TASKFORCE FOR CLIMATE RELATED FINANCIAL DISCLOSURES

1 JULY TO 31 DECEMBER 2022

(TCFD)

VULCAN ENERGY
ZERO CARBON LITHIUM™

ABN 38 624 223 132

CONTENTS

TCFD STATEMENT

The Financial Stability Board's Taskforce on Climate related Financial Disclosures (TCFD) released its final recommendations in June 2017. The TCFD provides a framework for companies and other organisations to develop more effective climate related financial disclosures through their existing reporting processes. Milestones over the last five years include companies increasingly disclosing climate related information in financial filings, preparers and users of disclosures increasingly viewing climate related issues as mainstream business and investment considerations and disclosures becoming more complete, with more appropriate pricing of climate related issues. This will be Vulcan's third voluntary TCFD report and incorporates for the first time climate scenario modelling, considering both physical and transitional climate related risks and opportunities for Vulcan.

FOREWORD FROM THE CEO

DR. FRANCIS WEDIN
Managing Director and CEO

Dear Stakeholders,

It is my pleasure to present to you Vulcan's inaugural standalone Taskforce for Climate Related Financial Disclosures (TCFD) Report, providing details on how our Company may be financially exposed to climate related risk over the short, medium and long term.

This is a notable milestone in our reporting and disclosure journey and is a testament to our objective to provide you, our valued stakeholders, with pertinent and transparent information relating to our business, and follows from our inaugural stand alone Sustainability Report that was released alongside the Annual Report in September 2022.

Those who have closely followed our growth and progress over the last few years will know that we have been reporting in line with the recommendations of the TCFD since 2021. Through this, we have come to greatly appreciate the value of understanding and communicating to our stakeholders our climate change risks and opportunities, strategies for managing these, and greenhouse gas emissions (GHG) footprint. I believe that by being an early adopter of TCFD, we have set Vulcan up to be at the forefront of sustainability reporting and have given our investors transparent and robust year on year comparative data as they come on this journey with us.

Our business exists to, essentially, make the world a better place. We aim to be the first in the world to deliver carbon neutral, domestically sourced lithium from Europe to European OEM's as part of the EV battery supply chain. In doing so, we aim to make a significant contribution to the Net Zero objective.

This first standalone TCFD report includes our first climate scenario modelling undertaken with the support of Baringa. Such modelling helps us identify and prepare for the impacts that climate change will have on our business model by exploring different possible futures that help us identify the most relevant risks and opportunities.

We are now transitioning from a development company to a project execution company, and our approach to sustainability and reporting will evolve in line with that transition. I am proud of the achievements Vulcan has made to date and look forward to continuing to share our progress with you, our stakeholders, as we ramp up to full commercial production.

DEFINING ZERO CARBON

VULCAN DEFINES 'ZERO CARBON' AS NET ZERO CARBON EMISSIONS RESULTING FROM THE ACTIVITIES UNDERTAKEN TO EXTRACT AND PROCESS LITHIUM FROM ITS COMBINED LITHIUM AND GEOTHERMAL BRINE RESOURCE LOCATED IN THE UPPER RHINE VALLEY, GERMANY.

Unlike existing lithium operations, Vulcan aims to not burn fossil fuels in the production and processing exercise. Instead, it will use its own geothermal renewable heat source to drive the process, whilst also selling its own geothermal heat and power to the grid, displacing fossil fuel generated energy. The carbon emissions avoided as a result of the displaced fossil fuel generated energy allows Vulcan to define the project as net zero, or 'Zero Carbon' per the project's trademarked nomenclature, the 'Zero Carbon Lithium™ Project'. Vulcan commissioned Minviro Ltd, an independent consultancy, to undertake an ISO aligned Life Cycle Assessment (LCA) of the integrated geothermal energy, lithium production and processing impacts to prove and certify the validity of the carbon neutral nature of the Zero Carbon Lithium™ Project. Minviro's first ISO aligned LCA was conducted in 2021, with the latest LCA undertaken in 2023 (after the end of the reporting period). LCAs will be updated at regular intervals going forward.

In addition to the above, Vulcan engaged Climate Active and South Pole to verify the GHG emissions of the whole Company, including its Australian and German operations respectively. The most recent carbon neutral certification of the organisation's emissions, which includes business travel, procurement of goods and services, waste usage and electricity usage, was undertaken in 2021. Climate Active completed the certification process for Australia, while South Pole certified Vulcan Energie Ressourcen GmbH, and its subsidiaries, Vulcan Energy Engineering GmbH and Vulcan Energy Subsurface Solutions GmbH (originally called Gec-co and Geo-T, respectively). South Pole's assessment did not include Vercana, Vulcan's electric drilling subsidiary, because it had been recently incorporated and was a shell company, or, the Natürlich Insheim plant as the acquisition of Natürlich Insheim occurred post certification. These entities will be included in the next assessment round currently being undertaken by Climate Active and will be reported on in Vulcan's next report. This assessment will include the development and construction activities associated with the build of the Company's Demo Plant following the successful completion of the DFS.

Following the Climate Active and South Pole reports, and in order to bring the minimal GHG emissions balance associated with the Australian and German operations to net zero, Vulcan purchased good quality carbon credits. Details of the Company's carbon emissions associated with the Zero Carbon Lithium™ Project were disclosed to the market in 2021 (Minviro LCA announcement 4 August 2021), GHG emissions associated with Vulcan's operations and carbon credits purchases for 2021 were reported in the FY22 Sustainability Report available via the website (https://v-er.eu). The GHG emissions associated with Vulcan's operations for 2022 are currently being updated and the updated Minviro LCA data was announced as part of the DFS on 13 February 2023. Vulcan expects to maintain its carbon neutral status for the period.

GOVERNANCE

THE KEY PURPOSE OF VULCAN'S BOARD OF DIRECTORS IS TO PROMOTE THE COMPANY'S LONG TERM SUSTAINABLE SUCCESS BY COLLECTIVELY DIRECTING ITS CORPORATE AND OPERATIONAL AFFAIRS, WHILE MEETING THE APPROPRIATE INTERESTS OF ITS SHAREHOLDERS AND RELEVANT STAKEHOLDERS.

In fulfilling this role, the Board is committed to upholding the highest standards of corporate governance practice and regulatory compliance.

Vulcan's Board of Directors monitors and oversees the Company's strategy, project execution, enterprise risk management, and climate related risks and opportunities including acute and chronic physical and transitional impacts.

The current structure of the Board and its committees is considered appropriate for the size and early stage project development nature of Vulcan Energy.

For more information on the Company's governance framework, please refer to the supplementary Corporate Governance report on the website (https://v-er.eu).

BOARD AND COMMITTEE OVERSIGHT OF CLIMATE RELATED RISKS AND OPPORTUNITIES

Climate related roles and responsibilities have been clearly defined and delegated across the leadership team to ensure accountability and clear reporting lines.

The diagram below refers specifically to Vulcan's climate related governance. For an overview of the broader corporate governance structure, please refer to page xx of the Annual Report.

CLIMATE RELATED GOVERNANCE

Board – Overall reponsibility for the Company's sustainability strategy

Audit, Risk and ESG Committee

Key responsibilities:

- Financial statements, accounting policies and financial reporting and disclosure practices **(including sustainability related and climate related reporting)**
- Compliance
- Internal control processes and control framework **(including controls as it relates to sustainability and ESG integration)**
- Internal and external audit
- Management and disclosure of business, ESG and economic risks
- Risk management framework **(including climate related and broader sustainability related risks)**, and management's performance

Projects Oversights Committee

Key responsibilities:

- Regular reviews of the status of nominated projects
- Apply appropriate corporate governance framework and risk management **(including climate related and broader sustainability related risks)**
- Review and advise whether the projects have appropriate leadership and direction complimentary to maintaining an appropriate awareness of the strategic objectives of the Company
- Review and advise whether the processes utilised in the governance and management of the projects align with complimentary processes used at the business and Company level e.g. risk management

People and Performance Committee

Key responsibilities:

- Overall remuneration strategy
- Short term and long term incentive plans, including **ESG related KPIs**
- Performance management
- Matters relating to recruitment, retention and termination policies
- Diversity strategy and gender pay equity audits

All committee Chairs report to the Board

Projects Execution Committee

Key responsibilities include providing a consistent approach to:

- delivery (project execution, contract strategy, engineering standards, strategic sourcing)
- integrating schedules and visibility of critical paths
- interfaces being effectively managed **(including sustainability related and ESG risks and opportunities)**
- risks and opportunities defined and managed
- control processes to give strategic management and insights

Supply Chain Council

Key responsibilities include

- business critical supply chain priorities
- approval of procurement strategies
- awarding of contracts and delegations
- **oversight of supply chain sustainability credentials**

All committee Chairs report to the relevant Board committee

Sustainability Steering Committee

Consists of ten committee members from all departments across the Company

Key responsibilities include:

- **Establishes direction and operationalises implementation of the sustainability framework**
- **Ambassadors of sustainability – ensures the culture of sustainability is integrated into the Company**
- **Responsible for employee training and education**

Committee Chair reports to the Audit, Risk and ESG committee

CLIMATE GOVERNANCE: MANAGEMENT OF CLIMATE RELATED MATTERS

The Board and its committees have oversight of climate related issues, which include climate related risks and opportunities. The Board believes its members are equipped with the requisite skills and experience to support Vulcan's strategy and to effectively evaluate its climate risks and opportunities.

Vulcan Energy has two committees that are primarily responsible for overseeing climate related risks and opportunities. The principal of these is the Audit, Risk and ESG Committee. One of its responsibilities includes oversight of the management and disclosure of environmental, social and governance (ESG) risks.

This three person committee is chaired by Independent Non Executive Director, Josephine Bush, a seasoned ESG strategic advisor, along with Gavin Rezos and Dr. Heidi Grön. This committee meets on a quarterly basis.

The other body is the Projects Oversight Committee. The purpose of this Committee is to ensure there is proper governance and risk management as it relates to project execution and management.. Climate-related risks and opportunities associated with projects are included within the ambit of the Committee's remit and there is liaison between this Committee and the Audit, Risk and ESG Committee on such matters.

A Projects Execution Committee comprised of key executives was formed during the period under review, the purpose of which was to oversee the effective execution of projects in development. A key function of this Committee is to oversee the integration of climate related matters into the procurement process and supply chain, in particular the management of Scope 3 emissions. This committee reports to the Projects Oversight Committee.

The Supply Chain Council is currently being formed to assist the Projects Execution Committee and procurement team. The role of this council is to determine the procurement strategy and have oversight of sustainability and ESG credentials of its suppliers, and to award contracts in line with Vulcan's procurement policy. Membership of the council will include company executives from finance, project execution, engineering, and sustainability. Formation of this Council is in line with Vulcan moving from a development company to a projects execution and operational company.

The Board and its committees receive quarterly updates from the CEO, Deputy CEO, CFO, COO and Head of ESG as appropriate, in the form of oral reports and presentations, on actual and potential climate related risks and opportunities, impacts on strategy, and financial planning.

During the period under review, a Sustainability Steering Committee (SSC) was formed. The SSC, which met for the first time in December 2022, is a monthly forum that enables a multidisciplinary team across the organisation to come together to discuss environmental and climate related topics, including the operationalisation of the Sustainability Framework.

Vulcan's climate governance is bolstered by Julia Poliscanova who is an independent specialist advisor to Vulcan's Board and provides updates on EU regulations, including climate related matters. Julia is a Senior Director with the European Union's Transport & Environment lobby group, and a Global Battery Alliance Board member. She has been active with the Carbon Border Adjustment Mechanism (CBAM), decarbonisation of transport in the EU and, more recently, in the drafting of its Critical Raw Materials Act. She attends Board meetings by invitation.

Vulcan continues to utilise independent sustainability and ESG advisors where appropriate to engage with the Board and leadership team. As it is a foundational focus of Vulcan's to remain at the forefront of sustainability disclosures and reporting, the Company will continue to work with experts in specific areas like EU Taxonomy alignment, TCFD reporting, and carbon neutral certification. More information about the leadership team and their skills can be found on Vulcan's website at https://v-er.eu.

CLIMATE GOVERNANCE RELATED ACHIEVEMENTS IN 2022

A number of climate related objectives were achieved in 2022. The most notable included:

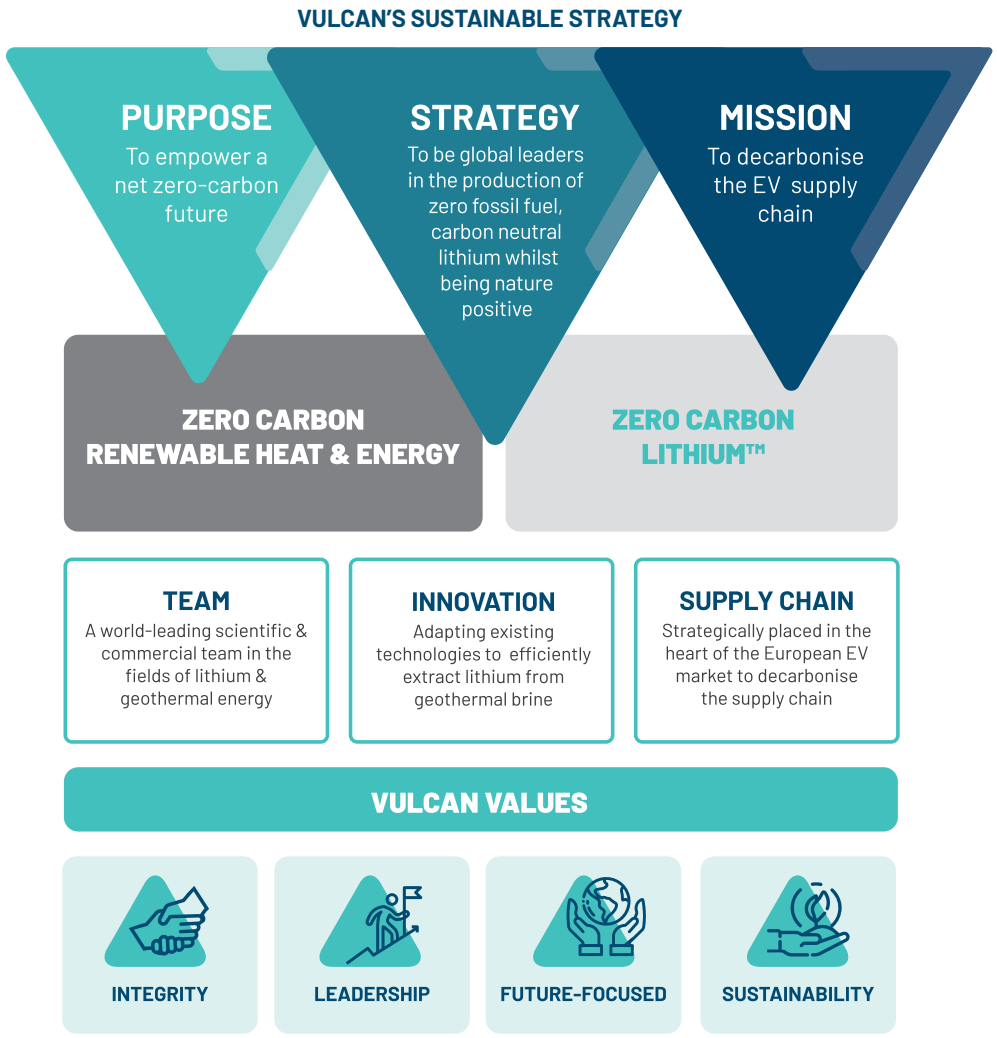
- The completion of an enhanced enterprise risk management review which included a deep dive into climate related risks and opportunities. This review comprised of workshops with the full Board and key executives across the organisation (please refer to the Risk management section below within this report for more details on the review);
- Receipt of Vulcan's first ESG risk rating, awarded by Sustainalytics in January 2023 and relating to the 2022 period. The ESG risk rating awarded was low and showed Vulcan as a first amongst peers and in the top 2% of the Chemicals Industry for ESG performance.
- Admission into the UN Global Compact (May 2022);
- Formation of the Sustainability Steering Committee to operationalise the sustainability framework;
- Vulcan Energie Ressourcen GmbH achieved ISO14001:2015 Environmental Management System certification (June 2022); and
- ESG linked KPIs to Executive compensation.

STRATEGY

VULCAN'S OVERARCHING STRATEGY

Vulcan was founded in 2018 on an environmentally focused goal, namely, to decarbonise lithium production for electric vehicle batteries, through developing the world's first Zero Carbon Lithium™ Project, with co-production of renewable geothermal energy and heat on a mass scale.

The overarching approach to Vulcan's growth strategy is detailed in the infographic below:



By adapting existing technologies to efficiently extract lithium from geothermal brine, Vulcan aims to deliver a local source of sustainable lithium for Europe, built around a net zero carbon strategy with strict exclusion of fossil fuels. Already an operational renewable energy producer, Vulcan will also provide renewable electricity and heat to local communities.

We believe that our purpose: to empower a net zero carbon future, clearly and succinctly represents the Vulcan Group's identity. It showcases why we exist, what problems we are working to solve and what we aspire to do.

INTEGRATION OF SUSTAINABILITY INTO THE STRATEGY

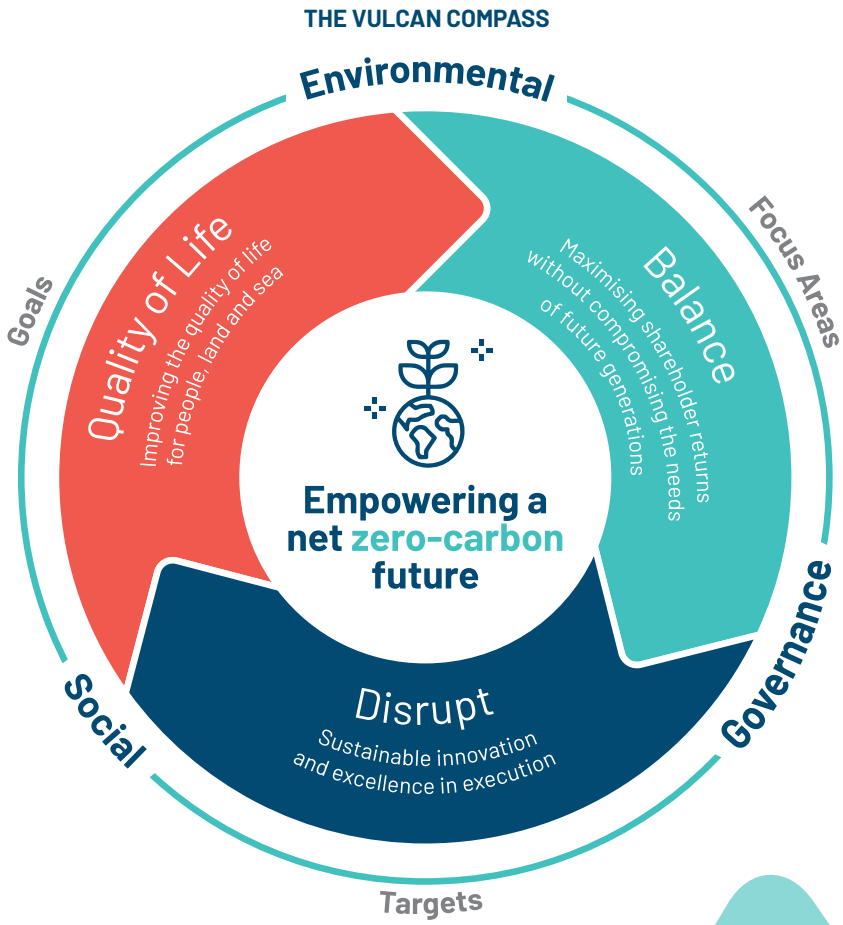
In 2022, Vulcan developed and adopted a Sustainability and ESG Framework, the purpose of which, is to weave sustainable decision making into the Company's core strategy. The Target Operating Model, (TOM360), review undertaken by PWC in early 2022 (see Risk Management section below) enabled this further with better alignment of the Company's structure, allocation of roles and responsibilities and reporting lines to Vulcan's sustainability strategy. The Company will continue to integrate and embed this further during the course of 2023.

Fundamental to Vulcan's approach to sustainability and the integration of that into the strategy is the principal of 'Do no harm'. This applies to the environment as much as it does to our people and communities. Vulcan's sustainability and ESG framework drives this principle into the executive decision making.

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

1. **Quality of Life** – improving the quality of life for people, land and sea
2. **Balance** – maximising shareholder returns without compromising the needs of future generations
3. **Positive disruption** – sustainable innovation and excellence in execution.

The Sustainability and ESG framework is supported by ESG initiatives as set out in our last standalone Sustainability Report 2022 available via the website https://v-er.eu.



VULCAN'S CLIMATE RESILIENCE

Vulcan's strategy is resilient to climate related risks, with very good exposure to climate related opportunities on the basis that the business model is driven by the decarbonisation of the electric vehicle (EV) industry and of electricity/heating grids.

In determining Vulcan's climate related resilience, Baringa assisted in devising the Company's first climate related scenarios assessment. The purpose of the assessment was to describe climate related risks and opportunities for Vulcan's business model by identifying key areas of the business including its current strategy, sources of revenue and costs, and the business metrics relevant to climate scenarios.

The assessment was based on the International Energy Agency's (IEA) Stated Policies Scenario (STEPS) and Net Zero Emissions by 2050 Scenario (NZE). Baringa's assessment process included:

- Analysis of the geodata of 11 critical assets for Vulcan;
- Extraction of baseline extreme event frequency hazard maps;
- Assessment of six likely climate related hazards including wildfire, riverine flooding, coastal flooding, tropical cyclone, heat stress and drought;
- Extraction of event frequency under climate change scenarios;
- The overlay of asset locations to calculate annual exposure likelihood to five hazard events;
- Application of simple exposure likelihood thresholds to categorise the exposure to a hazard as low, moderate or high; and
- Analysis of four major transition risk sections analysed including policy, technology, consumer, and market.

Baringa's summary shows that Vulcan Energy has low overall exposure to both physical and transition risks. The conclusions drawn from Baringa's study is that the NZE would benefit Vulcan, whereas risks potentially arise if the world maintains the STEPS scenario. Below are the key considerations under each climate scenario.

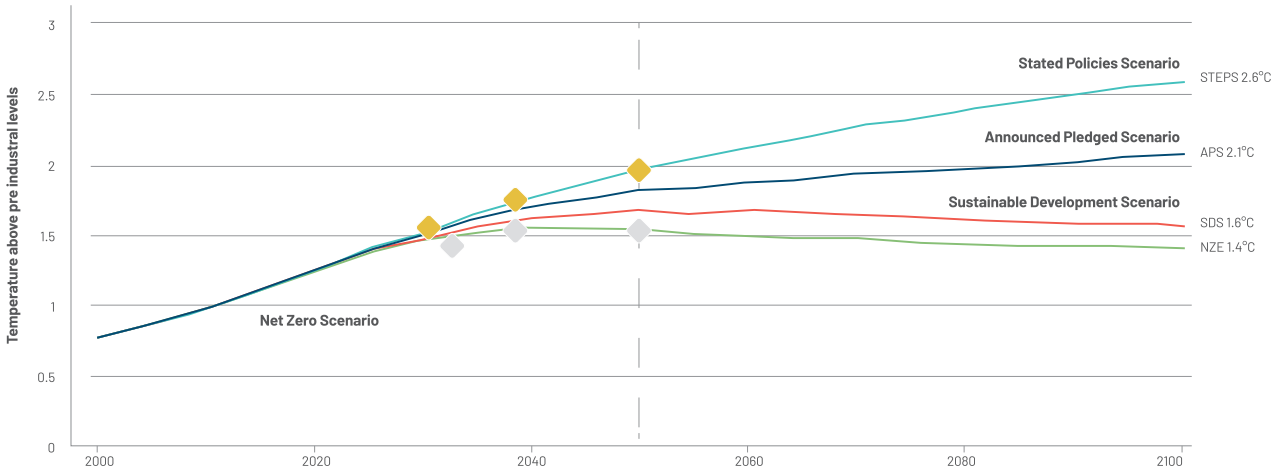
STEPS

- STEPS explores a scenario with least energy system transformation except what is driven by implemented policies, however carbon prices are still assumed to increase.
- By 2100, there is a 10% chance that temperature rise would exceed 3.5°C and extreme rainfall is 2x as often as 2022 and three to four times more intense.
- It is assumed under this scenario that ice sheets collapse, disrupting ocean circulation and causing irreversible changes in permafrost, boreal forests and the Amazon rainforest.

NZE

- NZE is consistent with limiting global temperature rise to 1.5°C with no or limited temperature overshoot, in line with reductions assessed in the Intergovernmental Panel on Climate Change (IPCC) sixth assessment report (2022).
- Represents one pathway for achieving net zero by 2050, but with uncertainty around pace of innovation in new and emerging technologies, the extent to which citizens are able or willing to change behaviour and the extent and effectiveness of international collaboration.
- NZE is built on the principle that the uptake of all the available technologies and emissions reduction options is dictated by costs, technology maturity, policy preferences and market conditions.

CLIMATE SCENARIO FORECAST ASSUMPTIONS UNDER STEPS, APS, SDS AND NZE (BARINGA)



* SDS was retired in October 2023

Physical risk assessment of Vulcan's assets in the Upper Rhine Valley shows exposure to wildfires, flooding and drought, however all climate related risks were deemed to be a low or no risk, with the advice to actively monitor for riverine flooding and wildfires.

RISK MANAGEMENT

HOW VULCAN IDENTIFIES AND ASSESSES RISK

To ensure Vulcan's strategy remains responsive to the external macro economic, climate and geopolitical environment, it is vital that all enterprise risks that may have a material impact on the business over the short, medium and long term are identified, assessed, and managed. We are committed to ensuring the Company has the right measures in place to mitigate these risks, and the right team to execute the strategy, to successfully commission the project and to capitalise on opportunities. This is as true of climate related risk as all other risks that may impact the business.

Vulcan takes a proactive approach to climate related risk management. Such risks are embedded in Vulcan's enterprise risk management framework and the process for the identification of such risks ensures they are picked up.

Vulcan's leadership team, together with the Head of ESG, are responsible for the process for identifying and assessing these risks reporting to the Audit, Risk and ESG Committee on their findings as well as the full Board where appropriate.

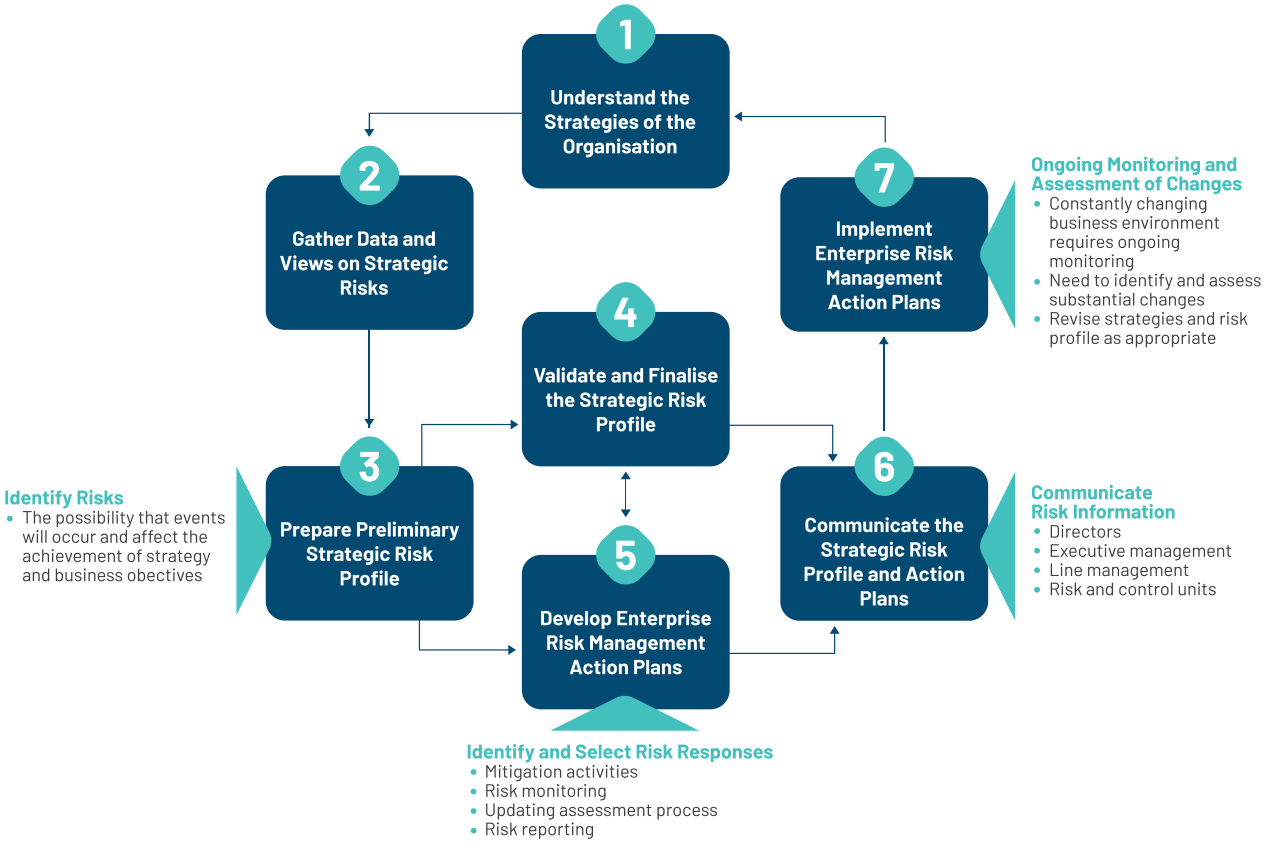
ENTERPRISE RISK MANAGEMENT

As Vulcan Energy is a relatively young company, the risk management approach is still evolving in line with Vulcan's development as a business. To give further impetus to this, in early 2022, Vulcan engaged PwC to undertake a 360 Target Operating Model (TOM 360) review. One of the key recommendations stemming from that review was that the Company centralise its backbone functions to enhance its strategic governance and administrative efficiency, thus ensuring the legal and operational structure of the Company is fit for purpose and aligned to its growth strategy.

Following the finalisation of the TOM 360, two workshops were held in Germany in September 2022 during which the Board and leadership team discussed the enterprise risk management framework, including the approach to climate related risks, and identified risks and impacts that could affect the Company. The Company follows the 2004 COSO Enterprise Risk Management – Integrated Framework as the principal mechanism to identify and assess risks. This is a seven step process whereby the consideration of risk is driven from an understanding of the company's strategy.

This flow chart illustrates how Vulcan identifies, assesses and manages all enterprise risks, which include those related to climate change.

COSO ENTERPRISE RISK MANAGEMENT – INTEGRATED FRAMEWORK



To date, Vulcan has progressed all risks through steps one to five, with prioritised risks having advanced through to step seven due to their identified importance to the Company. In order to prioritise the most salient risks for the Company, a traffic light system is utilised whereby likelihood is scaled from "Rare" to "Certain" across five levels and consequences range through seven scales from "Insignificant" to "Catastrophic", with the numbering aligned to the scale of consequences (from 1-35).

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

CLIMATE RELATED RISK MANAGEMENT

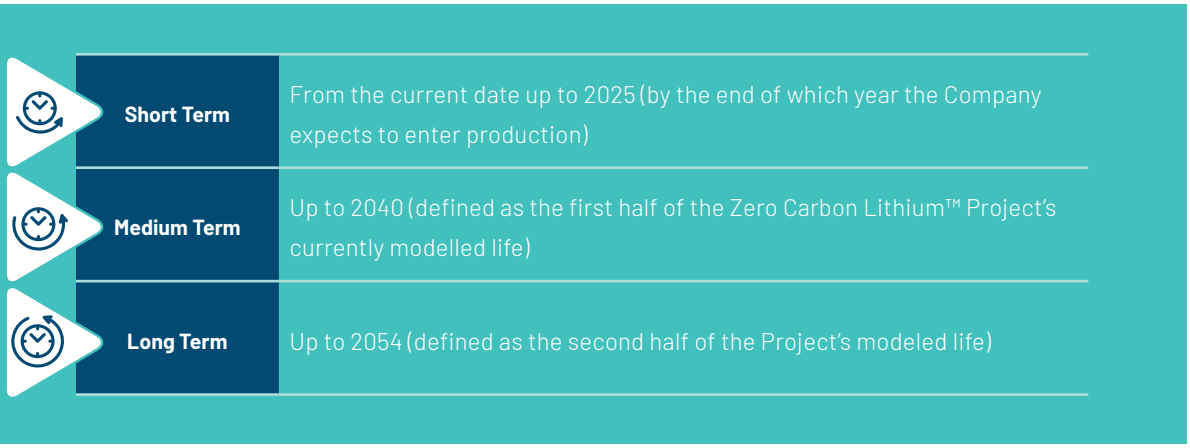
Deliberation of all climate related risks is captured and integrated into this broader integrated risk management framework. The climate related risks identified on the back of this process have been listed in the table on the following page. A total of nine key climate related risks to Vulcan's business were identified. These represent the top climate related risks Vulcan has identified to date and includes the risk rating and mitigation strategies. Vulcan have used the same quantification categories as applied to the enterprise wide risk ratings.

As per TCFD guidelines, climate risks are classified between physical and transition risks. These can be described as follows:

- Physical risks: are the tangible effects that climate has on organisations ie flooding, extreme weather events, water shortage and climate migration. They refer to the economic ramifications of damage to infrastructure, supply chains, and the built environment.
- Transition risks: are more intangible. They concern the risks that accompany the global decarbonisation transition, as the world transitions away from reliance on fossil fuels and towards a low carbon economy ie the possibility of the imposition of a carbon tax, carbon disclosure mandates and the transition to renewable energy.

DEFINING CLIMATE RELATED RISKS AND OPPORTUNITIES OVER THE SHORT, MEDIUM, AND LONG TERM

To explain how Vulcan has prioritised its risks and opportunities, it has mapped the timescale of the flagship Zero Carbon Lithium™ Project. The business case of the Zero Carbon Lithium™ Project is based on a thirty year project, asset and infrastructure life. It is on this basis that Vulcan Energy has categorised its time spans accordingly:



The management of short term risks are understandably prioritised without losing sight of medium and long term risk management.

KEY CLIMATE RELATED RISKS

Risk Type Timeline	Risk Description	Possible financial impact (EUR)[1]	Likelihood of occurrence	Management and Mitigation Strategies	Risk Rating
Transition Short term	Inadequate procurement policy and process leading to potential exposure to human rights violations, negative environmental impacts, litigation, delays and negative reputation for Vulcan	10M – 20M	Likely	Developing a Strong Procurement Policy and integration into the operations of the business Regular review of the ERP system and tools to ensure it is fit for purpose Developing further in house expertise and supporting 3rd party advisors	24
Transition Medium term	Increasing carbon pricing leads to difficulty to offset Vulcan's emissions and increased internal carbon pricing	500k – 2M	Certain	Implement GHG emissions reductions strategies to decrease reliance on offsets	15
Transition Short term	Health, safety, security and environment (HSSE) risks to which Vulcan and local stakeholders are potentially exposed to cover a wide spectrum of activity	500k – 2M	Possible	OH&S policies and procedures and implementation on site Dedicated resourcing to oversee HSSE Impact and risk assessments and reviews regularly	9

[1] Financial impact categorisations align to the enterprise wide risk management approach.

Risk Type Timeline	Risk Description	Possible financial impact (EUR)[1]	Likelihood of occurrence	Management and Mitigation Strategies	Risk Rating
Transition Medium/ Long term	Competitors creating more environmentally friendly processes	500k – 2M	Possible	Tracking new projects, technology, patents, etc. and constantly working on improving Vulcan's design and efficiency Ensuring minimal environmental impact	9
Transition Short term	Missed and/or late implementation of new legislation	2M-5M	Unlikely	Build strong relationships with regulatory bodies and external advisors Effective training and recruitment of skilled staff	8
Transition Medium/ Long term	Natural catastrophic events due to climate change that affect Vulcan's operational assets	2M-5M	Unlikely	Minimum Mitigation Strategy: Permitting in terms of building law for all buildings and wells (mining law). Additional Vulcan Mitigation Strategies with higher requirements: HAZOP, safety strategies on site and in laboratory, business continuity plan Emergency response plan for natural catastrophies including forecast of financial impact on Company Continued climate scenario modelling	8
Transition Medium term	A change of political and/or legal framework (e.g. energy law, emission laws, subsidies) caused by elections or other force majeure may result in future threats to business model	>20M	Rare	Review of Business Model Business resilience strategy Political network and lobbying Access to appropriate skilled advisors	7
Transition Short/ Medium term	Failure to comply with (or breach of) legal obligations that the company is subject to	2M-5M	Unlikely	Appropriate policies, reporting structures Strong Corporate Governance structure Accesss to appropriate skilled advisors	6
Transition Short term	Alignment of DFS Phase One Project to Equator Principles 4 (EP4) 1 -10 and International Finance Corporation (IFC) indicators for favourable financing	10M – 20M	Unlikely	Vulcan to follow recommendations of the EP4 and IFC Stakeholder engagement strategy to be further developed	4

[1] Financial impact categorisations align to the enterprise wide risk management approach.

PROCESSES FOR MANAGING CLIMATE RELATED RISKS

Vulcan's Board and leadership team utilises a range of methods for managing climate related risks via a delegated risk ownership structure. These include:

- Conducting a risk matrix review twice a year;
- Regular risk management reporting to the Audit, Risk and ESG committee;
- The formation of specific committees as required (such as the SSC, Projects Execution committee and Supply Chain Council), which hold deep dive workshops as and when necessary.
- linkage of pertinent climate related issues to KPIs. See below in Targets and Metrics.

CLIMATE RELATED OPPORTUNITIES

Five major climate related opportunities were also identified at these workshops, the details of which can be seen in the corresponding table.

Owing to the fact that Vulcan's strategy and project development is founded on the ideal of net zero carbon, much of what would be considered as a climate related risk for most companies is, in fact, an opportunity for Vulcan.

KEY CLIMATE RELATED OPPORTUNITIES TABLE

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 as part of Critical Raw Minerals Act (2023) 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 requirements (https://www.thinkgeoenergy.com/strategic-roadmap-released-for-deep-geothermal-energy-in-germany/)
Medium	Products and Services	Zero Carbon Lithium for EV vehicles that helps move the automotive industry away from fossil fuel reliance	High	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 in Europe, for Europe The Zero Carbon Lithium™ Project will include a full battery grade lithium service including extraction and processing into lithium hydroxide monohydrate at the Central Lithium Plant in Frankfurt
	Reputation	Combined geothermal energy and heat and lithium producer who is local, not affected by carbon border taxes and is reliable	High	New EU Battery Regulation and the Carbon Border Adjustment will give a green premium to Vulcan's lithium product, thereby making it the preferred supplier for many local OEM's including Stellantis, Volkswagen, & Renault
Long	Technology	Patented technology for DLE Sorption changes consumer behaviour and becomes the substitute for other production methods of Lithium	High	Executing Vulcan's Zero Carbon Lithium™ Project to an ambitious timeline will ensure Vulcan is the first integrated renewable energy, lithium extraction and lithium hydroxide refining project development to supply the battery electric vehicle industry from Europe, for Europe

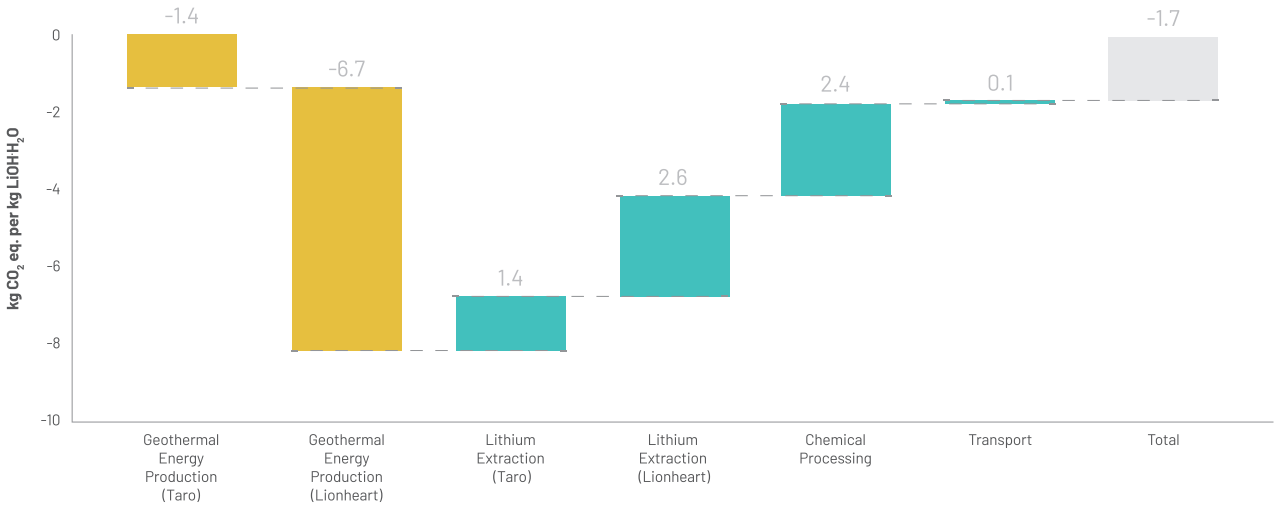
TARGETS AND METRICS

ZERO CARBON LITHIUM™ PROJECT LIFE CYCLE ASSESSMENT

On the back of the release of the Zero Carbon Lithium™ Project's Definitive Feasibility Study (DFS) on 13 February 2023, Minviro Ltd, the environmental consultant for the project, updated the lithium product LCA with current data for Vulcan's Phase One integrated renewable energy and lithium chemicals project.

The 2023 LCA continues to prove the environmental credentials of Vulcan's lithium product for its net negative impacts on Global Warming Potential (GWP), very low water use and AWARE factor (scarcity) and land use. The LCA is an important indicator for Vulcan in terms of environmental performance and will continue to be updated as the Zero Carbon Lithium™ Project advances through execution, construction and commissioning.

TOTAL CLIMATE CHANGE IMPACT



(Courtesy of Minviro 2023)

GREENHOUSE GAS EMISSIONS

Vulcan's Australian Organisation, comprised of a team based in Perth, Western Australia has maintained Climate Active carbon neutral certification for 2020 and 2021.

To complement the Australian carbon neutral certification for 2021, Vulcan engaged South Pole to certify the Vulcan German organisation, Vulcan Energie Ressourcen GmbH and its subsidiaries VEE and VES (originally Gec-co and Geo-T respectively). As part of the certification process, 2,228 tCO_2e credible carbon offsets were purchased to bring the Group to a carbon neutral position. These comprised of 598 tCO_2e supporting REDD+ Rimba Raya Biodiversity Project in Indonesia and 1,630 tCO_2e supporting the Sipansihaporas hydro power plant, North Sumatra.

Sustainable Business Consultants (SBC), who Vulcan utilise to assist with carbon neutral certification applications is currently completing a combined assessment (for Australia and Germany) of the greenhouse gas (GHG) emissions inventory for the 2022 calendar year. This is the first step of the annual carbon neutral certification process.

As the certification process is usually only completed by May of each year, the GHG emissions data has yet to be independently verified. Final numbers will be included in Vulcan's next Sustainability Report. Good quality carbon offsets will be acquired as in prior years once the numbers are finalised.

For further information on the process of carbon neutral certification for 2021, please refer to the FY22 Sustainability Report, available via the website https://v-er.eu.

REDUCTION AND OFFSET MEASURES

Some reduction measures that were defined from the 2021 South Pole carbon neutral certification included creating an organisational buildings policy integrated into contracting decisions as well as managing district heating by using efficient temperature settings. Vulcan does not own any of the offices so measures that can be undertaken are minimal. Below is a table of reduction measures identified alongside their potential GHG emissions reduction impact.

Owing to Vulcan's current stage of development, being not yet at full operational capacity, the impact of Scope 3 emissions will vary from year to year. Vulcan are committed to continuing to measure the organisational GHG emissions and using this data to implement reduction strategies.

REDUCTION STRATEGIES

GHG scope	Measure	Explanation	Project status	Emission reduction over nine years (tCO_2e)
Scope 1				
Mobile Combustion	Switching 100% of vehicles to electric vehicles (EVs)	Switching 100% of Vulcan's vehicles to EVs would result in a reduction of 2 tCO_2e per year. Vulcan only has one Internal Combustion Engine car left within its fleet.	On going	63
Scope 2				
Electricity	Purchasing energy attribute certificates (EACs) for Australian office	Due to the Perth site being located in a shared office, it is recommended that Vulcan purchases EACs to offset its electricity consumption in the shared space.	Planned	47
Electricity	Purchasing EACs for German operations	The majority of the European offices have no control over the choice of energy supplier to the site. To achieve emissions reduction for electricity consumption, it is recommended that Vulcan purchase EACs to offset its electricity consumption.	Planned	793
Heating	Reducing space heating temperature	Creating an organisational buildings policy that integrates a criterion to lower room temperature by 2 degrees Celsius (°C). For rented buildings, this policy must be integrated in contracting decisions.	Considered	243
Heating	Optimising thermostat settings	Changing policy within European offices to reduce the temperature of the thermostat when not in use to reduce the use of wasted heating.	Considered	112
BAU emissions in 2030				**1782**
Total potential GHG reductions				**1257**
Residual emissions				**583**
Target emissions				**34**

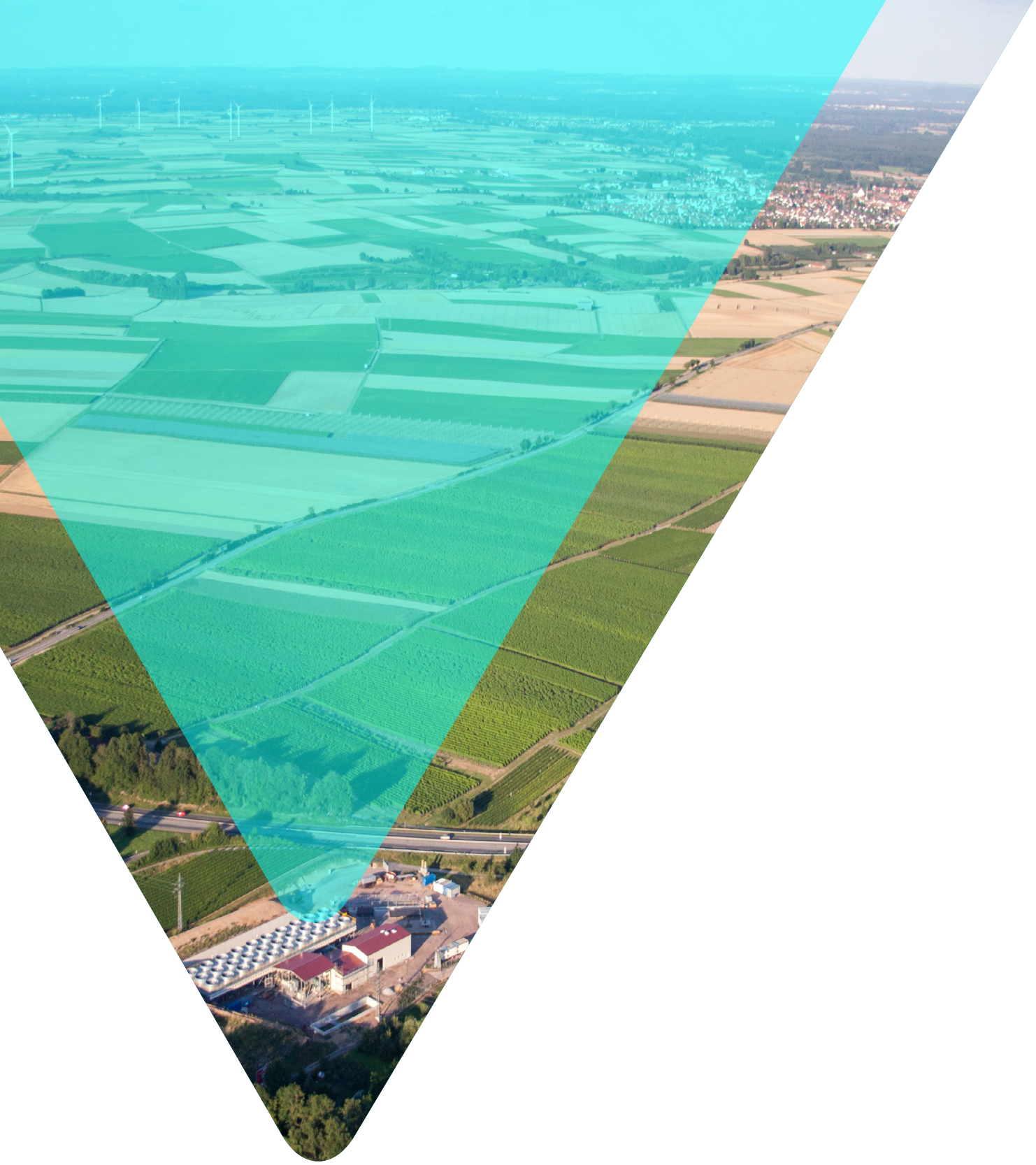
(Source: South Pole, 2022)

ESG LINKED EXECUTIVE COMPENSATION

ESG linked individual and shared key performance indicators (KPIs) were introduced in 2022 as part of Vulcan's executive compensation structure, evidencing its commitment to embed sustainability into every part of the business. The climate specific KPIs linked to Executive compensation include:

- Achieve sufficient funding in order to allow for completion of the first plant, of which at least 30% is obtained from an ESG Investor or green debt funding, where the criteria for such investment or funding includes a screening process that considers ESG performance alongside traditional financial performance;
- Report against the TCFD and, when guidelines are published, the Taskforce on Nature related Financial Disclosures (TNFD);
- Increase the number of institutional shareholders who use a screening process that considers ESG performance alongside traditional financial performance (ESG Investor) by 50% from those on the shareholder register as at 30 June 2022;
- Implement a sustainable procurement procedure to take into account supplier vetting process and metrics (baseline responsible supplier code of conduct for Vulcan Energy to take them on as a supplier), annual auditing process, and an action plan for potential breaches/risk mitigation and/or support programs for improvements. This procurement process must address environmental impacts, carbon footprint, human rights, modern slavery and labour rights;
- Set publicly announced greenhouse gas emissions reduction target and meet first year target, achieve lowest sector quartile GHG emissions;
- Map out local biodiversity improvement plan at Phase One operational site;
- Achieve positive, best in class score from third party ESG score provider; and
- Successfully complete UN Global Compact Communication on Progress report for Vulcan Energy Ltd, GmbH, VES, VEE, Natürlich Insheim.
- Obtaining and maintaining a certified carbon neutral status for the Company annually;
- Remaining in the lowest quartile for absolute (Scope 1, 2 and 3) carbon emissions;
- Ensuring strong governance of a sustainable and transparent supply chain.

An update on performance against these KPI's will be reported on in the next TCFD report.



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