Welcome to your CDP Climate Change Questionnaire 2023

C0. Introduction

C0.1

(C0.1) Give a general description and introduction to your organization.

Vulcan Materials Company operates primarily in the United States and is the nation's largest supplier of construction aggregates (primarily crushed stone, sand and gravel), a major producer of asphalt mix and ready-mixed concrete, and a supplier of construction paving services. We provide the basic materials for the infrastructure needed to maintain and expand the U.S. economy. Delivered by trucks, ships, barges, and trains, our products are indispensable materials for building homes, offices, places of worship, schools, hospitals, and factories, as well as vital infrastructure including highways, bridges, roads, ports and harbors, water systems, campuses, dams, airports, and rail networks.

As of December 31, 2022, we had 404 active aggregates facilities in Alabama, Arizona, California, Delaware, Florida, Georgia, Illinois, Kentucky, Louisiana, Maryland, Mississippi, New Jersey, New Mexico, New York, North Carolina, Oklahoma, Pennsylvania, South Carolina, Tennessee, Texas, and the U.S. Virgin Islands. We also had aggregates operations in the Bahamas; British Columbia, Canada; and Quintana Roo, Mexico. While aggregates is our focus and primary business, as of December 31, 2022, we further served our customers through our 71 asphalt facilities and 142 concrete facilities located in Alabama, Arizona, California, Maryland, New Jersey, New Mexico, New York, Oklahoma, Pennsylvania, Tennessee, Texas, Virginia, the U.S. Virgin Islands, Washington D.C. and the Bahamas. The products from the Mexico and Bahamas quarries are primarily exported by ship to the U.S. Gulf Coast. The products from the Canadian quarry are primarily exported by ship to California.

Our products are used in nearly all forms of construction. We have four operating (and reportable) segments (Aggregates, Asphalt, Concrete and Calcium) organized around our principal product lines. The largest segment is aggregates (crushed stone, sand and gravel), which represents 65% of the Company's 2022 revenues and 90% of 2022 gross profit. In 2022, the asphalt segment accounted for 13% of total revenue and 4% of gross profit. The concrete segment accounted for 22% of total revenue and 6% of gross profit. Calcium revenues and gross profit were less than one percent.

Environmental Stewardship & Climate Change at Vulcan Materials
The Vulcan Way is doing the right thing, the right way at the right time. We have a long history of servicing our customers and delivering results to our shareholders while embodying our commitments to people, to the safety and health of our Vulcan family members, to environmental stewardship, and to the neighborhoods and communities in which we live, work and play. These commitments have always been part of the Vulcan Way.

Environmental stewardship is necessary for Vulcan's long-term sustainability and growth. Production of construction aggregates requires land, energy, and water. Efficient use of these resources and management of the environmental impacts of our operations are embedded in our business planning. Our intentional approach to environmental stewardship has also produced increased operational efficiency and reduced costs, new opportunities for growth, and effective risk management.

In 2022, we continued to develop a better understanding of our greenhouse gas emissions (GHG) footprint. For the first time, we inventoried our Scope 1 and Scope 2 emissions by business segment (aggregates, asphalt and concrete) and fully incorporated acquisitions and divestitures into our calculations. We also piloted a Scope 3 supplier engagement program and calculated emissions for five of the 11 applicable reporting categories.

This visibility will help us set new goals and shape effective emissions reductions strategies. For example, the aggregates business segment comprises 73.4% of the company's sources of Scope 1 and Scope 2 GHG emissions. Aggregates production operations use diesel fuel and electricity to power the off-highway mining mobile equipment and the crushing, screening and conveying equipment used in the operations.

For the first phase of our Scope 3 emissions inventory, we used a spend-based analysis for nearly 15,000 suppliers across five reporting categories guided by the World Resources Institute (WRI) GHG Protocol's Corporate Value Chain (Scope 3) Accounting and reporting standard.

Our improved GHG emissions reporting demonstrates significant progress toward creating a comprehensive reporting model that provides an accurate breakdown of our energy use and emissions by Scope 1 and Scope 2 sources and business segments, and Scope 3 emissions categories.

C0.2

(C0.2) State the start and end date of the year for which you are reporting data and indicate whether you will be providing emissions data for past reporting years.

Reporting year

Start date

January 1, 2022

End date

December 31, 2022

Indicate if you are providing emissions data for past reporting years

Yes

Select the number of past reporting years you will be providing Scope 1 emissions data for

3 years

Select the number of past reporting years you will be providing Scope 2 emissions data for

3 years

Select the number of past reporting years you will be providing Scope 3 emissions data for

Not providing past emissions data for Scope 3

C0.3

(C0.3) Select the countries/areas in which you operate.

Bahamas
Canada
Honduras
Mexico
United States of America

C0.4

(C0.4) Select the currency used for all financial information disclosed throughout your response.

USD

C0.5

(C0.5) Select the option that describes the reporting boundary for which climate-related impacts on your business are being reported. Note that this option should align with your chosen approach for consolidating your GHG inventory.

Financial control

C-CE0.7

(C-CE0.7) Which part of the concrete value chain does your organization operate in?

Limestone quarrying
Aggregates production
Concrete production
Concrete pavement / asphalt / tarmac

C-MM0.7

(C-MM0.7) Which part of the metals and mining value chain does your organization operate in?

Row 1

Mining

Other mining, please specify

Construction aggregate: crushed stone, sand and gravel

Processing metals

Not applicable

C0.8

(C0.8) Does your organization have an ISIN code or another unique identifier (e.g., Ticker, CUSIP, etc.)?

Indicate whether you are able to provide a unique identifier for your organization	Provide your unique identifier
Yes, a Ticker symbol	NYSE:VMC

C1. Governance

C1.1

(C1.1) Is there board-level oversight of climate-related issues within your organization?

Yes

C1.1a

(C1.1a) Identify the position(s) (do not include any names) of the individual(s) on the board with responsibility for climate-related issues.

Position of individual or committee	Responsibilities for climate-related issues
Board-level committee	Two of the Board's six committees exercise oversight of climate-related risks and opportunities. Governance Committee: By charter, the Governance Committee is the primary committee responsible for oversight of ESG matters, including performance, strategies, goals, and policies. The Governance Committee reviews ESG strategic plans, sustainability reports, and third-party assessments of ESG performance.

	Audit Committee: The Audit Committee oversees the Company's risk assessment and risk management policies, including those related to climate change and other ESG-related risks.
Board Chair	The Board chair is also the President and Chief Executive Officer for the Company. He has ultimate responsibility and authority for the commitment of company resources (financial, personnel, equipment).

C1.1b

(C1.1b) Provide further details on the board's oversight of climate-related issues.

Frequency with which climate-related issues are a scheduled agenda item	Governance mechanisms into which climate-related issues are integrated	Please explain
Scheduled – all meetings	Reviewing and guiding annual budgets Overseeing major capital expenditures Reviewing and guiding strategy Monitoring progress towards corporate targets Reviewing and guiding the risk management process	Routine reporting to the Board includes as warranted climate change risks; emission reduction goals and targets; performance towards achievement of goals; major capital projects that impact climate change; and impacts and opportunities regarding climate issues. Anticipated impacts of climate change on company financial reporting are also reviewed in response to major climate-related events and disasters. Through management, the Board ensures the Company's policies are in line with best practices and accurately reflect our values and commitments. The Board keeps under review new climate-related developments that may affect the Company and ensures the appropriate controls and audits are in place. The Board oversees and provides guidance related to management's implementation of business plans and performance objectives.

C1.1d

(C1.1d) Does your organization have at least one board member with competence on climate-related issues?

	Board member(s) have competence on climate-related issues	Criteria used to assess competence of board member(s) on climate-related issues

Row 1	Yes	Yes, our board members come from a variety of industries and have experience and expertise in incorporating climate-related management into the governance strategy of their own organizations. For example, Tom Fanning, Chairman of Southern Company, brings to our Board a deep understanding of key issues facing an industrial company, including climate change, governmental and regulatory issues, and safety, health and environmental matters. Under Mr. Fanning's leadership, Southern Company decreased its greenhouse gas emissions by 52% from 2007 to 2020 and has set a goal to achieve net zero greenhouse gas emissions by 2050. Our 2022 Proxy Statement contains more information about the structure, tenure, and composition of our Board of Directors. Our website provides information about the experiences and expertise of individual Board members.

C1.2

(C1.2) Provide the highest management-level position(s) or committee(s) with responsibility for climate-related issues.

Position or committee

Other, please specify

SHE Management Committee

Climate-related responsibilities of this position

Managing climate-related risks and opportunities

Coverage of responsibilities

Reporting line

Reports to the board directly

Frequency of reporting to the board on climate-related issues via this reporting line

Quarterly

Please explain

The highest-level management committee responsible for oversight of Safety, Health and Environmental (SHE) issues reports to the Board SHE Committee. The committee includes top executives for the Company including the Company's Chief Executive Officer and Chairman of the Board; Chief Financial Officer; Chief Legal Officer; Chief Administrative Officer (if any); Head of Risk Management; and senior level SHE

managers.
Responsibilities: Managing climate-related risks and opportunities

Position or committee
Chief Executive Officer (CEO)

Climate-related responsibilities of this position
Monitoring progress against climate-related corporate targets
Managing climate-related risks and opportunities

Coverage of responsibilities

Reporting line
Reports to the board directly

Frequency of reporting to the board on climate-related issues via this reporting line
More frequently than quarterly

Please explain
The CEO is also the Company President and Chairman of the Board. He is ultimately responsible for committing the company to targets and goals regarding GHG emissions reductions and strategy regarding the management of climate change risk.

Responsibility: Managing climate-related risks and opportunities. He has ultimate authority to ensure that proper resources including financial, engineering and environmental experts, operational management personnel, energy management personnel, procurement, and other support groups are assigned to ensure management of climate change issues across the company. He also has responsibility for providing leadership and direction regarding company climate change goal setting and performance measurement and assessment. He has responsibility for setting the tone company-wide regarding the significance and importance of climate change management to the company and company shareholders.

Position or committee
Chief Financial Officer (CFO)

Climate-related responsibilities of this position
Managing annual budgets for climate mitigation activities
Managing major capital and/or operational expenditures related to low-carbon products or services (including R&D)
Assessing climate-related risks and opportunities
Managing climate-related risks and opportunities

Coverage of responsibilities

Reporting line

Reports to the board directly

Frequency of reporting to the board on climate-related issues via this reporting line

More frequently than quarterly

Please explain

The CFO is responsible for the accounting and finance functions of the organization and has a major role in determining capital expenditure budgets and for directing funds towards projects that target GHG emission reductions, low-carbon product innovation, and operational response to natural disasters (climate-related events).

Responsibility: Both assessing and managing climate-related risks and opportunities.

Position or committee

Other, please specify

Chief Legal Officer

Climate-related responsibilities of this position

Assessing climate-related risks and opportunities
Managing climate-related risks and opportunities

Coverage of responsibilities

Reporting line

CEO reporting line

Frequency of reporting to the board on climate-related issues via this reporting line

More frequently than quarterly

Please explain

The General Counsel is responsible for addressing potential legal risks facing the company, including ensuring that climate change risks are being adequately managed and properly disclosed through financial reporting.

Responsibility: Other, please specify (Chief Legal Officer) Assessing and managing climate change risks and ensuring that proper disclosures are made as part of financial reporting (10k, 10Q, Annual Reports, Sustainability Documents, etc.) a Chief Legal and a Risk Management Officer, Risk Management reports through legal.

Position or committee

Energy manager

Climate-related responsibilities of this position

Assessing climate-related risks and opportunities

Other, please specify

Responsible for management of company energy supply and resources and for procurement of clean energy sources

Coverage of responsibilities

Reporting line

Other, please specify

Vice President of Procurement

Frequency of reporting to the board on climate-related issues via this reporting line

Quarterly

Please explain

Manages the energy supply for Vulcan’s operations and is responsible for finding new opportunities in energy procurement that are financially viable while also minimizing the impact of these sources on the company's carbon footprint.

Responsibility: Responsible for management of company energy supply and resources and for procurement of clean energy sources. Identifies opportunities for partnerships and other arrangements to procure green energy sources such as solar, and wind generation sources. Identifies future opportunities for procurement of renewable and low carbon energy sources and helps identify opportunities to partner with other companies and utilities for participation in the pursuit of new renewable energy platforms.

Position or committee

Other committee, please specify

Board Governance Committee

Climate-related responsibilities of this position

Managing major capital and/or operational expenditures related to low-carbon products or services (including R&D)

Integrating climate-related issues into the strategy

Monitoring progress against climate-related corporate targets

Assessing climate-related risks and opportunities

Managing climate-related risks and opportunities

Coverage of responsibilities

Reporting line

Reports to the board directly

Frequency of reporting to the board on climate-related issues via this reporting line

Half-yearly

Please explain

Responsibility: Both assessing and managing climate-related risks and opportunities This committee has the responsibility and authority to direct the resources needed to assess and manage climate change risks and opportunities; climate change performance assessment and goals setting; evaluation of operational and direct impacts of climate change on company properties and operations; direct and indirect impacts on financial performance due to physical impacts to operations and infrastructure; impacts on the supply chain and customer base due to damage to infrastructure that adversely impacts product demand or interrupt distribution and delivery/supply of raw materials such as fuel and product shipments to customers.

C1.3

(C1.3) Do you provide incentives for the management of climate-related issues, including the attainment of targets?

	Provide incentives for the management of climate-related issues	Comment
Row 1	Yes	The CEO regularly reports on and is compensated in part based on the achievement of goals and objectives. Ensuring strong ESG performance and continuous improvement across topics material to the company, including climate change, is among his goals. The CEO and other Named Executive Officers are also compensated with short- and long-term performance-based incentives. The calculation of those incentives, discussed in detail in the Company's 2021 Proxy Statement, includes factors (cost) that are tied to energy management and climate change.

C1.3a

(C1.3a) Provide further details on the incentives provided for the management of climate-related issues (do not include the names of individuals).

Entitled to incentive

Board Chair

Type of incentive

Monetary reward

Incentive(s)

Bonus - % of salary

Performance indicator(s)

Reduction in emissions intensity
Energy efficiency improvement
Increased share of low-carbon energy in total energy consumption
Increased share of renewable energy in total energy consumption
Reduction in total energy consumption

Incentive plan(s) this incentive is linked to

Both Short-Term and Long-Term Incentive Plan

Further details of incentive(s)

CEO compensation is determined after evaluation of the CEO by the independent members of the Board of Directors across the categories of leadership, strategic planning, financial performance, safety performance, customer relations, personnel management, communications, board relations and overall performance. The CEO is also evaluated against goals presented to the board at the beginning of each year. The CEO's goals directly address climate change issue management in addition to other ESG factors.

Named Executive Officers are primarily rewarded through performance-based cash and equity incentive awards.

Short-term cash incentives (bonus % salary) are variable and based on pre-established company performance goals as measured by EBITDA Economic Profit as well as the company's safety performance and individual performance. Long-term incentives (shares and options) are variable and linked to both company and stock price performance.

Explain how this incentive contributes to the implementation of your organization's climate commitments and/or climate transition plan

Energy is a primary input into aggregates production; therefore climate-related issues are integrated into the company's financial performance. Both short-term and long-term incentive compensation for the CEO and NEOs, as well as other managers, are affected by the impacts of energy costs, energy efficiency initiatives and process improvements to increase throughput and yield. All of these flow through to our primary metrics for financial performance, cash gross profit per ton, and EBITDA. For example, key performance indicators are established and associated with energy efficiency which are factors in the performance evaluations of the operations and their management team. This establishes a correlation between financial performance and activities designed to reduce the usage of carbon-based fuels, thus financial incentives are impacted by the Company's management of carbon-based fuels.

Additionally, the investment community is increasingly focusing on the management of

climate issues as a performance indicator for companies that are targeted for investment. The success of the Company's climate issues management affects investor sentiment and potentially stock price, which also affects executive compensation. The Company has established specific performance metrics for the measurement and reporting of climate issues. Performance over time is being measured and reported internally and externally through the Company CSR website and reported to the investment community via performance presentations.

Entitled to incentive

Board/Executive board

Type of incentive

Monetary reward

Incentive(s)

Bonus - % of salary

Performance indicator(s)

Energy efficiency improvement
Reduction in total energy consumption

Incentive plan(s) this incentive is linked to

Both Short-Term and Long-Term Incentive Plan

Further details of incentive(s)

The Board and Executive Committee have a stake in the company's ESG efforts including climate change, as they impact the financial performance of the Company and therefore their equity compensation.

Named Executive Officers are primarily rewarded through performance-based cash and equity incentive awards.

Short-term cash incentives (bonus % salary) are variable and based on pre-established company performance goals as measured by EBITDA Economic Profit as well as the company's safety performance and individual performance. Long-term incentives (shares and options) are variable and linked to both company and stock price performance.

Explain how this incentive contributes to the implementation of your organization’s climate commitments and/or climate transition plan

Energy is a primary input into aggregates production; therefore climate-related issues are integrated into the company’s financial performance. Both short-term and long-term incentive compensation for the CEO and NEOs, as well as other managers, are affected by the impacts of energy costs, energy efficiency initiatives and process improvements to increase throughput and yield. All of these flow through to our primary metrics for

financial performance, cash gross profit per ton, and EBITDA. For example, key performance indicators are established and associated with energy efficiency which are factors in the performance evaluations of the operations and their management team. This establishes a correlation between financial performance and activities designed to reduce the usage of carbon-based fuels, thus financial incentives are impacted by the Company's management of carbon-based fuels.

Additionally, the investment community is increasingly focusing on the management of climate issues as a performance indicator for companies that are targeted for investment. The success of the Company's climate issues management affects investor sentiment and potentially stock price, which also affects executive compensation. The Company has established specific performance metrics for the measurement and reporting of climate issues. Performance over time is being measured and reported internally and externally through the Company CSR website and reported to the investment community via performance presentations.

Entitled to incentive

Corporate executive team

Type of incentive

Non-monetary reward

Incentive(s)

Internal team/employee of the month/quarter/year recognition

Performance indicator(s)

Progress towards a climate-related target
Reduction in absolute emissions
Reduction in emissions intensity
Energy efficiency improvement
Increased share of low-carbon energy in total energy consumption
Increased share of renewable energy in total energy consumption
Reduction in total energy consumption

Incentive plan(s) this incentive is linked to

Both Short-Term and Long-Term Incentive Plan

Further details of incentive(s)

The executive team members are eligible for long and short-term performance incentives that are tied to company operational and financial performance. Successful execution of energy and efficiency improvement projects positively impacts financial performance.

Explain how this incentive contributes to the implementation of your organization’s climate commitments and/or climate transition plan

Energy is a primary input into aggregates production; therefore climate-related issues are integrated into the company's financial performance. Both short-term and long-term incentive compensation for the CEO and NEOs, as well as other managers, are affected by the impacts of energy costs, energy efficiency initiatives and process improvements to increase throughput and yield. All of these flow through to our primary metrics for financial performance, cash gross profit per ton, and EBITDA. For example, key performance indicators are established and associated with energy efficiency which are factors in the performance evaluations of the operations and their management team. This establishes a correlation between financial performance and activities designed to reduce the usage of carbon-based fuels, thus financial incentives are impacted by the Company's management of carbon-based fuels.

Additionally, the investment community is increasingly focusing on the management of climate issues as a performance indicator for companies that are targeted for investment. The success of the Company's climate issues management affects investor sentiment and potentially stock price, which also affects executive compensation. The Company has established specific performance metrics for the measurement and reporting of climate issues. Performance over time is being measured and reported internally and externally through the Company CSR website and reported to the investment community via performance presentations.

Entitled to incentive

Process operation manager

Type of incentive

Monetary reward

Incentive(s)

Performance indicator(s)

Progress towards a climate-related target
Achievement of a climate-related target
Implementation of an emissions reduction initiative
Reduction in absolute emissions
Reduction in emissions intensity
Energy efficiency improvement
Reduction in total energy consumption

Incentive plan(s) this incentive is linked to

Both Short-Term and Long-Term Incentive Plan

Further details of incentive(s)

Process Operations Managers, which at Vulcan includes roles such as Director of Operational Support, Manager of Optimization Engineering, Manager of Engineering Process, Plant Managers, and Area Operations Managers, are eligible for long- and

short-term performance incentives that are tied to company operational and financial performance. Successful execution of energy and efficiency improvement projects positively impacts financial performance.

Explain how this incentive contributes to the implementation of your organization's climate commitments and/or climate transition plan

Energy is a primary input into aggregates production; therefore climate-related issues are integrated into the company's financial performance. Both short-term and long-term incentive compensation for the CEO and NEOs, as well as other managers, are affected by the impacts of energy costs, energy efficiency initiatives and process improvements to increase throughput and yield. All of these flow through to our primary metrics for financial performance, cash gross profit per ton, and EBITDA. For example, key performance indicators are established and associated with energy efficiency which are factors in the performance evaluations of the operations and their management team. This establishes a correlation between financial performance and activities designed to reduce the usage of carbon-based fuels, thus financial incentives are impacted by the Company's management of carbon-based fuels.

C2. Risks and opportunities

C2.1

(C2.1) Does your organization have a process for identifying, assessing, and responding to climate-related risks and opportunities?

Yes

C2.1a

(C2.1a) How does your organization define short-, medium- and long-term time horizons?

	From (years)	To (years)	Comment
Short-term	0	5	Vulcan considers 0-5 years as a short-term time horizon which is consistent with short-term financial reporting horizons and with operational performance incentives. This short-term horizon also covers the focal period needed for the establishment and reporting of the company's Scope 3 emissions, and of company GHG reduction performance goals and targets.
Medium-term	5	10	Vulcan considers 5-10 years as a medium-range time period. During this timeframe, Vulcan can explore large-scale projects with higher dollar capital expenditures, potential partnerships and research can be conducted to help achieve science-based targets and goals for GHG reductions and climate change mitigation. This timeframe also provides the opportunity to pilot and incorporate new technology into

			our operations to reduce GHG emissions and to explore through carbon sequestration and carbon neutralization ideas and technologies.
Long-term	10	50	Vulcan considers 10-50 years as a long-term time period. During this time frame, we expect climate change risks will be impacting the company and its operations more extensively. The GHG reductions and climate resiliency planning being conducted at Vulcan in present day are influenced by the climate change impacts expected in the long-term. What is done today to combat climate change will have the greatest impact on this timeframe. This is the timeframe that our efforts and planning need to focus most on when evaluating the cost-benefits of implementation of climate change measures and establishment of climate change goals.

C2.1b

(C2.1b) How does your organization define substantive financial or strategic impact on your business?

Our enterprise risk management program identifies, quantifies, mitigates, and monitors those risks that could impact the enterprise as a whole across five risk types; Operational, Strategic, Legal/Regulatory, Financial, and Other. Climate Change is one of the identified enterprise risks within the Other risk type.

The quantification of enterprise risks uses a proprietary model that includes likelihood, impact, and mitigant strength scores to assess inherent risk and residual risk. Likelihood scores range from 1 (Very Unlikely) to 5 (Very Likely). Impact is measured in financial terms using either a) one-time cost (e.g., a fine) or b) annual EBITDA loss (e.g., substitute products), and the scores range from 1 (Very Low) to 5 (Very High). Finally, mitigant strength scores are None, Weak, Adequate, and Strong determined by the nature of the mitigant (e.g., insurance).

Climate Change currently has a likelihood score of 4 (High) and an impact score of 3 (Medium). The impact score is preliminary and subject to change based on our ongoing assessment of the potential impacts to our business of events resulting from Climate Change (e.g., sea level rise, more frequent and powerful weather events, higher energy costs, etc.).

C2.2

(C2.2) Describe your process(es) for identifying, assessing and responding to climate-related risks and opportunities.

Value chain stage(s) covered

Direct operations
Upstream
Downstream

Risk management process

Integrated into multi-disciplinary company-wide risk management process

Frequency of assessment

More than once a year

Time horizon(s) covered

Short-term
Medium-term
Long-term

Description of process

Identification: There are multiple processes that incorporate identification, evaluation and reporting of potential impacts related to climate change. At the Corporate level, there is a formal biannual risk assessment process, which is implemented under the Board of Directors' authority, that evaluates risks including those related to climate change. Climate change risks are also discussed and evaluated to ensure adequate disclosures as part of the financial reporting process, including the preparation of the company's annual report.

Assessment: Cross-functional teams incorporate climate-related risks into analyses, including risks from severe weather events and disclosure of climate change impacts. The Safety, Health, and Environment (SHE) Management Committee considers risks to employee and community health from issues that are attributable, at least in part, to climate change. Division safety and health teams lead local efforts and report back on emerging climate-related risks that may require mitigation or controls.

Operations Support: Identifies and mitigates risks to production and distribution operations, including climate-related risks. Identifies opportunities to reduce energy use and increase efficiency, which contributes to reductions in GHG emissions.

Commercial Excellence: Anticipates and develops strategies to address demand for low-carbon products. Collaborates with Technical Services teams to develop customer solutions.

Government Relations: Continually monitors legislative and regulatory trends and developments at the local, state and federal levels of government. Engages with trade associations, such as the National Stone Sand and Gravel Association, National Asphalt Pavement Association and National Ready-Mixed Concrete Association on industry initiatives to address climate change and to inform policy development in concert with industry partners.

Risks related to climate change were initially assessed through our ERM evaluation process. As referenced in section C2.1, our ERM approach assesses and prioritizes risks by analyzing the relative likelihood and impact of a risk on the entire organization over the short term (~3 years). During our 2022 assessment, Climate Change received an Inherent Risk rating of High.

In addition to the ERM assessment, the cross-functional ESG steering committee, with representation from the c-suite, functional support Vice Presidents and operating Division Presidents, ensures coordination across functions and operations with regard to climate change risk identification and evaluation. The ESG steering committee reviews climate risk and performance information and provides direction to the organization and informs the enterprise risk management process, guides preparation of the CDP survey and other GHG reporting, and members of the committee participate in the annual cycle of stakeholder engagement meetings and participate regularly in investor relations meetings. The Steering Committee will review, in the second half of 2023, detailed climate and water risk assessments developed in collaboration with a third-party partner, the outputs of which include detailed information related to vulnerabilities and hazards at the site level, as well as transition risks to be considered at an enterprise-level.

Response: Climate change risk evaluation is inherent to the planning process for facility improvements, equipment purchases, and capital project planning as part of the focus on reducing ongoing GHG emissions and improving energy efficiencies. Climate change risks are also incorporated into the design of mitigation measures to reduce the impacts of climate change on our operations.

Examples include:
Focusing on locations of operations to minimize the risk of water level change impacts;
Placement of erosion and infiltration reductions measures such as large rip-rap stone barriers along water lines;
Planning for potential flood scenarios by identifying steps needed to minimize impacts, including installing equipment so it can be quickly removed and relocated if a flooding event is expected.

General emergency response planning for the protection of our sites and development of support services for the surrounding communities in the event of natural disasters (hurricanes, fire, flood, tornados)
Development of low-carbon and innovative products and services that support adaptive and climate-resilient infrastructure for our customers and communities.

Climate change impacts on the company and our ability to reduce our impact is integrated into our procurement efforts, particularly through the procurement of clean energy (low carbon and renewable) sources. As discussed, 2022 was a landmark year on our ESG strategy as we analyzed and reported our Scope 3 GHG emissions in 5 of the applicable 14 categories. This effort increased internal Company awareness as well as provided us with a strategic roadmap of external partners in our various lines of business to engage with to better understand their goals, targets and emission strategies. Those strategic engagement efforts commenced in 2023 and have helped us identify areas of our value chain where our suppliers' efforts are having a positive impact on their emissions and ultimately our Scope 3 emissions. As our Scope 3 analysis continues to grow and more categories are included in our future ESG report, climate considerations will become embedded into other procurement categories throughout our

supply chain.

C2.2a

(C2.2a) Which risk types are considered in your organization's climate-related risk assessments?

	Relevance & inclusion	Please explain
Current regulation	Relevant, always included	Introduction: The impact of current regulation and public policy is always a component of the risk assessment process -- and also a component of opportunity identification. Compliance with all applicable government regulations is a basic expectation of each of our operations regardless of the country, state or locality in which we operate. Permitting Ex: We actively adapt and manage our permitting process for proposed sites, balancing strategic locations in high-growth markets with increasingly stringent zoning and permitting regulations. Our site planning and permits include considerations for areas that may be vulnerable to climate-related risk as well as stricter regulations. For example, if a proposed site is located in an area of high coastal flooding risk, the potential effects on our business and the sites affect on community resilience are included in the decision-making process. Site development and the associated risks are managed by our Greenfield and Expansion Teams. Carbon Pricing Ex: Vulcan does not currently have significant operations in regions with carbon pricing or taxes. Additionally, our individual operations exist below the US EPA threshold for permitting and reporting GHG emissions. Any changes to these regulations are monitored by our Director of Environmental Compliance, VP External Affairs and Corporate Communication, and energy procurement team. Innovative Products Ex: Because much of our product is used in public construction, changes to building codes and standards or creation of governmental preferences for certain types of materials are among our current, and emerging, risk and opportunity assessment. We have received a growing number of requests from customers to help them fulfil low-carbon and GWP budget requirements for construction projects, most notably within California as part of the state-wide net-zero emissions goal. If we were unresponsive to the changes in materials and construction regulations, we would be at risk of losing established and potential customer relationships. The product development and innovation teams across all business segments are

		responsible for collaborating with customers to deliver products with enhanced sustainability offerings that maintain quality and our dedication to customer service. Additional risks and opportunities associated with governmental regulations are discussed in detail in the Company's annual 10K filing to the Securities and Exchange Commission.
Emerging regulation	Relevant, always included	Introduction: The impact of emerging regulation and public policy developments is always a component of the risk assessment process. SEC Climate-Related Disclosures: In preparing the 2022 ESG report, we considered the proposed SEC rules in GHG emissions reporting and chose to ensure our reporting capabilities were developing in alignment with these expected enhanced climate-related disclosures. We continue to mature our risk and opportunity identification process, and develop our data collection and reporting processes in alignment with SASB, TCFD, and CDP standards, recommendations, and reporting models, since the proposed requirements are reflective of these commonly applied standards and frameworks. As part of these expected disclosures, we have begun analyzing our Scope 3 emissions, a reporting exercise we intend to roll-out in phases. Vulcan also considers the opportunities and risks presented by changes to federal, state, and local infrastructure policies and programs. For example, aggregates are a durable product around which technologies are designed to improve the resilience of the physical environment. Vulcan is also conscious of the need to work with others in the value chain to enable our Scope 3 reporting and building capacity to do so. Carbon Pricing Ex: Vulcan closely monitors potential regulation of GHG emissions via establishment of a carbon tax or similar cost of carbon legislation. The risks and opportunities to the organization of potential measures are evaluated and disclosed when there is sufficient certainty on the finalization and extent of these measures. Monitoring changes in GHG-emission regulation is the responsibility of our Director of Environmental Compliance, VP External Affairs and Corporate Communication, and energy procurement team. These parties are tasked with monitoring the changes and presenting the potential implications to the highest levels of our leadership, where it can be evaluated from an operational, environmental, and financial perspective.

Technology	Relevant, always included	Introduction: The risks and opportunities associated with climate-related technology have been assessed as both extremely relevant and impactful to our business. We anticipate risks to Vulcan's market presence if we were to lag in our ability to develop innovative, low carbon and climate resilient materials. We also anticipate financial risks associated with the cost of upgrading to more efficient equipment as well as potential regulatory fines for not upgrading and incurring regulatory fines. The impact of technology used to produce Vulcan's products and the impacts climate-related issues could have on that technology and potential costs of upgrade are considered in our short, medium, and long-term planning. Equipment Efficiency Ex: We are in the process of replacing our off-road mobile equipment with new units that incorporate Tier IV clean engine technology. We mitigate the financial burden a total fleet replacement by replacing mobile equipment when it reaches the end of its useful life, while still making significant air pollution reductions year-over-year. Renewable Energy Ex: Technological advancements that can improve the efficiency of the operations, reduce dependency on petroleum-based fuels and energy sources, and provide opportunities for the use and/or generation of renewable energy sources are being tracked and evaluated as information becomes available. Our energy procurement team is directly responsible for evaluating the environmental benefits and market-based financial feasibility of renewable energy sourcing. Products & Services Ex: With regard to our products and services, Vulcan defines "technology" as innovation around design, engineering, processing, techniques, applications and systems. The primary climate-related risks associated with products and services would be realized if Vulcan did not continue to prioritize and meet customer demand for low-carbon or otherwise sustainable products, which could lead to a loss of market share. We mitigate these risks by engaging with stakeholders to innovate on our products and processes, providing our customers an increasing variety of sustainable product offerings including alternative materials, low-emissions cement, and concrete treated with CarbonCure technology. Risks and opportunities related to products and services are monitored, managed, and conveyed to leadership by our Technical Services teams across the individual business segments.

Legal	Relevant, always included	Introduction: Legal matters associated with climate-related issues are always included in our risk assessment, such as compliance obligations under climate-related laws and regulations; consideration of when a climate-related issue should be considered material. Because Vulcan does not produce cement, a high-emitting material, and instead purchases it for our concrete production, it is likely that climate-related laws and regulations will affect our supplier network before our owned operations. Climate-Related Disclosure Ex: A risk in this category is the potential exposure to litigation related to Vulcan's climate reporting as regulatory requirements become stricter and as concern increases around transparent and accurate disclosure and claims. To mitigate this risk, Vulcan's General Counsel and legal professionals are responsible for ensuring the Company's disclosures are proper and accurate both for financial reporting and for external reporting on climate change impacts. Carbon Pricing Ex: Though not currently applicable to Vulcan’s operations, a number of governmental bodies have introduced or are contemplating legislative and regulatory change in response to the potential impacts of climate change. Such legislation or regulation, if enacted, potentially could include provisions for a “cap and trade” system of allowances and credits or a carbon tax, among other provisions, and adversely impact the availability and/or cost of purchased electricity. Any changes to carbon pricing legislation is monitored by our Director of Environmental Compliance, VP External Affairs and Corporate Communication, and energy procurement team.
Market	Relevant, always included	Introduction: Climate-related issues can impact markets in multiple ways. Market opportunities that arise from climate change, and from sustainability aims more generally, are also a focus. Most notably being our ability to meet increasing customer demand for more sustainable, low-carbon materials. Our primary business segment, aggregates, is inherently a low carbon-intensity product. As part of our ongoing dedication to sustainable product development, we have put efforts toward accounting for our emissions-intensity by product line and developing product sustainability standards, including Environmental Product Declarations (EPD). Using product-specific sustainability metrics, Vulcan can more clearly articulate our sustainability offerings to our customers. Sustainable Products & Services Ex: We work closely with both our customers and sustainability partners to identify needs and help support the development of products and services that have reduced

		environmental impact - while also providing cost-effective solutions. We have focused on creating technologies that reduce the overall embodied carbon in construction and on sustainable and low-carbon downstream asphalt mix and ready-mixed concrete products that directly contribute to a low carbon future. A notable example is our continued partnership with CarbonCure. Vulcan licenses CarbonCure technology to inject CO2 into ready-mixed concrete to not only capture CO2 from industrial processes, but mineralize the gas, enhancing the strength of the concrete. Vulcan has expanded the use of CarbonCure technology and injected over one million cubic yards of concrete with CO2 in 2022. Products and services like this enable Vulcan to both mitigate the risk of losing competitive position in the market due to a failure to produce sustainable, in-demand products, as well as to capitalize on this demand as our products support a climate-resilient future. Sustainable product development efforts are led by our Technical Services teams across all business segments.
Reputation	Relevant, always included	Introduction: The impact of public perception of our management of climate issues has the potential to impact our corporate reputation, which in turn affects operations, sales and our future expansion efforts. The impact on our reputation is considered as part of the regular risk assessment process and as part of the process of reviewing and commenting on external ESG reviews of the Company. Existing and Future Goals Ex: We make statements about our ESG goals and initiatives through our ESG report, our other non-financial reports, information provided on our website, press releases and other communications. Responding to these ESG considerations and implementing these goals and initiatives involves risks and uncertainties, requires investments, and depends in part on third-party performance or data that is outside our control. We cannot guarantee that we will always achieve our announced ESG goals and initiatives. In addition, some stakeholders may disagree with our goals and initiatives. Meeting our climate-related commitments -- and transparently disclosing progress toward our emissions reduction targets are crucial components in maintaining our reputation and social license to operate. We are now in a position to set more ambitious, but still feasible GHG reduction and energy conservation goals in 2023. The expansion of renewable energy goals and partnerships is led by our energy procurement team, while energy efficiency initiatives and goal setting is led by our facilities managers within each business segment. Association with High-Emitting Sectors Ex: Vulcan does not produce cement, but instead purchases relatively small amounts as an input to

		our ready-mixed concrete products. However, even though our primary products have a relatively low emissions intensity, we are categorized with our high-emitting peers who engage in the production of cement. We do not have access to the same decarbonization opportunities or sector-specific guidance as cementitious materials. There is a reputational risk associated with our industry, especially if stakeholders perceive Vulcan as not engaging with climate action initiatives, such as SBTi, as much as our competitors. We mitigate these reputational risks by providing stakeholder engagement and education material about the emissions intensity of our products while collaborating with our suppliers. Responsible: VP External Affairs: external stakeholders IR: Investor and finance Technical Services: Customers
Acute physical	Relevant, always included	Introduction: Acute physical impacts of climate-related issues that are assessed include extreme weather impacts on Vulcan's operating facilities that could interfere with the ability to supply materials to our customers; impact on construction activity (timing and scope) due to extreme weather events that affect material sales and Company revenue; impacts to the health and safety of Vulcan employees and the surrounding communities; and impacts on the transportation infrastructure that supports our ability to deliver product to our customers; the increase in demand from customers and communities for our products as they rebuild from destruction caused by natural disasters. The impact of extreme weather on the Company's ability to accurately estimate future earnings is a risk: unpredictability of weather could result in earnings misses and affect the Company's reputation regarding the ability to accurately project future earnings. Heat Wave Ex: Vulcan currently operates in areas with extreme heat. Scenario planning from our climate risk assessment has identified an increased likelihood and severity of heatwaves in already vulnerable regions. Our Mountain West Division, which encompasses Arizona and New Mexico, has been developing and presenting best practices company-wide to reduce employee heat stress incidents. These programs are led by our Safety & Health teams, reporting to senior leadership in the Safety, Health & Environment (SHE) Management Committee. Climate Risk Analysis Ex: In late 2022, we began our first formal Climate Risk Analysis in conjunction with a third-party partner. This analysis evaluated the current vulnerabilities of our operations to both

		transition and physical risk, including acute physical hazards such as hurricanes, earthquakes, and riverine flooding. The analysis also included scenario analysis informed by industry-recognized climate models to examine our predicted exposure under general accepted climate scenarios. We have been examining not only our site exposure, but also the implications to our major distribution hubs, logistics, surrounding communities, and major metropolitan markets that comprise our customers. The findings from this analysis are being evaluated by members of our ESG Steering Committee, ERM program and senior leadership.
Chronic physical	Relevant, sometimes included	Introduction: We consider chronic physical issues when planning expansions of existing facilities or green fielding new sites, factoring in longer-term concerns such as sea level rise threats to facilities in close proximity to affected waters, availability of water supplies to support aspects of our operations (dust control, product washing), water supply issues that develop due to periods of extended drought. Chronic physical risks also present opportunities for new considerations when planning for the reclamation of sites. We use our site development process to plan for future site reclamation. Water Stress Ex: In 2022, we conducted a Water Risk Assessment to understand the scope of chronic water-related risks to our operations. A portion of our sites, especially those located in the arid western US, are located in areas of high water stress. To address these risks, we make efforts to recycle and conserve water at our sites, in an effort to preserve water availability for the surrounding community and protect water quality by pre-treating our water discharge. Access to a reliable source of water is especially important for our ready-mixed concrete and aggregates processes. When considering the end of our quarries lifespans, the nature of our mining operations does not leave behind toxic residues and the quarries can be readily reclaimed for water conservation. Many of our former quarry sites have been reclaimed as drinking water reservoirs, improving the resilience of natural resources for local communities. Our retired production sites have also become aquifer recharge basins, public parks, habitat mitigation banks, wetlands, productive farmland and residential and commercial developments. Sea Level Rise Ex: As part of our Climate Risk Analysis, we examined our existing operations' exposure to coastal inundation of 0.5 and 1 meter of sea level rise. These sites have already begun planning for, and investing in, adaptive measures such as increased pumping capabilities, stormwater drainage, and wetland conservation to protect our operations from hazards and keep our employees and

		communities safe. In addition to our operations, we maintain a special focus on our customers in coastal communities, where the demand for climate-resilient and adaptive infrastructure will continue to grow in response to coastal inundation.

C2.3

(C2.3) Have you identified any inherent climate-related risks with the potential to have a substantive financial or strategic impact on your business?

Yes

C2.3a

(C2.3a) Provide details of risks identified with the potential to have a substantive financial or strategic impact on your business.

Identifier

Risk 1

Where in the value chain does the risk driver occur?

Direct operations

Risk type & Primary climate-related risk driver

Acute physical

Heavy precipitation (rain, hail, snow/ice)

Primary potential financial impact

Decreased revenues due to reduced production capacity

Company-specific description

Uncertainty and variability around weather and climate, including increases in frequency and severity of storms as well as an expanded storm season, could affect our production operations, which are outdoors, and interrupt sales. We have determined that the risk of significant damage to any particular site is relatively low, however, we have conducted an analysis of our exposure to the physical hazards.

For example, more than 40 of Vulcan's sites are currently situated in regions with Very High hurricane exposure.. Other storm-related hazards like strong winds are particularly relevant, with more than 150 of Vulcan's sites at Very High or Relatively High risk of facing damaging winds.

In past years, including 2022, Vulcan operations were affected by severe weather events. Because of these hazards, we must, and have, accounted for potential damages to our operations and impacts on our supply chain in our risk management strategy. Components of our risk management strategy include a comprehensive and consistent

response process to protect our employees, operations, production capacity, and surrounding communities from the impacts of physical hazards in the event of severe climate events.

Our operations are strategically located to manage any potential significant downtime of production as a result of severe weather/climate events, and to continue delivering our products on schedule for customers by redirecting orders to adjacent, unaffected operations.

Time horizon

Short-term

Likelihood

Virtually certain

Magnitude of impact

Medium-low

Are you able to provide a potential financial impact figure?

Yes, an estimated range

Potential financial impact figure (currency)

Potential financial impact figure – minimum (currency)

1,000,000

Potential financial impact figure – maximum (currency)

10,000,000

Explanation of financial impact figure

It is not uncommon for earnings release disclosures to cite impacts of wet weather, often due to hurricanes in our operating footprint.

For example, “the Asphalt Segment gross profit was $7 million in the quarter compared to $30 million in the prior year period. The decrease in earnings was driven primarily by the impact of sharply higher energy costs and weather-related impacts on volumes. A record-setting number of rainy days disrupted asphalt shipments in Arizona, the Company's second largest asphalt market. Additionally, construction activity in Tennessee was also negatively impacted by hurricane-related wet weather.” (Vulcan Reports Third Quarter 2021 Results, 11/04/2021).

The financial impact range above is an estimate of impacts of weather-related events in 2022.

However, financial impacts are dependent on the location, nature, severity, and duration of weather events and are typically not reported in isolation. Additionally, while Vulcan

manages these financial impacts internally, it incorporates confidential financial information of our suppliers, insurers, and customers that can not be made public in these responses.

Cost of response to risk

1,000,000

Description of response and explanation of cost calculation

Weather is factored into the budgeting and financial forecasting processes. If impacts continue to increase, then these processes would be adjusted accordingly, taking into consideration data from globally-recognized climate models and scenarios

An example of our proactive management is the response of our Fort Myers plant after Hurricane Ian in September 2022 in which Vulcan avoided costly production shut-down and was also able to support the reconstruction of the local community. The figure above is derived from additional operational support to respond to these events.

The Fort Myers plant is subject to a Very High risk rating of hurricanes, according to the National Risk Index developed by FEMA, same as the surrounding communities. In the wake of Hurricane Ian, we used our Emergency Response Plan to assess and address the damage to our operations, reroute pending customer orders to nearby facilities, and ensure the safety of our employees. As a result of this preparation and quick action, our Fort Myers team was able to report to the quarry just hours after the storm. Vulcan produced and delivered more than 145,000 tons of essential construction materials, with the support of more than 60 employees and 100+ truck drivers, for the repair of the Sanibel Causeway, which enabled its reopening 10 days ahead of schedule.

Comment

Emergency management processes are already well established at Vulcan. Proactive management of physical risks has led to minimal financial impacts as a result of decreased revenues due to reduced production capacity.

Identifier

Risk 2

Where in the value chain does the risk driver occur?

Direct operations

Risk type & Primary climate-related risk driver

Chronic physical

Sea level rise

Primary potential financial impact

Increased capital expenditures

Company-specific description

Rising sea levels have the potential to impact operations, especially within coastal zones, to the extent that major facility improvements or periodic rehabilitation would be required. Major business interruptions caused by flooding or other events could cause interruptions at our manufacturing and/or distribution centers. This could result in increased capital costs to repair damages and lost revenue from stopping production disruptions. Additionally, there is a risk for insurance premiums to increase for properties designated as high-risk of flooding by insurers.

Vulcan’s operations are located throughout the US, including areas vulnerable to chronic flooding and sea-level rise. Nine of Vulcan's sites are facing Very High or Relatively High risk of inundation from coastal flooding under present climate conditions as identified by FEMA. In addition, 103 existing sites are in areas expected to be impacted, at least in some part, in the event of one-half meter of sea-level rise by mid-century. We are already engaged in flood management for our at-risk sites and are developing adaptive best-practices to minimize the potential effect of flooding and coastal inundation from sea-level rise on our most at-risk operations.

Time horizon

Medium-term

Likelihood

About as likely as not

Magnitude of impact

Low

Are you able to provide a potential financial impact figure?

Yes, an estimated range

Potential financial impact figure (currency)

Potential financial impact figure – minimum (currency)

1,000,000

Potential financial impact figure – maximum (currency)

25,000,000

Explanation of financial impact figure

The potential financial impact is a large range and could incorporate decreased profit margins, writing off the book value of plant and equipment, or losing the value of aggregates reserves. The amounts will vary significantly based on the type of operation (e.g. production operation with reserves versus a sales yard served by ship or rail) and location. The financial impact range provided represents costs does not include the financial impacts of the loss of reserves and contribution margin of the products.

It is not uncommon for earnings release disclosures to cite impacts of wet weather,

including flooding, in our operating footprint; however, financial impacts are dependent on the location, nature, severity, and duration of flooding and are typically not reported in isolation. The increased risk and magnitude of impact related to chronic flooding and potential sea-level rise are factors of our existing and future insurance premiums.

Increased risk and magnitude of flooding impacts are included in our insurance premiums and built into our operating costs and projections. Our insurance premiums, deductibles, and claims are considered confidential financial information and will not be disclosed in these public responses. However, Vulcan, like many organizations, is experiencing an increase in insurance premiums for our properties, particularly those in areas projecting sea-level rise.

Cost of response to risk

10,000,000

Description of response and explanation of cost calculation

As with the financial impact, response costs will vary widely. Weather, or chronic events resulting from climate change, are factored into the budgeting and financial forecasting processes. If impacts continue to increase, then these processes would be adjusted accordingly, taking into consideration data from globally-recognized climate models and scenarios.

Our Division teams are responsible for developing infrastructure and emergency management processes aimed at enhancing the climate resiliency of our operations. Risk response might involve engineering modifications to existing property, plant and equipment; relocating plant and equipment within the current site boundaries; or, acquiring new property for the purpose of relocating an operation in response to sea level rise.

Our forecasting and sales teams are responsible for responding to situations in which flooding has impacted our operations or ability to meet deliveries for customers. Our operations are strategically located to manage any potential significant downtime of production as a result of severe weather/climate events, and to continue delivering our products on schedule for customers by redirecting orders to adjacent operations. Our success in actively managing these risk to our operations is illustrated by our ability to avoid material financial losses in 2022, even in the event of several flooding events in our operations

Comment

Identifier

Risk 3

Where in the value chain does the risk driver occur?

Risk type & Primary climate-related risk driver

Reputation

Increased stakeholder concern or negative stakeholder feedback

Primary potential financial impact

Decreased access to capital

Company-specific description

The ESG ecosystem provides multiple, and sometimes contradictory, views of company responses to climate change in the form of scores, ratings and rankings . Poor performance negatively impacts the sentiments of potential investors, analysts, and creditors. Failure to meet the growing expectations of our investors and customers regarding climate change strategies and disclosures, and failure to maintain competitive ESG ratings and rankings, could result in reduced investment, capital, and revenues for our business.

Additionally, Vulcan is in a unique position within our industries, both construction materials and mining, in which our operations do not neatly fit into standard criteria for GHG emissions reporting and reduction opportunities. We have observed that in the absence of clear disclosure or explanation of our unique operations, we are held to the same standards of high-emitting sectors, such as cement, without access to the same decarbonization resources.

The risk of not proactively disclosing our efforts to monitor and manage climate-related risks, specifically GHG emissions reductions, is the perception amongst important stakeholders that we are not effectively managing our most material risks. We are increasing engagement efforts with investors, ESG raters and rankers, and disclosure organizations (such as CDP) to accurately highlight our progress in GHG reductions and our plan for progress using thoroughly vetted goals, initiatives, and solutions that have been vetted for our unique operations.

Time horizon

Short-term

Likelihood

About as likely as not

Magnitude of impact

Medium-low

Are you able to provide a potential financial impact figure?

No, we do not have this figure

Potential financial impact figure (currency)

Potential financial impact figure – minimum (currency)

Potential financial impact figure – maximum (currency)

Explanation of financial impact figure

The impact of lost reputation and negative investor sentiment has not been quantitatively estimated due to variability and uncertainty associated with the issue.

However, we have received an increased level of engagement among our priority stakeholders about any changes to Vulcan's ESG scores across the various rating and ranking platforms. We have also received requests to commit to goals to reduce emissions in line with holding warming to 1.5 degrees Celsius, submit goals and targets for approval by the Science-Based Targets Initiative, and disclosing Scope 3 emissions.

We have not experienced a lack of, or limitation to, access of capital as a result of ESG criteria, we have simply received an increase in inquiries on specific topics and ratings that required additional engagement.

Cost of response to risk

1,000,000

Description of response and explanation of cost calculation

The cost of the risk response figure above is derived from the need for additional FTE and third-party consulting to lead our engagement efforts.

As part of our ongoing ESG engagement efforts, we have made significant progress in how we collect, analyze, and manage climate-related data and how we incorporate this data into our corporate narrative.
An example of an investment in our ability to more accurately and transparently disclose climate-related data is our enhanced GHG emissions and energy accounting. 2022 was the first year we started reporting emissions/energy by business segment.

In 2022, our energy procurement team made significant efforts, with minimal monetary investment, to collaborate with our third-party utility management partner to build data collection processes that analyze GHG emissions and energy use by business segment. The result of this effort is not only business-segment specific emissions disclosures, but also emissions intensity by product to compare internally and among competitors:

Scope 1 & 2 - 2022 Emissions Intensity (MTCO2e/tons produced)
Aggregates: 0.0039
Asphalt: 0.0188
Ready-Mixed Concrete: 0.0086
Enterprise-wide (before applying renewable energy): 0.0046

These enhanced data processes allow us to disclose and explain the nuances of our business in rating and ranking platforms, leading to a rating that more accurately reflects our ESG-related risks, especially when compared with competitors.

Data collection provides the foundation for internal strategy and identifies high-impact GHG reduction initiatives within each business segment. This data will ultimately inform future, meaningful climate goals and targets to convey to stakeholders our commitment to ESG topics, particularly climate-related action.

Comment

This action is intended to provide more transparent and comprehensive information to investors to improve ESG rankings and address concerns from stakeholders. Costs for potential projects and activities to reduce GHG emissions to achieve our current and future targets are additional to this amount and not included in these internal calculations.

C2.4

(C2.4) Have you identified any climate-related opportunities with the potential to have a substantive financial or strategic impact on your business?

Yes

C2.4a

(C2.4a) Provide details of opportunities identified with the potential to have a substantive financial or strategic impact on your business.

Identifier

Opp1

Where in the value chain does the opportunity occur?

Upstream

Opportunity type

Energy source

Primary climate-related opportunity driver

Use of lower-emission sources of energy

Primary potential financial impact

Returns on investment in low-emission technology

Company-specific description

Our energy procurement strategy involves entering into agreements to purchase an as-needed amount of energy (electricity & fuel) for a specified time period, ensuring continuity of energy supply to all Vulcan operations. Over the last few years, the

purchase of cost-effective renewable energy has increased and our goal is to further increase our pace of renewable energy deployment across our footprint as renewable technologies and fuels become more cost effective. Our renewable energy procurement approach will continue to balance the energy resiliency needs of our operations and the cost of energy in respective regions with the environmental impact of our energy supply.

Example 1: Vulcan achieved its goal of sourcing 5% of its electricity needs from renewable sources by 2030. At the end of 2022, approximately 5.3% of our total electricity needs were sourced through power purchase agreements or other partnership mechanisms where we are receiving the clean energy as well as the Renewable Energy Credits (RECs). At San Emidio Quarry , Vulcan partnered with White Pine Renewable to convert 10 acres of land into an onsite behind-the-meter solar facility capable of producing more than 4 million kWh annually, providing for approximately 70% of the quarry's electricity needs. It's anticipated that approximately 25% of our electricity needs in California will come from solar sources by 2026.

Example 2: In 2022, Vulcan sourced approximately 550,000 gallons of renewable diesel at our Ready Mix operations located in California. All three of our primary segments rely heavily on diesel consumption for both mobile and stationary equipment. In 2023, we are actively evaluating opportunities to expand our renewable diesel purchasing efforts to all of our operations in California in an effort to reduce Scope 1 emissions while balancing the cost-effectiveness of our fuel supply.

Example 3: Vulcan has deployed battery energy storage systems at multiple locations in California allowing electricity to be stored during lower-cost, less CO2 intensive, off-peak periods and to be consumed during the higher cost, higher CO2 intensive, on-peak hours. This electricity can help reduce our reliance on the grid during those higher cost hours thereby reducing both cost and our CO2 emissions. These energy storage technologies aid in electric utilities meeting peak demand as our demand from the grid is reduced when we're discharging the battery.

Time horizon

Short-term

Likelihood

Very likely

Magnitude of impact

Medium-high

Are you able to provide a potential financial impact figure?

Yes, an estimated range

Potential financial impact figure (currency)

Potential financial impact figure – minimum (currency)

500,000

Potential financial impact figure – maximum (currency)

1,000,000

Explanation of financial impact figure

Internally, Vulcan considers the potential cost of carbon and direct financial cost savings on energy sourcing from utilities and suppliers. There are potential additional savings in rates and company reputation that could impact customers and investors, though these are not quantitatively qualified. The terms of contracts for these renewable energy opportunities vary significantly by region, scale of project and are confidential.

Impact figures are dependent on the number of facilities that can be brought online and size of operations. Benefits include a decrease in operating costs, the potential to sell back energy, and the possibility of carbon credits. The estimated figure above is for the battery storage project in California:

Calculations: Vulcan is currently operating 4 battery energy storage facilities in California with 4 additional facilities in California projected to be operational in 2024. When all 8 projects are operational, we anticipate annual energy savings on the order of $500k-$1M/year as well as a projected annual reduction of GHG emissions of approximately 155 metric tons of CO2e.

Cost to realize opportunity

500,000

Strategy to realize opportunity and explanation of cost calculation

The estimated cost to realize is derived from FTEs and third-party consultants supporting the procurement of renewable energy.

The energy procurement team at Vulcan has been tasked with continuously monitoring and strategically evaluating opportunities to procure low carbon renewable energy supply sources throughout our operations. Strategy most often involves entering into agreements to purchase above a stated amount of energy for a set period of time to be provided with assurances of commitment to supply the energy.

Many Vulcan operations are located in areas of high solar and wind energy potential, making our sites attractive candidates for renewable energy partnership. Additionally, many of these markets are also experiencing increasing energy costs when sourcing the regional grid. We have a presence in some markets with the highest electricity rates in the country, including California, Washington DC, and New England. The Vulcan energy procurement team considers financial and environmental returns when evaluating renewable energy sourcing, maximizing our return on investment.

For the battery storage project, we continue to develop the opportunity in California because of the high energy rates and high potential cost savings. By developing this

project in a market with a high return on investment, we can streamline the process and consider implementation in areas outside of California in the near future (2025-2030).

Comment

Identifier

Opp2

Where in the value chain does the opportunity occur?

Direct operations

Opportunity type

Products and services

Primary climate-related opportunity driver

Development and/or expansion of low emission goods and services

Primary potential financial impact

Other, please specify

Revenue from low-carbon products

Company-specific description

We are committed to meeting the ever-increasing demand for more sustainable products and contributing to innovation in climate-resilient infrastructure. Our technical team consists of quality assurance teams throughout each division of the business, one department dedicated to R&D, and a regional sustainability manager. Vulcan's National Research Lab is often the starting point for evaluating concrete-related materials and technologies, then spearheads that evaluation and product development in collaboration with the quality assurance departments and engineering teams. Our technical teams are a resource to the customer and communities for what is available today and innovative direction for the future. Collaboration with other companies supports the development of innovative products and processes that decrease the environmental impact while maintaining quality standards and cost-effectiveness. In various markets, Vulcan is increasing the implementation of higher amounts of slag and fly ash and new lower carbon cement sources in projects today and offering solutions utilizing bluetooth sensors for real-time strength measurement in the field that allows contractors to maintain construction schedule at the lowest carbon possible. We are exploring supplementary cementitious materials that are alternatives to slag and fly ash, artificial intelligence and machine-learning technologies for material and concrete mix optimization, lower carbon limestones and cements, various carbon-sequestering materials, processes that provide a use for waste material from the industry, and participating in federal laboratory and university projects.
Our business segment-specfic data collection allowed us to communicate the relative energy and GHG emissions intensity of our three major products and identify opportunities for emissions reduction.

A unique opportunity is the implementation of CarbonCure technology that provides capture and sequestration of carbon dioxide within ready-mix concrete. The carbon dioxide becomes chemically bound within the concrete matrix and is not released even when the concrete is recycled following use. The technology also has the ability to increase strength of the concrete, which reduces the demand for cement and other cementitious materials and reduces the supply-side carbon footprint. This unique solution generates carbon removal credits, allowing us to continue partnering with sustainability-focused companies.

Time horizon

Short-term

Likelihood

Virtually certain

Magnitude of impact

Medium-low

Are you able to provide a potential financial impact figure?

Yes, an estimated range

Potential financial impact figure (currency)

Potential financial impact figure – minimum (currency)

150,000,000

Potential financial impact figure – maximum (currency)

200,000,000

Explanation of financial impact figure

Financial impacts are connected to the marketing strategy for our concrete business line and are considered confidential. Therefore, many specific figures cannot be disclosed at this time.

In 2022, Vulcan injected 1,050,975 cubic yards of concrete with CarbonCure technology, accounting for approximately 10% of our total shipment volume of ready-mixed concrete. The average sales price of our ready-mixed concrete product in 2022 was estimated from publicly disclosed financial reporting, providing a lower and higher risk.

Calculations:
Low End assuming average pricing: $150/cy * 1,050,975 cy injected = $157.6M
High End assuming an extra $25/cy for CarbonCure: $175/cy * 1,050,975 cy injected = $183.9M

Cost to realize opportunity

300,000

Strategy to realize opportunity and explanation of cost calculation

The cost is estimated using a portion of the operating budget for the National Research Lab dedicated to low-carbon product development and technical services.

Vulcan invests in research and development for the ready-mixed concrete segment through the Vulcan National Research Laboratory. This lab vets materials through testing and seeks products that can be used to enhance Vulcan's product offerings, provide optimized performance, minimize production waste, or progress toward zero carbon concrete. The National Research Lab has provided in-kind support to government-funded research and is sought out by companies with startup products or new materials for industry expertise and collaborative product development. The work of the research lab positions Vulcan at the forefront of new options and forward thinking opportunities to consider for market leadership and differentiation.
Vulcan recognizes the inherent value in aggressively supporting sustainable construction and green building initiatives, so Vulcan's technical team provides input to specifiers regarding achievable low carbon targets and corresponding performance. The National Research Lab produced a specification guide that has been shared and publicly available online since 2018.

As of 2022, Vulcan increased our engagement with CarbonCure, leading to 1,050,875 in 2022 being injected with CO2 (a 25% increase over 2021).

Vulcan is actively working with suppliers and customers to prioritize the use of Portland Limestone cement, also known as Type 1L cement, which uses more limestone and less clinker than traditional Portland cement. The replacement of Type 1L cement can yield an estimated global warming potential (GWP) savings of 7%–12% and does not result in a significant price differential compared with Portland cement.
Vulcan's Quality Assurance teams provide mixes calibration for maturity strength measurements, which are especially useful for real-time in-place strength determination of the lowest carbon mixes.

Additional promotional efforts include technical team personnel delivering 15-25 low carbon presentations each year to architects, engineers, owners, contractors, and other project stakeholders.

Central Concrete, a subsidiary of Vulcan Materials, was the first to produce environmental product declarations (EPDs) for any building material in North America in 2012.

Comment

Identifier

Opp3

Where in the value chain does the opportunity occur?

Direct operations

Opportunity type

Resource efficiency

Primary climate-related opportunity driver

Use of more efficient production and distribution processes

Primary potential financial impact

Reduced indirect (operating) costs

Company-specific description

Our efforts to manage energy, increase efficiencies and reduce our environmental impact — is embedded into our business strategy and culture. We manage energy use carefully. We routinely conduct energy audits of our operations to identify areas for operational efficiency improvements and energy savings. We focus our efforts on four primary drivers of energy efficiency:
- Process Improvements
- Mobile Equipment
- Fuel Conservation Initiatives
- Energy Efficient Technology

Some of the opportunities within these drivers were identified during these audits that were implemented in 2022 include: replacement of older motors with new ultrahigh efficiency motors to power plant processing equipment; improvements in water handling systems to reduce water pumping needed; optimizing process equipment flow to maximize efficiency; use of LED lighting; and optimization of air conditioning and lighting control to reduce energy consumption.

Time horizon

Short-term

Likelihood

Virtually certain

Magnitude of impact

Medium

Are you able to provide a potential financial impact figure?

No, we do not have this figure

Potential financial impact figure (currency)

Potential financial impact figure – minimum (currency)

Potential financial impact figure – maximum (currency)

Explanation of financial impact figure

Projects are being assessed and implemented across the company on an ongoing basis and are integral to the Vulcan Way of Operating. The exact financial impact values of these initiatives are considered confidential and involve both cost of implementation and value realization.

A large portion of evaluating the financial impact internally rests on continuing to develop our data collection and analytics. In some cases this requires a financial investment in software or other technology, other cases it is an investment in staff training and reallocation for roles and responsibilities.

General estimates of energy and cost savings initiatives can be shared using publicly available national averages. For example, the National Renewable Energy Laboratory (NREL) estimates a commercial facility upgrade to LED interior lighting can achieve a nationwide average of 12.2% energy savings annually. Regional variations can account for changes in savings (13.3% in CA or 11.8% in AZ).

In a 2022 pilot project of data tracking and analytics, we observed a correlation between increased throughput efficiency and electrical efficiency of our aggregates operations. A 15% increase in throughput resulted in a 10% increase in electrical efficiency. In 2023 and beyond, we will be capturing these same KPIs from a larger sample size of facilities, including additional business segments, to inform more robust cost/savings impact figures.

Cost to realize opportunity

Strategy to realize opportunity and explanation of cost calculation

Opportunities are identified by a multi-functional team including corporate, division and facility personnel. Implementation of recommended actions are the responsibility of plant operations management and are supported by engineering, procurement and other company resources.

We focus our efforts on four primary drivers of energy efficiency:

Process Improvements: The Vulcan Way of Operating, one of Vulcan’s strategic disciplines, uses technology and data analytics to optimize production efficiency. The resulting process improvements support continuous improvement and durable growth throughout the economic cycle and helps Vulcan achieve increased energy efficiency and reduced environmental impacts. There are financial costs associated with

technology upgrades and data analytics however, these investments have a relatively short payback time once energy cost-savings are realized.

Mobile Equipment: More than 58% of our Scope 1 and 2 emissions in 2022 came from off-road mobile equipment. As we replace end of life off-road mobile equipment with new equipment, we see 30%–50% decreases in fuel consumption per engine. We have been transitioning our mobile, off-road fleet to Tier IV diesel, electric hybrid, and hydraulic hybrid engines. In 2022, Tier IV machines performed more than 57% of Vulcan's off-road fleet work. In the aggregates business line, Vulcan replaced 120 pieces of mobile equipment, including haul trucks, front end loaders, excavators, and bulldozers, with more fuel-efficient models in 2022.

Central Concrete, a subsidiary of Vulcan Materials Company, was the recipient of a $200,000 grant from the California Energy Commission to develop a Blueprint for transitioning its concrete operations fleet to zero emissions.

Fuel Conservation: The total amount of fuel burned is part of a standard key performance and production metric in the aggregates industry — and the more fuel used is customarily viewed as indicative of better performance. In contrast, Vulcan's fuel conservation initiative challenges its operators to conserve fuel and reduce idle equipment hours. While this opportunity will not require a financial investment, this will require a cultural shift on all sites across our organization.

Energy Efficient Technology: Variable frequency drive (VFD) controls on stationary equipment, LED replacements, lighting controls and optimized air-conditioning use less energy than the technologies they replaced.

Comment

C3. Business Strategy

C3.1

(C3.1) Does your organization's strategy include a climate transition plan that aligns with a 1.5°C world?

Row 1

Climate transition plan

No, but our strategy has been influenced by climate-related risks and opportunities, and we are developing a climate transition plan within two years

Explain why your organization does not have a climate transition plan that aligns with a 1.5°C world and any plans to develop one in the future

In the last three years, as we developed an ESG program, our focus was on understanding our Scope 1 and Scope 2 emissions and setting interim medium-term Scope 1 and 2 GHG emissions reduction targets. As part of our commitment to exploring the development of SBTi-approved targets and associated decarbonization plans, we will develop transition plans in alignment with 1.5-degree Celsius world. As we advance our efforts, in the past year, we have completed the first phase of our Scope 3 emissions inventory, as well as Climate and Water Risk assessments.

The results of the Climate Risk Analysis outlined the potential transition and physical risks associated with several climate scenarios, including a 1.5-degree Celsius world. Our next step will be to leverage the findings and tools from the climate risk analysis to support the development of a thoughtful transition plan.

C3.2

(C3.2) Does your organization use climate-related scenario analysis to inform its strategy?

	Use of climate-related scenario analysis to inform strategy
Row 1	Yes, qualitative, but we plan to add quantitative in the next two years

C3.2a

(C3.2a) Provide details of your organization's use of climate-related scenario analysis.

Climate-related scenario	Scenario analysis coverage	Temperature alignment of scenario	Parameters, assumptions, analytical choices
Physical climate scenarios RCP 2.6	Company-wide		Physical climate scenarios (RCP 2.6, 4.5, 8.5) : Vulcan commissioned an assessment of company-wide assets to evaluate the exposure to physical hazards such as drought, hurricanes, increased precipitation, flooding, and extreme temperatures, that are associated with climate change. The assessment included three globally recognized climate scenarios - RCP 2.6, RCP 4.5, and RCP 8.5 - and evaluated the climatic projections during early, mid, and late century intervals. For our sites and assets located in areas already experiencing acute physical hazards (such as hurricanes), we have been developing risk adaptation and mitigation measures as part of our emergency response and operational resilience plans. For current/proposed sites located in areas expected to experience chronic physical hazards (water stress, increased average temperatures, and sea-level rise), we are investigating climate-resilient processes and

			infrastructure to protect our operations, employees, and surrounding communities.
Physical climate scenarios RCP 4.5	Company-wide		Physical climate scenarios (RCP 2.6, 4.5, 8.5) : Vulcan commissioned an assessment of company-wide assets to evaluate the exposure to physical hazards such as drought, hurricanes, increased precipitation, flooding, and extreme temperatures, that are associated with climate change. The assessment included three globally recognized climate scenarios - RCP 2.6, RCP 4.5, and RCP 8.5 - and evaluated the climatic projections during early, mid, and late century intervals. For our sites and assets located in areas already experiencing acute physical hazards (such as hurricanes), we have been developing risk adaptation and mitigation measures as part of our emergency response and operational resilience plans. For current/proposed sites located in areas expected to experience chronic physical hazards (water stress, increased average temperatures, and sea-level rise), we are investigating climate-resilient processes and infrastructure to protect our operations, employees, and surrounding communities.
Physical climate scenarios RCP 8.5			Physical climate scenarios (RCP 2.6, 4.5, 8.5) : Vulcan commissioned an assessment of company-wide assets to evaluate the exposure to physical hazards such as drought, hurricanes, increased precipitation, flooding, and extreme temperatures, that are associated with climate change. The assessment included three globally recognized climate scenarios - RCP 2.6, RCP 4.5, and RCP 8.5 - and evaluated the climatic projections during early, mid, and late century intervals. For our sites and assets located in areas already experiencing acute physical hazards (such as hurricanes), we have been developing risk adaptation and mitigation measures as part of our emergency response and operational resilience plans. For current/proposed sites located in areas expected to experience chronic physical hazards (water stress, increased average temperatures, and sea-level rise), we are investigating climate-resilient processes and infrastructure to protect our operations, employees, and surrounding communities.

C3.2b

(C3.2b) Provide details of the focal questions your organization seeks to address by using climate-related scenario analysis, and summarize the results with respect to these questions.

Row 1

Focal questions

- Which of our operations are currently most at risk of physical hazards?
- What physical hazard scenarios are we able to manage currently?
- What climate-resilient controls need to be in place to ensure our operations can withstand future physical hazards?

Results of the climate-related scenario analysis with respect to the focal questions

Vulcan commissioned an assessment of company-wide assets to evaluate the exposure to physical hazards such as drought, hurricanes, increased precipitation, flooding, and extreme temperatures, that are associated with climate change. The assessment included three globally recognized climate scenarios - RCP 2.6, RCP 4.5, and RCP 8.5 - and evaluated the climatic projections during early, mid, and late century intervals.

For our sites and assets located in areas already experiencing acute physical hazards (such as hurricanes), we have been developing risk adaptation and mitigation measures as part of our emergency response and operational resilience plans. For current/proposed sites located in areas expected to experience chronic physical hazards (water stress, increased average temperatures, and sea-level rise), we are investigating climate-resilient processes and infrastructure to protect our operations, employees, and surrounding communities.

2022 was an initial assessment of data required to conduct a comprehensive scenario analysis. We intend to further engage with our leadership and key stakeholders in 2023 and beyond to build a more robust scenario analysis and disclosure process.

C3.3

(C3.3) Describe where and how climate-related risks and opportunities have influenced your strategy.

	Have climate-related risks and opportunities influenced your strategy in this area?	Description of influence
Products and services	Yes	We are actively considering our customers' growing demand for low-carbon or otherwise sustainability-enhanced products. We committed to meeting our

		customers (government and private) requirements Potential impacts of climate-related risks on product quality and end product quality that Vulcan supplies materials for, influences the quality control process, and product development and testing process. Vulcan's Technical Services team is continuously assessing the environmental impacts associated with our different products. We are exploring the opportunity to set product-specific emissions goals while actively conveying to our customers our commitment to supporting their low-carbon and climate-resilient construction goals. We are also committed to meeting our customers expectations for high quality products, in addition to their sustainability needs. For instance, porous pavement (Pervious Pavement) is a product that takes into account the impact of water from rainfall on highway surfaces and is designed to reduce ponding or build-up of water during a storm event. Demands for changes in product mix design due to climate-related risks are monitored to allow for adjustment to prevent supply disruption. Example: In the city of San Jose, Central Concrete, a Vulcan subsidiary, worked with the city and construction partners to create three custom concrete mixes that substituted traditional Portland cement with alternative materials, such as slag, fly ash, and post-industrial waste CO2. These different mixes were designed to support the construction of climate-resilient infrastructure that is also compliant with the Americans with Disabilities Act (ADA). Example: We produce Project Profiles that quantify the embodied carbon of the concrete for a job. This can be done early during the design of the project for the anticipated carbon footprint to seek opportunities for reduction and set expectations or after the job to quantify the embodied carbon of the job and reference for reduction targets on other jobs. Our customers sometimes request this report and sometimes we produce it in collaborations with designers to help advise on specifications.

Supply chain and/or value chain	Yes	Weather can impact Vulcan's ability to recover raw materials for producing products and disruptions to supply chains causing delayed shipments of needed materials are considered when setting production estimates and in financial planning. We engage with our suppliers, especially those in higher-risk or higher emissions categories to manage our Scope 3 emissions. Asphalt and ready-mixed concrete both have more extensive upstream supply chains associated with high-emissions raw materials including cement and petroleum products. Our technical teams work with those suppliers (cement, admixtures, supplementary cementitious, etc.) to give input on performance to target efficiency and performance that works with the lowest carbon concrete designs. For concrete products in some markets we request for our suppliers to produce EPDs and have helped transform the market in this way. Many of our suppliers have developed their first EPDs in response to our first to market concrete EPDs and as a result of our request for them. We were the first to buy slag and have sufficient storage capacity for it as a regular product in the SF Bay Area market in the early 2000's. Bringing in slag meant we had a second supplementary cementitious material to work with, which allowed the development of the lowest carbon mixes that we use standardly today. With that supply came more demand and competitors followed in offering both supplementary cementitious products because they also started being common in specifications.
Investment in R&D	Yes	Vulcan focuses on product development and optimization of products that are needed to adapt to changing climates and reduce emissions associated with infrastructure. . This includes porous pavements that help to keep vehicles from hydroplaning on highways; erosion control products including armor stone and rip rap; easy flow material to aide in filling of eroded areas from runoff; material for use in flood control barriers (sandbags and others). These materials are in high demand when areas are preparing for or responding to hurricanes and other severe weather events. Vulcan's National Research Lab vets out new technologies

		and materials for concrete ready mix and has been a resource in the industry for development of new materials. Approximately 75% of the projects that the research lab works on are centered around further improvement of low carbon mixes or new materials that lower the embodied carbon of concrete closer to zero or net negative emissions. Example: Vulcan is actively working with suppliers and customers to prioritize the use of Portland Limestone cement, also known as Type 1L cement, which uses more limestone and less clinker than traditional Portland cement. The replacement with Type 1L cement can yield an estimated global warming potential (GWP) savings of 7-12%. This initiative helps create climate-resilient infrastructure for vulnerable communities while reducing GHG emissions associated with the production of products, contributing to a low-carbon economy.
Operations	Yes	Impacts of climate-related risks on equipment, personnel, and facilities are considered both in the design and operation of our plants. Equipment must be able to withstand the forces of wind and rain and other climate-related issues. Consideration of flood plain locations and shifting due to water levels rising from climate change are also considered. Sites are designed with sufficient containments and water impoundment capacity to handle anticipated storm events. Heat stress exposure risk for our personnel by the growing prevalence of excessive heat days is actively being managed by our safety teams. We are committed to reducing the emissions associated with our products and production. In 2021 we set interim climate goals: - Reduce Scope 1 and 2 GHG emissions intensity per ton of product produced by 10% by 2030. - Reduce energy intensity per ton of product produced by 6.7% by 2030. - Secure 5% of electricity from renewable sources by 2030. We have achieved our renewable energy goal ahead of schedule. And while Vulcan has always focused on operational efficiency, we have started including climate-related KPIs into the strategic management of our operations.

C3.4

(C3.4) Describe where and how climate-related risks and opportunities have influenced your financial planning.

	Financial planning elements that have been influenced	Description of influence
Row 1	Revenues Capital expenditures Capital allocation	The projection of climate-related impacts is factored into estimating production capability, as well as adjusting market forecasts regarding the demand for products. This information impacts the projection of revenues for the company over the short-, medium-, and long-term. Climate events can also impact revenue projections and forecasts for the company. Sea level rise can impact future capital expenditures for relocation or renovation and upgrading of facilities to enhance resiliency. Perception of the investment community and financial organization of the company's preparedness for climate change impacts can influence the assessment of risk and willingness to provide capital and/or credit for future projects. Additionally, as outlined in our Annual Report, ESG Report, and other filings, we have a range of targets and initiatives in place to facilitate our low-carbon transition. These targets necessitate associated investment and allocation plans, which are primarily handled at the divisional level. Vulcan also increasingly invests in sustainable innovation and decarbonization, such as our ongoing and expanding partnership with CarbonCure. At the same time, Vulcan actively works to implement more sustainable and climate-resilient alternatives that lead to increased operational efficiency and financial savings, such as fuel-efficient mobile fleet equipment and hybrid engines. While undertaking these initiatives and investments, Vulcan maintains responsible financial planning and discipline resulting in sustainable returns, details of which are outlined in our Annual Report. In 2022, we delivered a 32% increase in total revenue and a gross profit improvement of 13% versus 2021. We also delivered a record $1.626 billion in adjusted earnings before interest, taxes, depreciation, and amortization, a 12% increase from 2021. We ended the year with a net debt to Adjusted EBITDA ratio of 2.3 times, well within our target range of 2.0-2.5 times.

C3.5

(C3.5) In your organization’s financial accounting, do you identify spending/revenue that is aligned with your organization’s climate transition?

	Identification of spending/revenue that is aligned with your organization's climate transition
Row 1	No, but we plan to in the next two years

C4. Targets and performance

C4.1

(C4.1) Did you have an emissions target that was active in the reporting year?

Intensity target

C4.1b

(C4.1b) Provide details of your emissions intensity target(s) and progress made against those target(s).

Target reference number

Int 1

Is this a science-based target?

No, but we anticipate setting one in the next two years

Target ambition

Year target was set

2021

Target coverage

Company-wide

Scope(s)

Scope 1

Scope 2

Scope 2 accounting method

Market-based

Scope 3 category(ies)

Intensity metric

Metric tons CO2e per metric ton of product

Base year

2021

Intensity figure in base year for Scope 1 (metric tons CO2e per unit of activity)

0.00337

Intensity figure in base year for Scope 2 (metric tons CO2e per unit of activity)

0.0013

Intensity figure in base year for Scope 3, Category 1: Purchased goods and services (metric tons CO2e per unit of activity)

Intensity figure in base year for Scope 3, Category 2: Capital goods (metric tons CO2e per unit of activity)

Intensity figure in base year for Scope 3, Category 3: Fuel-and-energy-related activities (not included in Scopes 1 or 2) (metric tons CO2e per unit of activity)

Intensity figure in base year for Scope 3, Category 4: Upstream transportation and distribution (metric tons CO2e per unit of activity)

Intensity figure in base year for Scope 3, Category 5: Waste generated in operations (metric tons CO2e per unit of activity)

Intensity figure in base year for Scope 3, Category 6: Business travel (metric tons CO2e per unit of activity)

Intensity figure in base year for Scope 3, Category 7: Employee commuting (metric tons CO2e per unit of activity)

Intensity figure in base year for Scope 3, Category 8: Upstream leased assets (metric tons CO2e per unit of activity)

Intensity figure in base year for Scope 3, Category 9: Downstream transportation and distribution (metric tons CO2e per unit of activity)

Intensity figure in base year for Scope 3, Category 10: Processing of sold products (metric tons CO2e per unit of activity)

Intensity figure in base year for Scope 3, Category 11: Use of sold products (metric tons CO2e per unit of activity)

Intensity figure in base year for Scope 3, Category 12: End-of-life treatment of sold products (metric tons CO2e per unit of activity)

Intensity figure in base year for Scope 3, Category 13: Downstream leased assets (metric tons CO2e per unit of activity)

Intensity figure in base year for Scope 3, Category 14: Franchises (metric tons CO2e per unit of activity)

Intensity figure in base year for Scope 3, Category 15: Investments (metric tons CO2e per unit of activity)

Intensity figure in base year for Scope 3, Other (upstream) (metric tons CO2e per unit of activity)

Intensity figure in base year for Scope 3, Other (downstream) (metric tons CO2e per unit of activity)

Intensity figure in base year for total Scope 3 (metric tons CO2e per unit of activity)

Intensity figure in base year for all selected Scopes (metric tons CO2e per unit of activity)

0.00467

% of total base year emissions in Scope 1 covered by this Scope 1 intensity figure

100

% of total base year emissions in Scope 2 covered by this Scope 2 intensity figure

100

% of total base year emissions in Scope 3, Category 1: Purchased goods and services covered by this Scope 3, Category 1: Purchased goods and services intensity figure

% of total base year emissions in Scope 3, Category 2: Capital goods covered by this Scope 3, Category 2: Capital goods intensity figure

% of total base year emissions in Scope 3, Category 3: Fuel-and-energy-related activities (not included in Scopes 1 or 2) covered by this Scope 3, Category 3: Fuel-and-energy-related activities (not included in Scopes 1 or 2) intensity figure

% of total base year emissions in Scope 3, Category 4: Upstream transportation and distribution covered by this Scope 3, Category 4: Upstream transportation and distribution intensity figure

% of total base year emissions in Scope 3, Category 5: Waste generated in operations covered by this Scope 3, Category 5: Waste generated in operations intensity figure

% of total base year emissions in Scope 3, Category 6: Business travel covered by this Scope 3, Category 6: Business travel intensity figure

% of total base year emissions in Scope 3, Category 7: Employee commuting covered by this Scope 3, Category 7: Employee commuting intensity figure

% of total base year emissions in Scope 3, Category 8: Upstream leased assets covered by this Scope 3, Category 8: Upstream leased assets intensity figure

% of total base year emissions in Scope 3, Category 9: Downstream transportation and distribution covered by this Scope 3, Category 9: Downstream transportation and distribution intensity figure

% of total base year emissions in Scope 3, Category 10: Processing of sold products covered by this Scope 3, Category 10: Processing of sold products intensity figure

% of total base year emissions in Scope 3, Category 11: Use of sold products covered by this Scope 3, Category 11: Use of sold products intensity figure

% of total base year emissions in Scope 3, Category 12: End-of-life treatment of sold products covered by this Scope 3, Category 12: End-of-life treatment of sold products intensity figure

% of total base year emissions in Scope 3, Category 13: Downstream leased assets covered by this Scope 3, Category 13: Downstream leased assets intensity figure

% of total base year emissions in Scope 3, Category 14: Franchises covered by this Scope 3, Category 14: Franchises intensity figure

% of total base year emissions in Scope 3, Category 15: Investments covered by this Scope 3, Category 15: Investments intensity figure

% of total base year emissions in Scope 3, Other (upstream) covered by this Scope 3, Other (upstream) intensity figure

% of total base year emissions in Scope 3, Other (downstream) covered by this Scope 3, Other (downstream) intensity figure

% of total base year emissions in Scope 3 (in all Scope 3 categories) covered by this total Scope 3 intensity figure

% of total base year emissions in all selected Scopes covered by this intensity figure

100

Target year

2030

Targeted reduction from base year (%)

10

Intensity figure in target year for all selected Scopes (metric tons CO2e per unit of activity) [auto-calculated]

0.004203

% change anticipated in absolute Scope 1+2 emissions

% change anticipated in absolute Scope 3 emissions

Intensity figure in reporting year for Scope 1 (metric tons CO2e per unit of activity)

0.00346

Intensity figure in reporting year for Scope 2 (metric tons CO2e per unit of activity)

0.00111

Intensity figure in reporting year for Scope 3, Category 1: Purchased goods and services (metric tons CO2e per unit of activity)

Intensity figure in reporting year for Scope 3, Category 2: Capital goods (metric tons CO2e per unit of activity)

Intensity figure in reporting year for Scope 3, Category 3: Fuel-and-energy-related activities (not included in Scopes 1 or 2) (metric tons CO2e per unit of activity)

Intensity figure in reporting year for Scope 3, Category 4: Upstream transportation and distribution (metric tons CO2e per unit of activity)

Intensity figure in reporting year for Scope 3, Category 5: Waste generated in operations (metric tons CO2e per unit of activity)

Intensity figure in reporting year for Scope 3, Category 6: Business travel (metric tons CO2e per unit of activity)

Intensity figure in reporting year for Scope 3, Category 7: Employee commuting (metric tons CO2e per unit of activity)

Intensity figure in reporting year for Scope 3, Category 8: Upstream leased assets (metric tons CO2e per unit of activity)

Intensity figure in reporting year for Scope 3, Category 9: Downstream transportation and distribution (metric tons CO2e per unit of activity)

Intensity figure in reporting year for Scope 3, Category 10: Processing of sold products (metric tons CO2e per unit of activity)

Intensity figure in reporting year for Scope 3, Category 11: Use of sold products (metric tons CO2e per unit of activity)

Intensity figure in reporting year for Scope 3, Category 12: End-of-life treatment of sold products (metric tons CO2e per unit of activity)

Intensity figure in reporting year for Scope 3, Category 13: Downstream leased assets (metric tons CO2e per unit of activity)

Intensity figure in reporting year for Scope 3, Category 14: Franchises (metric tons CO2e per unit of activity)

Intensity figure in reporting year for Scope 3, Category 15: Investments (metric tons CO2e per unit of activity)

Intensity figure in reporting year for Scope 3, Other (upstream) (metric tons CO2e per unit of activity)

Intensity figure in reporting year for Scope 3, Other (downstream) (metric tons CO2e per unit of activity)

Intensity figure in reporting year for total Scope 3 (metric tons CO2e per unit of activity)

Intensity figure in reporting year for all selected Scopes (metric tons CO2e per unit of activity)

0.00458

Does this target cover any land-related emissions?

No, it does not cover any land-related emissions (e.g. non-FLAG SBT)

% of target achieved relative to base year [auto-calculated]

19.2719486081

Target status in reporting year

Underway

Please explain target coverage and identify any exclusions

This intensity target was announced in the 2021 ESG Report. It includes the updated Scope 1 and 2 accounting methodologies mentioned in this survey. In 2022, we improved our GHG emissions inventory and accounting practices in order to support the

collection of Scope 1 and 2 GHG emissions data by business segment. We are revisiting this and other GHG emissions-related goals in light of improved data and will report progress against the 2022 product baselines beginning next year.

Plan for achieving target, and progress made to the end of the reporting year

Scope 1 emissions intensity increased by 12.4% in 2022 while Scope 2 emissions intensity decreased by 6.2%. Overall, Vulcan reduced combined Scope 1 & 2 emission intensity by 1.9%. Our plan for achieving this target comes from a combination of strategies addressing our Scope 1 & 2 emissions:

Scope 1 Sources: The primary drivers of Vulcan's Scope 1 emissions are diesel and natural gas used for both mobile and stationary operations.
Scope 1 Strategies:
- Renewable Sources: Emissions can be significantly reduced through renewable diesel sourcing. In 2022, 70% of Vulcan's overall Scope 1 emissions were from diesel.
- Tier IV Engines: Tier IV and hybrid engines for mobile equipment reduce fuel needs.
- Operational Efficiency: Increased efficiency in the equipment and processes used for asphalt mix drying can lead to reduced natural gas consumption.

Scope 2 Sources: The primary drivers to reduce Vulcan's Scope 2 emissions are to source renewable energy and increase production efficiencies.
Scope 2 Strategies:
- Renewable Electricity: About 5% of purchased electricity was sourced through renewable energy in 2022, with additional projects in development.
- Operational Efficiency: Examples include energy audits, improvements in LED lighting, and installation of variable frequency drive (VFD) water pumps.
- Generation and Battery Projects: We are investing in on-site solar generation and battery storage projects in sites in California and are currently analyzing additional states for on-site solar development and battery projects.

List the emissions reduction initiatives which contributed most to achieving this target

C4.2

(C4.2) Did you have any other climate-related targets that were active in the reporting year?

Target(s) to increase low-carbon energy consumption or production
Other climate-related target(s)

C4.2a

(C4.2a) Provide details of your target(s) to increase low-carbon energy consumption or production.

Target reference number

Low 1

Year target was set

2021

Target coverage

Company-wide

Target type: energy carrier

Electricity

Target type: activity

Consumption

Target type: energy source

Renewable energy source(s) only

Base year

2021

Consumption or production of selected energy carrier in base year (MWh)

37,227

% share of low-carbon or renewable energy in base year

4.46

Target year

2030

% share of low-carbon or renewable energy in target year

5

% share of low-carbon or renewable energy in reporting year

5.3

% of target achieved relative to base year [auto-calculated]

155.5555555556

Target status in reporting year

Achieved

Is this target part of an emissions target?

Our renewable energy goal is intended to support an emissions target within the next two years. Because we achieved this goal ahead of schedule, we will set a new, more ambitious renewable energy goal in 2024.

Is this target part of an overarching initiative?

No, it's not part of an overarching initiative

Please explain target coverage and identify any exclusions

The target covers company-wide electricity sourcing.

Plan for achieving target, and progress made to the end of the reporting year

List the actions which contributed most to achieving this target

Our energy procurement team was directly responsible for building renewable partnerships and achieving this goal ahead of schedule. Active projects during 2022 include:
- Solar Project in Bakersfield, CA
- Wind-generated electricity and renewable energy certificates (RECs) in TX
- Community solar arrangements in FL for renewable electricity and RECs
- Battery storage projects in CA

C4.2b

(C4.2b) Provide details of any other climate-related targets, including methane reduction targets.

Target reference number

Oth 1

Year target was set

2021

Target coverage

Company-wide

Target type: absolute or intensity

Intensity

Target type: category & Metric (target numerator if reporting an intensity target)

Energy consumption or efficiency

MWh

Target denominator (intensity targets only)

Other, please specify

ton of product produced

Base year

2021

Figure or percentage in base year

0.01632

Target year

2030

Figure or percentage in target year

0.01523

Figure or percentage in reporting year

0.01794

% of target achieved relative to base year [auto-calculated]

-148.623853211

Target status in reporting year

Underway

Is this target part of an emissions target?

Our energy efficiency goal is intended to support an emissions target within the next two years.

Is this target part of an overarching initiative?

No, it's not part of an overarching initiative

Please explain target coverage and identify any exclusions

The target covers company-wide energy usage in both Scope 1 and Scope 2.

Plan for achieving target, and progress made to the end of the reporting year

Our energy intensity figures have increased, due to acquisitions of not only aggregates, but also more energy intensive asphalt and concrete operations. This has increased our overall energy intensity and is being addressed in integration activities using energy-saving measures specific to the productions and processes of each business segment. 2022 was also the first year we have started internally reporting the correlation between energy efficiency and increased throughput.

List the actions which contributed most to achieving this target

C4.3

(C4.3) Did you have emissions reduction initiatives that were active within the reporting year? Note that this can include those in the planning and/or implementation phases.

Yes

C4.3a

(C4.3a) Identify the total number of initiatives at each stage of development, and for those in the implementation stages, the estimated CO2e savings.

	Number of initiatives	Total estimated annual CO2e savings in metric tonnes CO2e (only for rows marked *)
Under investigation	7	
To be implemented*	5	20,084.5
Implementation commenced*	0	
Implemented*	7	22,125.5
Not to be implemented	0	

C4.3b

(C4.3b) Provide details on the initiatives implemented in the reporting year in the table below.

Initiative category & Initiative type

Low-carbon energy consumption

Solar PV

Estimated annual CO2e savings (metric tonnes CO2e)

22,125.5

Scope(s) or Scope 3 category(ies) where emissions savings occur

Scope 2 (market-based)

Voluntary/Mandatory

Voluntary

Annual monetary savings (unit currency – as specified in C0.4)

Investment required (unit currency – as specified in C0.4)

Payback period

21-25 years

Estimated lifetime of the initiative

21-30 years

Comment

Renewable energy/low carbon energy projects implemented in 2022 include onsite solar, wind and solar generated RECs, and battery storage projects. These projects were located in California, Texas, and Florida. The calculations provided include emissions savings calculated from RECs, the San Emidio quarry solar facility, and battery storage projects.

The renewable energy partnerships do not require a CapEx investment and the value is realized through energy savings and reduction of costs relative to our market alternatives. We estimate the payback period to be 15-25 years depending on market pricing dynamics and the value of RECs.

Calculations source: The US EPA Greenhouse Gas Equivalencies Calculator uses the eGRID U.S. national annual average CO2 output rate to convert kilowatt-hours of energy use into units of carbon dioxide emissions. This calculation is used for renewable energy estimates (solar and RECs). The battery project was estimated as ½ the proposed savings of 155 MTCO2e for the eight projects when completed. Only four projects have been completed for an estimated 77.5MTCO2e in savings.

Initiative category & Initiative type

Energy efficiency in production processes
Process optimization

Estimated annual CO2e savings (metric tonnes CO2e)

Scope(s) or Scope 3 category(ies) where emissions savings occur

Scope 1
Scope 2 (market-based)

Voluntary/Mandatory

Voluntary

Annual monetary savings (unit currency – as specified in C0.4)

Investment required (unit currency – as specified in C0.4)

Payback period

Estimated lifetime of the initiative

>30 years

Comment

These energy efficiency programs include variable frequency drive (VFD) controls on stationary equipment, LED replacements, lighting controls and optimized air-conditioning. Additional efficiency programs are in fuel conservation of stationary and mobile equipment.

C4.3c

(C4.3c) What methods do you use to drive investment in emissions reduction activities?

Method	Comment
Financial optimization calculations	Vulcan is always looking for ways to be more energy-efficient. Organized operating teams evaluate the opportunities for increasing efficiency in operations on an ongoing basis. These opportunities are identified through site review conducted with input provided from plant personnel and with the engagement of engineers committed to identifying production optimization ideas and opportunities. Investments in energy efficiency and renewable energy projects are prioritized and authorized based on calculated financial benefits and environmental benefits.

C4.5

(C4.5) Do you classify any of your existing goods and/or services as low-carbon products?

Yes

C4.5a

(C4.5a) Provide details of your products and/or services that you classify as low-carbon products.

Level of aggregation

Product or service

Taxonomy used to classify product(s) or service(s) as low-carbon

No taxonomy used to classify product(s) or service(s) as low carbon

Type of product(s) or service(s)

Cement and concrete

Other, please specify

CarbonCure, cement substitutes

Description of product(s) or service(s)

We continued to leverage our partnership with CarbonCure, expanding the reach of its innovative process and allowing us to further optimize and add recycled CO2 to all our mix designs, including the lowest carbon ones, for customers, big and small, in markets seeking more sustainable construction materials. CarbonCure injects captured CO2 into fresh concrete during the mixing process, trapping CO2 permanently in the concrete as a mineral. This process prevents CO2 from being emitted into the atmosphere as a GHG, safely reducing the overall cement content within the product. Vulcan does estimate emissions reductions of low-carbon products. In 2022, Vulcan injected

1,050,975 cubic yards of concrete with CO2.

In addition to CarbonCure, we are always exploring the viability of alternative materials like slag and fly ash that replace more energy-intensive raw materials as well as recycling products at end-of-life to create new products and maintain the ability to do the low carbon products offered today.

Example: In our ready-mixed concrete division, we are actively working with suppliers and customers to prioritize the use of Portland Limestone cement, also known as Type 1L cement, which uses more limestone and less clinker than traditional Portland cement. The replacement of Type 1L cement can yield an estimated global warming potential (GWP) savings of 7%–12%.
Vulcan quantifies carbon emissions and savings using EPDs from upstream suppliers and for its own products.

Have you estimated the avoided emissions of this low-carbon product(s) or service(s)

Yes

Methodology used to calculate avoided emissions

Other, please specify

EPDs generated following PCRs. The GWPs from EPDs can be compared to benchmarks.

Life cycle stage(s) covered for the low-carbon product(s) or services(s)

Other, please specify

A1-A3 on an EPD

Functional unit used

per ton for aggregate
per m3 for concrete

Reference product/service or baseline scenario used

NRMCA industry benchmarks can be considered a baseline reference for concrete

Life cycle stage(s) covered for the reference product/service or baseline scenario

Estimated avoided emissions (metric tons CO2e per functional unit) compared to reference product/service or baseline scenario

Explain your calculation of avoided emissions, including any assumptions

Vulcan does not currently quantify and report the full scope of revenue or avoided emissions from the low-carbon infrastructure and sustainable building design support it provides its customers.

Revenue generated from low-carbon product(s) or service(s) as % of total revenue in the reporting year

C5. Emissions methodology

C5.1

(C5.1) Is this your first year of reporting emissions data to CDP?

No

C5.1a

(C5.1a) Has your organization undergone any structural changes in the reporting year, or are any previous structural changes being accounted for in this disclosure of emissions data?

Row 1

Has there been a structural change?

Yes, an acquisition

Yes, a divestment

Name of organization(s) acquired, divested from, or merged with

Acquired: US Concrete

Details of structural change(s), including completion dates

In the fourth quarter of 2022, we sold all concrete operations in New Jersey, New York and Pennsylvania. At various points throughout 2022, we purchased fourteen aggregates, four asphalt mix and eleven active and two idle ready-mixed concrete operations. (2022 10K, Note 19)

In 2021, we acquired U.S. Concrete, a publicly traded company, with aggregates and concrete operations in five states, Washington, DC, the US Virgin Islands and British Columbia, Canada. Additionally, we purchased concrete operations in California.

Integration activities for the U.S. Concrete systems were not complete until 2022. Impacts of U.S. Concrete related to greenhouse gas emissions and climate change did not appear in Vulcan's 2022 CDP questionnaire. The impact of all 2021 and 2022 acquisitions and divestitures is reflected in answers to this 2023 CDP questionnaire.

C5.1b

(C5.1b) Has your emissions accounting methodology, boundary, and/or reporting year definition changed in the reporting year?

	Change(s) in methodology, boundary, and/or reporting year definition?
Row 1	No

C5.1c

(C5.1c) Have your organization's base year emissions and past years' emissions been recalculated as a result of any changes or errors reported in C5.1a and/or C5.1b?

	Base year recalculation	Base year emissions recalculation policy, including significance threshold	Past years' recalculation
Row 1	No, because the operations acquired or divested did not exist in the base year	We substantially improved our data collection processes and GHG inventory reporting methods in 2022 versus prior years. As a result, 2022 GHG emissions calculations reflect all acquisitions and demonstrate consistent and replicable data management processes and will, therefore, serve as the new baseline against which to measure GHG emissions reduction progress. 2022 was the first year our GHG emissions could be reported by individual business segments. This data collection and analysis provides greater insight into the decarbonization and efficiency opportunities specific to our four operating (and reportable) segments (Aggregates, Asphalt, Concrete and Calcium) organized around our principal product lines. Due to greatly improved GHG inventory and accounting methodology, we now have additional insights to inform the development of our decarbonization strategy. The definition of reporting year and reporting boundary has remained the same. The methodology, while enhanced for accuracy, is built off the same fundamental GHG accounting principles as the base year (2021).	No

C5.2

(C5.2) Provide your base year and base year emissions.

Scope 1

Base year start

January 1, 2021

Base year end

December 31, 2021

Base year emissions (metric tons CO2e)

826,863

Comment

With the enhancement of our data collection methods by business segment, we are taking internal efforts to reevaluate our baseline and potential targets to include business segment-specific reduction initiatives.

Scope 2 (location-based)

Base year start

January 1, 2021

Base year end

December 31, 2021

Base year emissions (metric tons CO2e)

318,221

Comment

Vulcan continues to build out our reporting system to include a more comprehensive market-based inventory and approach. Our 2022 Scope 2 data is modelled using a market-based approach.

Scope 2 (market-based)

Base year start

January 1, 2021

Base year end

December 31, 2021

Base year emissions (metric tons CO2e)

311,101

Comment

Vulcan continues to build out our reporting system to include a more comprehensive market-based inventory and approach. Our 2022 Scope 2 data is modelled using a market-based approach.

Scope 3 category 1: Purchased goods and services

Base year start

January 1, 2022

Base year end

December 31, 2022

Base year emissions (metric tons CO2e)

1,930,438

Comment

Purchased goods and services accounted for approximately 62% of our evaluated Scope 3 emissions in 2022. The data included spending and sourcing from major acquisitions, including US Concrete, representing the most accurate baseline moving forward.

As the largest scope 3 category, we analyzed purchased goods and services by not only overall associated emissions, but also by commodities with the highest emissions factors. This category includes goods and services purchased to support our business operations, and categorized as operating expenditures (OpEx). Items in this category can include, but are not limited to, raw materials, office supplies, administrative and legal services, and safety equipment. For this analysis, we used emissions factors and commodity definitions provided by the EPA's Supply Chain Greenhouse Gas Emission Factors for US Industries and Commodities, informed by US Environmentally-Extended Input-Output (USEEIO) models. This allowed us to identify high-impact commodities and target them for supplier engagement, enhanced primary data collection, and emissions reductions opportunities:

Cement - Accounted for approximately 2% of our supplier spend, but 20% of our analyzed Scope 3 emission

Asphalt pavement (Liquid Asphalt) - Accounted for approximately 6% of our supplier spend, but 13% of our analyzed Scope 3 emissions.

Support Services - Accounted for 16% of our supplier spend, but only 5% of our analyzed Scope 3 emissions. Because this category included some professional and administrative services the emission factor was modeled as significantly lower than energy intensive raw materials.

Chemicals - Chemicals accounted for approximately 3% of our supplier spend and 2% of our analyzed Scope 3 emissions.

Scope 3 category 2: Capital goods

Base year start

January 1, 2022

Base year end

December 31, 2022

Base year emissions (metric tons CO2e)

52,551

Comment

Capital Goods accounted for approximately 2% of our evaluated Scope 3 emissions in 2022. The data included spending and sourcing from major acquisitions, including US Concrete, representing the most accurate baseline moving forward.

This category includes goods purchased to support our business operations and production as fixed assets, and are expected to have an extended life beyond a single fiscal year. We categorized these purchases as capital expenditures (CapEx). Items in this category can include, but are not limited to mobile and stationary equipment and buildings/facilities. For this analysis, we used emissions factors and commodity definitions provided by the EPA's Supply Chain Greenhouse Gas Emission Factors for US Industries and Commodities, informed by US Environmentally-Extended Input-Output (USEEIO) models.

Contrary to financial accounting, capital goods are not subject to depreciation, amortization, or discounting in GHG accounting and instead must account for the total GHG emissions within the year of purchase. We expect this number to vary year-over-year with large CapEx investments to our operations.

Material handling equipment was one of our largest capital goods emitters, accounting for approximately 5% of our spend, and 2 % of our analyzed Scope 3 emissions.

Scope 3 category 3: Fuel-and-energy-related activities (not included in Scope 1 or 2)

Base year start

January 1, 2022

Base year end

December 31, 2022

Base year emissions (metric tons CO2e)

0

Comment

This category was included in our analysis and disclosure to illustrate due diligence. We did not find any activities that met this criteria in our 2022 analysis. All fuel and energy related activities are accounted for in our enhanced Scope 1 and Scope 2 data collection and disclosure.

Scope 3 category 4: Upstream transportation and distribution

Base year start

January 1, 2022

Base year end

December 31, 2022

Base year emissions (metric tons CO2e)

1,135,118

Comment

Upstream Transportation and Distribution accounted for approximately 36% of our evaluated Scope 3 emissions in 2022. The data included spending and sourcing from major acquisitions, including US Concrete, representing the most accurate baseline moving forward.

As the second largest scope 3 category, we analyzed transportation by not only overall associated emissions, but also by transportation methods with the highest emissions factors and the associated suppliers. This category includes transportation and distribution of products for which we have direct control or influence, typically in the form of payment to third-party transportation partners. Three transportation methods were analyzed during 2022 for their contributions to transportation and distribution related emissions: .

Truck Transportation - 93% of Category 4 emissions
Water Transportation - 6% of Category 4 emissions
Rail Transportation - 1% of Category 4 emissions.

Scope 3 category 5: Waste generated in operations

Base year start

January 1, 2022

Base year end

December 31, 2022

Base year emissions (metric tons CO2e)

5,299

Comment

Waste generated in operations accounted for approximately 0.17% of our evaluated Scope 3 emissions in 2022. The data included spending and sourcing from major acquisitions, including US Concrete, representing the most accurate baseline moving forward.

This category includes waste management and remediation services data from vendors that have been aggregated into our environmental tracking system. Despite our placement in the mining and construction materials sector, Vulcan produces relatively little waste through our operations and even less hazardous waste. We included the management and disposal of both universal and hazardous waste categories in our

analysis.

Scope 3 category 6: Business travel

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment

Scope 3 category 7: Employee commuting

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment

Scope 3 category 8: Upstream leased assets

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment

Scope 3 category 9: Downstream transportation and distribution

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment

Scope 3 category 10: Processing of sold products

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment

Scope 3 category 11: Use of sold products

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment

Scope 3 category 12: End of life treatment of sold products

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment

Scope 3 category 13: Downstream leased assets

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment

Scope 3 category 14: Franchises

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment

Scope 3 category 15: Investments

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment

Scope 3: Other (upstream)

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment

Scope 3: Other (downstream)

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment

C5.3

(C5.3) Select the name of the standard, protocol, or methodology you have used to collect activity data and calculate emissions.

The Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard (Revised Edition)
The Greenhouse Gas Protocol: Corporate Value Chain (Scope 3) Standard
US EPA Center for Corporate Climate Leadership: Indirect Emissions From Purchased Electricity
US EPA Center for Corporate Climate Leadership: Direct Emissions from Stationary Combustion Sources
US EPA Center for Corporate Climate Leadership: Direct Emissions from Mobile Combustion Sources
US EPA Emissions & Generation Resource Integrated Database (eGRID)

C6. Emissions data

C6.1

(C6.1) What were your organization's gross global Scope 1 emissions in metric tons CO2e?

Reporting year

Gross global Scope 1 emissions (metric tons CO2e)

929,419

Start date

January 1, 2022

End date

December 31, 2022

Comment

2022 was the first year our GHG emissions were reported by individual business segments. This data collection and analysis provides greater insight into the decarbonization and efficiency opportunities specific to our four operating (and

reportable) segments (Aggregates, Asphalt, Concrete and Calcium) organized around our principal product lines.each product line and production process.

With the enhancement of our data collection methods by business segment, we are taking internal efforts to reevaluate our baseline and potential targets to include business segment-specific reduction initiatives. We will be reported Scope 1 & 2 gross emissions and emissions-intensity by business segment moving forward:

2022 Scope 1 & 2 GHG Emissions by Business Segment (MTCO2e)*:
- Aggregates: 912,618
- Asphalt: 228,708
- Ready-Mixed Concrete: 90,515
- Calcium: 11,676

* Before emissions reductions were applied to company-wide totals from renewable energy

Past year 1

Gross global Scope 1 emissions (metric tons CO2e)

826,863

Start date

January 1, 2021

End date

December 31, 2021

Comment

The 2021 reporting year is the base year for Vulcan's GHG emissions goals and includes an updated accounting methodology.

Past year 2

Gross global Scope 1 emissions (metric tons CO2e)

625,905

Start date

January 1, 2020

End date

December 31, 2020

Comment

Previous GHG methodology was used for reporting years prior to 2021.

Past year 3

Gross global Scope 1 emissions (metric tons CO2e)

626,221

Start date

January 1, 2019

End date

December 31, 2019

Comment

Previous GHG methodology was used for reporting years prior to 2021.

C6.2

(C6.2) Describe your organization's approach to reporting Scope 2 emissions.

Row 1

Scope 2, location-based

We are not reporting a Scope 2, location-based figure

Scope 2, market-based

We are reporting a Scope 2, market-based figure

Comment

In 2022, Vulcan began using a market-based approach to measure Scope 2 emissions. Market-based values were not available prior to 2020. Market-based value is reported to be the same as location–based values for years prior to 2021.

C6.3

(C6.3) What were your organization's gross global Scope 2 emissions in metric tons CO2e?

Reporting year

Scope 2, market-based (if applicable)

298,594

Start date

January 1, 2022

End date

December 31, 2022

Comment

In 2022, Vulcan began using a market-based approach to measure Scope 2 emissions.

Past year 1

Scope 2, market-based (if applicable)

311,101

Start date

January 1, 2021

End date

December 31, 2021

Comment

Past year 2

Scope 2, market-based (if applicable)

339,341

Start date

January 1, 2020

End date

December 31, 2020

Comment

Market-based values were not available prior to 2020. Market-based value is reported to be the same as location–based values for years prior to 2021.

Past year 3

Scope 2, market-based (if applicable)

371,778

Start date

January 1, 2019

End date

December 31, 2019

Comment

Market-based values were not available prior to 2020. Market-based value is reported to be the same as location–based values for years prior to 2021.

C6.4

(C6.4) Are there any sources (e.g. facilities, specific GHGs, activities, geographies, etc.) of Scope 1, Scope 2 or Scope 3 emissions that are within your selected reporting boundary which are not included in your disclosure?

Yes

C6.4a

(C6.4a) Provide details of the sources of Scope 1, Scope 2, or Scope 3 emissions that are within your selected reporting boundary which are not included in your disclosure.

Source of excluded emissions

The GHG emissions associated with aggregates production at international sites and transportation via blue water ship to U.S. markets is not included in reporting.

Scope(s) or Scope 3 category(ies)

Scope 1
Scope 2 (market-based)

Relevance of Scope 1 emissions from this source

Emissions are not relevant

Relevance of location-based Scope 2 emissions from this source

Relevance of market-based Scope 2 emissions from this source

Emissions are not relevant

Relevance of Scope 3 emissions from this source

Date of completion of acquisition or merger

Estimated percentage of total Scope 1+2 emissions this excluded source represents

1

Estimated percentage of total Scope 3 emissions this excluded source represents

Explain why this source is excluded

The impact of this exclusion is de minimis: fewer than one percent (1%) of Vulcan's production and distribution sites are located outside of the continental United States (2022 10K, page 3). Of those sites, two produce concrete for local uses, three produce aggregates for export to the United States and one aggregates operation is not active.

Explain how you estimated the percentage of emissions this excluded source represents

The production volumes and energy costs associated with these sites/activities informed the estimation.

C6.5

(C6.5) Account for your organization’s gross global Scope 3 emissions, disclosing and explaining any exclusions.

Purchased goods and services

Evaluation status

Relevant, calculated

Emissions in reporting year (metric tons CO2e)

1,930,438

Emissions calculation methodology

Spend-based method

Percentage of emissions calculated using data obtained from suppliers or value chain partners

0

Please explain

Purchased Goods and Services are extremely relevant to our emissions. As the largest scope 3 category, we analyzed purchased goods and services by not only overall associated emissions, but also by commodities with the highest emissions factors. This category includes goods and services purchased to support our business operations, and categorized as operating expenditures (OpEx). Items in this category can include, but are not limited to, raw materials, office supplies, administrative and legal services, and safety equipment.

Capital goods

Evaluation status

Relevant, calculated

Emissions in reporting year (metric tons CO2e)

52,551

Emissions calculation methodology

Spend-based method

Percentage of emissions calculated using data obtained from suppliers or value chain partners

0

Please explain

This category includes goods purchased to support our business operations and production as fixed assets, and are expected to have an extended life far beyond a single fiscal year. We categorized these purchases as capital expenditures (CapEx). Items in this category can include, but are not limited to mobile and stationary equipment and buildings/facilities.

Fuel-and-energy-related activities (not included in Scope 1 or 2)

Evaluation status

Relevant, calculated

Emissions in reporting year (metric tons CO2e)

0

Emissions calculation methodology

Spend-based method

Percentage of emissions calculated using data obtained from suppliers or value chain partners

0

Please explain

This category was included in our analysis and disclosure to illustrate due diligence. We did not find any activities that met this criteria in our 2022 analysis. All fuel and energy related activities are accounted for in our enhanced Scope 1 and Scope 2 data collection and disclosure.

Upstream transportation and distribution

Evaluation status

Relevant, calculated

Emissions in reporting year (metric tons CO2e)

1,135,118

Emissions calculation methodology

Spend-based method

Percentage of emissions calculated using data obtained from suppliers or value chain partners

0

Please explain

As the second largest scope 3 category, we analyzed transportation by not only overall associated emissions, but also by transportation methods with the highest emissions factors and the associated suppliers. This category includes transportation and distribution of products for which we have direct control or influence, typically in the form of payment to third-party transportation partners. Three transportation methods were analyzed during 2022 for their contributions to transportation and distribution related emissions: .

Truck Transportation - 93% of Category 4 emissions
Water Transportation - 6% of Category 4 emissions
Rail Transportation - 1% of Category 4 emissions.

Waste generated in operations

Evaluation status

Relevant, calculated

Emissions in reporting year (metric tons CO2e)

5,299

Emissions calculation methodology

Spend-based method

Percentage of emissions calculated using data obtained from suppliers or value chain partners

0

Please explain

Waste generation was a small, but still relevant source of emissions.

Business travel

Evaluation status

Relevant, not yet calculated

Please explain

We are analyzing our systems and the data available to determine the best methodology (spend or distance) for reporting business travel-related Scope 3 emissions. The nature of Vulcan's business means that many employees are travelling between operations, customers and job sites via personally-owned passenger vehicles (Scope 3) and company-owned passenger vehicles (already accounted for in Scope 1). In addition, the company also uses commercial travel providers (e.g. airlines and rental cars).

We intend to begin reporting this data by 2025.

Employee commuting

Evaluation status

Relevant, not yet calculated

Please explain

We expect to use the average-data method to estimate Scope 3 emissions from employee commuting. Vulcan has nearly 12,000 employees, the majority of which commute to over 600 operational sites across a diverse set of urban, suburban and rural areas. In 2022 we adopted a hybrid work policy, which adds another level of complexity to estimating.

Upstream leased assets

Evaluation status

Not relevant, explanation provided

Please explain

We have reviewed the Greenhouse Gas Protocol guidance and have determined this category does not meet the criteria for relevancy for Vulcan's operations. The operations of leased assets (upstream and downstream) is not material to Vulcan's business.

Downstream transportation and distribution

Evaluation status

Relevant, not yet calculated

Please explain

Due to the large number of customers and diversity of uses of crushed stone, sand and gravel, we expect that analysis of downstream transportation and distribution, processing of sold products, use of sold products and end of life treatment of sold products will not be ready for reporting until the end of 2024 (2025 CDP cycle).

Processing of sold products

Evaluation status

Relevant, not yet calculated

Please explain

Due to the large number of customers and diversity of uses of crushed stone, sand and gravel, we expect that analysis of downstream transportation and distribution, processing of sold products, use of sold products and end of life treatment of sold products will not be ready for reporting until the end of 2024 (2025 CDP cycle).

Use of sold products

Evaluation status

Relevant, not yet calculated

Please explain

Due to the large number of customers and diversity of uses of crushed stone, sand and gravel, we expect that analysis of downstream transportation and distribution, processing of sold products, use of sold products and end of life treatment of sold products will not be ready for reporting until the end of 2024 (2025 CDP cycle).

End of life treatment of sold products

Evaluation status

Relevant, not yet calculated

Please explain

Due to the large number of customers and diversity of uses of crushed stone, sand and gravel, we expect that analysis of downstream transportation and distribution, processing of sold products, use of sold products and end of life treatment of sold products will not be ready for reporting until the end of 2024 (2025 CDP cycle).

Downstream leased assets

Evaluation status

Not relevant, explanation provided

Please explain

We have reviewed the Greenhouse Gas Protocol guidance and have determined this category does not meet the criteria for relevancy for Vulcan's operations. The operations of leased assets (upstream and downstream) is not material to Vulcan's business.

Franchises

Evaluation status

Not relevant, explanation provided

Please explain

We have reviewed the Greenhouse Gas Protocol guidance and have determined this category does not meet the criteria for relevancy for Vulcan's operations. Vulcan does not operate franchises.

Investments

Evaluation status

Not relevant, explanation provided

Please explain

We have reviewed the Greenhouse Gas Protocol guidance and have determined this category does not meet the criteria for relevancy for Vulcan's operations.

Other (upstream)

Evaluation status

Not evaluated

Please explain

We have reviewed the Greenhouse Gas Protocol guidance and have determined this category does not meet the criteria for relevancy for Vulcan's operations.

Other (downstream)

Evaluation status

Not evaluated

Please explain

We have reviewed the Greenhouse Gas Protocol guidance and have determined this category does not meet the criteria for relevancy for Vulcan's operations.

C6.7

(C6.7) Are carbon dioxide emissions from biogenic carbon relevant to your organization?

Yes

C6.7a

(C6.7a) Provide the emissions from biogenic carbon relevant to your organization in metric tons CO2.

	CO2 emissions from biogenic carbon (metric tons CO2)	Comment
Row 1	6,172	Our biogenic emissions are the result of renewable diesel consumption with associated emissions of 6,172 MTCO2e.

C6.10

(C6.10) Describe your gross global combined Scope 1 and 2 emissions for the reporting year in metric tons CO2e per unit currency total revenue and provide any additional intensity metrics that are appropriate to your business operations.

Intensity figure

0.00017

Metric numerator (Gross global combined Scope 1 and 2 emissions, metric tons CO2e)

1,243,517

Metric denominator

unit total revenue

Metric denominator: Unit total

7,315,200,000

Scope 2 figure used

Market-based

% change from previous year

17.5

Direction of change

Decreased

Reason(s) for change

Change in revenue

Please explain

Scope 1 emissions increased by 12.4% from the 2021 baseline while Scope 2 emissions decreased by 6.1%. We substantially improved our data collection processes and GHG inventory reporting methods in 2022 versus prior years. Vulcan's total revenue increased significantly between 2021 and 2022, offering a larger denominator for a numerator that did not increase as significantly.

C-CE6.11

(C-CE6.11) State your organization's Scope 1 and Scope 2 emissions intensities related to cement production activities.

	Gross Scope 1 emissions intensity, metric tons CO2e per metric ton	Net Scope 1 emissions intensity, metric tons CO2e per metric ton	Scope 2, location-based emissions intensity, metric tons CO2e per metric ton
Clinker			
Cement equivalent			
Cementitious products			
Low-CO2 materials			

C7. Emissions breakdowns

C7.1

(C7.1) Does your organization break down its Scope 1 emissions by greenhouse gas type?

No

C7.2

(C7.2) Break down your total gross global Scope 1 emissions by country/area/region.

Country/area/region	Scope 1 emissions (metric tons CO2e)
United States of America 💬1	929,419

💬1 Use EPA GHG Hub emissions factors

C7.3

(C7.3) Indicate which gross global Scope 1 emissions breakdowns you are able to provide.

C-CE7.4/C-CH7.4/C-CO7.4/C-EU7.4/C-MM7.4/C-OG7.4/C-ST7.4/C-TO7.4/C-TS7.4

(C-CE7.4/C-CH7.4/C-CO7.4/C-EU7.4/C-MM7.4/C-OG7.4/C-ST7.4/C-TO7.4/C-TS7.4) Break down your organization's total gross global Scope 1 emissions by sector production activity in metric tons CO2e.

	Gross Scope 1 emissions, metric tons CO2e	Net Scope 1 emissions , metric tons CO2e	Comment
Cement production activities			
Metals and mining production activities	929,419		

C7.5

(C7.5) Break down your total gross global Scope 2 emissions by country/area/region.

Country/area/region	Scope 2, location-based (metric tons CO2e)	Scope 2, market-based (metric tons CO2e)
United States of America [1]		298,594

[1] Vulcan does buy low carbon energy and will refine data for next report.

C7.6

(C7.6) Indicate which gross global Scope 2 emissions breakdowns you are able to provide.

C7.7

(C7.7) Is your organization able to break down your emissions data for any of the subsidiaries included in your CDP response?

No

C-CE7.7/C-CH7.7/C-CO7.7/C-MM7.7/C-OG7.7/C-ST7.7/C-TO7.7/C-TS7.7

(C-CE7.7/C-CH7.7/C-CO7.7/C-MM7.7/C-OG7.7/C-ST7.7/C-TO7.7/C-TS7.7) Break down your organization's total gross global Scope 2 emissions by sector production activity in metric tons CO2e.

	Scope 2, location-based, metric tons CO2e	Scope 2, market-based (if applicable), metric tons CO2e	Comment
Cement production activities			
Metals and mining production activities		298,594	

C7.9

(C7.9) How do your gross global emissions (Scope 1 and 2 combined) for the reporting year compare to those of the previous reporting year?

Increased

C7.9a

(C7.9a) Identify the reasons for any change in your gross global emissions (Scope 1 and 2 combined), and for each of them specify how your emissions compare to the previous year.

	Change in emissions (metric tons CO2e)	Direction of change in emissions	Emissions value (percentage)	Please explain calculation
Change in renewable energy consumption	19,627	Decreased	6.2	The reduction in Scope 2 emissions from 2021 to 2022 was attributed to additional renewable energy sourcing.
Other emissions reduction activities				
Divestment				
Acquisitions	82,929	Increased	6.7	The overall additional Scopes 1 and 2 emissions from 2021 to 2022 were attributed to the inclusions of GHG data from acquisitions, including US Concrete
Mergers				
Change in output				
Change in methodology				

Change in boundary				
Change in physical operating conditions				
Unidentified				
Other				

C7.9b

(C7.9b) Are your emissions performance calculations in C7.9 and C7.9a based on a location-based Scope 2 emissions figure or a market-based Scope 2 emissions figure?

Market-based

C8. Energy

C8.1

(C8.1) What percentage of your total operational spend in the reporting year was on energy?

More than 10% but less than or equal to 15%

C8.2

(C8.2) Select which energy-related activities your organization has undertaken.

	Indicate whether your organization undertook this energy-related activity in the reporting year
Consumption of fuel (excluding feedstocks)	Yes
Consumption of purchased or acquired electricity	Yes
Consumption of purchased or acquired heat	No
Consumption of purchased or acquired steam	No
Consumption of purchased or acquired cooling	No
Generation of electricity, heat, steam, or cooling	No

C8.2a

(C8.2a) Report your organization's energy consumption totals (excluding feedstocks) in MWh.

	Heating value	MWh from renewable sources	MWh from non-renewable sources	Total (renewable and non-renewable) MWh
Consumption of fuel (excluding feedstock)	HHV (higher heating value)	11,091	3,914,439	3,925,530
Consumption of purchased or acquired electricity		46,967	848,497	895,464
Total energy consumption		58,058	4,762,936	4,820,993

C-CE8.2a

(C-CE8.2a) Report your organization's energy consumption totals (excluding feedstocks) for cement production activities in MWh.

	Heating value	Total MWh
Consumption of fuel (excluding feedstocks)	HHV (higher heating value)	0
Consumption of purchased or acquired electricity		0
Total energy consumption		0

C-MM8.2a

(C-MM8.2a) Report your organization's energy consumption totals (excluding feedstocks) for metals and mining production activities in MWh.

	Heating value	Total MWh
Consumption of fuel (excluding feedstocks)	HHV (higher heating value)	3,925,530
Consumption of purchased or acquired electricity		895,464
Consumption of self-generated non-fuel renewable energy		0
Total energy consumption		4,820,993

C8.2b

(C8.2b) Select the applications of your organization's consumption of fuel.

	Indicate whether your organization undertakes this fuel application

Consumption of fuel for the generation of electricity	Yes
Consumption of fuel for the generation of heat	Yes
Consumption of fuel for the generation of steam	No
Consumption of fuel for the generation of cooling	No
Consumption of fuel for co-generation or tri-generation	No

C8.2c

(C8.2c) State how much fuel in MWh your organization has consumed (excluding feedstocks) by fuel type.

Sustainable biomass

Heating value

Unable to confirm heating value

Total fuel MWh consumed by the organization

0

MWh fuel consumed for self-generation of electricity

0

MWh fuel consumed for self-generation of heat

0

Comment

Vulcan does not use sustainable biomass as a fuel type

Other biomass

Heating value

Unable to confirm heating value

Total fuel MWh consumed by the organization

0

MWh fuel consumed for self-generation of electricity

0

MWh fuel consumed for self-generation of heat

0

Comment

Vulcan does not use biomass as a fuel type

Other renewable fuels (e.g. renewable hydrogen)

Heating value

HHV

Total fuel MWh consumed by the organization

11,091

MWh fuel consumed for self-generation of electricity

0

MWh fuel consumed for self-generation of heat

11,091

Comment

Renewable diesel used for stationary and mobile equipment.

Coal

Heating value

Unable to confirm heating value

Total fuel MWh consumed by the organization

0

MWh fuel consumed for self-generation of electricity

0

MWh fuel consumed for self-generation of heat

0

Comment

Vulcan does not use coal as a fuel source

Oil

Heating value

HHV

Total fuel MWh consumed by the organization

2,639

MWh fuel consumed for self-generation of electricity

0

MWh fuel consumed for self-generation of heat

2,639

Comment

This includes Fuel Oil 2 and Heating Oil

Gas

Heating value

HHV

Total fuel MWh consumed by the organization

3,911,799

MWh fuel consumed for self-generation of electricity

0

MWh fuel consumed for self-generation of heat

3,911,799

Comment

Used for stationary and mobile equipment. This category includes Burner Fuel, Diesel, Gasoline, Natural Gas, and Propane.

Other non-renewable fuels (e.g. non-renewable hydrogen)

Heating value

Unable to confirm heating value

Total fuel MWh consumed by the organization

0

MWh fuel consumed for self-generation of electricity

0

MWh fuel consumed for self-generation of heat

0

Comment

Vulcan does not currently use other non-renewable fuels

Total fuel

Heating value

HHV

Total fuel MWh consumed by the organization

3,925,529

MWh fuel consumed for self-generation of electricity

MWh fuel consumed for self-generation of heat

3,925,529

Comment

This fuel is used for the power of stationary and mobile equipment.

C-CE8.2c

(C-CE8.2c) State how much fuel in MWh your organization has consumed (excluding feedstocks) by fuel for cement production activities.

Sustainable biomass

Heating value

HHV

Total MWh fuel consumed for cement production activities

0

MWh fuel consumed at the kiln

0

MWh fuel consumed for the generation of heat that is not used in the kiln

0

MWh fuel consumed for the self-generation of electricity

0

Comment

Vulcan does not produce cement.

Other biomass

Heating value

HHV

Total MWh fuel consumed for cement production activities

0

MWh fuel consumed at the kiln

0

MWh fuel consumed for the generation of heat that is not used in the kiln

0

MWh fuel consumed for the self-generation of electricity

0

Comment

Vulcan does not produce cement

Other renewable fuels (e.g. renewable hydrogen)

Heating value

HHV

Total MWh fuel consumed for cement production activities

0

MWh fuel consumed at the kiln

0

MWh fuel consumed for the generation of heat that is not used in the kiln

0

MWh fuel consumed for the self-generation of electricity

0

Comment

Vulcan does not produce cement

Coal

Heating value

HHV

Total MWh fuel consumed for cement production activities

0

MWh fuel consumed at the kiln

0

MWh fuel consumed for the generation of heat that is not used in the kiln

0

MWh fuel consumed for the self-generation of electricity

0

Comment

Vulcan does not produce cement

Oil

Heating value

HHV

Total MWh fuel consumed for cement production activities

0

MWh fuel consumed at the kiln

0

MWh fuel consumed for the generation of heat that is not used in the kiln

0

MWh fuel consumed for the self-generation of electricity

0

Comment

Vulcan does not produce cement

Gas

Heating value

HHV

Total MWh fuel consumed for cement production activities

0

MWh fuel consumed at the kiln

0

MWh fuel consumed for the generation of heat that is not used in the kiln

0

MWh fuel consumed for the self-generation of electricity

0

Comment

Vulcan does not produce cement

Other non-renewable fuels (e.g. non-renewable hydrogen)

Heating value

HHV

Total MWh fuel consumed for cement production activities

0

MWh fuel consumed at the kiln

0

MWh fuel consumed for the generation of heat that is not used in the kiln

0

MWh fuel consumed for the self-generation of electricity

0

Comment

Vulcan does not produce cement

Total fuel

Heating value

HHV

Total MWh fuel consumed for cement production activities

0

MWh fuel consumed at the kiln

0

MWh fuel consumed for the generation of heat that is not used in the kiln

0

MWh fuel consumed for the self-generation of electricity

0

Comment

Vulcan does not produce cement

C8.2e

(C8.2e) Provide details on the electricity, heat, steam, and/or cooling amounts that were accounted for at a zero or near-zero emission factor in the market-based Scope 2 figure reported in C6.3.

Country/area of low-carbon energy consumption

United States of America

Sourcing method

Other, please specify

RECs and PPA

Energy carrier

Electricity

Low-carbon technology type

Solar

Low-carbon energy consumed via selected sourcing method in the reporting year (MWh)

24,008

Tracking instrument used

Contract

Country/area of origin (generation) of the low-carbon energy or energy attribute

United States of America

Are you able to report the commissioning or re-powering year of the energy generation facility?

No

Commissioning year of the energy generation facility (e.g. date of first commercial operation or repowering)

Comment

Country/area of low-carbon energy consumption
United States of America

Sourcing method
Other, please specify
RECs and PPA

Energy carrier
Electricity

Low-carbon technology type
Wind

Low-carbon energy consumed via selected sourcing method in the reporting year (MWh)
22,959

Tracking instrument used
Contract

Country/area of origin (generation) of the low-carbon energy or energy attribute
United States of America

Are you able to report the commissioning or re-powering year of the energy generation facility?
No

Commissioning year of the energy generation facility (e.g. date of first commercial operation or repowering)

Comment

C8.2g

(C8.2g) Provide a breakdown by country/area of your non-fuel energy consumption in the reporting year.

Country/area
United States of America

Consumption of purchased electricity (MWh)

895,464

Consumption of self-generated electricity (MWh)

0

Consumption of purchased heat, steam, and cooling (MWh)

0

Consumption of self-generated heat, steam, and cooling (MWh)

0

Total non-fuel energy consumption (MWh) [Auto-calculated]

895,464

C9. Additional metrics

C9.1

(C9.1) Provide any additional climate-related metrics relevant to your business.

C-MM9.3a

(C-MM9.3a) Provide details on the commodities relevant to the mining production activities of your organization.

Output product

Other mining (Please specify)

Construction aggregate: crushed stone, sand and gravel

Capacity, metric tons

Production, metric tons

213,188,414

Production, copper-equivalent units (metric tons)

Scope 1 emissions

627,620

Scope 2 emissions

284,998

Scope 2 emissions approach

Market-based

Pricing methodology for copper-equivalent figure

Comment

This data is specifically from our aggregates business segment that includes the direct mining of construction aggregate: crushed stone, sand and gravel. In previous questions, we have included all Vulcan operations as part of our mining activities because they involve mining or the use of mined aggregates in some capacity.

C-CE9.6/C-CG9.6/C-CH9.6/C-CN9.6/C-CO9.6/C-EU9.6/C-MM9.6/C-OG9.6/C-RE9.6/C-ST9.6/C-TO9.6/C-TS9.6

(C-CE9.6/C-CG9.6/C-CH9.6/C-CN9.6/C-CO9.6/C-EU9.6/C-MM9.6/C-OG9.6/C-RE9.6/C-ST9.6/C-TO9.6/C-TS9.6) Does your organization invest in research and development (R&D) of low-carbon products or services related to your sector activities?

	Investment in low-carbon R&D	Comment
Row 1	Yes	Vulcan focuses on product development and optimization of products that are needed to adapt to changing climates and reduce emissions associated with infrastructure. Vulcan's National Research Lab vets out new technologies and materials for concrete ready mix and has been a resource in the industry for development of new materials. Approximately 75% of the projects that the research lab works on are centered around further improvement of low carbon mixes or new materials that lower the embodied carbon of concrete closer to zero or net negative emissions. Additional research and investigation is being conducted in the aggregates and asphalt business segments to quantify and reduce the GHG emissions associated with production and use.

C-CE9.6a

(C-CE9.6a) Provide details of your organization's low-carbon investments for cement production activities over the last three years.

C-MM9.6a

(C-MM9.6a) Provide details of your organization's investments in low-carbon R&D for metals and mining production activities over the last three years.

Technology area

Unable to disaggregate by technology area

Stage of development in the reporting year

Average % of total R&D investment over the last 3 years

R&D investment figure in the reporting year (unit currency as selected in C0.4) (optional)

300,000

Average % of total R&D investment planned over the next 5 years

Explain how your R&D investment in this technology area is aligned with your climate commitments and/or climate transition plan

The figure estimated above is only a portion of our R&D investment and represents a portion of the operating budget for Vulcan's National Research Lab. We are unable to decouple and disclose explicit financial information for R&D investment in low-carbon projects at this time. Additional information about low-carbon initiatives, include CarbonCure and low-carbon concrete mixes can be found in C2.4a. While we do not produce cement, we do actively support the exploration of low-carbon cement initiatives of our suppliers by incorporating low-carbon cement and substitutes into our products. We are also exploring the use of renewable diesel for our mining operations. These projects contribute to our overall goal of providing our customers with low-carbon products to build climate-resilient infrastructure.

C10. Verification

C10.1

(C10.1) Indicate the verification/assurance status that applies to your reported emissions.

	Verification/assurance status
Scope 1	No third-party verification or assurance
Scope 2 (location-based or market-based)	No third-party verification or assurance
Scope 3	No third-party verification or assurance

C10.2

(C10.2) Do you verify any climate-related information reported in your CDP disclosure other than the emissions figures reported in C6.1, C6.3, and C6.5?

No, but we are actively considering verifying within the next two years

C11. Carbon pricing

C11.1

(C11.1) Are any of your operations or activities regulated by a carbon pricing system (i.e. ETS, Cap & Trade or Carbon Tax)?

No, and we do not anticipate being regulated in the next three years

C11.2

(C11.2) Has your organization canceled any project-based carbon credits within the reporting year?

No

C11.3

(C11.3) Does your organization use an internal price on carbon?

No, and we do not currently anticipate doing so in the next two years

C12. Engagement

C12.1

(C12.1) Do you engage with your value chain on climate-related issues?

Yes, our suppliers

C12.1a

(C12.1a) Provide details of your climate-related supplier engagement strategy.

Type of engagement

Information collection (understanding supplier behavior)

Details of engagement

Collect GHG emissions data at least annually from suppliers

Collect targets information at least annually from suppliers

% of suppliers by number

1

% total procurement spend (direct and indirect)

% of supplier-related Scope 3 emissions as reported in C6.5

33

Rationale for the coverage of your engagement

As a result of our initial analysis and reporting of our scope 3 GHG emissions in 5 of the applicable 11 categories in 2022, we have started engaging our top spend suppliers that was determined through our spend-based analysis. This engagement effort is focused on primarily large, publicly traded suppliers, that account for the majority of our 2022 spend and calculated emissions in the purchased goods and services and upstream transportation and distribution categories. Our engagement efforts in 2023 have been focused on understanding where our strategic partners are on their emissions reduction journey and how we can help drive innovation, R&D investment or other emission reduction efforts to the benefit of both Companies.

Impact of engagement, including measures of success

Our goal is to engage our top 8-10 suppliers accounting for a calculated ⅓ of our scope 3 GHG emissions by April 2024. From this effort, we anticipate the ability to enhance our scope 3 emissions reporting to a hybrid analysis utilizing spend to estimate emissions for suppliers along with detailed supplier specific emission data where available.

Comment

Vulcan does not currently disclose the details of our procurement spend, in general, or by supplier.

C12.2

(C12.2) Do your suppliers have to meet climate-related requirements as part of your organization's purchasing process?

No, and we do not plan to introduce climate-related requirements within the next two years

C12.3

(C12.3) Does your organization engage in activities that could either directly or indirectly influence policy, law, or regulation that may impact the climate?

Row 1

External engagement activities that could directly or indirectly influence policy, law, or regulation that may impact the climate

Not assessed

Does your organization have a public commitment or position statement to conduct your engagement activities in line with the goals of the Paris Agreement?

Yes

Attach commitment or position statement(s)

Vulcan acknowledges the goals of the Paris Agreement in the 2022 10k, Part I, page 17. "Climate change, or long-term changes in global temperature and other characteristics of the atmosphere, is a global concern. The United National Climate Change Conference in Glasgow (COP36) stressed the urgency of taking action to keep global temperature from exceeding 1.5 degrees Celsius above pre-industrial levels. Due to human influence on the climate from carbon-based energy use and unsustainable natural resource management, the Earth is now about 1.1 degrees Celsius warmer than it was in the 1800s. As an industry leader, Vulcan is, and has always been, committed to environmental stewardship. We are committed to doing our part to reduce our greenhouse gas (GHG) emissions and mitigate against the potential impacts of climate change."

Describe the process(es) your organization has in place to ensure that your external engagement activities are consistent with your climate commitments and/or climate transition plan

Vulcan provides our views through trade association policy committees and working groups when applicable.

C12.4

(C12.4) Have you published information about your organization's response to climate change and GHG emissions performance for this reporting year in places other than in your CDP response? If so, please attach the publication(s).

Publication

In voluntary sustainability report

Status

Complete

Attach the document

2022-VMC-ESG-Report-web.pdf

Page/Section reference

pg. 26-32

Content elements

Governance
Strategy
Risks & opportunities
Emissions figures
Emission targets

Comment

C12.5

(C12.5) Indicate the collaborative frameworks, initiatives and/or commitments related to environmental issues for which you are a signatory/member.

	Environmental collaborative framework, initiative and/or commitment
Row 1	We are not a signatory/member of any collaborative framework, initiative and/or commitment related to environmental issues

C15. Biodiversity

C15.1

(C15.1) Is there board-level oversight and/or executive management-level responsibility for biodiversity-related issues within your organization?

	Board-level oversight and/or executive management-level responsibility for biodiversity-related issues	Description of oversight and objectives relating to biodiversity
Row 1	Yes, executive management-level responsibility	There is executive management-level responsibility for biodiversity, land management and reclamation as part of our overall environmental stewardship efforts. As described in our 2022 10k, page 7, with more than 240,000 acres in our land portfolio, a long-term, holistic approach to preserving land and water is integral to sustaining our success. From pre-mining, to mining to reclamation, we are actively managing the entire life cycle of our land to create maximum value for the business, our shareholders and our communities. Because of the evolving needs of our communities, we listen to and collaborate with our neighbors to prepare the land for its highest and best use after mining is complete. Due to the cross-cutting nature of the topic, professionals in several different functions (Lands, Mine Planning, and Community and Government Relations and Permitting) coordinate localized strategies with operations leadership.

C15.2

(C15.2) Has your organization made a public commitment and/or endorsed any initiatives related to biodiversity?

	Indicate whether your organization made a public commitment or endorsed any initiatives related to biodiversity	Initiatives endorsed
Row 1	Yes, we have endorsed initiatives only	Other, please specify Widlife Habitat Council; Conservation Banking

C15.3

(C15.3) Does your organization assess the impacts and dependencies of its value chain on biodiversity?

Impacts on biodiversity

Indicate whether your organization undertakes this type of assessment

No, but we plan to within the next two years

Dependencies on biodiversity

Indicate whether your organization undertakes this type of assessment

No and we don't plan to within the next two years

C15.4

(C15.4) Does your organization have activities located in or near to biodiversity-sensitive areas in the reporting year?

Yes

C15.4a

(C15.4a) Provide details of your organization's activities in the reporting year located in or near to biodiversity -sensitive areas.

Classification of biodiversity -sensitive area

Other biodiversity sensitive area, please specify

USGS Protected Areas Database (PAD), US Fish and Wildlife Service (USFWS) endangered and protected species.

Country/area

United States of America

Name of the biodiversity-sensitive area

Some of our sites exist on or near areas designated as USGS Protected Areas Database (PAD), US Fish and Wildlife Service (USFWS) endangered and protected species.

Proximity

Adjacent

Briefly describe your organization's activities in the reporting year located in or near to the selected area

The nature of our business requires the use of land, water and energy. Vulcan has a large number of operations across 22 states and in the District of Columbia. Our operations includes aggregates quarries, sales and distribution yards; asphalt mix production; and, ready-mixed concrete production. The process of crushed stone production can include land preparation (vegetation and overburden removal), drilling and blasting rock into large pieces, loading material into haul trucks, processing that material through a mechanical crushing and screening process, stockpiling material and transporting material off-site. An asphalt plant can incorporate storage, heating/drying, conveyors, cooling, and load-out. In a recycling operation asphalt and concrete rubble are mechanically crushed, versus the quarrying process. Concrete production involves batching (gathering necessary ingredients to produce a particular type of concrete) and mixing, then transporting and placing.

Indicate whether any of your organization's activities located in or near to the selected area could negatively affect biodiversity

Yes, but mitigation measures have been implemented

Mitigation measures implemented within the selected area

Site selection
Project design
Scheduling
Physical controls
Operational controls
Abatement controls
Restoration
Biodiversity offsets

Explain how your organization's activities located in or near to the selected area could negatively affect biodiversity, how this was assessed, and describe any mitigation measures implemented

Examples of our activities and potential impacts on biodiversity, all of which are strictly regulated by permits issued primary at the local level of government, include vegetation removal prior to site development, noise and vibration from production and transportation, potential to increase the presence of solids (e.g. silt) into water and air emissions of various types.

When Vulcan acquires land, pursues permitting for a new or expanded site, or assumes control of operations as part of an acquisition, we assess the context of that site, including biodiversity, land, air and water factors, along with other important social and environmental considerations. After identifying any formal site classification, mutidisciplinary teams, including external experts in specialty areas such as hydrology and species management, identify the area of impact, considering the site itself, the uses of the surrounding area and land/air/water connections; we consider how the site,

the habitat it provides and the dependent and interdependent species might change over time (e.g. seasonality, migration). Expansion, greenfield development and operations also always include community and neighbor engagement and education.

In addition to taking actions to meet permitting requirements, Vulcan addresses biodiversity programmatically in two ways.

Wildlife Habitat Council (WHC): WHC's Corporate Wildlife Habitat Certification/International Accreditation Program recognizes commendable wildlife habitat management and environmental education programs at individual sites. Vulcan has been a proud national partner of WHC since 1990 when our Sanders quarry became the first site in the U.S. to obtain certification by WHC. In 2022, we received accreditation for 40 quarry sites containing wildlife enhancement programs. WHC was developed in 1988 to restore and improve wildlife environments through the help of corporations, conservation organizations, and individuals.

Conservation Banking: Where applicable, we create banked habitat on our properties or purchase portions of banks elsewhere to mitigate the ecological impacts from our proposed development. For example, Vulcan originally purchased land in Polk County, Florida, with the intention of building a quarry. After an extensive review of the impacts to sensitive species, our team collaborated with the U.S. Fish & Wildlife Service and Florida Wildlife Commission to find an alternative beneficial use for the land. Today, the Tiger Creek Conservation Bank (TCCB) acts as protected habitat for endangered or sensitive species. Gopher Tortoises listed as "threatened" by the state of Florida can be safely relocated to TCCB through Vulcan's permits, finalized in 2022. Currently, 116 acres are occupied in the TCCB; there are an additional 113 acres of potentially suitable habitat. Additional species that call the TCCB home include the Florida sandhill crane, red-bellied woodpecker, Florida scrub lizard, and southern cricket frog.

C15.5

(C15.5) What actions has your organization taken in the reporting year to progress your biodiversity-related commitments?

	Have you taken any actions in the reporting period to progress your biodiversity-related commitments?
Row 1	No, we are not taking any actions to progress our biodiversity-related commitments, but we plan to within the next two years

C15.6

(C15.6) Does your organization use biodiversity indicators to monitor performance across its activities?

	Does your organization use indicators to monitor biodiversity performance?	Indicators used to monitor biodiversity performance

Row 1	Yes, we use indicators	State and benefit indicators

C15.7

(C15.7) Have you published information about your organization's response to biodiversity-related issues for this reporting year in places other than in your CDP response? If so, please attach the publication(s).

Report type	Content elements	Attach the document and indicate where in the document the relevant biodiversity information is located
In voluntary sustainability report or other voluntary communications	Content of biodiversity-related policies or commitments Impacts on biodiversity Details on biodiversity indicators Risks and opportunities Biodiversity strategy	pg. 33: Biodiversity and Land Use

C16. Signoff

C-FI

(C-FI) Use this field to provide any additional information or context that you feel is relevant to your organization's response. Please note that this field is optional and is not scored.

C16.1

(C16.1) Provide details for the person that has signed off (approved) your CDP climate change response.

	Job title	Corresponding job category
Row 1	Vice President, External Affairs and Corporate Communications	Public affairs manager

SC. Supply chain module

SC0.0

(SC0.0) If you would like to do so, please provide a separate introduction to this module.

Vulcan appreciates the interest of our suppliers and customers in the company's approach to reducing climate change impacts both to and from our operations. We have made significant progress in improving the efficiency of operations and reducing our per ton production or per dollar revenue production rations. Our overall GHG numbers have been slowly rising but not at the same rate as production. In other words, we are providing more product to our customers while reducing the amount of GHG emissions per ton. Our suppliers play a huge role in helping to make this happen with their focus on providing their products and services with a smaller GHG footprint than before. Success will depend on these partnerships and everyone paying attention and taking action regarding climate change.

SC0.1

(SC0.1) What is your company's annual revenue for the stated reporting period?

	Annual Revenue
Row 1	

SC1.1

(SC1.1) Allocate your emissions to your customers listed below according to the goods or services you have sold them in this reporting period.

Requesting member

Scope of emissions

Scope 2 accounting method

Scope 3 category(ies)

Allocation level

Allocation level detail

Emissions in metric tonnes of CO2e

Uncertainty (±%)

Major sources of emissions

Verified

Allocation method

Market value or quantity of goods/services supplied to the requesting member

Unit for market value or quantity of goods/services supplied

Please explain how you have identified the GHG source, including major limitations to this process and assumptions made

SC1.2

(SC1.2) Where published information has been used in completing SC1.1, please provide a reference(s).

SC1.3

(SC1.3) What are the challenges in allocating emissions to different customers, and what would help you to overcome these challenges?

Allocation challenges	Please explain what would help you overcome these challenges
Customer base is too large and diverse to accurately track emissions to the customer level	System for accounting for site and product specific data is not currently in place. Considering development of Environmental Product Declarations as means of generating this information. However, if a decision to proceed is reached the implementations timeframe will still be years.

SC1.4

(SC1.4) Do you plan to develop your capabilities to allocate emissions to your customers in the future?

Yes

SC1.4a

(SC1.4a) Describe how you plan to develop your capabilities.

Working on internal processes for compiling the data needed to complete the allocation process. The data that is needed includes total sales across multiple product lines to the customers. The customers are serviced from multiple production locations. The process requires calculation of site specific emissions rates for the specific products and calculation of unitized emission rates per production unit.. The process also requires site specific production information. Separate calculations are required for the specific products being supplied to the customer.

SC2.1

(SC2.1) Please propose any mutually beneficial climate-related projects you could collaborate on with specific CDP Supply Chain members.

SC2.2

(SC2.2) Have requests or initiatives by CDP Supply Chain members prompted your organization to take organizational-level emissions reduction initiatives?

SC4.1

(SC4.1) Are you providing product level data for your organization's goods or services?

Submit your response

In which language are you submitting your response?

English

Please confirm how your response should be handled by CDP

	I understand that my response will be shared with all requesting stakeholders	Response permission
Please select your submission options	Yes	Public

Please confirm below

I have read and accept the applicable Terms