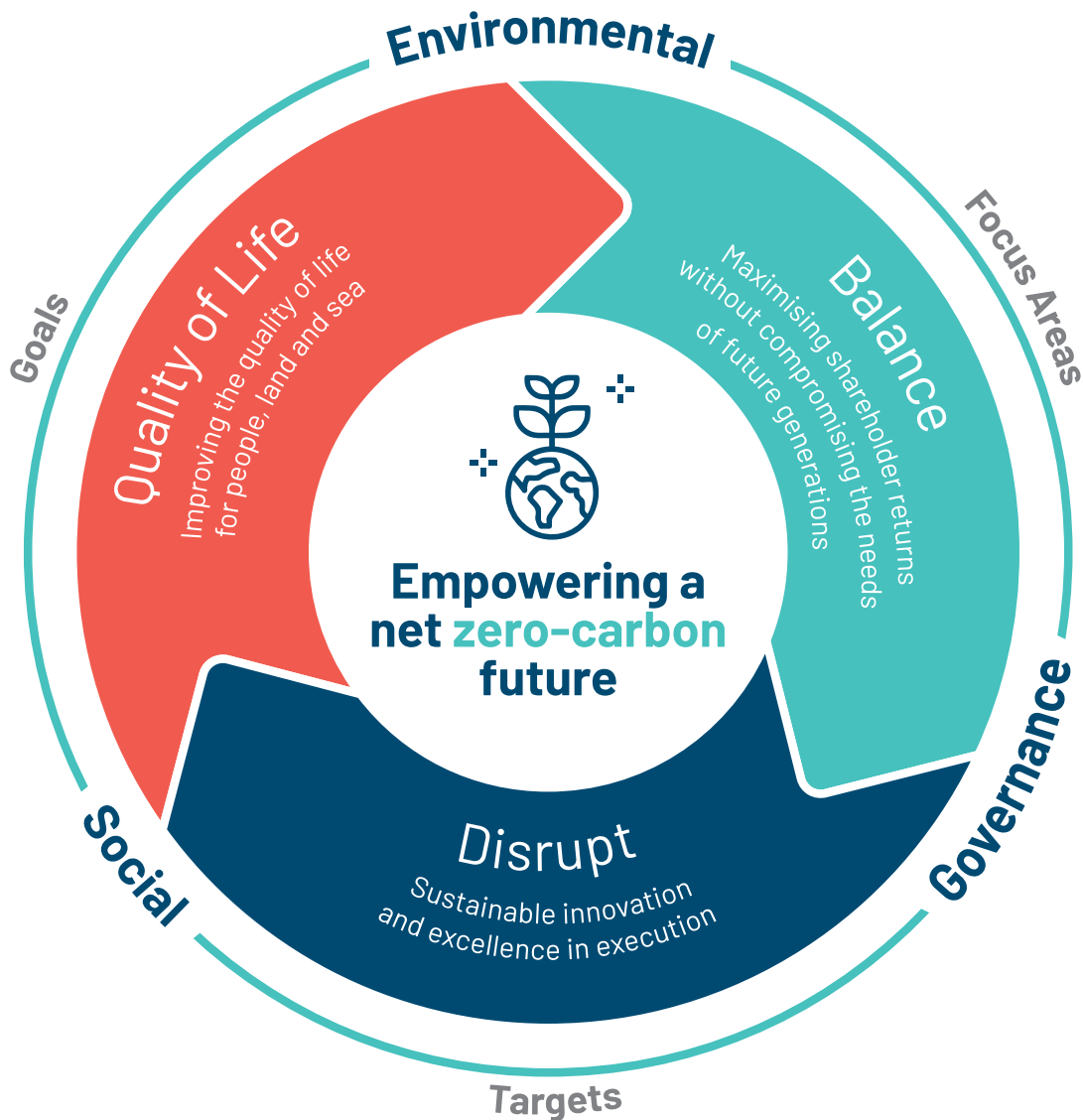
Woven through our Sustainability and ESG Framework and informing every level of our business model, the Vulcan Compass guides our sustainable decision making – binding our purpose, mission, strategy, and values together via three key themes.

Quality of Life: *improving the quality of life for people, land and sea*

Balance: *maximising shareholder returns without compromising the needs of future generations; and*

Positive Disruption: *sustainable innovation and excellence in execution*

These themes are supported by ESG initiatives that deliver our Sustainability and ESG Framework and objectives.



Vulcan Values

During the year, the team discussed and agreed on a common set of Vulcan Values. Given we are still in the early stages of our journey as a business, it was an important opportunity for team members to talk about what values were important and take ownership for the type of company they want Vulcan to be.

Discussions and workshops were held in Australia and Germany, with the team deciding on the following values:



INTEGRITY

Integrity – because we are respectful, authentic and trustworthy, to each other and to external groups. We collaborate with our stakeholders and build long-term relationships based on trust and mutual benefit.



LEADERSHIP

Leadership – because every employee at Vulcan has their own important part to play in the success of the company. We have come together from around the world, as leaders striving for excellence.



FUTURE-FOCUSED

Future-focused – because we are working for a better future. We are innovative, disruptive and think outside the box to find solutions.



SUSTAINABILITY

Sustainability – because a net zero carbon future means living and acting in a way that is environmentally friendly and has a positive impact on future generations, today. Sustainability is the bedrock of what we stand for.

MATERIALITY ASSESSMENT

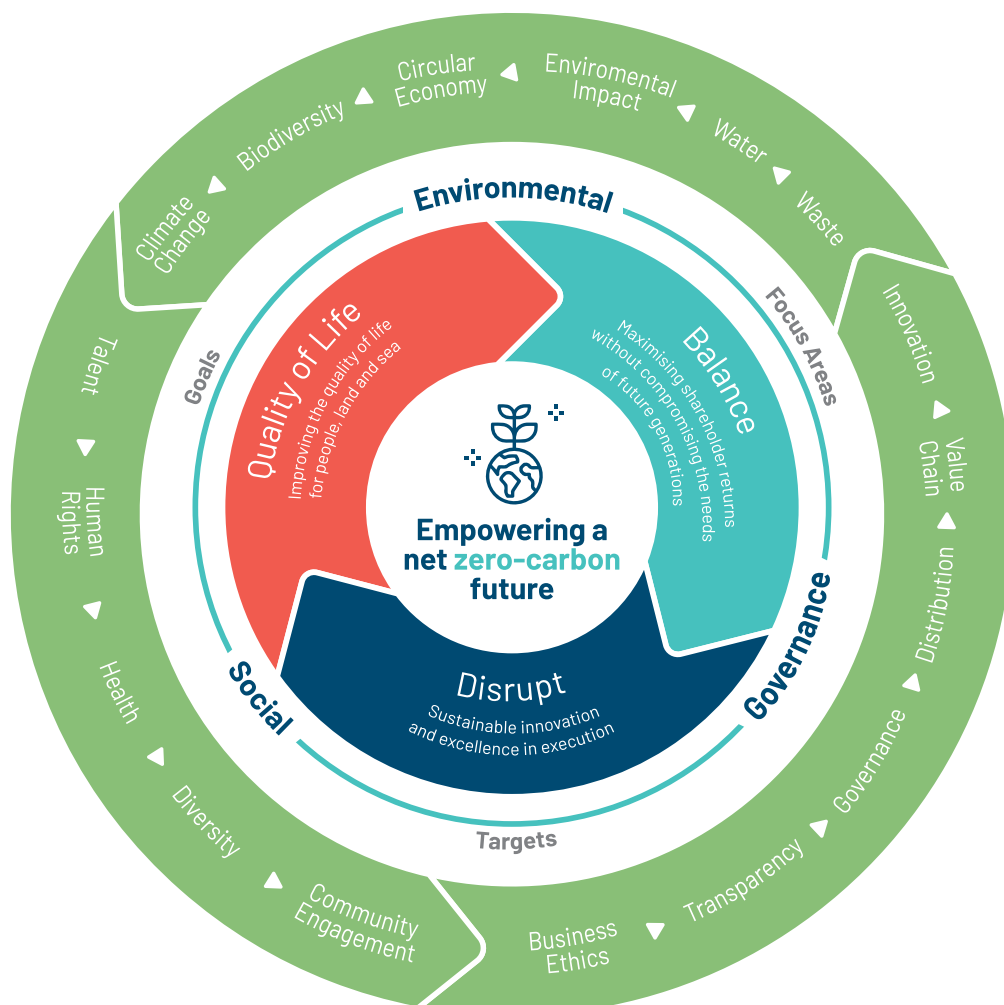


In line with international good practice, Vulcan completed a Materiality Assessment in 2022 which focused on identifying the issues that have the biggest impact on our business, communities and the environment. The Materiality Assessment process was conducted in accordance with GRI Standards and involved reviewing global industry trends, benchmarking peers and leaders, as well as interviews with our key external and internal stakeholders, including Vulcan's Board of Directors, members of our leadership team and employees.

The subsequent 17 material topics align our strategy with the issues that matter most to the future success of our company, and together with our compass, guide our priorities and decision making.

Our Materiality Matrix and material topics definitions can be found in the [appendix](#) of this report.

We have aligned Vulcan's approach to sustainability with the United Nations SDGs including linking them with our material topics and informing our targets. We have prioritised ten of the 17 SDGs where we can have the greatest impact.





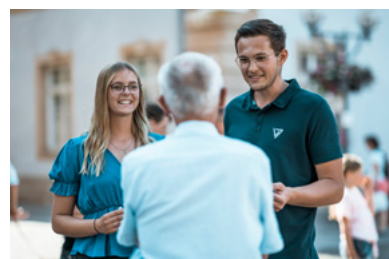
Environment

Biodiversity
Climate change and energy
Circular economy
Environmental impact
Waste
Water



Social

Community engagement
Diversity, equity and inclusion
Health, safety and wellbeing
Human rights
Talent attraction and retention



Governance

Business ethics
Digitisation and cyber security
Governance
Innovation
Value chain
Transparency



Stakeholder Engagement

At Vulcan, we collaborate with our stakeholders and build long-term relationships based on our Value of *Integrity*.

As a forward-thinker, we are excited to partner with stakeholders who share our decarbonisation and electrification ambitions. We are strategically working with industry leaders to innovate and adapt traditional forms of lithium extraction to realise our purpose.

As our world responds to the global climate change challenge, we believe we are in a unique position to influence policy, including governments' approach to critical raw materials and supply chain security for the electric battery value chain in Europe. We will continue to work with governments to advocate for policies that support a net zero carbon future.

Underpinning our stakeholder engagement efforts is our steadfast commitment to have a positive social impact in the communities in which we operate. We are actively engaging with our local communities in order to minimise negative impacts and maximise mutually beneficial outcomes.

We believe in the importance of engaging directly with our stakeholders to understand their priorities. We use a variety of engagement tools to solicit feedback including, roadshows, permanent information centres, virtual workshops, face-to-face meetings, and surveys. In the table on page 13, we map our material issues to the core concerns of our key stakeholders.

Stakeholder group	How we engaged	Related material topics	Sustainable Development Goals	Page
Employees	Annual "SommerFest" Quarterly team town halls Surveys Direct engagement Email	Climate change and energy Environmental impact Community engagement Diversity, equity and inclusion Health, safety and wellbeing Business ethics Governance Transparency	        	33
Community Local communities in the regions in which Vulcan operates	Direct engagement Phone calls Email Newsletters Media (including newspapers) Meetings Events Website Feedback Sponsorships	Biodiversity Climate change and energy Environmental impact Community engagement Health, safety and wellbeing Business ethics Governance Transparency	       	36
Customers Lithium offtakers Heat offtakers Geothermal energy offtakers	Direct engagement Email Site visits Market briefings	Climate change and energy Circular economy Environmental impact	     	15
Suppliers Range of businesses, including both local and multinational businesses	Website Emails Direct engagement	Climate change and energy Circular economy Environmental impact Human rights	      	36
Government and regulators Local, regional and national governments including Australia, Germany, Italy and the European Union	Meetings Briefings Presentations Events Working groups Forums Letters Emails Formal submissions Website Participation in industry Associations and advocacy bodies	Biodiversity Climate change and energy Environmental impact Community engagement Diversity, equity and inclusion Health, safety and wellbeing Business ethics Digitisation and cyber security Governance Transparency	        	38
Investors and financiers	Website Investor briefings Annual general meetings Emails Annual reports	Climate change and energy Environmental impact Community engagement Diversity, equity and inclusion Health, safety and wellbeing Business ethics Digitisation and cyber security Governance Transparency	        	18
Partners Decarbonisation partners Lithium-ion battery partners Electric vehicle supply chain partners	Meetings Briefings Presentations Events Working groups Forums Letters Emails Direct engagement Website	Climate change and energy Environmental impact Community engagement Health, safety and wellbeing Business ethics Governance Transparency	      	53

ENVIRONMENT

Driven by our Value of *Sustainability*, Vulcan aims to have a net positive impact on nature for the benefit of future generations. Vulcan therefore has an important role to play in Europe's decarbonisation journey.

We see ourselves as a positive disruptor, with a management approach designed to have minimal impacts on communities and the environment.

We strive for continual improvements in our approach and engage in ongoing dialogue with local stakeholders in order to manage the potential impacts of construction and operational activities on the natural environment, including water, biodiversity, land and air. We aim to minimise waste and will continue to work with sector partners to support the development of a circular electric battery value chain in Europe.

ENVIRONMENT		
Material issues	Achievements in FY22	Future outlook
      Climate change and energy Environmental impact Biodiversity Circular economy Water Waste	Became a UN Global Compact Member. Joined the TNFD Forum as a Member. Became a renewable energy producer with the acquisition of Natür³Lich Insheim. Expanded our Zero Carbon Lithium™ Project exploration license area, including a collaboration agreement with Enel Green Power in Italy. Following our Climate Active certification in 2020, we successfully mapped our organisational carbon emissions footprint for 2021 across the whole Vulcan Group and achieved carbon neutral status via a South Pole certification.	Annual focus includes: - Targeting zero negative environmental impact incidents Focus in 2022 includes: - Expand TCFD reporting - Complete initial TNFD pilot Focus for 2023 includes: - Verify carbon positive impact on surrounding environment at all Vulcan operational sites - Partner with local biodiversity projects to further enhance local climate efforts - Set GHG reductions target to SBTi's Focus for 2024 includes: - Increase renewable energy use by 50% for all office buildings - Water stewardship assessment pre-production year - Waste management assessment prior to production Focus for 2025 includes: - Verify 100% renewable energy used to power pilot plant and central lithium plant - Update LCA with live data at both DFS and production - Implement Circular CO₂ traceability for lithium product - Supply renewable heating to MVV - Extend geothermal capacity with additional plants

Climate Change and Energy

Vulcan has a important role to play in decarbonisation across our value chain, including renewable energy generation, energy use and efficiency. We are also seeking to mitigate risks to the business from climate change impacts, including supply chain resilience and impacts to infrastructure.

ZERO CARBON LITHIUM

Lithium is a key and irreplaceable component in lithium-ion batteries which are used in both electric vehicles and renewable energy storage. It is a cornerstone resource of global efforts to mitigate the effects of climate change. Europe is predicted to experience significant growth in demand for electric vehicles over the next three decades, and we anticipate demand for lithium products will increase in Europe in line with growth in electric vehicle production and sales, as well as a predicted expansion of local electric vehicle manufacturing.

For more information about the demand for lithium and Vulcan's view on the macroeconomic policy settings, read our FY22 Management Report which is available on our website at <https://v-er.eu>

RENEWABLE ENERGY

Vulcan aims to support the decarbonisation of energy supply in Europe through the provision of geothermal, renewable energy. We anticipate production of renewable energy on a mass scale will play an important part in



Ralf Theis – HR Recruiter



"THE CO₂-FREE EXTRACTION OF SUCH A VALUABLE RAW MATERIAL AS LITHIUM, HERE IN THE REGION WHERE I GREW UP, NOT ONLY IMMEDIATELY

EXCITED ME, BUT ALSO MAKES ME BELIEVE IN THE INNOVATIVENESS AND FUTURE VIABILITY OF A SUSTAINABLE GERMANY AND EUROPE."

achieving European and German energy security and independence.

During the year, we acquired an operational geothermal renewable energy power plant that was renamed Natür³Lich Insheim, based in Karlsruhe, and have already signed a 20 year agreement with MVV Energie AG (MVV) to supply renewable heat to households in Mannheim, Germany from our planned geothermal wells in the area surrounding the City of Mannheim.

Cognisant of Germany's energy and heating requirements, now and in the future, Vulcan is committed to playing a leading role in Germany's "Wärmewende", or "heat transition", as the country looks to reduce its reliance on Russian imported gas and energy.

Natür³Lich Insheim Geothermal Plant



- €3.0 million revenue since the acquisition in December 2021
- Supplied 6,500 households with power
- 4,344 operating hours
- Fed in 11,679,652 kWh
- CO₂ saving of 5,000 tonnes
- As owner operator of Natür³Lich Insheim, Vulcan employs 11 people.

We intend to build several geothermal renewable energy plants across the Upper Rhine Valley Brine Field (URVBF) region and are in discussions with other regional utilities, companies and communities regarding additional heat offtake agreements.



A strategy paper published in February 2022 by German-based Fraunhofer Society and the Helmholtz Association¹ shows that with the installation of 70 gigawatts of capacity, deep geothermal energy could cover more than a quarter of Germany's annual heat requirements. The strategy paper calls for the mobilisation of government assistance and the national economy, to enable the drilling of 2,000 deep geothermal wells by 2030, and at least 3,000 more by 2050, dwarfing the 42 geothermal plants currently in operation. The report also calls for billion-Euro levels of federal funding to support the development noting that, with the rising cost of CO₂, geothermal heating is increasingly competitive compared to expensive, imported natural gas.

² Roadmap deep geothermal energy for Germany - recommendations for action for politics, business and science for a successful heat transition. <https://www.ieg.fraunhofer.de/content/dam/ieg/documents/Roadmap%20Tiefe%20Geothermie%20in%20Deutschland%20FHG%20HGF%2002022022.pdf>

CARBON NEUTRAL CERTIFICATIONS

CLIMATE ACTIVE

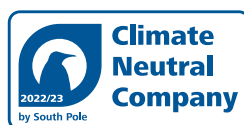
Vulcan's Australian organisation, comprised of a team based in Perth, Western Australia, has been certified as carbon neutral by Climate Active since 2020. Climate

Active certification is awarded to businesses and organisations that have credibly achieved a state of net zero emissions. It is an ongoing partnership between the Australian Government and Australian businesses to drive voluntary climate action. We are proud to participate in a network of over 350 businesses who have collectively offset over 30 million tonnes of carbon to date.

SOUTH POLE

To complement the Australian carbon neutral certification, we engaged South Pole to undertake a similar, credibly verified certification for Vulcan's German subsidiary companies³. South Pole's climate neutral labels adhere to best-practice reporting guidance from the Science Based Targets initiative (SBTi), the Greenhouse Gas Protocol (GHG protocol) and PAS 2060; the leading international standard for demonstrating carbon neutrality.

As part of our certification process, we supported a hydropower project and biodiversity sanctuary in Indonesia via the purchase of verified carbon offset credits. Carbon neutral certification is the first step for our company to measure and track our organisational emissions footprint excluding our geothermal energy, heat and net zero carbon lithium products. We are now focused on setting emissions reductions targets to be able to track performance annually.



³ This does not include Natür³Lich Insheim as acquisition occurred outside calendar year 2021, this will be included in our 2022 calculations and included in our subsequent Sustainability Report.

Environmental Impacts

We believe that environmental impact modelling at each stage of development is essential for understanding and managing impacts while we scale up our project.

We work at minimising all environmental impacts, including seismic activity linked to geothermal drilling, by utilising best practices and remaining compliant with all regulations. Our approach enables us to quantify our environmental impacts, understand their drivers, and make decisions about our supply chains and energy use to minimise future impacts.

ENVIRONMENTAL MANAGEMENT POLICY

Our Environmental Management Policy will continue to be developed and assessed as we advance operations. An Environmental Management Policy outlines our commitment to have a positive input in the communities and environments in which we operate. Accordingly, we strive to understand all environmental aspects associated with our operations and identify and implement measures to mitigate related impacts to the extent possible whilst remaining economically viable.

Full information on our Environmental Management Policy is available via our website at <https://v-er.eu>

ENVIRONMENTAL MANAGEMENT SYSTEM (EMS)

As the holding company for our German operating entities, Vulcan Energie Ressourcen GmbH received ISO 14001:2015 Environmental Management System (EMS) and ISO 9001 Quality Management System (QMS) certification in September 2022, outside the FY22 reporting period. ISO 14001:2015 specifies the requirements for an environmental management system in line with an environmental management policy to manage company sustainability, achievement of our environmental objectives and fulfilment of our compliance obligations. ISO 9001 works in tandem with ISO 14001:2015 to increase productivity, efficiency, and accountability within our organisational processes. Certification to these standards is international good practice and will help ensure the systems in place are robust.

Certification is conducted by Bureau Veritas Germany, a world leader in audit and certification services. Successful implementation within Vulcan Energie Ressourcen GmbH will mean that the ISO certification will be rolled out to the rest of the Vulcan companies over the coming years, starting with Natür³Lich Insheim.





TASKFORCE ON CLIMATE-RELATED FINANCIAL DISCLOSURES (TCFD)

The Financial Stability Board established the Taskforce on Climate-Related Financial Disclosures (TCFD) to develop recommendations for more effective climate related disclosures that could promote more informed investment, credit, and insurance underwriting decisions and, in turn, enable stakeholders to better understand the concentrations of carbon-related assets in the financial sector and the financial system's exposures to climate-related risks. Vulcan are committed to reporting to the TCFD, noting that we are not at full commercial production currently and are in the early stages of our company growth strategy.

Governance

BOARDS OVERSIGHT OF CLIMATE-RELATED RISKS AND OPPORTUNITIES

Vulcan's Board of Directors monitor and oversee the Company's strategy, project execution, enterprise risk management and reviews climate-related risks and opportunities including acute and chronic physical and transitional impacts. The Board convenes 10 times in FY22 and Leadership regularly provides updates at Board meetings regarding actual and potential climate-related risks and opportunities impacts on strategy and financial planning.

We continue to work to ensure that the Board and Leadership team have the requisite skills and experience to evaluate climate risks and opportunities.

During the year, the Board invited an ESG Fund manager to present on changing investor expectations and the Board are advised on transitional risks associated with policy and regulation by independent advisor Julia Poliscanova, a Senior Director with the European Union's Transport and Environment and Global Battery Alliance Board member. Ms. Poliscanova has been instrumental in shaping policies around electric vehicle CO₂ standards and sustainable batteries. See our Board Skills Matrix on page 45 for details on the sustainability credentials of our Non-Executive Directors (NEDs).

The Board's Audit, Risk and ESG Committee, chaired by former EY Senior Partner in Renewables and ESG Strategic Advisor Josephine Bush, specifically addresses management and disclosure of business, ESG and economic risks. The Committee meets quarterly and is comprised of the Board Chair, Gavin Rezos and Dr. Heidi Grön. This committee receives updates from the Company's ESG Lead on climate related projects and initiatives and Vulcan's two Chief Financial Officers (CFO) on enterprise risk management, including a risk matrix assessment, monitoring, and forecasting.

On 1 July 2022 the Committee received the first, fully integrated enterprise wide internal briefing on the key risks to the business including transition and physical climate risks.

The Projects Oversight Committee – newly formed in 2022 – provides more detailed advisory capacity and oversight of project specific management, including the Company's corporate governance framework and risk management including environmental, health and safety. Chaired by Board Non-Executive Director, Mark Skelton, who has extensive experience as Project Director for BP and Fortescue, other committee members are Dr. Günter Hilken and Dr. Heidi Grön.

MANAGEMENT'S ROLE ON CLIMATE-RELATED RISKS AND OPPORTUNITIES

Climate-related responsibilities have been clearly defined and delegated across the executive team to ensure accountability, measurement and risk mitigation.

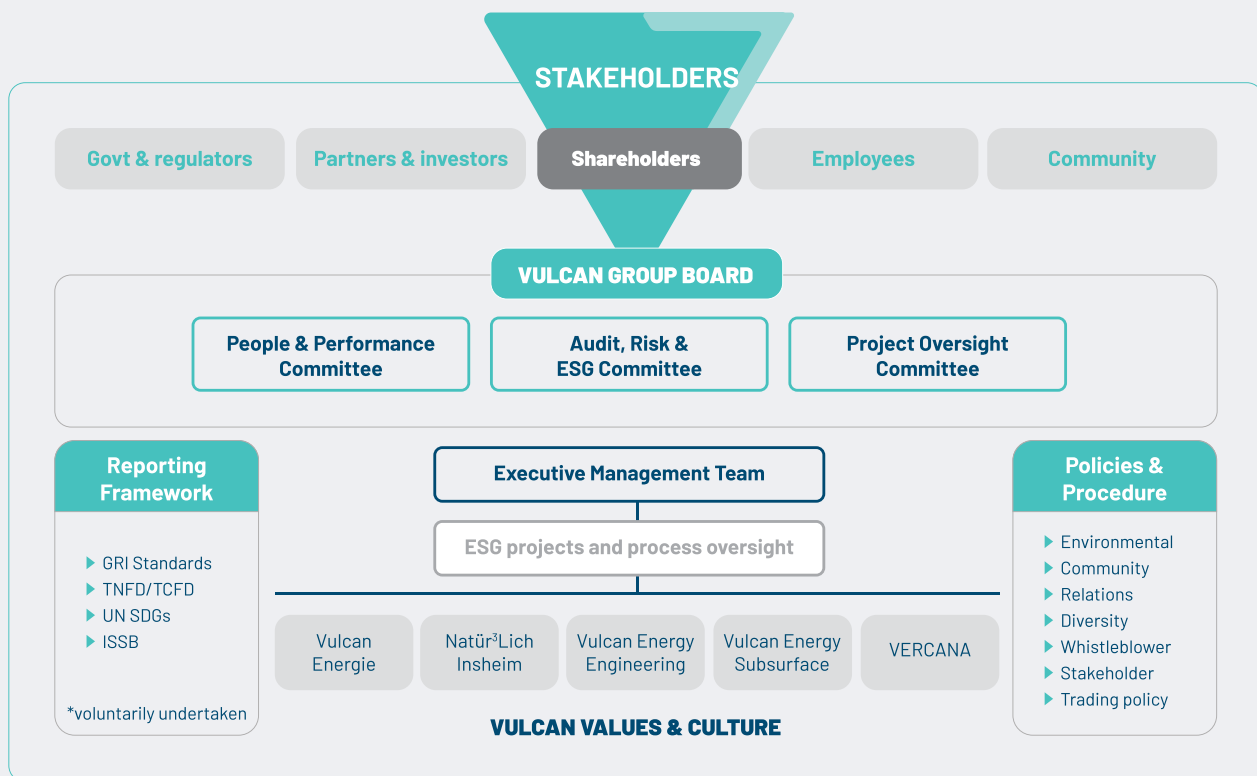
Our ESG Lead, who reports jointly to the Chief Executive Officer (CEO) and the German CFO, leads our sustainability strategy and implementation. Although climate-related positive impacts are integral to our strategy, creation of this position allowed a more nuanced focus on sustainability management. The ESG Lead was fundamental in formulating our Purpose, Mission, Strategy and Vulcan Values and co-ordinated the release of our Sustainability and ESG Framework in June 2022. Other achievements include the Company's international carbon neutral certification, admission into the UN Global Compact and assisting to set ESG related KPI's.

The CFOs (responsible for oversight of Australian and German compliance respectively) are also jointly responsible for enterprise risk management including assessment, categorisation and mitigation, and allocation of climate-related investments and budget. Regularly reporting to the Audit, Risk and ESG Committee, the German CFO led implementation of the Target Operating Model 360 (TOM360) review, a process that ensures Vulcan has the correct operating structure in place and correct resources to manage climate risks. A direct function of this process was allocation of a part-time risk manager and the centralisation of organisational responsibility to ensure robust management protocols.

To ensure further definition of responsibility and accountability, we introduced short and long term ESG linked incentives for our key executives as part of our commitment to embed sustainability into every part of our business and decision making. These KPI's are a mix of individualised and shared objectives, ten of which specifically address climate related incentives. Further details of these KPIs can be found in the Remuneration Report in the Annual Report on our website <https://v-er.eu>.

Formal training was undertaken by our ESG Lead during the year including the GRI Sustainability Professional Certification and the UN Global Compact's Climate Accelerator Program, due to conclude in October 2022. Management have participated in strategy workshops and external ESG consultant presentations as part of our continued focus on training and education.

CORPORATE GOVERNANCE FRAMEWORK



Taking into account where we are in our reporting journey, we continue to utilise independent advisors where appropriate to engage with our Board and Leadership team to assist with objectives such as peer benchmarking, materiality assessment and disclosures reporting.

More information about our Leadership team and their skills can be found on our website <https://v-er.eu>.

Strategy

CLIMATE-RELATED RISKS AND OPPORTUNITIES IDENTIFIED IN THE SHORT, MEDIUM AND LONG TERM

Taking into consideration the Zero Carbon Lithium™ Project business case has been based on a thirty year project, asset and infrastructure life, Vulcan will treat short term

risk as being current up to 2025 (when we expect to enter full production), medium term risks up to 2040 (defined as the first half of the Zero Carbon Lithium Project's currently modelled life), and long term risks up to 2054 (defined as the second half of the Project's modelled life). This follows the timeframes set in the FY21 Annual Report TCFD section.

Via our enterprise risk management review, conducted in Q2 of 2022, we identified 20 climate-related risks. From this process, we also prioritised our key risks and opportunities and assigned a significance category to each. Given our progress to date, we consider short term risks to be of the highest priority, as we consider how the pandemic disrupted raw materials' supply chains and geopolitical tensions affected political agendas.



KEY CLIMATE-RELATED RISKS IDENTIFIED

Time Horizon	Risk Type	Classification	Risk Description	Mitigation Strategies	Magnitude of Financial Impact
Short	Transition	Market	Increased cost of raw materials resulting in project budget increase and delays in construction	- Budget forecasting and analysis is undertaken on a regular basis and the leadership team and Board are updated accordingly - The team have signed long term supply contracts with suppliers to assist with costs management and timeline alignment	Significant (€2M – €5M)
	Transition	Technology	Unsuccessful investment in new technologies resulting in further R&D requirements	- Although Sorption-type DLE has not been brought to commercial production levels previously, we have engaged an expert team to execute our project and are utilising technologies that have been successfully used in different applications - We have applied for patents to protect our processes and have already achieved important milestones in our project scale up	Minor (€100K – €500K)
	Transition	Policy and legal	Enhanced emissions-reporting and obligations leading to greater reporting expenditure and resource use due to dual listing	Although this will create a greater financial reporting burden, we consider this to be a low risk as we do not have legacy reporting processes to be redefined and changed. Initial uptake will be the greatest resources impact, with this decreasing over time and with experience	Insignificant (<€100K)
	Transition	Reputation	Increased stakeholder concern due to negative actions of peer companies that influence Vulcan's reputation	This is considered moderate as our ability to control this risk is low. We consider the best mitigation strategy is to keep focusing on continuous stakeholder communication via timely reporting and updates	Moderate (€500K – €2M)
Medium	Physical	Acute	Increased severity of extreme weather events such as floods and droughts that could affect operating assets	Vulcan's infrastructure and assets are not within identified 'at risk' zones, however, we will continue to forecast and monitor any potential changes	Insignificant (<€100K)
Long	Physical	Chronic	Rising mean temperatures decreases geothermal power output	We have performed analysis on geothermal energy output with consideration of rising average mean temperatures, due to the fact that ambient temperature increases affects output. We have determined that a 1 degree celsius increase would only have a measurable financial impact of around 2 – 3% after 20 years	Insignificant (<€100K)

KEY CLIMATE-RELATED OPPORTUNITIES IDENTIFIED

Time Horizon	Classification	Description	Magnitude of Financial Impact	Potential Financial Impact
Short	Markets	Supportive policy incentives including Germany's need to decrease reliance on imported gas and increase renewable energy options to decarbonise the electricity grid	High	- Increased governmental grants to support renewable energy projects - Increased revenue as geothermal energy mix in the national grid increases - A submission by researchers from the Fraunhofer Society and the Helmholtz Association shows that deep geothermal energy could cover more than a quarter of Germany's annual heat requirements⁴ - Recently, the German government has started a €2.98 billion funding program to support heating grids to be fed by renewable energies.
Medium	Products and services	Zero Carbon Lithium for electric vehicles that helps move the automotive industry away from fossil fuel reliance	Medium	- Vulcan has one of the largest lithium deposits in the world, able to supply 40 kilo tonnes of battery grade LiOH annually at full capacity - Europe is the fastest growing lithium market based on electric vehicle sales and lithium-ion battery production growth. There is no existing EU domestic lithium production - European Commission support for the uptake of electric vehicles includes a commitment to a 100% reduction in CO₂ emissions from new cars by 2035
	Reputation	Combined geothermal energy and heat and lithium producer who is local, not affected by carbon border taxes and reliable	High	New EU Battery Regulation and the Carbon Border Adjustment Mechanism will give a green premium to our lithium product, thereby making us the preferred supplier for many local OEM's including Stellantis, Volkswagen, and Renault
Long	Technology	Patented technology for Sorption-type DLE changes consumer behaviour and becomes the substitute for other production methods of Lithium	High	Executing our Zero Carbon Lithium™ Project would ensure we are at the forefront of Sorption-type DLE patented technology and would give Vulcan a first-mover advantage over competitors.

⁴ <https://www.thinkgeoenergy.com/strategic-roadmap-released-for-deep-geothermal-energy-in-germany/>.

IMPACT OF CLIMATE-RELATED RISKS AND OPPORTUNITIES ON THE ORGANISATION'S BUSINESS, STRATEGY AND FINANCIAL PLANNING

Vulcan was founded in direct response to the impact of climate-related risks and opportunities in Europe. Our dual business model as a supplier of renewable energy and a producer of sustainable lithium positions Vulcan to capitalise on these opportunities, while proactively managing risks.

The electrification of transport in Europe is the basis of our business strategy and informs all operational decisions. The region has a robust outlook in terms of

the decarbonisation of road transport in most climate scenarios, thus reducing demand risk. Already, the uptake of electric vehicles in Europe has increased from 3.5% of all new car registrations to 11% between 2019 and 2020⁵ and the European Commission is seeking to have at least 30 million electric vehicles on the roads by the end of this decade⁶. Vulcan are set to start providing battery-grade lithium at a time when electric vehicle uptake is at its most accelerated.

⁵ <https://www.eea.europa.eu/ims/new-registrations-of-electric-vehicles>

⁶ <https://www.virta.global/blog/this-is-how-eu-regulation-accelerates-the-electric-vehicle-revolution>

In order to position Vulcan as a preferred supplier of sustainable lithium, our leadership team are making conscious strategic and financial planning choices to exclude fossil fuels from our power requirements for process flowsheets and include technologies such as electrolysis which can use green power for our lithium chemicals production. Given where we are within our growth trajectory, we understand that our strategy and financial planning needs to be proactive and timely, ensuring we are constantly considering how climate-related impacts inform each stage of our development.

We are aware that our ability to create value, now and in the future, is interdependent on our ability to scale up and roll out our dual geothermal Sorption-type DLE plants, downstream lithium chemical plant alongside scaling up our geothermal energy and heat capacities within expected timeframes.

In addition to our lithium business, Vulcan intends to enable the decarbonisation of energy supply in Europe. With the dual goals of energy sovereignty and climate change mitigation in mind, in February 2022, Germany brought forward its goal of 100% renewable power to 2035; fifteen years earlier than originally planned⁷. The subsequent policy settings supporting renewable energy projects will immediately benefit our operations as more funding is made available for new projects and assets.

Recent geopolitical events in Europe have also proven that Vulcan are well placed to benefit from changing consumer requirements and political sentiment.

We continue to act to derisk our operations to climate related factors, for example through 2021 we acquired a geothermal plant and two geothermal engineering firms (VEE and VESS formerly GeoT and Gec-co) which will support us to reach optimal plant efficiency, mitigating the potential impact of physical risk on our operations.

RESILIENCE OF THE ORGANISATION'S STRATEGY CONSIDERING CLIMATE-RELATED SCENARIOS

Since our entire business model has been built around the premise of decarbonising battery grade lithium product and producing renewable heat and power, we consider our strategy to be very resilient to climate-related risks, with very good exposure to climate-related opportunities. We aspire to maintain our carbon neutral status and looking to set Science-Based Targets Initiative (SBTi) aligned GHG reduction targets. We will be undertaking further climate scenario analysis in the next year, taking into account new data from the Intergovernmental Panel for Climate Change (IPCC-57 Working Group III Sixth Assessment Report), released in February 2022, data from the World Economic Forum (WEF) and the International Energy Agency (IEA) to inform our forecasting and to strengthen our strategy.



⁷ A. Delfs and V. Dezem, , Germany Brings Forward Goal of 100% Renewable Power to 2035', [Bloomberg](#), 28 February 2022, accessed August 2022.

Risk Management

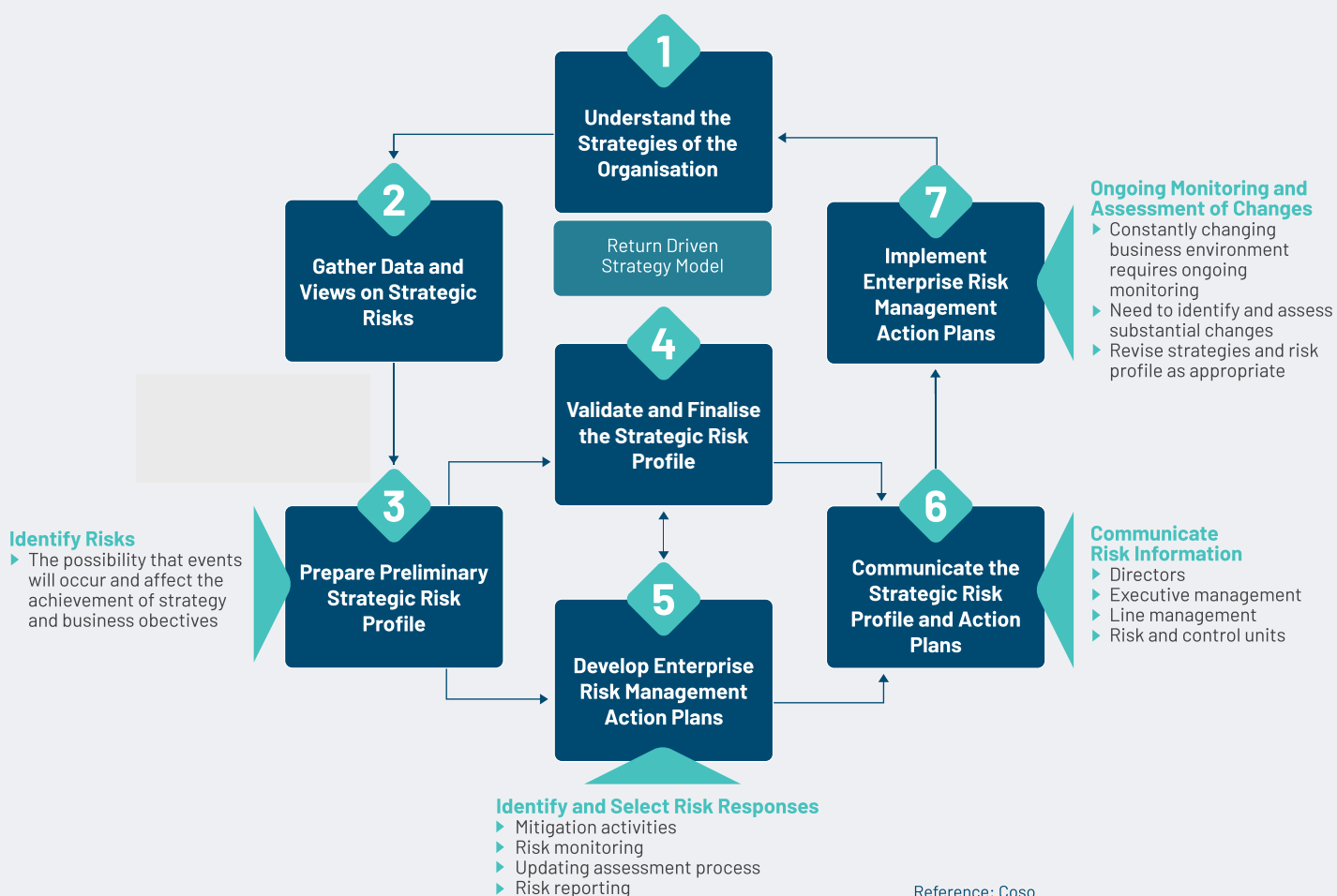
PROCESSES FOR IDENTIFYING AND ASSESSING CLIMATE-RELATED RISKS

Management of sustainability-related risks, including climate-related risks, is embedded in our enterprise risk management process and is integrated, comprehensive and forward-looking, based on a collaborative review run by risk management and specific risk owners. It is then presented to the executive team and Board via the relevant Committee.

Following from the TOM 360 review, we prioritised a formal risk management process and to date have focused on

- Developing Enterprise Risk Management Action Plans;
- Communicating the Strategic Risk Profile and Action Plans; and
- Implementing the Enterprise Risk Management Action Plans.

Our risk management approach is based on the 2004 COSO Enterprise Risk Management – Integrated Framework, a seven step process where consideration is driven from an understanding of the company's strategy. We continue to embed and enhance our risk management as we progress development of the Zero Carbon Lithium™ Project



PROCESSES FOR MANAGING CLIMATE-RELATED RISKS

Vulcan manage our climate-related risks via a bi-annual matrix review and our risk rating is based on likelihood and consequence alongside a traffic light system, whereby likelihood is scaled from rare to certain across five levels and consequence ranges through seven scales from insignificant to catastrophic. The financial consequence of each climate risk is evaluated and rated across the seven categories of magnitude, ranging from <€100,000 to €20 million.

Risk owners are responsible for assessing potential new risks and assist with risk re-evaluation during the review period. Prioritisation of risk rating takes into account risk owner knowledge and experience alongside company operational requirements and external macro analysis. Climate-related risks are considered across all business areas rather than separated out as its own sub classification as they are considered inherent in every aspect of the business.

INTEGRATION OF PROCESSES FOR IDENTIFYING, ASSESSING AND MANAGING CLIMATE-RELATED RISKS

We have a risk management team, including a part time risk manager, who reinforces our risk culture by ensuring risk transparency and collaboration.

Mitigation strategies have been identified and accountability for execution of these strategies are given to each risk owner, with risk management maintaining regular monitoring to provide an extra layer of oversight. To ensure consistent improvement, risks are also given a control effectiveness rating and priority is given to risks that are categorised as reasonable or below in control.

Metrics and Targets

METRICS USED TO ASSESS RISKS AND OPPORTUNITIES

We are committed to minimising our footprint across all aspects of environment and sustainability. Further information on our approach to Biodiversity, Circular Economy, Water and Waste can be found in the relevant sections of this report and on our website.

Risks are (a) assessed with quantitative and qualitative tools considering both the probability of likelihood and the impacts (financial, HSE, environmental, community, reputation and compliance) that would take place in a given time frame if the risk were to occur and (b) on a control effectiveness rating to allow comparison and prioritisation by relevance.

Vulcan Energy Resources Limited

STRATEGIC RISK REGISTER

Risk Rating

CONSEQUENCE								
LIKELIHOOD		1	2	3	4	5	6	7
Rating	Descriptor	Insignificant	Minor	Moderate	Significant	Major	Critical	Catastrophic
1	Rare	1	2	3	4	5	6	7
2	Unlikely	2	4	6	8	10	12	14
3	Possible	3	6	9	12	15	18	21
4	Likely	4	8	12	16	20	24	28
5	Certain	5	10	15	20	25	30	35

CONDITIONAL FORMATTING

Colour	Rating
	<= 10
	> 10 <= 20
	> 20

As mentioned above, we introduced sustainability linked incentive remuneration based on key short term and long term ESG metrics. In the short term we have set carbon neutral certification and an ESG rating from a recognised third-party provider. Long term metrics include continued carbon neutral certification and remaining in the lowest quartile for absolute (scopes 1, 2, and 3) GHG emissions.

DISCLOSURE OF SCOPE 1, 2 AND 3 GREENHOUSE GAS (GHG) EMISSIONS

While we accounted for the GHG emissions for the Australian organisation in 2020, we did not undertake an emissions mapping exercise for the whole Vulcan Group until 2021, taking into consideration that this is the first year we acquired Vulcan Energie Subsurface Solutions (formerly Geo-T) and Vulcan Energy Engineering (formerly Gec-co) and incorporated Vercana⁸. As we scale up, we will continue to expand our data reporting and be able to provide year on year comparisons.

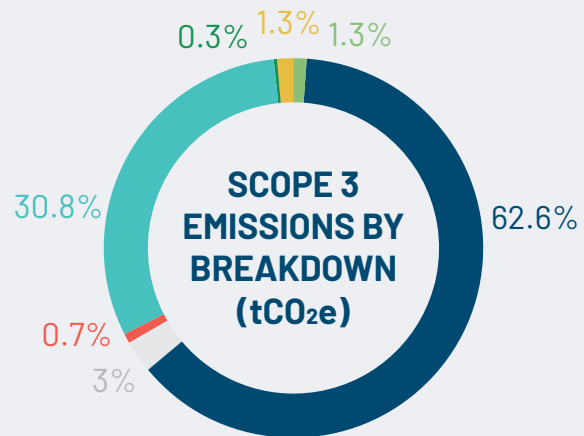
We obtained our carbon neutral certification by engaging Climate Active for our Australian business and South Pole for our German business. Our emissions footprint has been calculated in accordance with the GHG Protocol, and covers Scope 1 emissions (mobile combustion), Scope 2 emissions (market-based electricity and heating), and Scope 3 emissions (Category 1 [purchased goods and services including property, plant and equipment], Category 2 [capital goods], Category 3 [fuel and energy related activities], Category 5 [waste generated in operations], Category 6 [business travel], and Category 7 [employee commuting]). As part of our carbon neutral certifications, we acquitted offsets that supported two projects registered under the Verified Carbon Standard (VERRA) including the Rimba Raya Biodiversity Reserve and Sipansihaporas Hydro project in Indonesia.

Further information is available on page 16.

For the baseline year of 2021 our carbon emissions were:
 Scope 1 = 2.33 tCO₂e
 Scope 2 = 71.77 tCO₂e
 Scope 3 = 2172.87 tCO₂e



● Scope 1 and 2 ● Scope 3



- Business Travel
- Employee Commuting
- Purchased Goods and Services
- 5% uptake from Climate Active
- Capital Goods
- Fuel and energy related activities
- Waste generated in operations

Scope 3 emissions by source	Emissions (tCO ₂ e)	%
Business travel	28.36	1.3%
Capital Goods	1,360.45	62.6%
Employee Commuting	64.38	3%
Fuel and energy related activities	15.00	0.7%
Purchased Goods and Services	669.45	30.8%
Waste generated in operations	6.82	0.3%
5% uptake from Climate Active	28.40	1.3%
	2,172.87	

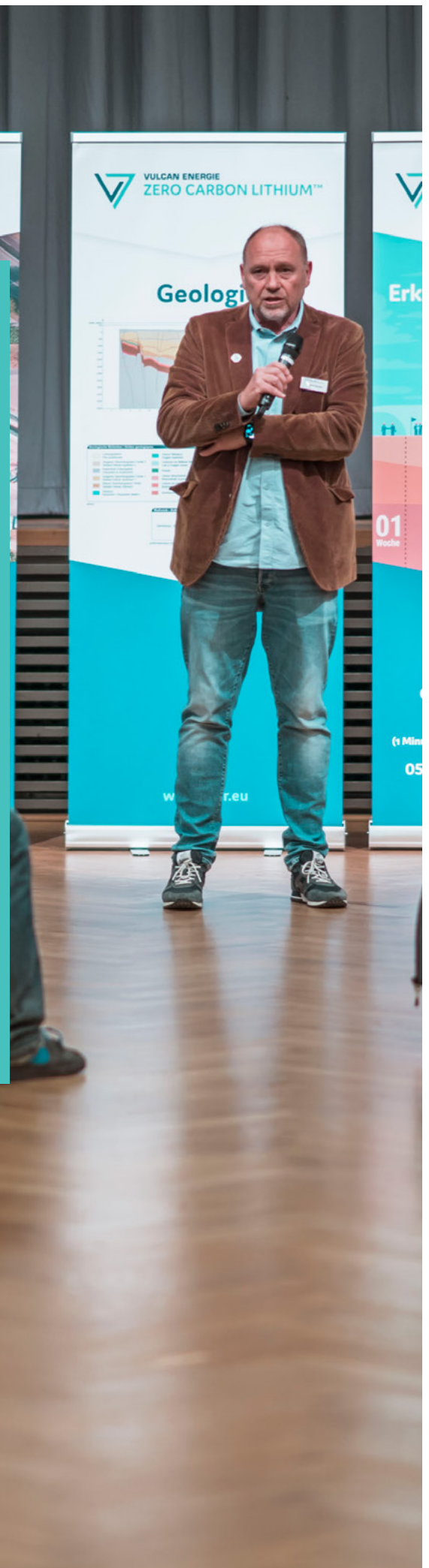
⁸ Natür3Lich Insheim is not included in the 2021 scope as it was acquired outside the calendar year.

TARGETS USED AND PERFORMANCE

We have conducted regular Lifecycle Assessments (LCAs) with Minviro of our planned developments and use the metrics from these assessments to inform our strategy and risk management process. We currently have data based on our Pre-feasibility Study (PFS) (released in January 2021 and available on our website) and will update this report with data from our Definitive Feasibility Study (DFS). The LCA covers our lithium product for its impacts on Global Warming Potential (GWP), water use and AWARE factor (scarcity) and land use.

Targets that have been set as per our Sustainability and ESG Framework include being certified as carbon neutral, ensuring 100% renewable energy is used to power operations, setting GHG reductions targets to the Science-Based Targets Initiative (SBTis) and having a positive climate impact on the environment surrounding our operational sites. Executive individual and shared KPI's have been set with these targets in mind.

Please reference TCFD table in appendix for further disclosures.



ENVIRONMENTAL PERFORMANCE

As we develop our Zero Carbon Lithium™ Project, we are making deliberate technical decisions to minimise our environmental footprint.

At a minimum, we seek to comply with all relevant environmental laws and regulations. We have not been prosecuted or fined for environmental infractions since our inception.

As an early example of Vulcan's environmental credentials, the State Office for Geology and Mining in Rhineland-Palatinate has approved our preliminary Environmental Impact Assessment (EIA) application (UVP-V) to drill six wells for geothermal energy and lithium as part of our Taro license. The State Office determined that the environmental impact of the planned wells, taking into account their size, extent, location, and intensity of action, cannot be assessed as significant. There is therefore no requirement to carry out a full environmental impact assessment for the wells, which is a positive step forward for the Zero Carbon Lithium™ Project development. A second Preliminary EIA approval awarded for the Taro license, in the "Taro Golf" zone was announced on 13 September 2022.

Since Vulcan's lithium operations are still in development and are not yet commercially operational, we use prospective LCAs in order to reduce the environmental impacts of our process for extracting lithium hydroxide monohydrate (LiOH H₂O). The results of the latest LCA were detailed in our FY21 Annual Report. Vulcan's LCA will be updated following our Definitive Feasibility Study (DFS), targeted for release in Q1 2023.

Biodiversity

We are committed to minimising the impacts on natural habitats and ecosystems across Vulcan's value chain, including operational impacts on biodiversity, pollinator protection, soil health and land stewardship practices.

TASKFORCE ON NATURE-RELATED FINANCIAL DISCLOSURES (TNFD)

The Taskforce on Nature-related Financial Disclosures (TNFD) was established in 2021 in response to the growing need to factor nature in financial and business decisions. The TNFD is a global, market-led initiative with the mission to develop and deliver a risk management and disclosure framework for organisations to report and act on evolving nature-related risks and opportunities, with the aim of supporting a shift in global financial flows away from nature-negative outcomes and towards nature-positive outcomes.

As a first mover adopter, we are members of the TNFD Forum, a global multi-disciplinary consultative group of institutions with over 550 Forum members, helping to contribute to the work and mission of the Taskforce. The TNFD is currently in Beta v0.2 stage, which includes a draft approach to metrics and targets and guidance for dependency and impact metrics.

Vulcan will undergo a pilot test assessment of our Natür³lich Insheim operations to provide feedback to the TNFD on the framework's practicality and clarity.

Acknowledging the interconnections between TCFD and TNFD, Vulcan will continue to work closely with independent experts to align sustainability reporting to both frameworks as they evolve.



Circular Economy

As a future-focused company, our goal is to work towards a more net zero carbon circular economy for materials within our value chain.

Vulcan is collaborating with partners in advancing projects and initiatives around battery materials traceability and transparency. We are a Member of the Global Battery Alliance (GBA) and partner with Circulor, whose technology tracks and measures GHG emissions through a product's value chain. We will continue to work with industry leaders to enable a circular battery value chain and increase accountability towards battery materials traceability and transparency. We plan to be ready to capitalise on and contribute to a second-life battery market when end of life battery volumes reach sufficient levels.

Working with our partners and offtakers, we will ensure responsible management of the lithium product along the entire value chain whilst also providing Germany with a secure, reliable and renewable local source of energy.

Water

Vulcan is committed to minimising the amount of water consumed through effective recycling and replenishment of withdrawn water. To protect this valuable resource, we will reuse water when feasible, test and treat water returned to the environment, and will continue to advance our understanding of potential risks – including the potential for increased water scarcity due to climate related changes in precipitation in Western Europe.

Vulcan's geothermal energy production and lithium

extraction are both dependent on deep brine aquifers, accessed by drilling. The high temperature brine is separated from shallow freshwater aquifers by kilometres of impermeable rock formations, with no impact anticipated on local potable groundwater. Vulcan will access the brine, initially generating energy using conventional geothermal technology currently operating in the Upper Rhine Valley, then extract the lithium using sorption-type DLE. Our geothermal lithium process will then return the water to its original aquifer, after heat and lithium extraction.

While the sorption-DLE process already uses less water than legacy production methods, we are focused on doing as much as possible to reduce our use of water. We are intending to build as much water recycling capability as possible into our process, and the team is also evaluating a range of high performing DLE sorbents; some of which present the opportunity to further reduce water consumption.

Waste

Vulcan is committed to the effective management of waste, including overall operational waste efficiency and recycling from lithium processing. While we are not yet in production for our lithium product, we understand the importance of developing solutions that promote a circular economy through waste management, prevention and reuse efforts. We are actively designing processes to minimise waste once we reach construction and production phases. We do not emit SO_x or NO_x emissions.



SOCIAL

Our Value of *Integrity* provides the foundation for how we approach all of our relationships. We aim to have positive social impact in the communities in which we operate, and improve the quality of life for people, land and sea. By acting respectfully and with authenticity in our engagements with our local communities, partners and with each other, we are building long-term relationships based on trust and mutual benefit.

We understand the value of a diverse workforce that is reflective of our community. We are committed to supporting our team to balance their professional and personal lives as we work together to think outside the box to find solutions to some of our biggest, global challenges.

Health, Safety and Wellbeing

Vulcan believes that everyone has the right to be safe and prioritises the health, safety and wellbeing of the Vulcan team, contractors and stakeholders. Our Value of *Leadership* encapsulates our commitment to work to the highest standards of safety, quality and efficiency.

We promote a positive culture around work-life balance, employee well-being and mental health. Compliance with worker health and safety requirements is a minimum standard we seek to meet.

A range of safety focused initiatives are in place, underpinned by continuous training programs tailored to each team member's relevant work area. We are focused on supporting our drilling subsidiary, Vercana, given the unique complexity and risk of its operations.

As our operations across geothermal and lithium divisions expand, and we progress to the project construction phase, embedding a positive safety culture is critical. Looking ahead, we are targeting zero lost time incidents (LTIs) and, as construction and drilling operations increase, safety-specific focused KPIs have been introduced for the leadership team. To date, we are proud to have zero LTI's and zero fatalities. Two minor incidents were reported, where the employees were able to return to work and did not require any time away. Over the year and across the Vulcan Group of companies, 72 people took a combined 661 days leave of absence.

SOCIAL

Material issues	Achievements in FY22	Future outlook
    Health, safety and wellbeing Diversity, equality and inclusion Talent attraction and retention Community engagement Human rights	- Gender-balanced board - Opened first InfoCentre in Landau - Conducted first employee satisfaction survey - Implemented Employee Wellbeing Framework - Consolidated companies into Vulcan Group to bring team closer together 7 team town halls hosted 21 community roadshow events	Annually focusing on: - Zero lost time incidents - Constantly improving employee satisfaction rating (annually benchmarked) Focus in 2022 includes: - Gender and diversity recruitment process - Mental wellbeing training for executive team - Open Mannheim InfoCentre Focus in 2023 includes: - Open Karlsruhe InfoCentre - Increased educational programs for the benefits of geothermal heat and energy - Fully integrated internal training and development program Focus in 2024 includes: - Support university research and development programs Focus in 2025 includes: - Girls in Science' scholarship program - External validation of gender pay equality

EMPLOYEE WELLBEING

We continue to provide resources to support our employees' physical and mental wellbeing. Our Employee Wellbeing Framework, launched in 2022, is focused on empowering Vulcan's employees to be a productive and engaged part of the business. Our Employee Wellbeing Framework promotes a healthy work environment with a focus on support, flexibility, and work-life balance.

The four pillars of our wellbeing framework are:



EMPLOYEE WELLBEING

A holistic approach to the individual's needs



INTERNAL COMMUNICATIONS

Engage, inform, and include to build the Vulcan team



WORKPLACE SATISFACTION

Promote healthy work environments with a focus on support, flexibility, and balance



COMMUNITY FOCUS

Give back to the local community as our social responsibility

Our team also has free access to private psychology sessions through an Australian-based online provider, available 21 hours a day, 7 days a week, to ensure the highest level of accessibility for our global team.



**RITA WEINHOLD -
PROJECT
MANAGER
EMPLOYEE
WELLBEING**

"I AM NOW RESPONSIBLE FOR EMPLOYEE WELLBEING AT VULCAN. WORKING ON THE TOPIC OF SUSTAINABILITY IN HR EXCITES ME. I THINK I CAN MAKE A VALUABLE CONTRIBUTION TO MY COLLEAGUES, THE COMPANY AND THEREFORE ALSO TO SOCIETY."



EMPLOYEE SATISFACTION SURVEY

Vulcan completed our first employee satisfaction survey in 2022, receiving a response rate of 57%.

The results of this survey will inform our employee wellbeing management and enable us to track and measure changes to the employee satisfaction index annually. Improving our employee satisfaction index is

included in our KPIs, introduced following the review into executive remuneration.

Other insights that were helpful was that 89% of respondents like the working culture in their team and 76% would apply to work for Vulcan again. It also proved that multi-faceted communication was an area we need to work on, given the distances between our teams.





VULCAN ENERGIE

ZERO CARBON LITHIUM™



With employees in Germany, Australia, United Kingdom and USA, staying connected is a constant priority and challenge for the Group. During the year, the Vulcan team came together for 7 virtual town halls.

Each town hall was attended by approximately 100 people and was an invaluable opportunity to hear about the latest developments across the company, priorities, and upcoming events.

A thoughtful and constructive question and answer session was held during each meeting, with team members having the opportunity to speak directly with our CEO Dr. Francis Wedin and CEO Germany Dr. Horst Kreuter.

As an Australian and German company, our meetings were translated into German in real time by Dr. Kreuter, to ensure everyone had the opportunity to understand and engage in the discussion.



ONGOING RESPONSE TO COVID-19

Since the outbreak of COVID-19 in January 2020, and as Vulcan has grown, we have systemically monitored and implemented a range of measures to protect the health and safety of our team. Robust COVID-19 management plans have been put in place across the global business, in line with relevant government regulation and underpinned by strict hygiene, physical distancing measures and hybrid work arrangements. We continue to assess the impact of COVID-19 to our developments, including ongoing and unprecedented supply chain disruption which has been more recently exacerbated by the invasion of Ukraine.

Diversity, Equity and Inclusion

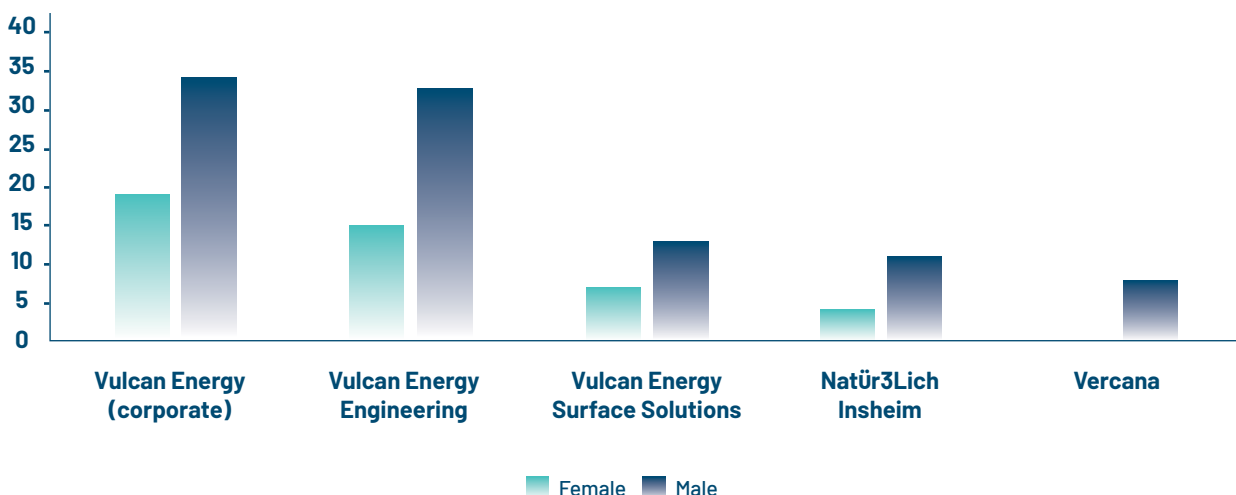
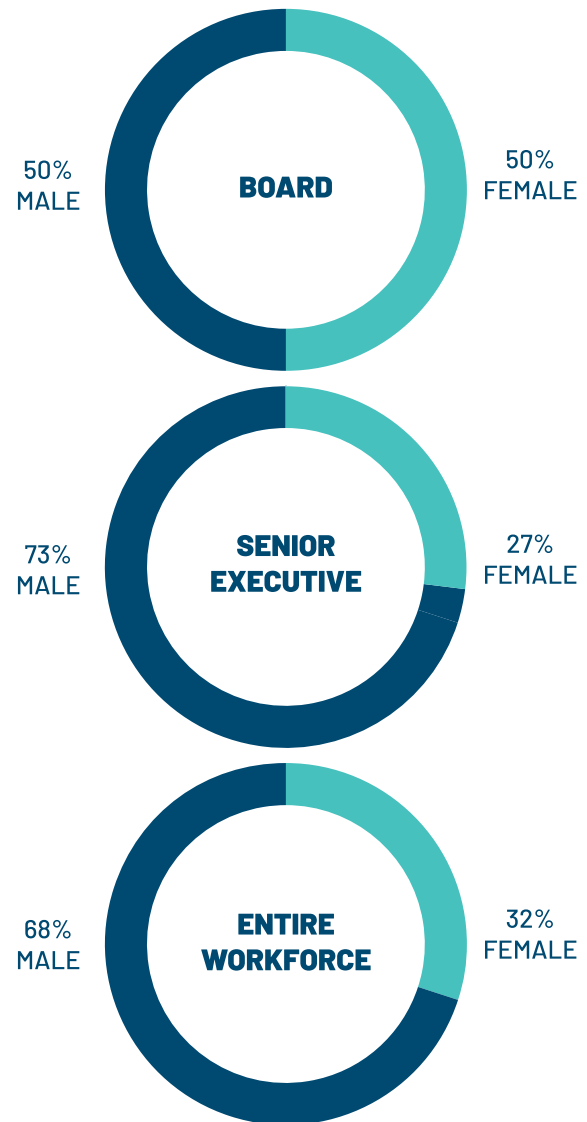
The Vulcan team continues to grow across geothermal renewable energy and lithium battery chemicals business units and totalled around 129 FTE people at 30 June 2022.

We are committed to championing diversity and inclusion at all levels of the organisation, including our Board of Directors.

The Board has set measurable gender diversity objectives of 40% female representation on the Board, in senior executive positions, and across the entire workforce.

At the end of June 2022, we had exceeded or are on track to meet all of these targets.

While working to meet our targets, it is pleasing to see that female representation is comparatively even across Vulcan's business units, with our surface and sub-surface engineering teams also having 31% and 35% female employment respectively.



Talent Attraction and Retention

Vulcan recognises the importance of attracting and retaining talent and providing opportunities for ongoing skills training and professional development.

During the year, we expanded our recruitment team to increase our efforts in attracting the best people. The process by which we select our new team members has been set up to be equitable and fair, with some of our criteria being that people are open-minded, innovative, determined to drive change and are a team-player. We

are in an ambitious recruitment drive, with over twenty five open positions currently listed on our German website with new positions opening up every month as we accelerate and expand our operations.

As part of the Just Transition and knowing the valuable experience in the oil and gas industry, our recruitment drive is targeting experts from the hydrocarbons sector. United by a commitment to contribute to a greener, more sustainable future, we have proudly onboarded a number of former oil and gas employees, including three of our leadership team.



Due to the high energy and dynamic environment of our ambitious scale up drive, we have an approximate 17.5% attrition rate for FY22. We are respectful of this factor and continue to improve internal support systems and processes to ensure our workforce continues being engaged, with our employee satisfaction survey and Employee Wellbeing Framework important aspects of this work.



**MARKUS
CECHOVSKY –
GKW NATÜRLICH
INSHEIM GMBH**

*"I SWITCHED
FROM THE OIL
INDUSTRY TO VULCAN BECAUSE
I AM CONVINCED AND EXCITED
BY SUSTAINABLE AND CO₂-FREE
ENERGY PRODUCTION."*

Community Engagement

At Vulcan we see local communities as our partners and seek to have a positive impact by creating local jobs and generating clean energy and heat. We engage directly with local communities in order to understand and meet their needs.

Our approach of ongoing engagement allows us to have a better understanding of real-time environmental and social concerns, so we can make informed decisions and find win-win solutions. During the year, our community team hosted twenty one roadshow events in several municipalities in the three federal states of Germany. Information stalls were held in Billigheim, Rohrbach, Landau, Offenbach and Herxheim, while two information events were hosted in Herxheim and HaBloch with around 130 people in attendance. Each event included topics such as 3D seismics, geology, heat generation, insurance, and much more. The participants were able to choose the topics of interest to them and speak directly with experts from our team.

Building on the important work of the roadshows, our community information centres (InfoCentres) ensure we have an ongoing, tangible presence in the communities where we intend to operate, while providing locals with opportunities to ask questions and understand the benefits Vulcan and the energy transition can bring to their community. We opened our first InfoCentre and offices in Landau in June 2022, and are due to open one more in late 2022 and the other in 2023.

Informing communities at the Maimarket in Mannheim

Vulcan has strong connections in Mannheim, having signed a heat offtake agreement with locally based MVV Energie AG, the largest municipal energy company in Germany, for the provision of renewable heat to 25,000 – 35,000 households in the city.

Mannheim's Maimarket is Germany's largest regional trade fair with more than 800 exhibitors and over 200,000 visitors. We were proud to show our work and inform the community about geothermal, lithium and the Zero Carbon Lithium™ Project.

Over the ten days our communications team reached over 3,000 citizens within our operating areas.



"WANNS LICHT BRENNT, IS UFF!"

There is an old saying in Germany's Palatinate region, "wanns Licht brennt, is uff!" which roughly translates as "when the light is on, it's open".

So it was with much excitement that the Vulcan team including Dr. Horst Kreuter, Vulcan CEO Germany, Thorsten Weimann, Chief Operations Officer, and Beate Holzwarth, Chief Communications Officer celebrated the opening of our first InfoCentre in Landau with special guests and media.

The InfoCentre will become Vulcan's communication, public relations, and marketing hub in the southern Palatinate region. The space will also serve as a place of work and activity for Vulcan's team.

Landau covers part of Vulcan's geothermal production license at Insheim, which forms a core part of our Phase 1 development plans, as well as the Landau Süd production license where we have a brine offtake agreement with the operator.

Reflecting on the opening of the InfoCentre, Dr. Kreuter said, "Landau is at the heart of our development in the Upper Rhine Valley, so it made sense to open Vulcan's first InfoCentre in this community. The InfoCentre, the first of three across the region, is a clear demonstration of our commitment to building strong, lasting relationships in the community.



At a local government level, support continues to grow for geothermal production. The Upper Rhine Council, a cross-border association of the regions of Baden-Württemberg, Rhineland-Palatinate, Alsace, and the cantons of Northwestern Switzerland, resolved in favour of supporting deep geothermal projects in Ortenau, one of Vulcan's Phase two project areas.

The City Council of Landau also voted to support geothermal energy production in the area and to take a positive stance towards the extraction of lithium from geothermal brine, which overturned a previously held, negative position. The Council recognised that, in addition to being a source of renewable baseload heat, deep geothermal energy can also be used to extract lithium for electric vehicle battery production with a net zero carbon, zero fossil fuel footprint of production. The City Council of Landau covers part of Vulcan's geothermal production license at Insheim, as well as the Landau Süd production license where Vulcan has a brine offtake agreement with the operator.

We have received strong support to carry out a 3D seismic survey from the following eight local councils in the German state of Rhineland-Palatinate:

- City of Landau in der Pfalz;
- Municipality of Herxheim bei Landau Pfalz;
- Municipality of Rohrbach;
- Municipality of Insheim;
- Municipality of Offenbach an der Queich;
- Municipality of Billigheim-Ingelheim;
- Municipality of Impflingen; and
- Municipality of Erlenbach bei Kandel.



SPONSORSHIPS

Strengthening our support for local communities, we sponsored the following events;

- Soapbox race (Insheim);
- Ukraine support (Landau) providing a financial donation to assist with school materials, clothing and food and colouring books for children;
- Handball TSG Haßloch and HSG Landau Land, Südpfalztiger, TV Offenbach;
- Duck race (Hassloch) and
- Wine festival Isemer Sommer and Nußdorfer Weinfest.

Human Rights

Vulcan is committed to upholding and respecting the human rights of all people including its employees, the communities in which it operates, those who may be impacted by its activities and those within its value chain. Vulcan respects freedom of association, the right to a fair wage and aims for all employees to be treated fairly and without discrimination due to age, race, gender, political or religious belief, culture, family commitments, physical or mental ability, marital status, or sexual orientation. We respect freedom of association, including the right to representation by independent unions and collective bargaining or enterprise agreements.

We continue to safeguard human rights and economic development consistent with the UNSDGs. Our commitment to Human Rights is included in our Code of Conduct and Ethics and Supplier Code of Conduct.

Our Sustainable Supplier Policy outlines Vulcan's expectation of its suppliers, and their supply chain, regarding governance, ethics, and sustainability matters. Vulcan is committed to contributing to global efforts to combat climate change and expects its suppliers to be undertaking actions to evaluate the risks and opportunities of climate change to their business and work towards reducing their greenhouse gas emissions in line with the objectives of the Paris Agreement.

Our full Code of Conduct and Ethics, Supplier Code of Conduct and Sustainable Supplier Policy can be found on our website at <https://v-er.eu>.

MODERN SLAVERY

We reject and prohibit the use of all forms of slavery, child or forced labour within our operations and the operations of our suppliers. Suppliers are expected to comply with the requirements of the Modern Slavery Act 2018 (Cth) including having the necessary processes and procedures in place to investigate, assess and address the risk of modern slavery within their operations, and those of their supply chain including implementing appropriate due diligence and remediation programs.

CONFLICT MINERALS POLICY

During the year, Vulcan implemented a Conflict Minerals Policy. We have a moral obligation to source responsibly and consider mining activities that fuel conflict as unacceptable. We adhere to the directive as set out in the EU – Conflict Minerals Regulation that came into effect on 1 January 2021 and we meet international responsible sourcing standards as set by the Organisation for Economic Co-operation and Development (OECD).

Tracing the origin and chain of custody of minerals throughout a global supply chain is a complex process. We also recognise that in many situations Vulcan is many tiers downstream in the supply chain, however, we will use our best endeavours to put in place procedures, assessments and policies to ensure we source from a "reasonable country of origin", in line with current draft EU legislation on battery regulation (EU No 2019/1020).



GOVERNANCE

Vulcan is committed to the highest standards of corporate governance practice and regulatory compliance and promotes ethical and responsible decision making. We believe that sustained positive environmental impact and social responsibility can only be achieved via a commitment to excellence in corporate governance.

This is reflected in our Values of *Leadership*, as we strive for excellence and *Integrity*, as each team member endeavours to be respectful, authentic and trustworthy, in their relationships with each other and with external groups.

GOVERNANCE		
Material issues	Achievements in FY22	Future outlook
   Governance Transparency Business ethics Innovation Value chain Digitisation and cyber security	- Completed dual listing on regulated market Frankfurt Stock Exchange (prime standard)(FSE) - Included in S&P ASX 300 index - Obtained external reviews in critical risk areas - Completed Target Operating Model 360 Review - Appointed a component auditor for German operations - Strengthened risk management processes and appointed a part time risk manager - Completed quality management process system for ISO 14001:2015 and 9001 certifications - NED and Executive Remuneration review - Implemented new company-wide policies - Perform peer benchmarking	Focusing annually on: - Company policies reviews - Executive remuneration review including ESG-linked KPI's Focus in 2022 includes: - ISO 14001:2015 and 9001 for Natür³Lich Insheim - ESG Risk Rating from external body Focus in 2023 includes: - First audited Sustainability Report - Report to International Sustainable Standards Board (ISSB) Focus in 2024 includes: - Undertake supply chain risk analysis including environmental and modern slavery audit - Sustainable Procurement process

Our FY22 Corporate Governance Statement is available at <https://v-er.eu>

At Vulcan, we are committed to ensuring all of our business activities are conducted fairly, honestly and with integrity in compliance with all applicable laws. To achieve this, our Board of Directors has adopted a number of charters and policies which aim to ensure that value is created whilst accountability and controls are commensurate with the risks involved.

The Board believes that our policies and practices comply with the recommendations set out in the ASX Corporate

Governance Principles and Recommendations – 4th Edition (Recommendations) as well as compliance with German Regulations as part of our dual listing under the German Federal Financial Supervisory Authority (BaFin).

As Vulcan grows, we are committed to establishing and enhancing robust governance processes and controls.

Governance

RISK MANAGEMENT

Vulcan's approach to opportunity and risk management is underpinned by the Company Value of *Integrity*, as we commit to being respectful, authentic, and trustworthy to each other and to external groups.

The Zero Carbon Lithium™ Project is highly complex and involves many known and unknown risks, some of which are beyond our control. We are committed to ensuring we have the right measures in place to mitigate these risks, the right team to execute on the project and can capitalise on opportunities.

Management of sustainability-related risks is embedded in our enterprise risk management process and is integrated, comprehensive and forward-looking, based on a collaborative review run by the risk management team and specific risk owners that is then presented to the leadership team and Board via the relevant Committee.

Greater information on how climate related risks and opportunities are identified and measured within our risk management approach is available in the TCFD section of this report on page 18 and table in the [appendix](#).

AREAS OF SUSTAINABILITY / ESG GOVERNANCE FOCUS DURING FY22 – A SNAPSHOT

- Certified carbon neutral organisation across the Vulcan Group.
- Launched Sustainability and ESG Framework and defined roles, responsibilities, and accountability.
- Embedded ESG KPIs for leadership team. KPIs are individualised and linked to each business unit to ensure accountability.
- Commitment to pilot TNFD beta framework as an industry-first adopter alongside TCFD reporting.
- Committed to the UN Global Compact corporate responsibility initiative and its principles in the areas of human rights, labour, the environment, and anti-corruption by becoming a UN Global Compact member.
- Completed first Materiality Assessment, via internal and external stakeholder feedback, to inform Vulcan's sustainability reporting and priorities focus.



BOARD SKILLS MATRIX

Vulcan's management of risk begins with our independently appointed Board who have been carefully selected to ensure relevant and diverse expertise. As such, during the year, we appointed two new Board members, Mark Skelton and Dr. Günter Hilken to complement the expertise of the group and bring the total number of Board members to eight.

The composition of the Board is to be reviewed regularly against the Company's Board Skills Matrix, which is prepared and maintained by the nominations committee, or, in its absence, the Board, to ensure the appropriate mix of skills and expertise is present to facilitate successful strategic direction and to manage and leverage new and emerging business and governance issues.

The following table sets out the composition of skills and experience of Vulcan's Board of Directors.

Experience	Knowledge and skills
Corporate leadership Successful experience in CEO and/or other senior corporate leadership roles	Strategic expertise Experience setting and reviewing strategy and/or business development
International experience Senior experience in multiple international locations	Marketing & communications Media, stakeholder communication, investor relations, public relations
Resources or technology industry experience Relevant industry (resources, energy, power, mining, exploration, processing) experience	Risk and compliance Risk management and mitigation experience
Other Board level experience Membership of other listed entities (last 3 years)	Capital markets Capital raising, mergers and acquisitions
Capital projects Major resources capital project development and management	Environmental Proven experience with climate change policy, sustainability, carbon reduction
	Social Positive human resource management
	Governance Relevant exposure to controlling and operating organisational procedures and processes

AUDIT, RISK AND ESG COMMITTEE

The role of the Audit, Risk and ESG Committee is to assist the Board in monitoring and reviewing any matters of significance affecting financial reporting and compliance. The Committee oversees our risk management systems, practices and procedures to ensure effective risk identification and management and compliance with internal guidelines and external requirements. The Committee Charter, which is available on the Company's website at <https://v-er.eu> sets risk parameters and defines the Audit, Risk and ESG Committee's function, composition, mode of operation, authority and responsibilities.

Responsibility for the identification, assessment, treatment and reporting of risks lies with the operational business units and corporate functions. During the year, we prioritised a Risk Review Matrix and employed a part-

time Risk Manager. The Risk Manager has led a detailed review of Vulcan's risks and has delivered qualitative and quantitative improvements to the Company's Risk Review Matrix. This review will be used for a risk management workshop with key executives in September 2022 and will be part of the risk management presentation to the Board.

PROJECTS OVERSIGHT COMMITTEE

Recently formed, the Projects Oversight Committee is responsible for regularly reviewing the status of nominated projects and applying appropriate corporate governance frameworks and risk management. Given the current status of Vulcan's progress, the Board considered that the establishment of this committee, with specific focus on the development and execution of the program of projects, was beneficial to allow for more risk specific oversight.



RISK IDENTIFICATION

We are focused on embedding and enhancing rigorous risk management frameworks, as we progress and scale up operations. To that end, we recognise we are only partly through our risk management journey and, to date have focused on:

- Developing Enterprise Risk Management Action Plans;
- Communicating the Strategic Risk Profile and Action Plans; and
- Implementing the Enterprise Risk Management Action Plans.

Further identification of risks has been categorised as specifically climate-related under TCFD reporting and the broader Environmental, Social and Governance (ESG) as published in our June 2022 Sustainability and ESG Framework. For more information, please read the TCFD section of this report and our FY22 Annual Report, accessible via the website at <https://v-er.eu>.

REMUNERATION

During the year, following feedback from stakeholders and key investors, and considering Vulcan's growth and evolving stage of operations, the Board reviewed our executive remuneration structure. The resulting, enhanced framework is designed to support Vulcan's strategy and to reward our executive team for the successful execution of development plans and the delivery of the Zero Carbon Lithium™ Project.

In addition to ensuring our remuneration framework reflected our strategy and longer-term alignment between the business unit leaders, the Company, and our shareholders, the independent review looked at implementing ESG linked KPIs, as part of Vulcan's commitment to embed sustainability in every aspect of our business and decision making.

The new short-term incentive plan includes KPIs that are individualised and linked to each business unit to ensure accountability and measurability. It is imperative that sustainability considerations are embedded in our operations from the outset to guide all decisions

and actions as we focus on our ambitious scale up of operations and bring our Zero Carbon Lithium™ Project to commercial production, therefore we deemed it important to set annually occurring sustainability KPIs alongside project execution targets. Leaders also have shared objectives to ensure sustainable business practices are a collaborative effort. Some examples of these KPIs includes staff retention and satisfaction, a carbon neutral certification and an ESG rating from a third-party provider each year.

Vulcan's long-term incentive plan also includes a portion of sustainability returns, based on the Company achieving carbon neutral certification across all operations through each year in the four-year period and remaining in the lowest quartile for absolute GHG emissions (Scope 1, 2, 3).

Vulcan's full Remuneration Report can be found in the FY22 Annual Report on our website at <https://v-er.eu>

TARGET OPERATING MODEL (TOM) 360 REVIEW

We completed a Target Operating Model (TOM) 360 review, with the objective of developing a fit for purpose corporate structure for the next phase of project development and expansion. A key recommendation of the TOM was the centralisation of backbone functions to ensure better governance and higher efficiency.

Consistent with this recommendation, our sub-surface engineering business, GeoT, has been renamed Vulcan Energy Subsurface Solutions (VESS), while Vulcan's engineering company, Gec-co is now called Vulcan Energy Engineering (VEE). Crucially, VEE and VESS are world-leading scientific teams, and their experience is a key part of Vulcan's plan to deliver the Zero Carbon Lithium™ Project.

From the outset, clear communication was at the heart of this change. The restructure was discussed with the team via a company-wide town hall, together with team meetings and one-on-one conferences.

Transparency

We report Vulcan's impacts on society and the environment, including our progress on its goals and strategic objectives. We are committed to acting with transparency and accountability, providing improved clarity on value chain influence and responsibility, reduced variation across the organisation, and alignment with international standards.

We continue to keep our stakeholders updated on the changes to community support, as well as impacts to the project timetable. For example, opposition to any

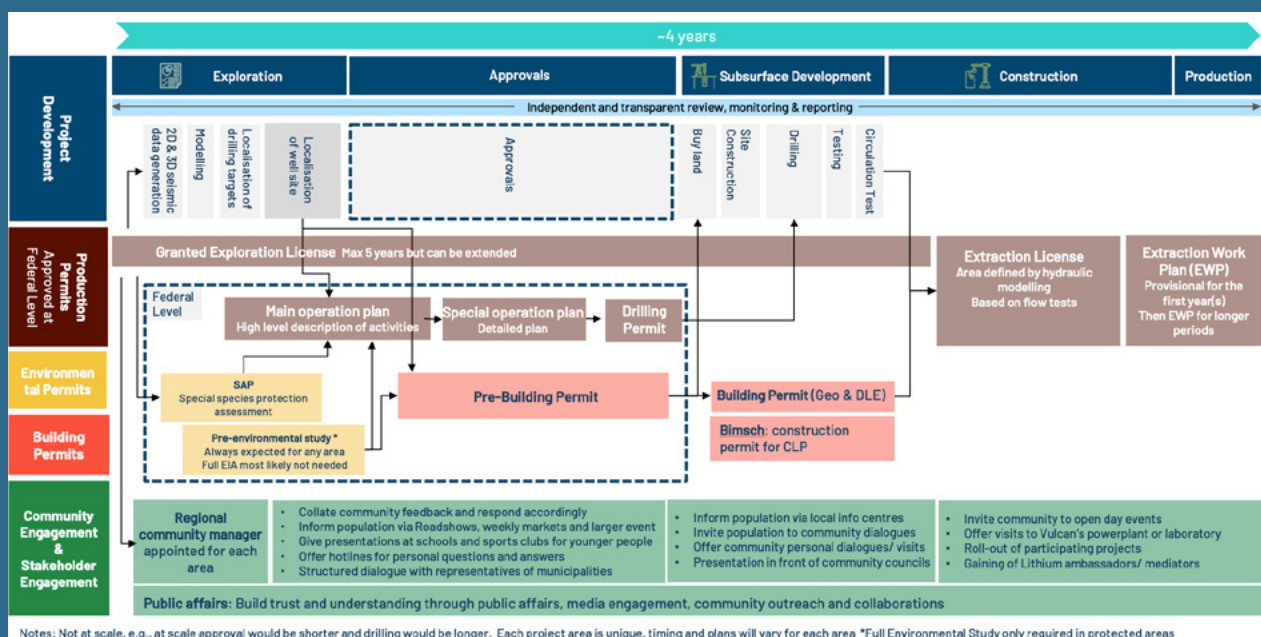
sort of new renewable energy development including wind and solar, is not uncommon in Europe. We have been transparent about this risk since the beginning. Specifically, in 2021, our seismic exploration based on our Ortenau License near the City of Offenburg was met with local opposition. In response, we paused the application process for conducting the seismic exploration and allocated extra time to address local stakeholder concerns. Importantly, we publicised this in a Project Update to the ASX.

Vulcan's government approvals progress

We have always said that avoiding bottlenecks and delays related to government and community approvals is a high priority for our team as we develop the Zero Carbon Lithium™ Project. The graphic below provides a high-level overview of the governmental approvals we need to deliver the project. Importantly, we have a team of experts in the geothermal industry (who have developed numerous projects in the past), who are working on this.

At a state and federal government level, we have received strong encouragement that renewable energy project permitting times will be reduced as a priority, given the dual imperatives of climate change and energy security in Europe. Domestic production of strategic battery raw materials will also be prioritised.

There is a long road ahead of us. Numerous approvals will be needed and there is a process of best practice we must follow, but we are encouraged by the steadily building momentum behind our world-changing project.



DUAL LISTING ON THE FRANKFURT STOCK EXCHANGE (FSE)

During 2022, we became the first ASX-listed company to have a dual listing on the regulated market of the Frankfurt Stock Exchange (FSE), in the Prime Standard market segment. The Prime Standard of the FSE is considered to have the highest transparency and governance requirements of the FSE, positioning Vulcan to meet and exceed the rigorous standard of governance and reporting.

With Vulcan's projects and more than 90% of the team based in Germany, the dual listing on the FSE is an important step in expanding our European investor base and international exposure, while also fostering public and community acceptance of our Zero Carbon Lithium™ Project in Germany.

Business Ethics

Vulcan's Code of Conduct and Ethics (the Code) underpins our commitment to integrity and fair dealing in our business affairs, a commitment to do what is right and honourable built on a duty of care to all employees, clients and stakeholders.

The Code details Vulcan's commitment to foster an open and supportive environment in all activities and relationships and ensure senior executives demonstrate and reinforce Vulcan's Values in all aspects of its business and in all interactions with our team.

Our employees and business partners are also required to act with the highest levels of ethics and integrity, in accordance with Vulcan's beliefs and values and in the best interests of the Company.

Material breaches of the Code must be reported to the Board or a committee of the Board. The Code can be found on our website at <https://v-er.eu>

REPORTING AND INVESTIGATION

We encourage a culture of 'speaking up' to raise concerns about possible unlawful, unethical or socially irresponsible behaviour or other improprieties of or within the company, without fear of retaliation or otherwise being disadvantaged.

We provide a range of mechanisms to report suspected breaches to the Code. These include:

- Encouraging employees to raise issues with their manager or a member of the Human Resources team
- Speaking with our Whistleblower Protection and Investigation Officer (WPIO)
- Using our independent and confidential reporting channel, speaki

During FY22, no Whistleblower Hotline disclosures were reported, while the WPIO managed no matters of concern.

Vulcan's Whistleblower Policy can be found on our website at <https://v-er.eu>

ANTI-BRIBERY AND ANTI-CORRUPTION

Vulcan is committed to preventing any form of corruption and bribery and to upholding all laws relevant to these issues, including the Anti-Corruption Legislation. We have adopted an Anti-Bribery and Anti-Corruption Policy (ABC Policy) to ensure effective procedures are in place to prevent corruption and bribery. Vulcan's ABC Policy also includes practical examples in order to provide guidance on acceptable behaviour.

Material breaches of the ABC Policy will be reported to the Board or a committee of the Board.

POLITICAL CONTRIBUTIONS

Team members are prohibited from making political contributions to Officials (or political involvement of any kind) on behalf of Vulcan. Any donations above a level determined in Federal legislation must be disclosed annually to the Australian Electoral Commission (AEC) and will be published on the AEC website.

We do not seek to curtail an individual's freedom to make political contributions in their personal capacity and therefore the context of any other political contributions is key in determining their appropriateness. For instance, participating in political forums is a legitimate way for industry to present their experience and agendas. The Company may pay to attend a political function in circumstances where such payment could not be construed as an attempt to influence the political party.

Vulcan's Anti-Bribery and Anti-Corruption Policy can be found on the Company's website at <https://v-er.eu>

Innovation

Being innovative is integral to our work, as we try to build a new type of project – integrating geothermal renewable energy, lithium extraction and lithium chemicals refining, without burning fossil fuels.

We are working strategically to innovate traditional forms of lithium extraction and move successfully into full operation in the shortest amount of time, while also ensuring that we are always adhering to our net zero emissions and environmentally focused purpose.

DATA

The Upper Rhine Valley Brine Field has been a mature, producing field for both oil and gas as well as geothermal for many years. Vulcan has strategically leveraged the extensive exploration historically conducted by the hydrocarbons industry, to advance the Zero Carbon Lithium™ Project. During the period, Vulcan signed an agreement with Rhein Petroleum GmbH to purchase 3D seismic and drilling data to assist with additional project generation. The new data assists with understanding the sub-surface in these areas, allowing the team to target high brine flow zones in a precise, careful and cost efficient way, therefore contributing to public acceptance.



Sorption-type DLE

Vulcan has intentionally chosen a sorption-type DLE approach due to its current successful commercial deployment globally, and because sorption technology has been proven to optimally produce lithium chemicals from hot brines with a low operating cost and sustainable footprint.

DLE using sorption has a fifty-year development and implementation history. Since its initial genesis with Dow in the 1970s, Livent has practiced sorption-type DLE at commercial levels in South America for 26 years, and more recently sorption-type DLE has been commercially deployed at multiple plants in China.

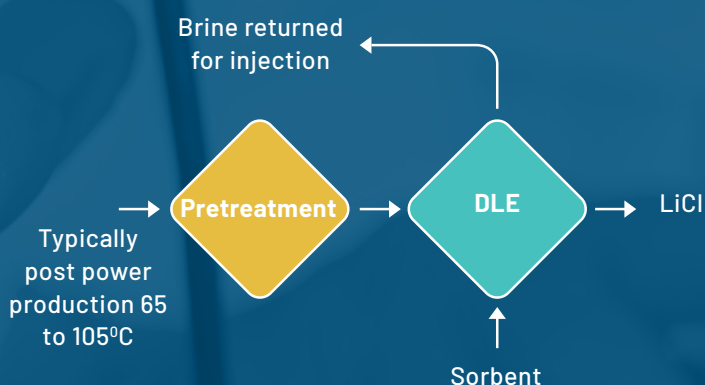
Over the last 12 months there have been large investments into DLE projects including in Argentina by Rio Tinto at the Rincon project and Eramet's Eramine project.

Critically, since sorption-type DLE typically requires the brine to be hot, Vulcan intends to use the heat already embodied in the waste brine stream from its geothermal renewable energy operations, removing the requirement to heat the brine with fossil gas as happens at other commercial operations worldwide. This represents a significant financial and greenhouse gas emissions saving, and enables the technology to be used on lower grade lithium brines compared to salars.

Further, the sorption-type DLE associated with geothermal brine, of the kind Vulcan is developing, avoids the requirement to heat the brine with fossil gas, providing the potential for no carbon emissions and offers additional revenue stream from energy.

DLE offers “significant promise of increasing (lithium) supply, reducing the (lithium) industry’s environmental, social, and governance footprint, and lowering costs”.

-McKinsey, April 2022





DURING THE PERIOD, VULCAN BECAME A NEW SHAREHOLDER OF THE TECHNOLOGIEREGION KARLSRUHE GMBH (TRK). AS OUR GERMAN HEAD OFFICE IS BASED IN THE KARLSRUHE TECHNOLOGY REGION, IT IS IMPORTANT FOR US TO CONNECT WITH LOCAL AUTHORITIES, CHAMBERS OF COMMERCE, SCIENTIFIC INSTITUTIONS AND OTHER COMPANIES IN THE REGION AND TO PROMOTE NEW TECHNOLOGIES. OUR PARTNERSHIP WITH TRK IS AN EFFECTIVE PLATFORM FOR THESE ACTIVITIES. IMPORTANTLY, VULCAN ALSO WANTS TO LEVERAGE THE NETWORK OF TRK TO ACCELERATE THE ENERGY TRANSITION IN THE REGION.

RESEARCH AND DEVELOPMENT

We believe in progress through science and know that by leveraging research and development, we can solve some of our greatest challenges including climate change.

While we are focused on project development using proven technology where possible, we are committed to research and development (R&D) with partners like the Karlsruhe Institute of Technology, the University of Stuttgart, TU Darmstadt and other institutions to

clarify geological parameters and further optimise lithium extraction processes during the development of the project.

Furthermore, our subsidiaries Vulcan Energy Subsurface Solutions and Vulcan Energy Engineering have been involved in numerous research and development projects on European and national German level.

Key R&D projects include:

Vulcan Energy Engineering (VEE)

EFFEO

Increasing efficiency of geothermal power plants via Project Management Jülich

GREGEO

Aims to develop a new well completion strategy that aims to establish a corrosion-resistant alternative to steel

GEORISK PROJECT

Aims to develop financial schemes and mitigate the impact of the resource risk

GEOTHERMSCALLING

Development and evaluation of the advanced iron boride-based anti-corrosion coating with high resistance to corrosion and scaling for the deep geothermal applications.

Vulcan Energy Subsurface (VESS)

CROWDTHERMAL

Empowering the European public to directly participate in the development of geothermal projects with the help of alternative financing schemes (crowdfunding) and social engagement tools

MEET

Multidisciplinary and multi-context demonstration and EGS exploration and Exploitation Techniques and potentials

DGE-ROLLOUT

Roll-out of Deep Geothermal Energy in Northwest Europe

Value Chain

We actively engage key stakeholders throughout our value chain to understand their needs, identify opportunities for positive impact and collaboration, and ensure that we continue to deliver value.

binding lithium offtake agreements with some of the largest cathode, battery and automakers in the world.

European auto-manufacturers committing to produce carbon neutral electric vehicles at delivery to the customer, including the battery raw materials used in production, was a significant inspiration for founding Vulcan in Germany a few years ago.

OFFTAKE PARTNERS

Vulcan is committed to partnering with organisations who share our decarbonisation ambitions, and we have

AUTO BATTERY AND CATHODE-MAKERS COMMITTING TO CARBON NEUTRALITY



'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'.



'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'.



'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 CO₂ neutral'.



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



'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'.



MEMBERSHIPS

Memberships in associations help us network and raise awareness of renewable energy and E-mobility. Developing partnerships and alliances also helps support us toward project development. Vulcan and/or our local subsidiaries have memberships or associations with the following organisations:

GEOTHERMAL

- International Geothermal Association (IGA), Bonn <https://www.geothermal-energy.org/>
- European Geothermal Energy Council (EGEC), Brussels <https://www.egec.org/>
- Bundesverband Geothermie (BVG), Berlin <https://www.geothermie.de/>

LITHIUM AND BATTERIES

- Kompetenznetzwerk Lithium Ionen Batterie (KLiB), Berlin <https://klib-org.de/>
- European Battery Alliance (EBA250), Brussels <https://www.eba250.com/>
- Global Battery Alliance

ENERGY

- EIT InnoEnergy SE, Eindhoven <https://www.innoenergy.com/>

BUSINESS COMMUNITY

- Wirtschaftsrat Deutschland, Berlin <https://www.wirtschaftsrat.de/>
- BVMW – Bundesverband mittelständische Wirtschaft,
- Unternehmerverband Deutschlands e.V., Berlin <https://www.bvmw.de/>
- UN Global Compact Network Australia
- German – Australian Consulate Member

AUTOMOTIVE

- Automotive Engineering Network (aen), Karlsruhe <https://ae-network.de/en/>

Digitisation and Cyber Security

Vulcan's cyber security measures incorporate multiple factors to best protect our data systems and that of our stakeholders, including suppliers, customers, employees and others. We guard against threats to data, such as protecting data from loss, corruption, or unauthorised access, and governing how data, specifically personal data, is legitimately used and disclosed.

In 2021 we conducted an external Cyber Risk assessment which rated our system 91/100, well within the advanced category of protection against malicious attacks.

As part of our TOM 360 Review, we recently incorporated all Vulcan Group companies into the one data management system and office suite of applications. This has allowed enhanced internal communications without compromising on security. We also have a dedicated team of IT professionals who manage our cyber security and ensure data is securely stored and archived appropriately.

With operations in Germany, we are bound by EU Data Protection Regulations, further information is available via our Website Terms of Use page and Privacy Policy.





UN Global Compact



We were thrilled to be accepted as a participant of the United Nations Global Compact; a global network of over 15,000 companies and 4,000 non-business participants each committed to building a sustainable future.

Known as the world's largest corporate sustainability initiative, the UN Global Compact is based on ten principles around four key themes of Human Rights, Labour, Environment and Anti-Corruption. By becoming a member of the UN Global Compact, we commit to enacting these values in our culture, strategies, policies, and procedures. Vulcan will report against our efforts annually via our Communication on Progress uploaded to the UN Global Compact website.

We are a Member of the Global Battery Alliance (GBA), an umbrella partnership made up of 70 members working towards a globally sustainable battery value chain.

Industry members include BMW Group, BASF, BP, Google, Renault Group, LG Chem, Umicore, Volkswagen Group and Volvo Group. Vulcan joins SQM and Wesfarmers as members from the lithium sector. Representatives from our team participated in meetings and workshops during the year. We will continue to work with industry leaders to enable a circular battery value chain and increase accountability towards battery materials traceability and transparency.



Establish a circular battery value chain as a major driver to achieve the Paris Agreement

1. Maximising the **productivity of batteries** in their first life
2. Enabling productive and **safe second life use**
3. Ensuring the **circular recovery of battery materials**



Establish a low carbon economy in the value chain, create new jobs and additional economic value

4. Ensuring **transparency** of greenhouse gas emissions and their progressive reduction
5. Prioritising energy efficiency measures and **substantially increasing the use of renewable energy** as a source of power and heat when available
6. Fostering **battery-enabled renewable energy integration and access** with a focus on developing countries
7. Supporting **high quality job creation** and skills development



Safeguard human rights and economic development consistent with the UN Sustainable Development Goals

8. Immediately and urgently eliminating child and forced labour, strengthening communities and respecting the human rights of those employed by the value chain
9. Fostering protection of public health and the environment, minimising and remediating the impact from pollution in the value chain
10. Supporting responsible trade and anti-corruption practices, local value creation and economic diversification

APPENDIX

Group Structure

Vulcan has assembled a best-in-class team of professionals in the fields of geothermal renewable energy project development and lithium extraction. The team is working together to deliver a fully integrated renewable energy and sustainable lithium chemicals business in Europe.

VULCAN HAS ASSEMBLED A BEST-IN-CLASS TEAM OF PROFESSIONALS IN THE FIELDS OF GEOTHERMAL RENEWABLE ENERGY PROJECT DEVELOPMENT AND LITHIUM EXTRACTION. THE TEAM IS WORKING TOGETHER TO DELIVER A FULLY INTEGRATED RENEWABLE ENERGY AND SUSTAINABLE LITHIUM CHEMICALS BUSINESS IN EUROPE.



ASX listed parent entity responsible for strategy, governance and reporting.

Employer of corporate related staff and Board members.



German wholly owned subsidiary of Vulcan Energy Resources Ltd.

Vulcan Energie Ressourcen GmbH employs technical staff relating to development of Vulcan's Zero Carbon Lithium project. Is the holding company for German operating entities.

Operating entities



In-house sub-surface planning and engineering company responsible for deep geothermal energy projects encompassing everything from exploration geology to reservoir engineering and drilling.

Previously known as Geothermal Engineering GmbH (GeoT).



In-house engineering team focused on deep geothermal projects at surface including power plants, heat stations, drill pads and permitting.

Previously known as Global Engineering and Consulting Company GmbH (Gec-Co).

NatürLich Insheim GmbH

Vulcan acquired the Insheim geothermal power plant in December 2021, renaming it Natür³Lich Insheim.

The operational, revenue generating plant currently has the technical capacity to produce a maximum of 4.8MW renewable power, with an additional ability to produce heating.



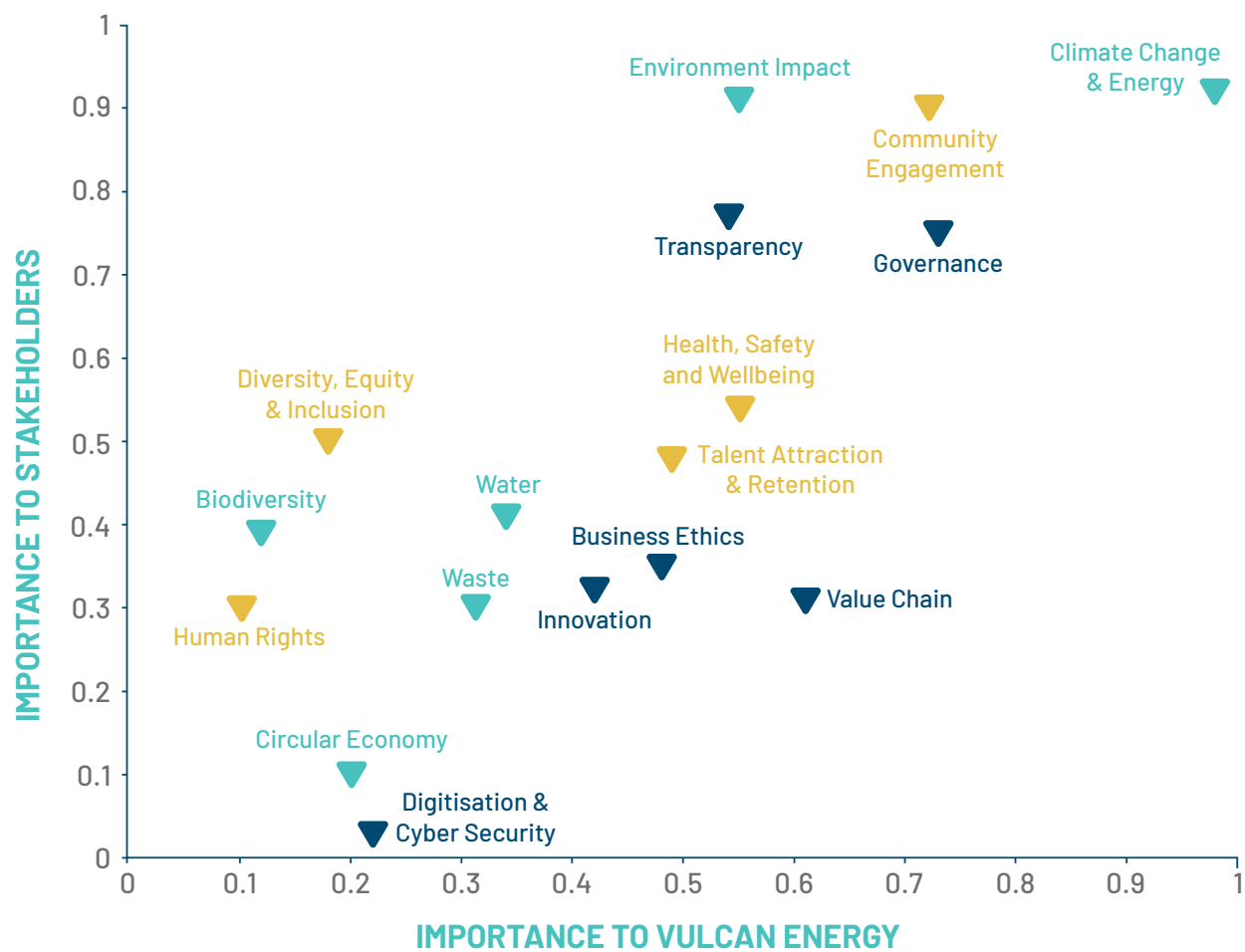
In-house drilling company, established 2021.

Owns and operates specialised electric rigs which can drill to the target depth required for deep geothermal energy wells in the Upper Rhine Valley, Germany.

Material Topics Matrix and Definitions

The Materiality Assessment process was conducted in accordance with GRI Standards and involved reviewing global industry trends, benchmarking key peers and leaders, as well as interviews with our key external and internal stakeholders, including Vulcan’s Board

of Directors, members of our leadership team and employees. Results from the assessment were then categorised into a matrix to give a grade of importance to each of our identified material topics as they relate to stakeholders and Vulcan.



Material Issue Definitions	
Biodiversity	Impacts on natural habitats and ecosystems across Vulcan Energy's value chain; including operational impacts on biodiversity, pollinator protection, soil health and land stewardship practices.
Climate change and energy	Mitigation of and adaptation to climate change across Vulcan Energy's value chain; including renewable energy generation, energy use and efficiency, risks to the business from climate change effects (including supply chain resilience and impacts to infrastructure).
Circular economy	Enabling a circular battery value chain.
Environmental impact	Minimising all environmental impacts, including seismic activity linked to geothermal drilling by utilising best practices and remaining compliant with all regulations.
Waste	Management of waste, including overall operational waste efficiency and recycling from lithium processing.
Water	Minimising the amount of water consumed through effective recycling and replenishment of withdrawn water and effectively mitigating impacts to groundwater.
Community engagement	Effective engagement with the communities in which Vulcan Energy operates. Contributing to local communities as a business partner (e.g., job creation and tax payments) and community partner (e.g., understanding and meeting community needs); effectively considering environmental and social concerns in business policies, decisions and operations.
Diversity, equity and inclusion	An inclusive culture, employee diversity, board and leadership diversity.
Health, safety and wellbeing	Culture around work-life balance, employee well-being and mental health, as well as compliance with worker health and safety requirements.
Human Rights	Human rights within the Vulcan Energy's value chain, including supply chain and lithium offtakers.
Talent attraction and retention	Attracting and retaining world-class talent and providing opportunities for ongoing skills training and professional development.
Business ethics	Adhering to the Vulcan Values and policies set out for our company to behave ethically, including compliance with laws, anti-corruption and bribery; anti-competitive behaviour; paying fair share of local, regional and national taxes; and conducting political engagement/lobbying transparently.
Digitisation and cyber security	Company digitisation and digital efficiency. Protection of the company and its stakeholders' (suppliers, customers, employees and others) data. Guarding against threats to data, such as protecting data from loss, corruption, or unauthorised access, and governing how data, specifically personal data, is legitimately used and disclosed.
Governance	Executive governance of Vulcan Energy, including the execution and oversight of ESG strategy, Board composition, executive remuneration, shareholder rights and enterprise risk management.
Innovation	Executing current innovation while continually updating the company's technology and systems to maximise efficiency and ESG performance.
Value chain	Taking responsibility for human rights and environmental performance across the company's value chain and ensuring that workers are treated fairly and supported in meeting the ethical standards set out by our company.
Transparency	Transparently reporting Vulcan Energy's positive and negative impacts on society and the environment, including the company's progress on its goals and strategic objectives.

GRI Content Index

Statement of use		GRI 1 used
Vulcan Energy Resources has reported the information cited in this GRI content index for the period July 1 2021-June 30 2022 with reference to the GRI Standards.		GRI 1: Foundation 2021
GRI STANDARD	DISCLOSURE	LOCATION
Organisational Profile		
GRI 2: General Disclosures 2021	2-1 Organizational details	p.10 Annual Report 2022
	2-2 Entities included in the organization's sustainability reporting	p.1 About this report, Sustainability Report 2022 p.56 Group Structure, Sustainability Report 2022
	2-3 Reporting period, frequency and contact point	p.1 About this report, Sustainability Report 2022
	2-4 Restatements of information	There are no restatements of information in this report.
	2-5 External assurance	Data in this report has not been externally assured.
	2-6 Activities, value chain and other business relationships	p.6 Circular Zero Carbon Business Model, Sustainability Report 2022 p.13 Stakeholder Engagement, Sustainability Report 2022 p.54 Memberships, Sustainability Report 2022
	2-7 Employees	p.4 ESG Highlights, Sustainability Report 2022 p.34 Diversity, equity & inclusion , Sustainability Report 2022
	2-8 Workers who are not employees	Vulcan Group uses subcontractors, but does not have systems to track the total number. Vulcan Group is considering this for future reporting.
	2-9 Governance structure and composition	p.12-13 Annual Report 2022 Meet the Team Corporate directory https://v-er.eu/corporate-directory-and-governance/
	2-10 Nomination and selection of the highest governance body	p.2 Company website: 2021 Corporate Governance Statement
	2-11 Chair of the highest governance body	p.12 Annual report 2022
	2-12 Role of the highest governance body in overseeing the management of impacts	p.20 Governance, Sustainability Report 2022
	2-13 Delegation of responsibility for managing impacts	p.20 Managing ESG Risks, Sustainability Report 2022
	2-14 Role of the highest governance body in sustainability reporting	p.20 ESG Governance Table, Sustainability Report 2022

GRI STANDARD	DISCLOSURE	LOCATION
	2-15 Conflicts of interest	p.3 Company website: Corporate Code of Conduct and Ethics Company website: https://v-er.eu/wp-content/uploads/2022/06/POL_UPDATED-Code-of-Conduct-Ethics.pdf
	2-16 Communication of critical concerns	Corporate Code of Conduct and Ethics p 3 Company website: https://v-er.eu/wp-content/uploads/2022/06/POL_UPDATED-Code-of-Conduct-Ethics.pdf
	2-17 Collective knowledge of the highest governance body	Company website: Corporate Governance 2021 Corporate Governance Statement p 5 and 6 https://v-er.eu/wp-content/uploads/2021/09/CorporateGovernanceStatement.pdf (29/08/22)
	2-18 Evaluation of the performance of the highest governance body	Company website: Corporate Governance 2021 Corporate Governance Statement p 3 - 4 https://v-er.eu/wp-content/uploads/2021/09/CorporateGovernanceStatement.pdf (29/08/22)
	2-19 Remuneration policies	p.52-55 Annual Report 2022 Remuneration Report Prospectus February 2022 pp. 144 - 146 Remuneration Policy https://www.investi.com.au/api/announcements/vul/7f0e696c-923.pdf
	2-20 Process to determine remuneration	Prospectus February 2022 p 144 - 146 Remuneration Policy https://www.investi.com.au/api/announcements/vul/7f0e696c-923.pdf (29/08/22)
	2-21 Annual total compensation ratio	Vulcan Group does not currently report this confidential data but is considering reporting this in future years.
	2-22 Statement on sustainable development strategy	p. 8-13 Our approach to Sustainability, Sustainability Report 2022
	2-23 Policy commitments	p. 14 Environment, Sustainability Report 2022 p. 30 Social, Sustainability Report 2022 p. 43 Governance, Sustainability Report 2022
	2-24 Embedding policy commitments	p. 14 Environment, Sustainability Report 2022 p. 30 Social, Sustainability Report 2022 p. 43 Governance, Sustainability Report 2022
	2-25 Processes to remediate negative impacts	p. 49 Business Ethics, Sustainability Report 2022
	2-26 Mechanisms for seeking advice and raising concerns	Vulcan Energy Whistleblower Protection Policy: https://vulcan.co/wp-content/uploads/2021/10/Vulcan-Whistleblower-Policy.pdf

GRI STANDARD	DISCLOSURE	LOCATION
	2-27 Compliance with laws and regulations	p. 49 Business Ethics, Sustainability Report 2022
	2-28 Membership associations	p. 54 Memberships, Sustainability Report 2022
	2-29 Approach to stakeholder engagement	p.12-13 Stakeholder Engagement, Sustainability Report 2022
	2-30 Collective bargaining agreements	0% of employees utilise collective bargaining agreements.
Materiality Assessment		
GRI 3: Material Topics 2021	3-1 Process to determine material topics	p.11-12 Materiality Assessment, Sustainability Report 2022
	3-2 List of material topics	p.11-12 Materiality Assessment, Sustainability Report 2022
	3-3 Management of material topics	p. 14 Environment, Sustainability Report 2022 p. 30 Social, Sustainability Report 2022 p. 43 Governance, Sustainability Report 2022
Economic Topics		
GRI 201: Economic Performance 2016	201-1 Direct economic value generated and distributed	p. 32 Annual Report
	201-2 Financial implications and other risks and opportunities due to climate change	p. 19-25 Taskforce on Climate-Related Financial Disclosure, Sustainability Report 2022
	201-3 Defined benefit plan obligations and other retirement plans	Vulcan Group does not currently report this confidential data but is considering reporting this in future years.
	201-4 Financial assistance received from government	Vulcan Group does not currently report this data.
GRI 202: Market Presence 2016	202-1 Ratios of standard entry level wage by gender compared to local minimum wage	Vulcan Group does not currently report this confidential data but is considering reporting this in future years.
	202-2 Proportion of senior management hired from the local community	Vulcan Group does not currently report this data but is considering reporting this in future years.
GRI 203: Indirect Economic Impacts 2016	203-1 Infrastructure investments and services supported	p.47 Annual Report
	203-2 Significant indirect economic impacts	p.6-7 About Vulcan, Sustainability Report 2022
GRI 204: Procurement Practices 2016	204-1 Proportion of spending on local suppliers	Vulcan Group does not currently report this data but is considering reporting this in future years.
GRI 205: Anti-corruption 2016	205-1 Operations assessed for risks related to corruption	Vulcan Group does not currently report this data.
	205-2 Communication and training about anti-corruption policies and procedures	Vulcan Group does not currently report on communication and training about anti-corruption policies and procedures but is considering reporting this in future years.
	205-3 Confirmed incidents of corruption and actions taken	No confirmed incidents for corruption during this reporting period.
GRI 206: Anti-competitive Behavior 2016	206-1 Legal actions for anti-competitive behavior, anti-trust, and monopoly practices	Vulcan Group does not currently report this data.

GRI STANDARD	DISCLOSURE	LOCATION
GRI 207: Tax 2019	207-1 Approach to tax	p.77 Annual Report
	207-2 Tax governance, control, and risk management	p.24-25 Risk Management, Sustainability Report 2022
	207-3 Stakeholder engagement and management of concerns related to tax	p.13 Stakeholder Engagement p.58 Material Issue Topic Definitions
	207-4 Country-by-country reporting	p.25 Market Disclosures, Corporate Governance 2022
Environmental Topics		
GRI 302: Energy 2016	302-1 Energy consumption within the organization	Vulcan Group does not currently report this data but is considering reporting this data in future reports.
	302-2 Energy consumption outside of the organization	Vulcan Group does not currently report this data but is considering reporting this data in future reports.
	302-3 Energy intensity	Vulcan Group does not currently report this data but is considering reporting this data in future reports.
	302-4 Reduction of energy consumption	Vulcan Group does not currently report this data but is considering reporting this data in future reports.
	302-5 Reductions in energy requirements of products and services	Vulcan Group does not currently report this data but is considering reporting this data in future reports.
GRI 303: Water and Effluents 2018	303-1 Interactions with water as a shared resource	p.29 Water, Sustainability Report 2022
	303-2 Management of water discharge-related impacts	p.29 Water, Sustainability Report 2022
	303-3 Water withdrawal	p.29 Water, Sustainability Report 2022
	303-4 Water discharge	p.29 Water, Sustainability Report 2022
	303-5 Water consumption	p.29 Water, Sustainability Report 2022
GRI 304: Biodiversity 2016	304-1 Operational sites owned, leased, managed in, or adjacent to, protected areas and areas of high biodiversity value outside protected areas	p.29 Biodiversity, Sustainability Report 2022
	304-2 Significant impacts of activities, products and services on biodiversity	p.29 Biodiversity, Sustainability Report 2022
	304-3 Habitats protected or restored	p.29 Biodiversity, Sustainability Report 2022
	304-4 IUCN Red List species and national conservation list species with habitats in areas affected by operations	Vulcan Group does not currently report this data but is considering reporting this in future years.

GRI STANDARD	DISCLOSURE	LOCATION
GRI 305: Emissions 2016	305-1 Direct (Scope 1) GHG emissions	p.26 Climate Change, Sustainability Report 2022
	305-2 Energy indirect (Scope 2) GHG emissions	p.26 Climate Change, Sustainability Report 2022
	305-3 Other indirect (Scope 3) GHG emissions	p.26 Climate Change, Sustainability Report 2022
	305-4 GHG emissions intensity	Vulcan Group does not currently report this data but is considering reporting this in future years.
	305-5 Reduction of GHG emissions	Vulcan Group does not currently report this data but is considering reporting this in future years.
	305-6 Emissions of ozone-depleting substances (ODS)	Vulcan Group does not currently report this data.
	305-7 Nitrogen oxides (NOx), sulfur oxides (SOx), and other significant air emissions	Vulcan Group does not currently report this data.
GRI 306: Waste 2020	306-1 Waste generation and significant waste-related impacts	p.28-29 Waste, Sustainability Report 2022
	306-2 Management of significant waste-related impacts	p.28-29 Waste, Sustainability Report 2022
	306-3 Waste generated	p.28-29 Waste, Sustainability Report 2022
	306-4 Waste diverted from disposal	Vulcan Group does not currently disclose this data but is considering reporting this data in future years.
	306-5 Waste directed to disposal	Vulcan Group does not currently report this data but is considering reporting this data in future years.
GRI 308: Supplier Environmental Assessment 2016	308-1 New suppliers that were screened using environmental criteria	Vulcan Group does not currently report this data but is considering reporting this in future years.
	308-2 Negative environmental impacts in the supply chain and actions taken	Vulcan Group does not currently report this data but is considering reporting this in future years.
Social Topics		
GRI 401: Employment 2016	401-1 New employee hires and employee turnover	p.4 Highlights, Sustainability Report 2022 Vulcan Group does not currently disclose employee turnover data.
	401-2 Benefits provided to full-time employees that are not provided to temporary or part-time employees	Corporate Governance Sustainable Supplier Policy https://v-er.eu/wp-content/uploads/2021/09/Sustainable-Supplier-Policy-FINAL-310821-1.pdf
	401-3 Parental leave	Company website: Corporate Governance Sustainable Supplier Policy https://v-er.eu/wp-content/uploads/2021/09/Sustainable-Supplier-Policy-FINAL-310821-1.pdf
GRI 402: Labor/Management Relations 2016	402-1 Minimum notice periods regarding operational changes	Vulcan Group does not currently report this data but is considering reporting this in future years.

GRI STANDARD	DISCLOSURE	LOCATION
GRI 403: Occupational Health and Safety 2018	403-1 Occupational health and safety management system	p.30-31 Health, Safety & Wellbeing, Sustainability Report 2022
	403-2 Hazard identification, risk assessment, and incident investigation	p.30-31 Health, Safety & Wellbeing, Sustainability Report 2022
	403-3 Occupational health services	p.30-31 Health, Safety & Wellbeing, Sustainability Report 2022
	403-4 Worker participation, consultation, and communication on occupational health and safety	p.30-31 Health, Safety & Wellbeing, Sustainability Report 2022
	403-5 Worker training on occupational health and safety	p.30-31 Health, Safety & Wellbeing, Sustainability Report 2022
	403-6 Promotion of worker health	
	403-7 Prevention and mitigation of occupational health and safety impacts directly linked by business relationships	p.30 Health, Safety & Wellbeing, Sustainability Report 2022
	403-8 Workers covered by an occupational health and safety management system	p.29-30 Health, Safety & Wellbeing, Sustainability Report 2022
	403-9 Work-related injuries	p.30 Health, Safety & Wellbeing, Sustainability Report 2022
	403-10 Work-related ill health	p.30 Health, Safety & Wellbeing, Sustainability Report 2022
GRI 404: Training and Education 2016	404-1 Average hours of training per year per employee	Vulcan Group does not currently report this data but is considering reporting this in future years.
	404-2 Programs for upgrading employee skills and transition assistance programs	p.35 Talent Attraction & Retention, Sustainability Report 2022
	404-3 Percentage of employees receiving regular performance and career development reviews	Vulcan Group does not currently report this data but is considering reporting this in future years.
GRI 405: Diversity and Equal Opportunity 2016	405-1 Diversity of governance bodies and employees	p.30 Social, Sustainability Report 2022
	405-2 Ratio of basic salary and remuneration of women to men	Vulcan Group does not currently report this confidential data but is considering reporting this in future years.
GRI 406: Non-discrimination 2016	406-1 Incidents of discrimination and corrective actions taken	Vulcan Group does not currently report this data but is considering reporting this in future years.
GRI 407: Freedom of Association and Collective Bargaining 2016	407-1 Operations and suppliers in which the right to freedom of association and collective bargaining may be at risk	Vulcan Group does not currently report this data but is considering reporting this in future years.

GRI STANDARD	DISCLOSURE	LOCATION
GRI 408: Child Labor 2016	408-1 Operations and suppliers at significant risk for incidents of child labor	Vulcan Group does not currently report this data but is considering reporting this in future years.
GRI 409: Forced or Compulsory Labor 2016	409-1 Operations and suppliers at significant risk for incidents of forced or compulsory labor	Vulcan Group does not currently report this data but is considering reporting this in future years.
GRI 410: Security Practices 2016	410-1 Security personnel trained in human rights policies or procedures	Vulcan Group does not currently report this data because we do not utilise security personnel but will consider reporting this in future years if applicable.
GRI 411: Rights of Indigenous Peoples 2016	411-1 Incidents of violations involving rights of indigenous peoples	Vulcan Group does not currently report this data because we do not operate in at risk areas but will consider reporting this in future years if applicable
GRI 413: Local Communities 2016	413-1 Operations with local community engagement, impact assessments, and development programs	p.36-38 Community Engagement, Sustainability Report 2022
	413-2 Operations with significant actual and potential negative impacts on local communities	p.36-38 Community Engagement, Sustainability Report 2022
GRI 414: Supplier Social Assessment 2016	414-1 New suppliers that were screened using social criteria	Vulcan Group does not currently report this data but is considering reporting this in future years.
	414-2 Negative social impacts in the supply chain and actions taken	Vulcan Group does not currently report this data but is considering reporting this in future years.
GRI 415: Public Policy 2016	415-1 Political contributions	p.50 Business Ethics, Sustainability Report 2022
GRI 417: Marketing and Labeling 2016	417-1 Requirements for product and service information and labeling	Vulcan Group does not currently report this data because we do not sell retail products.
	417-2 Incidents of non-compliance concerning product and service information and labeling	Vulcan Group does not currently report this data because we do not sell retail products or services but will consider reporting this in future years if applicable.
	417-3 Incidents of non-compliance concerning marketing communications	Vulcan Group does not currently report this data because we have not had any non-compliance incident but will consider reporting this in future years if applicable
GRI 418: Customer Privacy 2016	418-1 Substantiated complaints concerning breaches of customer privacy and losses of customer data	p.54 Digitisation and Cyber Security, Sustainability Report 2022

United Nations Guiding Principles Initial Assessment

This table represents our initial assessment of the UN Global Compact Ten Principles

Human Rights	
Businesses should support and respect the protection of internationally proclaimed human rights	Vulcan Group has developed a Diversity Policy. Our Corporate Code of Conduct and Ethics and Sustainable Supplier Policy addresses risks associated with human rights.
Businesses should ensure that they are not complicit in human rights abuses	No significant human rights-related issues were identified in this reporting period.
Labour	
Businesses should uphold the freedom of association and the effective recognition of the right to collective bargaining	The diverse nature of our business means we have a mix of collective and individually regulated employment arrangements. Whatever the nature of those arrangements, we recognise the right of our employees to freely associate and join trade unions. Vulcan Group consults with its employee's unions as required and recognises and supports the rights of trade unions to enter the workplace to hold discussions and investigate alleged breaches as per Fair Work Act 2009. We are not aware of any Vulcan Group business activities which are at risk from forced/compulsory labour and child labour issues. Assessments of our supply chain labour risks are undertaken through our Sustainable Supplier Policy. Vulcan Group meets its obligations under anti-discrimination legislation, which is supported by our policies regarding the making of complaints via our Whistleblower Protection Policy, Corporate Code of Conduct and Ethics, People and Performance Committee Charter, and Diversity Policy. Vulcans' remuneration strategy and practices do not differentiate based on gender.
Businesses should uphold the elimination of forced or compulsory labour	
Businesses should uphold the effective abolition of child labour	
Businesses should uphold the elimination of discrimination in respect of employment and occupation	
Environment	
Businesses should support a precautionary approach to environmental challenges	Vulcan Group has developed an Environmental Management Policy and Sustainability and ESG Framework which outlines our commitment to the environmental in which we operate. Embedding risk management processes into all our critical business systems allows us to adopt a precautionary approach to business management that is based on valid data and sound science. Vulcan Group's environmental innovation approaches include showcasing environmental best practices across the business continually updating the company's technology and systems to maximise efficiency and Sustainability and ESG performance, and working towards reduced water usage and consumption, through recycling as much water as possible during the lithium extraction process.
Businesses should undertake initiatives to promote greater environmental responsibility	
Businesses should encourage the development and diffusion of environmentally friendly technologies	
Anti-Corruption	
Businesses should work against all forms of corruption, including extortion and bribery	Vulcan Group has a Corporate Code of Conduct and Ethics, Anti-Bribery and Anti-Corruption Policy and associated training and engagement, Whistleblower Protection Policy, and Continuous Disclosure Policy with a focus on continuous disclosure compliance. Vulcan Group will not make political contributions in cash or in-kind and will not participate directly in the activities of political parties.

TCFD DISCLOSURES TABLE

TCFD Recommendation	Summary	Reference
1. Governance		
1.a Board's oversight of climate-related risks and opportunities	- Board skills composition - Board's Audit, Risk and ESG Committee - Projects Oversight Committee - Advisory support	TCFD section Board Skills Matrix Corporate Governance Statement - Board Composition - External Corporate Governance Advisors - Board Committees FY22 Annual Report - Board of Directors - Directors Report - Sustainability Partners Sustainability and ESG Framework
1.b Managements role on climate-related risks and opportunities	- Climate-related responsibilities and roles defined - Organisational structure - Short and long term ESG KPI's for key management - Training and education	TCFD section Corporate Governance Statement - Risk Management FY22 Annual Report - Group Structure - Leadership Team - Remuneration Report FY22 Management Report 1.4 Management Strategy and Objectives Sustainability and ESG Framework
2. Strategy		Reference/ Further Details
2.a Climate-related risks and opportunities identified in the short, medium and long term	- Short term - 2025 - Medium term - 2040 - Long term - 2054 (half of the projects life) 20 Climate-related risks identified	TCFD section Corporate Governance Statement - Opportunity and Risk Status FY22 Management Report 4.0 Outlook, Opportunities and Risks Sustainability and ESG Framework

TCFD Recommendation	Summary	Reference
2.b Impact on the organisation's business, strategy and financial planning	- Zero Carbon Lithium™ Project - Identified key risks and opportunities - Project outlook	TCFD section FY22 Annual Report - Exploration and Development - Renewable Energy and Geothermal Division - Zero Carbon Lithium™ Project FY22 Management Report 1.5 Management Systems and Steering
2.c Resilience of the organisation's strategy considering climate-related scenarios	- Forecasting and climate scenario analysis - Macro trends	TCFD section FY22 Management Report 2.0 Economic Report
3. Risk Management		
3.a Processes for identifying and assessing climate-related risks	- Management of sustainability-related risks - Formal risk management framework	TCFD section FY22 Annual Report - Overview of Governance FY22 Management Report 1.11.1 Risk Management System
3.b Processes for managing climate-related risks	- Bi-annual matrix review - Risk owners collaboration	TCFD section FY22 Management Report 1.12 Overall Assessment of Opportunities and Risks by Management
3.c Integration of processes for identifying, assessing and managing climate-related risks	- Risk management team - Mitigation strategies	TCFD section
4. Metrics and Targets		
4.a Metrics used to assess risks and opportunities	Risks are assessed: - With quantitative and qualitative tools - Life Cycle Assessment - Environmental Impact Assessments	TCFD section FY22 Management Report 1.9.3 Key Performance Measures used by Vulcan Group
4.b Disclosure of Scope 1, 2 and 3 greenhouse gas (GHG) emissions	Emissions mapping exercise	TCFD section Climate Active website profile page Company website
4.c Targets used and performance	- Lifecycle Assessment Analyses - Targets for Sustainability and ESG Framework	TCFD section FY22 Annual Report - Executive Remuneration Arrangements - Executive KMP Remuneration Outcomes for FY22 - ESG KPIs for Executive Team Company website Sustainability & ESG Framework



VULCAN ENERGY
ZERO CARBON LITHIUM™

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