

CASG SME Questionnaire Reporting Guidance

Background: The Green and Sustainable Finance Cross-Agency Steering Group (CASG) partnered with CDP to launch a SME Questionnaire¹ in Dec 2022 to aid SMEs’ sustainability reporting processes, and raise their sustainability visibility to lenders, investors and supply chain clients so to better access sustainability financing. It will also facilitate financial institutions’ collection and assessment of company-level data for risk assessment and relevant business decisions. This Guidance was developed to assist companies in preparing their response to the CASG SME Questionnaire, and provide clarity around questions, terminology and requirements as appropriate. The CASG will continue to review and update the SME Questionnaire and this guidance on an ongoing basis in line with global standards.

0. Introduction

[0.1] Give a general description and introduction to your organization. (Source: CDP Private Markets Questionnaire 2022)

Rationale

This will help data users interpret your responses.

Response options

This is an open text question with a limit of 5,000 characters.

Please note that when copying from another document into the disclosure platform, formatting is not retained.

Requested content

General

- Provide information about your operations to help data users understand your greenhouse gas (GHG) emissions inventory and corporate climate change strategy. Include information on your business divisions and your emissions-generating activities (e.g. extraction and/or processing/refining of natural resources, electricity generation, transportation, manufacturing etc.).
- This information helps data users understand your company’s emissions profile and differences in emissions figures between peer companies.
- Note and explain any changes in your reporting year (PM0.3) from previous CDP disclosures (e.g. from reporting calendar year to financial year, or vice versa).

Explanation of terms

- **Organization:** Throughout this questionnaire, “your organization” refers collectively to all the companies, businesses, other entities or groups that fall within the definition of your reporting boundary. This term is used interchangeably with “your company”, but CDP recognizes that some disclosing organizations may not consider themselves to be, or be formally classified, as “companies”.

[0.2] State the end date of the twelve-month period for which you are reporting data. (Source: CDP Private Markets Questionnaire 2022)

Rationale

This will help data users interpret your responses.

Response options

Please complete the following table.

End date
To: [DD/MM/YYYY]

¹ See the Press Release “Cross-Agency Steering Group announces collaboration with CDP to enhance data availability and sustainability reporting in Hong Kong” dated 20 December 2022:

<https://www.hkma.gov.hk/eng/news-and-media/press-releases/2022/12/20221220-5/>

Requested content

General

- The start date will be automatically assumed to be exactly 365 days prior to the listed end date.
- Apply this reporting year to your answers for the entire questionnaire unless the ability is provided to specify other reporting periods.
- Please ensure that the reporting period represents only one full year that has already passed. Reporting periods should not be in the future. This information is important for others to understand the time dimension of your disclosure.
- The current reporting year is the most recent 12-month period for which data is reported.
- This reporting period applies to all answers except where other reporting periods can be disclosed. CDP does not require companies to align their reporting year with their fiscal year. However, when organizations report emissions intensity using a financial metric, both emissions and financial information provided should align with the reporting year reported here.
- Note that the investment community generally prefers a company's disclosure period to match the fiscal year for their financial jurisdiction. This facilitates the assessment of environmental performance data in alignment with financial performance data.
- CDP recommends that companies provide a year for which they have complete data if possible. However, if you do not have data for the entirety of your reporting year, you have the following options:
 - Extrapolate your data to cover the entire reporting year.
 - Outline in emissions questions the sources of Scope 1 and 2 emissions within your selected reporting boundary and not included in your disclosure.

[0.3] Report the total number of employees in your organization, based on staff headcount. (Source: CDP Private Markets Questionnaire 2022)

Rationale

To obtain data on company size which can be used to determine eligibility for conditional questions later in the questionnaire.

Response options

Please complete the following table.

Total Number of Employees
Numerical field [enter a number from 0-999,999,999,999,999]

Requested content

General

- Please include staff headcount at your organization for the reporting period stated above. Please do NOT use the number of full time employees (FTE).

[0.4] What is your company's annual revenue for the stated reporting period in USD? (Source: CDP Private Markets Questionnaire 2022)

Rationale

Annual revenue for the reporting period provides contextual information for requesting investors and will be used to model emissions if companies do not self-report emissions.

Response options

Please complete the following table:

Annual revenue
Numerical field [enter a number from 0-999,999,999,999,999 using a maximum of 2 decimal places]

Requested content

General

- Enter a numerical value for the revenue, this should be consistent with the reporting period disclosed in question PM0.3.

- Note: This figure must be provided in single units NOT in units of thousands or millions.
- Note: This figure must be provided in United States Dollars (USD).
- Enter the figure for "revenue" as would be declared in your financial statement (sometimes referred to a "turnover" or "sales"). Under the [International Financial Reporting Standard](#) this would be the inflow of income arising in the course of an entity's ordinary activities, with deductions made (such as for sales returns, allowances, and discounts). This figure is commonly used by investors to assess the income-generating ability of a business.

Explanations of Terms

- **Revenue:** Income arising in the course of an entity's ordinary activities (less returns, allowances and discounts) - before deducting costs for the goods/services sold and operating expenses to arrive at profit (based on the [International Financial Reporting Standard](#))

[0.5] * Select the industry that your organization belongs to. (New Question for CASG SME Questionnaire)

Rationale

This will help data users interpret your responses.

Connection to other frameworks

CDP's Activity Classification System (CDP-ACS)

CDP-ACS was developed to allocate sector-specific questions to companies. It categorizes companies by focusing on the activities from which they drive revenue and associating these activities with the company's climate change impact.

Response options

Please select the industry that is most applicable to your organization:

- Apparel
- Biotech, health care & pharma
- Food, beverage & agriculture
- Fossil fuels
- Hospitality
- Infrastructure
- International bodies
- Manufacturing
- Materials
- Power generation
- Retail
- Services
- Transportation Services

Requested content

General

- Companies should follow guidance from CDP in determining their industry sector by accounting for a company's business activities and revenues.

[0.6] Select the countries/areas in which you operate. (Source: CDP Climate Change 2022 Questionnaire)

Rationale

This will help data users interpret your responses.

Connection to other frameworks

RE100

Response options

Please complete the following table:

Country/area
Select all that apply: [Country/area drop-down list]

Requested content

General

- Select all countries/areas in which you operate from the drop-down menu provided.

[0.7] 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. (Source: CDP Private Markets Questionnaire 2022)

Rationale

This will help data users interpret your responses.

Response options

Select one of the following options:

- Financial control
- Operational control
- Equity share
- Other, please specify

Requested content

General

- Use a consolidated approach when determining reporting boundaries. CDP recommends that you consult your legal or accounting advisors when doing so.
- The “consolidated approach” identifies which entities are included within the reporting boundary. Unless stated otherwise, the information you provide in response to the CDP climate change questionnaire should be presented as one “consolidated” result covering all of the companies, entities, businesses, etc., within your reporting boundary.
- To support the use, tracking, and comparability of reported GHG information, respondents are encouraged to adopt the consolidation approaches based on the GHG Protocol Corporate Standard, outlined in more detail in Chapter 3 of the Standard.

Further clarification of options

- The options in the drop-down for this question are based on the GHG Protocol Corporate Standard, and are described in more detail below (text adapted from the [GHG Protocol Corporate Standard](#)):
 - **Financial control:** An organization has financial control over an operation if it has the ability to direct the financial and operating policies of the operation with a view to gaining economic benefits from its activities. Generally, an organization has financial control over an operation for GHG accounting purposes if the operation is treated as a group company or subsidiary for the purposes of financial consolidation.
 - Companies using the CDSB framework should select this option.
 - **Operational control:** An organization has operational control over an operation if it or one of its subsidiaries has the full authority to introduce and implement its operating policies at the operation.
 - Most SMEs select this option.
 - **Equity share:** Under the equity share approach, a company accounts for GHG emissions from operations according to its share of equity in the operation. The equity share reflects the economic interest, which is the extent of rights a company has to the risks and rewards flowing from an operation. Typically, the share of economic risks and rewards in an operation is aligned with the company's percentage ownership of that operation, and equity share will normally be the same as the ownership percentage. Where this is not the case, the economic substance of the relationship the company has with the operation always overrides the legal ownership form to ensure the equity share reflects the percentage of economic interest. The principle of economic substance taking precedence over legal form is consistent with international financial reporting standards.
- In the case of leasing arrangements, please see the [GHG Appendix: Categorizing GHG Emissions from Leased Assets](#) and the [International Accounting Standard \(IAS\) 17 on Leases](#), published by the International Financial Reporting Standards (IFRS) to determine the appropriate scope for those emissions.

Explanation of terms

- **Company:** Throughout this questionnaire, “your company” refers collectively to all the companies, businesses, organizations, other entities or groups that fall within your definition of the reporting boundary. This term is used interchangeably with “your organization”, but CDP recognizes that some disclosing organizations may not consider themselves to be, or be formally classified, as “companies”.
- **Consolidation approach:** The identification of companies, businesses, organizations etc. for inclusion within the reporting boundary of the responding organization. The way in which you report information for the companies that are included within the reporting boundary is known as the “consolidation approach” because, unless stated otherwise, the information you provide in response to the questionnaire should be presented as one “consolidated” result covering all of the companies, entities, businesses etc. within your reporting boundary. The GHG Protocol states that two distinct approaches may be used to consolidate GHG emissions; the equity share and the control approaches. Control can be defined in either financial (financial control) or operational (operational control) terms. This term is used interchangeably with “your organization”, but CDP recognizes that some disclosing organizations may not consider themselves to be, or be formally classified, as “companies”.
- **GHG inventory:** a quantified list of an organization's greenhouse gas emissions and sources.
- **Reporting boundary:** This determines which organizational entities, such as groups, businesses, and companies, are included in or excluded from your disclosure. These may be included according to your financial control, operational control, equity share or another measure. Please consistently apply this organizational boundary when responding to questions unless you are specifically asked for data about another category of activities.
- **Organization:** Throughout this questionnaire, “your organization” refers collectively to all the companies, businesses, other entities or groups that fall within the definition of your reporting boundary (provided in PM0.8). This term is used interchangeably with “your company”, but CDP recognizes that some disclosing organizations may not consider themselves to be, or be formally classified, as “companies”.

1. Governance

[1.1] Is there any member(s) of your organization responsible for overseeing climate change matters? (Source: A Climate Disclosure Framework for SME, CDP)

Requested content

General

- Companies shall disclose if there is an individual(s) responsible for overseeing climate change action and their seniority within the organization.
- If the company has a board, they should disclose whether there is board-level oversight of climate change matters.

[1.2] Do you provide incentives for the management of climate-related issues, including the attainment of targets? (Source: CDP Climate Change 2022 Questionnaire)

Rationale

CDP data users aim to understand the degree to which companies encourage their employees to address climate-related issues and impacts of the business, as well as the mechanisms by which companies are incentivizing certain behaviors and performances.

Connection to other frameworks

SDG

Goal 12: Responsible consumption and production

Response options

Please complete the following table:

Provide incentives for the management of climate-related issues	Comment
Select from: <ul style="list-style-type: none"> • Yes • No, not currently but we plan to introduce them in the next two years • No, and we do not plan to introduce them in the next two years 	Text field (maximum 1,000 characters)

Requested content

General

- Note that incentives can be positive (i.e. give people something) or negative (prevent access to something).

[1.2a] Provide further details on the incentives provided for the management of climate-related issues (do not include the names of individuals). (Source: CDP Climate Change 2022 Questionnaire)

Rationale

CDP data users aim to understand the degree to which companies encourage their employees to address climate-related issues and impacts of the business, as well as the mechanisms by which companies are incentivizing certain behaviors and performances.

Connection to other frameworks

SDG

Goal 12: Responsible consumption and production

2018 RobecoSAM Corporate Sustainability Assessment (DJSI)

Strategy

Response options

Please complete the following table. You are able to add rows by using the "Add Row" button at the bottom of the table.

Entitled to incentive	Type of incentive	Activity incentivized	Comment
Select from: <ul style="list-style-type: none"> • Board Chair 	Select from: <ul style="list-style-type: none"> • Monetary reward 	Select all that apply: <ul style="list-style-type: none"> • Emissions reduction project 	Text field [maximum 2,400 characters]

Entitled to incentive	Type of incentive	Activity incentivized	Comment
<ul style="list-style-type: none"> ● Board/Executive board ● Director on board ● Corporate executive team ● Chief Executive Officer (CEO) ● Chief Financial Officer (CFO) ● Chief Operating Officer (COO) ● Chief Procurement Officer (CPO) ● Chief Risk Officer (CRO) ● Chief Sustainability Officer (CSO) ● Chief Investment Officer (CIO) [Financial services only] ● Chief Underwriting Officer (CUO) [Financial services only] ● Chief Credit Officer (CCO) [Financial services only] ● Other C-Suite Officer ● President ● Executive officer ● Management group ● Business unit manager ● Energy manager ● Environmental, health, and safety manager ● Environment/Sustainability manager ● Facilities manager ● Process operation manager ● Procurement manager ● Public affairs manager ● Risk manager ● Portfolio/Fund manager [Financial services only] ● ESG Portfolio/Fund manager [Financial services only] ● Investment analyst [Financial services only] ● Dedicated Responsible Investment staff [Financial services only] ● Investor Relations staff [Financial services only] ● Risk management staff [Financial services only] ● Buyers/purchasers ● All employees ● Other, please specify 	<ul style="list-style-type: none"> ● Non-monetary award 	<ul style="list-style-type: none"> ● Emissions reduction target ● Energy reduction project ● Energy reduction target ● Efficiency project ● Efficiency target ● Behavior change related indicator ● Environmental criteria included in purchases ● Supply chain engagement ● Company performance against a climate-related sustainability index ● Portfolio/fund alignment to climate-related objectives [Financial services only] ● Other, please specify 	

[Add Row]

Requested content

General

- Note that this question asks about the position of employees receiving incentives. Do not include the name of any individual or any other personal data in your response.

Entitled to incentives (column 1)

- If incentives are provided to specific lower-level employees, select "Other, please specify" (column 1) and specify the position.

Types of incentive (column 2)

- Incentive types include:
 - Monetary - a bonus or some form of financial remuneration;
 - Non-monetary - employee awards (e.g. employee of the year) or career progression schemes not tied directly to any form of financial remuneration, increased holiday allowances, special assignments, parking allocations etc.

Activity incentivized (column 3)

- Performance indicators might include:
 - Projects: The implementation of projects that are realizing savings in emissions, energy, and/or that are promoting efficiency;
 - Targets: Activity resulting in progress towards your company's target(s);
 - Behavior change: Contribution towards corporate global reputation improvement, rate of participation by employees in environmental activities, number of employees receiving training.

[1.3] * Are you familiar with any local government or related incentives to manage your climate related issues, risks or disclosure? (New Question for CASG SME Questionnaire)

Rationale

This question is added to understand whether businesses are aware of the external support and/or incentives available to their organizations in the areas they operate in, and whether businesses are utilizing these external resources to support their effort in managing their climate-related risks and addressing the impacts of their business on climate change.

Response options

Please select one of the following options:

- Yes
- No, we are not aware of such incentives

[1.3a] * Do you take advantage of such incentives? Please provide further details on the incentives used by your firm. (New Question for CASG SME Questionnaire)

Rationale

This question is added to understand whether businesses are aware of the external support and/or incentives available to their organizations in the areas they operate in, and whether businesses are utilizing these external resources to support their effort in managing their climate-related risks and addressing the impacts of their business on climate change.

Response options

This is an open text question.

Requested content

General

- Companies should provide information as to whether they have attempted to search for, or have applied for or taken part in any local government or related incentives in the reporting year.
- Where appropriate, companies should make reference(s) to any relevant incentive schemes or programs, and provide supporting information about their participation in the scheme or program.
- For example, companies may consider incentives and schemes such as government grants, subsidies, capacity building schemes, continuing professional development (CPD) courses related to sustainability, etc.

2. Climate-related Risks

[2.1] How does your organization define short-, medium- and long-term time horizons? (Source: CDP Climate Change 2022 Questionnaire)

Rationale

CDP has added this question to understand the different timescales at which businesses consider climate-related issues in their risk assessment process and in strategy and financial planning. Subsequent questions on risk and opportunity disclosure, strategy and financial planning, relate to different time horizons, hence their definition is requested here.

Connection to other frameworks

TCFD

Strategy recommended disclosure a) Describe the climate-related risks and opportunities the organization has identified over the short, medium, and long term.

Response options

Please complete the following table:

Time horizon	From (years)	To (years)	Comment
Short-term	Numerical field [enter a number from 0-100 using no decimals or commas]	Numerical field [enter a number from 0-100 using no decimals or commas]	Text field [maximum 2,400 characters]
Medium-term			
Long-term			

Requested content

General

- This question is seeking a definition of what your organization considers to be short-, medium-, and long-term horizons in the context of climate-related risks and opportunities.
- If your long-term time horizon is open-ended, you may leave the column "To (years)" blank.

Comment (column 4) (optional)

- You may specify if this time horizon for assessing climate-related risks and opportunities is aligned with other business practices time horizons and provide any other relevant information.

Additional information

Time horizons of climate-related risks

- There is a common perception that all climate-related risks are "long-term", arising in 10+ years; however, transitional risks such as policies, technology, and markets are emerging earlier than this, and physical risks including the frequency and intensity of storms, floods, and droughts are recognized risks today.
- Evaluating exposure to climate-related risks over a range of time horizons allows for a strategy for the transition to a low-carbon economy as recognized in the Paris Agreement and UN SDGs.

TCFD position on time horizons

- Because the timing of climate-related impacts on organizations will vary, TCFD believes specifying timeframes across sectors could hinder organizations' consideration of the climate-related risks and opportunities specific to their businesses. TCFD is therefore not defining timeframes and encourages respondents to decide how to define their own timeframes according to the life of their assets, the profile of the climate-related risks they face, and the sectors and geographies in which they operate.
- In assessing climate-related issues, organizations should be sensitive to the timeframes used to conduct their assessments. While many organizations conduct operational and financial planning over a 1-2 year timeframe, and strategic and capital planning over a 2-5 year timeframe, climate-related risks may have implications over a longer period. It is therefore important for organizations to consider the appropriate timeframes when assessing climate-related risks.

[2.2] Do you assess your climate risks? (Source: A Climate Disclosure Framework for SME, CDP)

Response options

- Please complete the following table.

Does your organization have a process for identifying, assessing and managing climate-related risks?	Describe your process(es) for identifying, assessing and managing climate-related risks.	When do you expect the risk impacts to materialise?	How often do you review your climate risk assessment?	When was the last time you assessed your climate risks?
- Yes - No	[If yes, this is an open text question] [If no, please put N/A in this field]	- <3years - 3-10 years - >10 years - N/A	[Open text question]	[Please provide the year of the last climate risk assessment undertaken by your organization. Please input N/A if your organization does not conduct climate risk assessments.]

Requested content

General

- Companies should state if they identify, assess, and manage climate risks.
- For the description of process(es) for identifying, assessing and managing climate-related risks, companies should consider providing the following details of their risk management process:

- How frequently they carry out climate risk assessments
- Value chain stages covered (e.g., direct operations, downstream, upstream)
- Time horizon(s) covered
- Risk types considered
- For climate risk types, companies should consider both physical and transition risks:
 - Physical risk can be acute or chronic. Acute physical risks arise from extreme events that occur at a point in time, such as wildfires, floods and storms. Chronic physical risks arise from progressive climate shifts, such as rising sea levels, water stress, biodiversity loss and resource scarcity.
 - Transition risks are risks associated with the process of adjustment towards a low-carbon economy. Financial impacts can arise directly or indirectly from the transition towards a more sustainable economy, e.g. triggered by disruptive policies, technological progress and market sentiment shifts. The types of transition risk include Policy and Regulation, Technology, Legal and Market risks.

[2.2a] (If yes) Provide details of risks identified with the potential to have a substantive financial or strategic impact on your business. (Source: CDP Private Markets Questionnaire 2022)

Rationale

Your response to this question will allow data users to see, in one place, details of the risks posed to your organization by climate-related issues, and also the estimated potential financial impact of these risks at the corporate level and your response strategy to manage these risks.

Connection to other frameworks

TCFD

Strategy recommended disclosure a) Describe the climate related risks and opportunities the organization has identified over the short, medium, and long term.
 Strategy recommended disclosure b) Describe the impact of climate-related risks and opportunities on the organization's businesses, strategy and financial planning.

SDG

Goal 12: Responsible consumption and production
 Goal 13: Climate action

Response options

Please complete the following table. You are able to add rows by using the "Add Row" button at the bottom of the table.

Identifier	Where in the value chain does the risk driver occur?	Risk type	Primary climate-related risk driver	Primary potential financial impact	Company- specific description	Time horizon	Likelihood	Magnitude of impact
Risk1 - Risk100	Select from: <ul style="list-style-type: none"> • Direct Operations • Upstream • Downstream 	Select from: <ul style="list-style-type: none"> • Current regulation • Emerging regulation • Legal • Technology • Market • Reputation • Acute physical • Chronic physical 	See drop-down options below	Select one of the following options: <ul style="list-style-type: none"> • Increased direct costs • Increased indirect (operating) costs • Increased capital expenditures • Increased credit risk • Increased insurance claims liability • Decreased revenues due to reduced demand for products and services • Decreased revenues due to reduced production capacity • Decreased access to capital • Decreased asset value or asset useful life leading to write-offs, asset impairment or early retirement of existing assets • Other, please specify 	Text field [maximum 2,500 characters]	Select from: <ul style="list-style-type: none"> • Short-term • Medium-term • Long-term • Unknown 	Select from: <ul style="list-style-type: none"> • Virtually certain • Very likely • Likely • More likely than not • About as likely as not • Unlikely • Very unlikely • Exceptionally unlikely • Unknown 	Select from: <ul style="list-style-type: none"> • High • Medium-high • Medium • Medium-low • Low • Unknown

[Add Row]

Primary climate-related risk driver drop-down options (column 4)

Select one of the following options:

<p>Current regulation</p> <ul style="list-style-type: none"> • Carbon pricing mechanisms • Enhanced emissions-reporting obligations • Mandates on and regulation of existing products and services • Other, please specify <p>Emerging regulation</p> <ul style="list-style-type: none"> • Carbon pricing mechanisms • Enhanced emissions-reporting obligations • Mandates on and regulation of existing products and services • Other, please specify <p>Legal</p> <ul style="list-style-type: none"> • Exposure to litigation • Other, please specify <p>Technology</p> <ul style="list-style-type: none"> • Substitution of existing products and services with lower emissions options • Unsuccessful investment in new technologies • Transitioning to lower emissions technology • Other, please specify 	<p>Market</p> <ul style="list-style-type: none"> • Changing customer behavior • Uncertainty in market signals • Increased cost of raw materials • Other, please specify <p>Reputation</p> <ul style="list-style-type: none"> • Shifts in consumer preferences • Stigmatization of sector • Increased stakeholder concern or negative stakeholder feedback • Other, please specify <p>Acute physical</p> <ul style="list-style-type: none"> • Increased severity and frequency of extreme weather events such as cyclones and floods • Increased likelihood and severity of wildfires • Other, please specify <p>Chronic physical</p> <ul style="list-style-type: none"> • Changes in precipitation patterns and extreme variability in weather patterns • Rising mean temperatures • Rising sea levels • Other, please specify
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Requested content

General

- For the purposes of this response, the risks reported should only be those which may pose inherently substantive impacts in your business operations, revenue, or expenditure, regardless of whether or not the company has taken action to mitigate the risk(s).

Identifier (column 1)

- Select a unique identifier from the drop down menu provided to identify the risk in subsequent questions, if required, and to track the status of the risk in subsequent reporting years.

Where in the value chain does the risk driver occur? (column 2)

- Upstream value chain refers to activities, products and services that are inputs to the activities of your business, sourced from third parties. This may include the regulations and policies applied by governments; the products and services provided by your suppliers (i.e. the supply chain).
- Downstream value chain refers to the third parties benefiting from the outputs, products and services of your business activities. This may be your customers and clients, or the organizations and projects your business invests in.

Risk type (column 3)

- See explanation of terms for definitions of risk types.

Primary climate-related risk driver (column 4)

- Risk driver describes the source of the risk and will depend on the risk type chosen in column 3. Select an option that best describes the primary risk driver of the identified risk from the drop-down menu.

Primary potential financial impact (column 5)

- This column refers to the potential financial impact that the risk could have on your organization. The financial impacts of climate-related issues on organizations are not always clear or direct, and for many organizations there might be more than one financial impact associated with a climate-related risk. Select the option from the drop-down menu that you evaluate as having the biggest impact.

Company-specific description (column 6)

- Provide further contextual information on the risk driver, including more detail on the exact nature, location and/or regulation of the effect concerned, as well as any notable geographic/regional examples.

- Be sure to include company-specific detail, such as references to activities, programs, products, services, methodologies, or operating locations specific to your company's business or operations.

Time Horizon (column 7)

- As defined by the company.

Likelihood (column 8)

- The likelihood of the impact occurring along with the magnitude of the impact are the building blocks of a risk/opportunity matrix – a common method of identifying and prioritizing risk and opportunities.
- The likelihood refers to the probability of the impact to your business occurring within the time horizon provided, which in the case of an inherent risk might be similar to the probability of the climate event itself.
- For example, if the risk relates to a piece of new legislation which has already been prepared in draft form, the likelihood of the impact associated with that risk occurring will be relatively high.

Magnitude of impact (column 9)

- The magnitude describes the extent to which the impact, if it occurred, would affect your business. You should consider the business as a whole and therefore the magnitude can reflect both the damage that may be caused and the exposure to that potential damage.
- For example, two companies may have identical facilities located on a coast in an area which is vulnerable to sea level rise. However, if company A relies on that facility for 90% of its production capacity and company B relies on it for only 40% of its production capacity, the magnitude of a sea level rise impact on company A will be comparatively higher than that on company B.
- It is not possible for CDP to accurately define terms for magnitude as they will vary from company to company. For example, a 1% reduction in profits will have different effects on different companies depending on the profit margins on which they work. Therefore, companies are asked to determine magnitude on a qualitative scale. Factors to consider include:
 - The proportion of business units affected;
 - The size of the impact on those business units; and
 - The potential for shareholder or customer concern.

Note for oil and gas sector companies:

- In answering the questions above, please consider the impact of national and international emissions targets and how those could affect demand for oil and gas products. Will they lead to your company having a less carbon-intensive fuel mix? Will fuel efficiency standards affect the demand for fuel? Are there other instances where demand is likely to reduce due to regulation?
- Is your company affected by other types of regulation such as restrictions on flaring, or by requirements for a certain level of climate-related performance in order to receive permission to operate and/or as a condition of accessing new oil & gas resources? (e.g. a requirement for carbon sequestration).
- Companies are encouraged to include these drivers in the response to this question and explain how their portfolio of reserves is evolving in response to these drivers (in the Comment column).

Note for electric utility sector companies:

- Electric utilities are asked to consider, among other issues:
 - How national and international targets on demand management might affect demand for electricity;
 - The impacts of related policies such as building regulations specifying more energy-efficient buildings;
 - Policies to increase renewable electricity supply or to support developments that may result in GHG emissions reductions, e.g. CO₂ capture and storage, clean coal technologies and energy storage;
 - The impacts of any emissions trading schemes and any emissions reduction targets you have set or with which you have to comply, including the analysis of possible scenarios and their effect on the company;
 - The effects on wholesale and retail power prices of carbon prices in the different markets in which you operate and the extent to which carbon prices are passed through, or may in the future be passed through, into electricity prices in the markets, based on current and anticipated regulatory requirements.

Note for auto and auto component manufacturing companies:

- Please consider the financial and strategic implications of current and planned national, regional, and international policies for increasing automobile fuel efficiency and developing “clean” engines for each of the markets in which you operate. You should also consider how other related environmental policies, such as regulations and standards regarding air quality, use of alternative fuels, and sustainable mobility could further impact your business.
- Specifically, you should take into account how climate change policy could impact you in terms of sales, the financial cost of any loss or potential loss of market share, additional costs of complying with regulation and, if applicable, how you have or will pass increased costs down the value chain.

Note for agricultural sector companies:

- Agricultural companies should report on risks that may affect the revenue associated with the agricultural/forestry, processing/manufacturing and/or distribution. These risk are often driven by:
 - Physical factors, e.g. extreme weather events that disrupt production/supply of raw materials.
 - Changes in regulation pertaining to agricultural, processing, manufacturing, distribution and/or consumption activities.
 - Changes in consumer demands and new market trends

Note for companies with coal reserves:

- Companies with coal reserves can refer to [CDP Technical Note: Guidance for companies with coal reserves](#) for more information on disclosing demand and stranded asset risk.

Note for financial services sector companies:

- For the purposes of this response, the risks reported should be inherent and have the potential for substantive impacts on your investing, financing, underwriting and/or operational activities, regardless of whether any action has been taken to respond to the risk(s).
- Consider providing a description of risks by sector and/or geography, as appropriate. This can be provided in the "Company-specific description" (column 6).
- Both physical and transition risks in your investing, financing, underwriting, and/or operational activities should be considered, including the risk of stranded assets. These are assets that are no longer economically viable as a result of climate-related transition or physical risks.
- Banks:
 - Banks should describe significant concentrations of credit exposure to carbon-related assets.
 - Additionally, banks should consider disclosing their climate-related risks (transition and physical) in their lending and other financial intermediary business activities.
- Insurance companies:
 - Insurance companies should consider climate-related risks on re-/insurance portfolios by geography, business division, or product segments, including the following risks:
 - Physical risks from changing frequencies and intensities of weather-related perils;
 - Transition risks resulting from a reduction in insurable interest due to a decline in value, changing energy costs, or implementation of carbon regulation; and
 - Liability risks that could intensify due to a possible increase in litigation. For example, the risk of an increase in claims for defense costs in relation to directors and officers (D&O) liability.
 - Additionally, as an asset owner, please also describe the climate-related risks relevant to your investment portfolio.
- Asset managers:
 - Asset managers should consider climate-related risks for each product or investment strategy.

Note for real estate companies:

- Since real estate is a location-bound and a long-term investment, it is highly exposed to climate-related risks. Commercial real estate companies should consider stranding risks - the devaluation or non-performance of assets, thus making them 'stranded'.
- Stranded assets may be subject to write-downs due to:
 - Demand shifts towards sustainable properties, putting pressure on 'non-green' assets;
 - Higher exposure to acute physical risks (storms, flooding, wildfires, etc.);

Notes for capital goods sector companies:

- All the end markets supplied to by the capital goods sector face increasing regulation and decarbonization targets; from building standards to mandated technologies for power generation. Companies in this sector are therefore indirectly exposed to risks in their value chain, and should consider, among other issues, risks associated with:
 - Carbon pricing regulation and stricter emissions constraints on products and services;
 - Shifts in end-market demand away from fossil fuel dependent technologies.

Explanation of terms

- **Climate-related risks:** TCFD divides climate-related risks into two major categories: risks related to the transition to a lower-carbon economy and risks related to the physical impacts of climate change.
- Transition risks
 - Current and emerging regulation – policy developments that attempt to constrain actions that contribute to the adverse effects of climate change or policy developments that seek to promote adaptation to climate change;
 - Technology – all risks associated with technological improvements or innovations that support the transition to a lower-carbon, energy-efficient economic system;
 - Legal – all climate-related litigation claims;
 - Market – all shifts in supply and demand for certain commodities, products, and services;
 - Reputation – all risks tied to changing customer or community perceptions of an organization's contribution to or detracting from the transition to a lower-carbon economy.
- Physical risks
 - Acute – risks that are event-driven, including increased severity of extreme weather events, such as cyclones, hurricanes, or floods;
 - Chronic – longer-term shifts in climate patterns (e.g., sustained higher temperatures) that may cause sea level rise or chronic heat waves.

- **Likelihood:** The terms used to describe likelihood are taken from the Intergovernmental Panel on Climate Change's (IPCC) 2013 reports. They are associated with probabilities, indicating the percentage likelihood of the event occurring. It is not necessary for respondents to have calculated probabilities for the risks they are considering, however they can give an indication as to the meaning of the terms:
 - Virtually certain: 99–100% probability
 - Very likely: 90–100%;
 - Likely: 66–100%;
 - More likely than not: 50–100%;
 - About as likely as not: 33–66%;
 - Unlikely: 0–33%;
 - Very unlikely: 0-10%;
 - Exceptionally unlikely: 0–1%.
- **Direct costs:** Also known as “costs of goods or services sold”. These expenses can be attributed to the manufacture of a particular product or the provision of a particular service.
- **Indirect (operating) costs:** Refers to the essential expenses incurred in order to maintain the business including wages, rent, transport, energy (electricity, fuel, etc.), maintenance, and so on. These expenses cannot be attributed to the manufacture of a particular product or the provision of a particular service - they are standard costs that apply regardless of the volume of goods produced.
- **Capital expenditure:** A measure of the value of purchases of fixed assets such as property, buildings, an industrial plant, technology, or equipment. Put differently, CapEx is any type of expense that a company capitalizes, or shows on its balance sheet as an investment, rather than on its income statement as an expenditure.
- **Revenue:** Income arising in the course of an entity's ordinary activities (less returns, allowances and discounts) - before deducting costs for the goods/services sold and operating expenses to arrive at profit (based on the [International Financial Reporting Standard](#))
- **Access to capital:** Cash flows from sources other than an organization's sales and other revenues. It includes cash infusions from investors or securing lines of credit with banks and other lenders.

[2.3] Can you provide a financial impact figure for any of the risks listed in the previous question? (Source: CDP Private Markets Questionnaire 2022)

Rationale

Larger companies may be required to report financial impact figures of risk under certain emerging regulatory reporting requirements.

Connection to other frameworks

TCFD

Strategy recommended disclosure a) Describe the climate related risks and opportunities the organization has identified over the short, medium, and long term.
 Strategy recommended disclosure b) Describe the impact of climate-related risks and opportunities on the organization's businesses, strategy and financial planning.

SDG

Goal 12: Responsible consumption and production
 Goal 13: Climate action

Response options

Please complete the following table. The table is displayed over several rows for readability. You are able to add rows by using the “Add Row” button at the bottom of the table.

Identifier	Are you able to provide a potential financial impact figure?	Potential financial impact figure (\$USD)	Explanation of financial impact figure	Cost of response to risk (\$USD)	Description of response and explanation of cost calculation	Comment
Risk1 - Risk100	Select from: <ul style="list-style-type: none"> • Yes, a single figure estimate • Yes, an estimated range • No, we do not have this figure 	Numerical field [enter a number from 0 to 999,999,999,999,999 using up to 2 decimal places]	Text field [maximum 2,500 characters]	Numerical field [enter a number from 0-999,999,999,999,999 using a maximum of 2 decimal places]	Text field [maximum 2,500 characters]	Text field [maximum 2,500 characters]

[Add Row]

Requested content

Identifier (column 1)

- All identifiers must match what was inputted in the previous question (PM2.3a)

Are you able to provide a potential financial impact figure? (column 2)

- It is acknowledged that these figures will be estimates.
- If you are unable to provide a figure for a financial impact, you may use column 4 "Explanation of financial impact" to provide a description of the impact in relative terms; for example, as a percentage relative to a stated or publicly available figure, or give a qualitative estimate of the financial impact.

Potential financial impact figure (currency) (column 3)

- Provide a single figure for the inherent financial impact of the risks (before taking into consideration any controls you may have in place to mitigate the impacts). This figure should be in USD.
- An example would be the cost of destruction of facilities from extreme weather (before taking into consideration how much insurance coverage you have).

Explanation of financial impact figure (column 4)

- Use this open text field to explain the figure provided in the "Potential financial impact" (column 3);
- Describe how you arrived at this figure, including:
 - What approach was employed to calculate the figure;
 - The figures used in your calculation;
 - Any assumption the figure is dependent on.
- If "No, we do not have this figure" was selected in column 2, use this column to provide a description of the financial impact in relative terms (for example as a percentage relative to a stated or publicly available figure) or give a qualitative estimate of the financial impact. Otherwise, if you have no information about the financial impact, please state "The impact has not been quantified financially".

Cost of response to risk (column 5)

- Provide a quantitative figure for the cost of your risk response actions. If there are no costs to responding to the risk, enter 0.
- If you cannot provide absolute values, you may provide a percentage value in the "Comment" column (column 7).
- This figure should be in USD.

Description of response and explanation of cost calculation (column 6)

- Provide details of your organization's response to mitigate, control, transfer or accept the risk.
- Include an example of company-specific risk responses actions (activities, projects, products and/or services).
- Provide an explanation of how the figure for the cost of managing the risk (in column 5) was calculated, including the figures used in your calculation.

Comment (column 7) (optional)

- You can use this text field to enter any additional relevant information.

[2.4] * What is the proportion of revenue in your organization that is reliant upon high-carbon products (e.g., oil, gas, coal)? (New Question for CASG SME Questionnaire)

Rationale

This question provides insights into a company's current reliance on fossil fuels or high carbon products in respect of the company's current revenue mix. Data users can assess the company's transition risk in revenue terms as the market transitions away from fossil fuel energy products or high carbon products

Response options

Please provide a percentage figure below:

___%.

Requested content

General

- (For energy & utilities) % revenue from extraction, production, refining, distribution, transmission, or sales of fossil fuels (e.g. oil & coal) vs. renewables or biofuels
- (For transport) % revenue from sale or use of vehicles running on oil products (e.g. gasoline & diesel) vs. electric, hybrid or new energy vehicles
- (For manufacturing) % revenue from using energy from fossil fuels within manufacturing plant(s) vs. renewables
- (For others) % revenue from using energy from fossil fuels or other carbon intensive methods (e.g. own-use energy sources on premises to produce products or services) vs. low carbon alternatives

[2.5] * Please provide key asset locations of the organization, including both operating assets and collateral assets. (New Question for CASG SME Questionnaire)

Rationale

This question provides data users with geographical information of the respondent's key assets that are material to their business operations, which is useful for data users to conduct climate-related risk assessment, including understanding physical exposure to climate risks.

Response options

Please complete the following table:

S N	Asset Type	Classification	Site Name	Address						GPS
				Street	District	City	Province/S tate	Country/ Region	Postal Code	GPS Coordina tes
#		Operating Asset / Collateral Asset								

Requested content

General

- Companies should disclose locational information for as many assets under their operation and/or ownership as possible.
- Companies should provide the longitude and latitude of a key asset location for the column "GPS Coordinates", as accurately as possible.
- Companies may include assets owned or collateral assets pledged to a lender, covering: (i) operating assets that account for majority (>50%) of a company's production capacity or revenue generated; or (ii) pledged assets that account for majority of collateral value.
- As a minimum, companies should include their top 5 assets in terms of (i) production capacity, (ii) generated revenue or (iii) collateral value if they have many asset holdings.

Explanation of terms

- **Key assets:** organization's operational assets (e.g. plants, factories, data centres, stations, offices, etc.) that are critical to business operations, contribute materially to revenue generation, or account significantly for the organization's carbon footprint

[2.6] * Does your organization have sufficient insurance policy coverage to mitigate against financial losses due to residual physical risks after the implementation of your organization's climate risk policy and strategy? (New Question for CASG SME Questionnaire)

Rationale

This question provides data users with an understanding of the extent to which businesses are taking action to address their climate-related risks by establishing effective internal policy, systems and mechanisms within the organization.

Response options

Please select one of the following options:

- Yes
- No

3. Business Strategy

[3.1] Does your organization use climate-related scenario analysis to inform its strategy? (Source: CDP Climate Change 2022 Questionnaire)

Rationale

Your disclosure to this question provides data users with an indication of the extent to which your company is considering a range of possible and probable futures when considering climate-related challenges and opportunities, in line with best practices in corporate environmental management.

Connection to other frameworks

TCFD

Strategy recommended disclosure c) Describe the resilience of the organization's strategy, taking into consideration different climate related scenarios, including a 2°C or lower scenario.

SDG

Goal 13: Climate action

2018 RobecoSAM Corporate Sustainability Assessment (DJSI)

Scenario Analysis

Response options

Complete the following table:

Use of climate-related scenario analysis to inform strategy	Primary reason why your organization does not use climate-related scenario analysis to inform its strategy	Explain why your organization does not use climate-related scenario analysis to inform its strategy and any plans to use it in the future
Select from: <ul style="list-style-type: none"> ● Yes, qualitative ● Yes, quantitative ● Yes, qualitative and quantitative ● Yes, qualitative, but we plan to add quantitative in the next two years ● No, but we anticipate using qualitative and/or quantitative analysis in the next two years ● No, and we do not anticipate doing so in the next two years 	Select from: <ul style="list-style-type: none"> ● Important but not an immediate priority ● Judged to be unimportant, explanation provided ● Lack of internal resources ● No instruction from management ● Other, please specify 	[Text field, 2,500 characters]

Requested content

General

- Select whether your organization uses climate-related scenario analysis to inform its business strategy, and if yes, the type of scenario analysis you use. See “Explanation of terms” for more details on qualitative and quantitative scenario analysis.

Primary reason why your organization does not use climate-related scenario analysis to inform its strategy (column 2)

- This column is only presented if “No, but we anticipate using qualitative and/or quantitative analysis in the next two years” or “No, and we do not anticipate doing so in the next two years” is selected in column 1.
- Select the reason that best describes why your organization does not use climate-related scenario analysis to inform your strategy.
- If more than one reason applies to your organization, select the reason which is most relevant and elaborate on the other reason(s) in column 3.

Explain why your organization does not use climate-related scenario analysis to inform its strategy and any plans to use it in the future (column 3)

- This column is only presented if “No, but we anticipate using qualitative and/or quantitative analysis in the next two years” or “No, and we do not anticipate doing so in the next two years” is selected in column 1.
- Provide a company-specific explanation of why you do not use climate-related scenario analysis to inform your strategy and outline any plans to do so in the future.
- If you selected “Judged to be unimportant, explanation provided” in column 2, explain the criteria used to decide that climate-related scenario analysis is not important for your organization.
- If you selected “Lack of internal resources”, specify whether this relates to lack of internal expertise, data availability, funds to outsource the analysis or other resources.

Explanation of terms

- **Scenario analysis:** A scenario describes a potential path of development that will lead to a particular outcome or goal. Scenario analysis is the process of highlighting central elements of a possible future and drawing attention to key factors (or critical uncertainties). It is a tool to enhance critical strategic thinking by challenging “business-as-usual” assumptions, and to explore alternatives based on their relative impact and likelihood of occurrence. Scenarios are not forecasts or predictions, but tools to describe potential pathways that lead to a particular outcome or goal.
 - *Qualitative scenarios:* A high level, narrative approach to scenario analysis, suitable for organizations familiarizing themselves with the process. Qualitative scenario analysis explores relationships and trends for which little or no numerical data is available.
 - *Quantitative scenarios:* A more detailed method for conducting scenario analysis, with greater rigor and sophistication in the use of data sets and quantitative models which may warrant further analysis. Quantitative scenario analysis can be used to assess measurable trends and relationships using models and other analytical techniques.

Additional information

Industry examples of scenario analysis - [Shell](#), [BP](#), [Mercer](#), [BHP Billiton](#), [BIER's Future Scenarios Toolkit](#)

[3.2] Provide details of your organization's use of climate-related scenario analysis. (Source: CDP Climate Change 2022 Questionnaire)

Rationale

Scenario analysis as a planning tool is a recommended practice for businesses preparing for possible futures. Investors are interested in understanding how companies use this planning tool to guide climate-related strategy, and specifically which scenarios different organizations utilize in their planning process.

Connection to other frameworks

TCFD

Strategy recommended disclosure c) Describe the resilience of the organization’s strategy, taking into consideration different climate related scenarios, including a 2°C or lower scenario.

SDG

Goal 13: Climate action

Response options

Please complete the following table. You are able to add rows by using the “Add Row” button at the bottom of the table.

Climate-related scenario	Scenario analysis coverage	Temperature alignment of scenario	Parameters, assumptions, analytical choices
Select from: Transition scenarios <ul style="list-style-type: none"> ● IEA NZE 2050 ● IEA B2DS ● IEA 2DS ● IEA 450 ● IEA SDS ● IEA APS ● IEA STEPS (previously IEA NPS) ● IEA CPS ● Greenpeace ● DDP ● IRENA ● BNEF NEO ● NGFS scenarios Framework [Financial Services only] ● Customized publicly available transition scenario ● Bespoke transition scenario Physical climate scenarios <ul style="list-style-type: none"> ● RCP 1.9 ● RCP 2.6 ● RCP 3.4 ● RCP 4.5 ● RCP 6.0 ● RCP 7.0 ● RCP 8.5 ● Customized publicly available physical scenario ● Bespoke physical scenario 	Select from: <ul style="list-style-type: none"> ● Company-wide ● Business division ● Business activity ● Facility ● Country/area ● Product-level ● Portfolio [FS only] ● Other, please specify 	Select from: <ul style="list-style-type: none"> ● 1.5°C ● 1.6°C – 2°C ● 2.1°C - 3°C ● 3.1°C - 4°C ● 4.1°C and above ● Unknown 	Text field [maximum 2,500 characters]

[Add Row]

Requested content

General

- As recommended by TCFD, scenarios should be sufficiently diverse to allow challenging “what-if” analyses and capture a wide range of insights about uncertain futures. In assessing transition risks, a company should consider using or developing a 1.5°C scenario. In assessing physical risks, a company should use the current GHG pathway based on government policies currently in place, which according to latest estimates from the [Climate Action Tracker](#) would result in warming of about 2.7°C above pre-industrial levels. 2.7°C is the median of the low and high ends of current policy projections.
- Companies using customized or bespoke scenarios should have a robust and accountable process to ensure that the scenarios used are objective and diverse, and should transparently disclose this process and the content of the scenarios in this question.

Climate-related scenario (column 1)

- Add a row for each scenario used in your scenario analysis.

Scenario analysis coverage (column 2)

- The [TCFD Guidance on Scenario Analysis](#) recommends that scenario analysis should encompass the whole company. Note that “company” refers collectively to all the companies, businesses, organizations, other entities or groups that fall within your definition of the reporting boundary.
- If the scenario analysis does not apply to the whole company, select the option that best describes the coverage of the scenario, and provide further details in column 4 “Parameters, assumptions, analytical choices”.

Temperature alignment of scenario (column 3)

- This column is only presented if “Customized publicly available physical scenario”, “Customized publicly available transition scenario”, “Bespoke physical scenario”, or “Bespoke transition scenario” is selected in column 1.

Parameters, assumptions, analytical choices (column 4)

- Provide details on how the selected scenario was identified, with reference to the parameters, assumptions and analytical methods used:
 - **Parameters** refer to measurable factors built into the scenario that may have a material impact on your business performance, such as discount rate, GDP, and other macro-economic or demographic variables.
 - **Assumptions** refer to assumptions made about how the parameters are likely to develop over the scenario's timeframe, such as the timing of policy changes (e.g., carbon prices) or the development of market prices of key commodities/products.
 - **Analytical choices** refer to the time horizons, data sources and models used, such as any SSPs (Shared Socioeconomic Pathways) used in conjunction with your scenario.
- Indicate in your response whether your analysis using this scenario was quantitative or qualitative.

Note for financial services sector companies:

- State if your organization uses climate-related scenario analysis to understand the impact of climate-related issues on lending, financial intermediary, investment and/or insurance underwriting activities, in addition to operational activities.
- Note that “Company-wide” in column 2 refers to the reporting boundary as disclosed in question C0.5 in the introduction module. Financial services sector organizations using scenario analysis on their portfolios should select “Portfolio [FS only]”, even when the scenario analysis covers all financial activities and portfolios.
- Both physical and transition pathway risks should be considered in your scenario analysis.
- Banks:
 - Banks are encouraged to use the Network for Greening the Financial System (NGFS) scenarios Framework.
- Insurance companies:
 - Insurance companies that perform climate-related scenario analysis on their underwriting activities should provide the following information:
 - Information on the time frames used for the climate-related scenarios, including short-, medium-, and long-term milestone; and
 - Companies with substantial exposure to weather-related perils should consider a greater than 2°C scenario to account for physical effects of climate change.

Explanation of terms

- **1.5°C or lower scenario:** A core element of the TCFD's Strategy recommendation c) “Describe the resilience of the organization's strategy, taking into consideration different climate-related scenarios, including a 2°C or lower scenario”. As noted on page 26 of The [TCFD Guidance on Scenario Analysis for Non-Financial Companies](#), the TCFD now recommends that in assessing transition risks, companies should consider using or developing a 1.5°C scenario for the “2°C or lower scenario”, stating that “a 1.5°C scenario would provide stronger diversity in assumptions about future policies and technologies. A 1.5°C scenario also aligns with the latest scientific research from the IPCC, the growing momentum of pledges to limit emissions to net-zero by 2050, and the spirit of the Paris Agreement, demonstrating a company's alignment to recognized temperature targets.”
- **Publicly available scenarios:** Taken from [TCFD recommendations](#), “Publicly available scenarios” refer to scenarios which are:
 - used/referenced and issued by an independent body;
 - wherever possible, supported by publicly available datasets;
 - updated on a regular basis; and
 - linked to functional tools (e.g., visualizers, calculators, and mapping tools) that can be applied by organizations.

- **IEA NZE 2050:** IEA's Net Zero by 2050 scenario presents a roadmap for the energy sector to transition to a net zero energy system by 2050. It assumes that advanced economies will reach net zero in advance of 2050 and sets out an emissions trajectory consistent with a 50% chance of limiting the global temperature rise to 1.5°C without a temperature overshoot.
- **IEA B2DS:** IEA's Beyond 2°C Scenario (B2DS) sets out a rapid decarbonization pathway in line with international policy goals. The B2DS looks at how far known clean energy technologies could go if pushed to practical limits, in line with countries' ambitious aspirations in the Paris Agreement. In this scenario, the energy sector reaches carbon neutrality by 2060 to limit future temperature increases to 1.75°C by 2100. This pathway implies that all available policy levers are activated throughout the outlook period in every sector worldwide, requiring unprecedented policy action as well as effort and engagement from all stakeholders.
- **IEA 2DS:** IEA's 2°C Scenario is built on a projected warming limit of 2°C and is part of the annual publication "Energy Technology Perspectives", providing scenario analysis based on the development of lower carbon technology and its deployment in various sectors. The IEA ETP 2DS sets out an energy system development pathway and an emissions trajectory consistent with at least a 50% chance of limiting the average global temperature rise to 2°C. It sets the target of cutting CO2 emissions by almost 60% by 2050 (compared with 2013), followed by continued decline after 2050 until carbon neutrality is reached. It also identifies changes that help ensure a secure and affordable energy system in the long run, while emphasizing that transforming the energy sector is vital, but not enough on its own.
- **IEA 450:** IEA's World Energy Outlook 450 scenario is expressed as realizing a 50% chance of limiting warming to a 2°C rise by 2100 (originally based upon a projected warming limit of 2°C through limiting the concentration of GHG's to around 450ppm of CO2 equivalent) and offers steps by which that goal might be achieved. It references many separate measures which are required to reduce energy-related emissions from 2015 to 2040, including stronger deployment of technologies that are familiar and available at a commercial scale today, delivering close to 60% of the emissions reductions. Technologies referenced include the building of significant additional nuclear capacity and rapid CCS expansion.
- **IEA SDS:** IEA's Sustainable Development Scenario (SDS) is compatible with the Paris Agreement's less ambitious "well-below 2°C" goal. It assumes all energy-related SDGs and all current net-zero pledges are achieved, with advanced economies reaching net zero emissions by 2050, China by 2060 and all others by 2070 at the latest. It has a 50% probability of limiting global temperature rise to 1.65°C, assuming no extensive net negative emissions. With some net negative emissions after 2070, temperature rise could be reduced to 1.5°C by 2100.
- **IEA APS:** IEA's Announced Pledges Scenario (APS) takes account of all climate commitments made by governments around the world including Nationally Determined Contributions (NDCs) as well as longer-term net-zero targets and assumes they will be met in full and on time. The global emissions difference between the APS and the NZE represents the "ambition gap" that needs to be closed for governments to achieve the goals agreed in the 2015 Paris Agreement.
- **IEA STEPS (previously IEA NPS):** IEA's Stated Policies Scenario (STEPS) does not take for granted that governments will meet all announced goals. It instead looks at where the energy system might go without additional policy implementation, looking at existing policies and measures and those under development. The global emissions difference between the STEPS and the APS represents the "implementation gap" that needs to be closed for governments to achieve their announced decarbonization targets.
- **IEA CPS:** IEA's Current Policies Scenario (CPS) includes only existing energy policies. This default setting for the energy system is a benchmark against which the impact of "new" policies can be measured.
- **Greenpeace:** Refers to the Advanced Energy [R]evolution scenario. Based on Greenpeace's basic Energy [R]evolution scenario, which includes significant efforts to exploit opportunities for energy efficiency, along with large-scale integration of renewables, biofuels, and hydrogen into the energy mix, the Advanced Energy [R]evolution scenario sets out an ambitious pathway towards a fully decarbonized energy system by 2050 through much stronger efforts to move energy towards a 100% renewable energy supply. Consumption pathways remain similar to the basic scenario, but faster introduction of technologies leads to complete decarbonization. The IEA's Current Policies Scenario serves as the reference point in the development of Greenpeace's Advanced Energy Revolution scenario.
- **DDP:** The Deep Decarbonization Pathways (DDP) initiative builds and brings to the public debate realistic decarbonization pathways to 2050. These are designed to deeply reduce carbon emissions while satisfying socio-economic objectives. The pathways are developed country by country, considering in each case the specific context and highlighting key drivers of the transformation and their potential effects.
- **IRENA:** IRENA's REmap determines the potential for countries, regions and the world to scale up renewables in order to ensure an affordable and sustainable energy future. REmap assesses worldwide renewable energy potential assembled from the bottom-up, starting with country analyses – in collaboration with country experts, and then aggregating these results to arrive at a global picture. REmap accounts for renewable power technologies, but also considers technology options in heating, cooling and transport. In determining the potential to scale up renewables, REmap focuses on possible technologies pathways and assesses numerous other metrics, including: technology, sector and system costs; investment needs; externalities relating to air pollution and climate; CO2 emissions; and economic indicators such as employment and economic growth. Based on these country driven results, REmap provides insights to policy and decision makers for areas in which action is needed.
- **BNEF NEO:** Bloomberg New Energy Finance's (BNEF) New Energy Outlook (NEO) focusses on the annual long-term economic analysis of the world's power sector out to 2050. 2021's edition presents three scenarios that are aligned with the Paris Agreement, achieving net-zero emissions in 2050. The Green Scenario is a net-zero pathway where so-called 'green hydrogen' complements greater electricity use, recycling and bioenergy. The Grey Scenario assumes greater use of electricity and renewable power is complemented by carbon capture and storage technology and allows for the continued use of some fossil fuels. The Red Scenario assumes smaller, modular nuclear is deployed to complement wind, solar and battery technology in the power sector, with dedicated nuclear plants manufacturing so-called "red hydrogen".
- **NGFS scenarios Framework [Financial services only]:** To facilitate the uptake of climate scenario analysis by central banks, financial regulators, and the larger financial community, the NGFS developed a global set of scenarios and published guidance on conducting such analysis.
- **RCP 1.9:** Representative Concentration Pathway (RCP) 1.9 is the IPCC's lowest emission pathway that focuses on limiting warming to below 1.5°C by the end of the century, which is the aspirational goal of the Paris Agreement. RCPs provide a quantitative description of atmospheric pollutions over time, as well as radiative forces in 2100. In RCP 1.9, radiative forcing is limited to no more than 1.9 W/m2 above pre-industrial levels.
- **RCP 2.6:** In RCP 2.6, radiative forcing peaks at 3.1 W/m2 before returning to 2.6 W/m2 by 2100, achieved through; a shift to renewable energy sources; CO2 remaining at today's level until 2020, then decline and becoming negative in 2100; and CO2 concentrations peaking by 2050, followed by a modest decline to around 400 ppm by 2100.
- **RCP 3.4:** RCP 3.4 represents the IPCC's intermediate pathway between the very stringent RCP2.6 and the less stringent mitigation efforts associated with RCP4.5.
- **RCP 4.5:** RCP 4.5 represents one of IPCC's intermediate stabilization pathways in which radiative forcing is stabilized at approximately 4.5 W/m2 after 2100.
- **RCP 6.0:** RCP 6.0 represents one of IPCC's intermediate stabilization pathways in which radiative forcing is stabilized at approximately 6.0 W/m2 after 2100.

- **RCP 7.0:** RCP 7.0 consists of a baseline outcome rather than a mitigation target, and represents the medium-to-high end of the range of future emissions and warming resulting from no additional climate policy.
- **RCP 8.5:** RCP 8.5 represents the IPCC's high-end pathway in which radiative forcing reaches greater than 8.5 W/m² by 2100, and continues to rise for some time afterwards.
- **Transition risks**
 - Current and emerging regulation – policy developments that attempt to constrain actions that contribute to the adverse effects of climate change or policy developments that seek to promote adaptation to climate change;
 - Technology – all risks associated with technological improvements or innovations that support the transition to a lower-carbon, energy-efficient economic system;
 - Legal – all climate-related litigation claims;
 - Market – all shifts in supply and demand for certain commodities, products, and services;
 - Reputation – all risks tied to changing customer or community perceptions of an organization's contribution to or detractor from the transition to a lower-carbon economy.
- **Physical risks**
 - Acute – risks that are event-driven, including increased severity of extreme weather events, such as cyclones, hurricanes, or floods;
 - Chronic – longer-term shifts in climate patterns (e.g., sustained higher temperatures) that may cause sea level rise or chronic heat waves.

Additional information

IEA Energy Technology Perspectives (ETP)

International Energy Agency (IEA)'s comprehensive publication on energy technology focuses on the opportunities and challenges of scaling and accelerating the deployment of clean energy technologies. Additional information on this publication can be found [here](#).

Critical uncertainties

Identified using a process of scaling potential impacts and uncertainties, those meeting high for both impact and uncertainty should be considered 'critical uncertainties' and the basis for the development of scenarios. A common process for identifying critical uncertainties is the development of an impact/uncertainty grid. Further information on critical uncertainties can be found in [CDP's technical note on Scenario Analysis](#).

[3.3] Describe where and how climate-related risks and opportunities have influenced your strategy. (Source: CDP Private Markets Questionnaire 2022)

Rationale

Investors and data users are interested to know how climate-related risks and opportunities may have affected organizations' strategies. Answers to this question may be used to inform expectations about the future performance of an organization and on how resilient its strategy is to climate-related risks and opportunities.

Connection to other frameworks

TCFD

Strategy recommended disclosure b) Describe the impact of climate-related risks and opportunities on the organization's businesses, strategy, and financial planning.

SDG

Goal 12: Responsible consumption and production
Goal 13: Climate action

Response options

Please complete the following table:

Business area	Have climate-related risks and opportunities influenced your strategy in this area?	Description of influence
Products and services	Select from: <ul style="list-style-type: none"> ● Yes ● No ● Evaluation in progress ● Not evaluated 	Text field [maximum 2,400 characters]
Supply chain and/or value chain		
Investment in R&D		
Operations		

Requested content

General

- Each row in the table corresponds to a possible area of impact in a company's business. For each row, select how climate-related risks and opportunities have affected your strategy in this area.
- This question is intended to focus on the group business strategy – meaning the full corporate body on which you are reporting. However, if it is more appropriate, you may wish to comment on divisional (business unit) strategies. If you are responding to the request from a supply chain member, please also include information specific to your requesting member, i.e. relevant business units.

Description of influence (column 3)

- Describe how your strategy in this area has been influenced by climate-related risks and opportunities and the time horizon(s) it covers;
- Specify if this includes any climate change adaptation and mitigation activities.
- Include the most substantial strategic decision(s) in this area to date that have been influenced by the climate-related risks and opportunities;
- If a certain strategic decision was informed by the climate-related scenario analysis, please specify that.
- If your strategy in this area has not been influenced by climate-related risks and opportunities, explain why not.
- If the evaluation of influence is still in progress, include a company-specific description of the evaluation process used, and when it is expected to be completed.

Note for oil & gas companies, electric utilities, automotive and automotive component manufacturers, and companies with coal reserves:

- Please refer to the sector specific guidance for the risks and opportunities questions before answering this question.
- The guidance contains a number of issues that investors want these sectors to consider in answering the risks and opportunities questions and you may wish to draw together some of these issues in your answers to questions on the integration of climate change into business strategy.
- Please provide a complete answer to these questions on business strategy in the input fields provided. Do not cross-refer to the risks and opportunities answers in your response to this question.

Note for oil & gas sector companies:

- Discuss, if relevant, your methodology for the integration of regulatory and physical climate change risks into the company strategy, investment decisions and risk management, including the assumptions used.
- Where possible, provide illustrative examples of the assumptions made in specific investment decisions.
- You should also discuss - again if relevant - the diversification of your portfolio into lower-carbon and non-fossil fuel products (e.g. natural gas, biofuels, renewable energy) and strategy for development of carbon capture and sequestration technology, including technology areas of focus, and distinctive areas of strength your company believes it holds.

Please give the methodology used for the integration of future carbon prices into your hydrocarbon exploration strategy and investment decisions, with the assumptions used. Where possible, provide illustrative examples of the assumptions made in specific investment decisions.

Note for electric utility sector companies:

- Discuss any work to incorporate renewable energy, carbon capture & sequestration, cleaner coal technologies and energy storage into your strategy.

Note for transport OEMs sector companies:

- Discuss the impact on your strategy for your products at group level and, where relevant, for specific markets, including any related targets for GHG emissions performance (expressed as gCO₂e/unit distance) and include a reference to any regulatory drivers and the baseline against which performance is measured.
- Discuss expansion into hybrid/fully electric vehicles and fuel cell technology, if relevant.

Note for companies with coal reserves:

- Companies with coal reserves can refer to [CDP Technical Note: Guidance for companies with coal reserves](#) on how to disclose demand and stranded asset risk.

Note for financial services companies:

- The climate-related risks and opportunities to be considered in this question refer to lending, financial intermediary, investment and/or insurance underwriting activities of your organization, in addition to your operational activities.
- Banks:
 - Describe the potential impacts of climate-related risks and opportunities on your core businesses, products and services, including:
 - Information at the business division, sector or geography, credit quality and average tenor levels;
- Asset managers/Asset owners:
 - Under "Supply chain and/or value chain" describe how climate-related risks and opportunities are factored into your investment strategies and investee selection.
 - Also describe how each product or investment strategy may be affected by the transition to a lower-carbon economy.
- Insurance companies:
 - Describe the potential impacts of climate-related risks and opportunities on your core businesses, products and services, including:
 - Information at the business division, sector or geography levels;
 - As asset owners, insurance companies should describe how climate-related risks and opportunities are factored into relevant investment strategies – in the business' value chain. This could be described from the perspective of the total fund or investment strategy or individual investment strategies for various asset classes.

Explanation of terms

Note for financial services sector companies:

- **Products and services:** All products and services in the organization's lending, investing and insurance underwriting business as well as other products and services including financial intermediary activities that are not part of core financing activities such as financial guarantees, M&A, securities underwriting, bond issuance, etc.

- Therefore, if climate-related risks and opportunities influenced your bank lending or insurance underwriting strategy, you should select "Yes" or "Yes, for some" as appropriate for "Products and services".

Example response

Business area	Have climate-related risks and opportunities influenced your strategy in this area?	Description of influence
Products and services	Yes	Risks and opportunities related to the growing demand from customers for transparency, naturality, and food and drinks with low carbon footprint, (as reported in C2.3a Risk 6 and C2.4a Opportunity 8) have influenced our product-related strategy and product portfolio. In June 2019, our Board of Directors made a Global Transparency and Sustainability Pledge, committing to increasing the share of plant-based products in the portfolio, using more natural ingredients in our flagship brands such as Pantheon Peanut Butter, Red Rose Beetroot Paste, Gracious Hummus and increasing transparency on our packaging (e.g. disclosure of the presence of any synthetic or GMO ingredients on product labels). This gives consumers a greater variety of products and improved ability to choose them, while providing a high-quality product offering, benefiting the producers as well as preserving natural resources, promoting biodiversity, improving soil health and water quality, and reducing carbon emissions. We aim to have implemented changes to our products and packaging in line with the pledge by December 2020, prioritizing our consumer base in North America and Europe.
Supply chain and/or value chain	Evaluation in progress	Since we source 80% of our raw materials from drought-prone India and severe water stress is increasing every year, we have started placing more emphasis on conducting risk assessments for extreme weather events. In December 2019, the Board decided to employ a team of external consultants to work on developing a supply chain transparency tool. This tool will allow us to gather important information about our supply network (including sub-tier suppliers), so that we can better assess our vulnerability to natural disasters and other risks across our global supply chain. The supply chain transparency tool is expected to be fully functional by September 2020 and will be central in informing our supply chain strategy going forward.
Investment in R&D	No	Climate-related risks and opportunities have not yet influenced our R&D investment strategy, as we are initially focused on evaluating the risks and opportunities relating to our operations, supply chain and existing products and services, ensuring our business strategy is aligned in accordance with these. We expect to begin evaluating the impact of risks and opportunities on our R&D expenditures in 2020.
Operations	Yes	National and sub-national jurisdictions that account for about half of the global economy now have carbon pricing systems (as disclosed in C2.3a Risk 2). This trend is on the rise and could result in increased operational costs for our company. For example, a carbon price of €32/ton would increase our operational costs to €25.1m in Europe. This has led to our Board's strategic decision to join RE100 and commit to transition to 100% renewable electricity by 2030, with an intermediary step of 40% by 2022. In 2019, 38 of our production sites in Europe ran on 100% renewable energy and we purchased 37% of our total electricity from renewable sources such as wind farms and hydropower plants (compared with 22% in 2018). As part of this strategy, all our new plants will have renewable power generation facilities on site.

[3.4] Describe where and how climate-related risks and opportunities have influenced your financial planning. (Source: CDP Private Markets Questionnaire 2022)

Rationale

This question is seeking to understand where the identified risks and opportunities may have influenced your financial statements, and how this has been incorporated into your financial planning process.

Connection to other frameworks

TCFD

Strategy recommended disclosure b) Describe the impact of climate-related risks and opportunities on the organization's businesses, strategy, and financial planning.

Response options

Please complete the following table:

Financial planning elements that have been influenced	Description of influence
---	--------------------------

<p>Select all that apply:</p> <ul style="list-style-type: none"> • Revenues • Direct costs • Indirect costs • Capital expenditures • Capital allocation • Acquisitions and divestments • Access to capital • Assets • Liabilities • Provisions of general services [Financial services only] • Claims reserves [Financial services only] • None of the above 	<p>Text field [maximum 5,000 characters]</p>
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Requested content

General

- Climate-related issues can affect several important aspects of an organization's financial position, both now and in the future. For example, climate-related issues may have implications for an organization's capital expenditures. In turn, capital expenditures will determine the nature and amount of fixed assets, how these depreciate over time and the proportion of debt and equity to be funded on an organization's balance sheet. Climate-related issues may also carry implications for future cash flows (operating, investing, and financing activities). This question seeks to establish whether climate-related issues have already had implications on your financial planning.

Description of influence (column 2)

- Provide details on how climate-related risks and opportunities have influenced the selected elements of your financial planning. Including a case study for at least one of the elements selected.
- Specify the time horizons this planning covers.
- If you selected "None of the above", explain if there is another element of financial planning that has been influenced; or why climate-related risks and opportunities have not yet influenced your financial planning.

Note for financial services sector companies:

The climate-related risks and opportunities to be considered in this question refer to lending, financial intermediary, investment and/or insurance underwriting activities of your organization, in addition to your operational activities.

- Banks:
 - Describe the potential financial impacts of the identified climate-related risks and opportunities on your core businesses, products and services. For example, you may do this by translating climate risk data into probability of default, total committed exposure and/or exposure at default.
- Insurance companies:
 - Describe the potential financial impacts of climate-related risks and opportunities on your core businesses, products and services. For example, you may do this by translating climate risk data into probability of default and/or exposure at default.
 - As asset owners, insurance companies should describe how climate-related risks and opportunities may affect the financial returns of investment strategies. This could be described from the perspective of the total fund or investment strategy or individual investment strategies for various asset classes.
- Asset managers:
 - Where appropriate, describe how climate-related risks and opportunities may affect the financial returns of relevant products or investment strategies.
 - Asset managers should also describe how each product or investment strategy might be affected by the transition to a lower-carbon economy.

Explanation of terms

- **Financial planning:** in line with the TCFD recommendations, refers to an organization's consideration of how it will achieve and fund its objectives and strategic goals. Financial planning allows organizations to assess future financial positions and determine how resources can be utilized in pursuit of short- and long-term objectives. As part of financial planning, organizations often create "financial plans" that outline the specific actions, assets, and resources (including capital) necessary to achieve these objectives over a 1- 5 year period. However, financial planning is broader than the development of a financial plan as it includes long-term capital allocation and other considerations that may extend beyond the typical 3-5 year financial plan (e.g., investment, research and development, manufacturing, and markets).
- **Revenue:** Income arising in the course of an entity's ordinary activities (less returns, allowances and discounts) - before deducting costs for the goods/services sold and operating expenses to arrive at profit (based on the [International Financial Reporting Standard](#)).
- **Direct costs:** Also known as "costs of goods or services sold". These expenses can be attributed to the manufacture of a particular product or the provision of a particular service.
- **Indirect costs:** Also known as 'operating cost' or 'overheads'. This generally refers to the essential expenses incurred in order to maintain the business including wages, rent, transport, energy (electricity, fuel, etc.), maintenance, and so on. These expenses cannot be attributed to the manufacture of a particular product or the provision of a particular service - they are standard costs that apply regardless of the volume of goods produced.
- **Capital allocation:** refers to distributing and investing a company's financial resources in ways that will increase its efficiency, and maximize its profits. Some options for allocating capital could include returning cash to shareholders via dividends, repurchasing shares of

stock, issuing a special dividend, or increasing a research and development (R&D) budget. Alternatively, the company may opt to invest in growth initiatives, which could include acquisitions and organic growth expenditures.

- **Capital expenditure:** Capital expenditure is a measure of the value of purchases of fixed assets such as property, buildings, an industrial plant, technology, or equipment. Put differently, CapEx is any type of expense that a company capitalizes, or shows on its balance sheet as an investment, rather than on its income statement as an expenditure.
- **Acquisition:** Obtaining ownership and control by one firm, in whole or in part, of another firm or business entity.
- **Divestment:** A process for selling assets for financial, environmental, political or social goals. In the progression to a low-carbon economy, organizations are recognizing climate-related transition and physical risks posed to minimize exposure to stranded assets (assets that have suffered unanticipated or premature write-downs, devaluations or conversion to liabilities).
- **Access to capital:** Cash flows from sources other than an organization's sales and other revenues. It includes cash infusions from investors or securing lines of credit with banks and other lenders.
- **Assets:** Entities functioning as stores of value and over which ownership rights are enforced by institutional units, individually or collectively, and from which economic benefits may be derived by their owners by holding them, or using them, over a period of time (the economic benefits consist of primary incomes derived from the use of the asset and the value, including possible holding gains/losses, that could be realized by disposing of the asset or terminating it).
- **Liabilities:** An obligation which requires one unit (the debtor) to make a payment or a series of payments to the other unit (the creditor) in certain circumstances specified in a contract between them.

Example Response

Financial planning elements that have been influenced	Description of influence
Capital expenditures	In 2017 our organization introduced an internal price on carbon into our capital expenditures approval process, with the aim to redirect investments towards clean technologies, lower-carbon solutions, and renewable energy projects across our operations and supply chain. We conducted a benchmark study and decided to set the price at a relatively high level, 36€/tCO2e, to internalize the potential future cost of carbon in the long term. Returns on investments are assessed with the impact of the carbon implication. This enables management to arbitrate between different options and to choose the most virtuous and efficient ones in order to achieve our organization's strategic goals. This is a long-term measure, and the price will be periodically reviewed and updated. As a direct result of this implemented internal price on carbon we have approved a project of installing solar panels in our factories in Spain that will reduce our demand for purchased energy by 30% in the next 5 years.

[3.5] Does your organization's strategy include a transition plan that aligns with a 1.5°C world? (Source: CDP Climate Change 2022 Questionnaire)

Rationale

Developing a climate transition plan provides certainty to data users that a company is aligning to the long-term climate goals and that its business model will continue to be relevant in a net-zero carbon economy. Collecting feedback on the transition plan allows shareholders to review and raise resolutions related to progress. This question allows companies to demonstrate transparency on their transition plans and associated feedback mechanisms.

Connection to other frameworks

TCFD

Strategy recommended disclosure b) Describe the impact of climate-related risks and opportunities on the organization's businesses, strategy, and financial planning.

SDG

Goal 13: Climate action

Response options

Please complete the following table:

Transition plan	Publicly available transition plan	Mechanism by which feedback is collected from shareholders on your transition plan	Description of feedback mechanism	Frequency of feedback collection	Attach any relevant documents which detail your transition plan (optional)	Explain why your organization does not have a transition plan that aligns with a 1.5°C world and any plans to develop one in the future	Explain why climate-related risks and opportunities have not influenced your strategy
Select from: <ul style="list-style-type: none"> ● Yes, we have a transition plan which aligns with a 1.5°C world ● No, but our strategy has been influenced by climate-related risks and 	Select from: <ul style="list-style-type: none"> ● Yes ● No 	Select from: <ul style="list-style-type: none"> ● Our transition plan is voted on at Annual General Meetings (AGMs) ● We have a different feedback mechanism in place 	Text field [maximum 2,500 characters]	Select from: <ul style="list-style-type: none"> ● More frequently than annually ● Annually ● Less frequently than annually 	[Functionality that allows for several attachments]	Text field [maximum 2,500 characters]	Text field [maximum 2,500 characters]

Transition plan	Publicly available transition plan	Mechanism by which feedback is collected from shareholders on your transition plan	Description of feedback mechanism	Frequency of feedback collection	Attach any relevant documents which detail your transition plan (optional)	Explain why your organization does not have a transition plan that aligns with a 1.5°C world and any plans to develop one in the future	Explain why climate-related risks and opportunities have not influenced your strategy
<p>opportunities, and we are developing a transition plan within two years</p> <ul style="list-style-type: none"> No, our strategy has been influenced by climate-related risks and opportunities, but we do not plan to develop a transition plan within two years No, and our strategy has not been influenced by climate-related risks and opportunities 		<ul style="list-style-type: none"> Our transition plan is voted on at AGMs and we also have an additional feedback mechanism in place We do not have a feedback mechanism in place, but we plan to introduce one within the next two years We do not have a feedback mechanism in place, and we do not plan to introduce one within the next two years Not applicable as our organization does not have shareholders 					

Requested content

General

- Note for financial services sector companies: Questions C-FS14.3 and C-FS14.3a ask about actions to align your portfolio with a 1.5°C world, and whether you assess if your clients/investees' business strategies are aligned with a 1.5°C world.

Transition plan (column 1)

- You should select "Yes, we have a transition plan which aligns with a 1.5°C world" if you have developed a plan for how to transition your company to a business model compatible with the level of decarbonization required to keep global temperature increase to 1.5°C compared to pre-industrial temperatures. See "Explanation of Terms" for more information. If you select this option, you will be asked to provide further details on your transition plan in subsequent columns.
- You should select "No, but our strategy has been influenced by climate-related risks and opportunities, and we are developing a transition plan within two years" if climate-related risks and opportunities have already influenced your strategy and/or financial planning and you either:
 - have not developed a transition plan but intend to develop one which aligns with a 1.5°C world within two years; or
 - have developed a climate transition plan which does not yet align with a 1.5°C world (as per the definition in "Explanation of terms") and intend to align it within two years.
- If you select "No, and our strategy has not been influenced by climate-related risks and opportunities", you will have the opportunity to explain further in column 8 "Explain why climate-related risks and opportunities have not influenced your strategy".

Publicly available transition plan (column 2)

- This column is only presented if "Yes, we have a transition plan..." is selected in column 1.

Mechanism by which feedback is collected from shareholders on your transition plan (column 3)

- This column is only presented if "Yes, we have a transition plan..." is selected in column 1.
- You should select "Our transition plan is voted on at Annual General Meetings" if you hold AGMs (as defined in the Explanation of Terms) during which shareholders vote on your organization's climate transition plan. Note that this option is applicable even if your transition plan is already in progress, as it should be continually adjusted and voted on by shareholders (rather than a one-time sign-off). Furthermore, shareholders should be given the opportunity to provide feedback on progress made against your transition plan.
- You should select "We have a different feedback mechanism in place" if your transition plan is not voted on at AGMs, but there is another way shareholders can provide feedback on the contents and progress of your climate transition plan.
- You should select "Not applicable as our organization does not have shareholders" if, for example, your organization is privately held.

Description of feedback mechanism (column 4)

- This column is only presented if “We have a different feedback mechanism in place” or “Our transition plan is voted on at AGMs and we also have an additional feedback mechanism in place” is selected in column 3.
- Briefly describe the process shareholders use to provide feedback on the contents and progress of your climate transition plan. You may also provide any additional information to clarify your selection in column 3, for example, why you do not hold AGMs, or why you have more than one feedback mechanism in place.

Frequency of feedback collection (column 5)

- This column is only presented if “We have a different feedback mechanism in place” or “Our transition plan is voted on at AGMs and we also have an additional feedback mechanism in place” is selected in column 3.

Attach any relevant documents which detail your transition plan (optional) (column 6)

- This column is only presented if “Yes, we have a transition plan...” is selected in column 1.
- You may attach one or more documents which include your climate transition plan e.g. your annual report, your sustainability report, and/or a separate transition plan document.
- Note that CDP considers a credible transition plan to be succinctly integrated into an organization’s existing mainstream filings. Please refer to the [CDP Climate Transition Plan technical note](#) for more details.

Explain why your organization does not have a transition plan that aligns with a 1.5°C world and any plans to develop one in the future (column 7)

- This column is only presented if “No, but our strategy has been influenced by climate-related risks and opportunities, and we are developing a transition plan within two years” or “No, our strategy has been influenced by climate-related risks and opportunities, but we do not plan to develop a transition plan within two years” is selected in column 1.
- Explain why you have not developed a climate transition plan, or why your transition plan is not aligned with a 1.5°C world (as per the definition in “Explanation of terms”).

Explain why climate-related risks and opportunities have not influenced your strategy (column 8)

- This column is only presented if “No, and our strategy has not been influenced by climate-related risks and opportunities” is selected in column 1.
- Your answer should be company-specific and include:
 - Why climate-related risks and opportunities have not influenced your business strategy and/or financial planning; and
 - Whether you expect them to in the future. For example, climate change may have little effect on your business because of the nature of your goods/services. In that case, please give as complete an explanation as possible.
- [Oil and gas only] Discuss whether you have considered integrating regulatory and physical climate change risks into your business strategy, investment decisions and risk management. You should also discuss whether you have considered the diversification of your portfolio into lower-carbon and non-fossil fuel products (e.g. natural gas, biofuels, renewable energy), and development of carbon capture and sequestration technology. If relevant, provide the methodology used for any integration of future carbon prices into your hydrocarbon exploration strategy and investment decisions, and the assumptions used. Where possible, provide illustrative examples of the assumptions made in specific investment decisions.
- [Electric utilities only] Discuss any considerations to incorporate renewable energy, carbon capture & sequestration, cleaner coal technologies and energy storage into your strategy.
- [Transport OEMs only] Discuss whether you have considered the impact of climate-related issues on your strategy for your products at group level and, where relevant, for specific markets, including the impact of existing regulatory drivers. Discuss expansion into hybrid/fully electric vehicles and fuel cell technology, if relevant.

Explanation of terms

- **Climate transition plan:** a time-bound action plan that clearly outlines how an organization will achieve its strategy to pivot its existing assets, operations, and entire business model towards a trajectory that aligns with the latest and most ambitious climate science recommendations, i.e., halving greenhouse gas (GHG) emissions by 2030 and reaching net-zero by 2050 at the latest, thereby limiting global warming to 1.5 degrees Celsius. Please refer to the [CDP Climate Transition Plan technical note](#) for more details.
- **Strategy:** In line with TCFD recommendations, refers to an organization’s desired future state. An organization’s strategy establishes a foundation against which it can monitor and measure its progress in reaching that desired state. Strategy formulation generally involves establishing the purpose and scope of the organization’s activities and the nature of its businesses, taking into account the risks and opportunities it faces and the environment in which it operates.
- **Financial planning:** In line with TCFD recommendations, refers to an organization’s consideration of how it will achieve and fund its objectives and strategic goals. Financial planning allows organizations to assess future financial positions and determine how resources can be utilized in pursuit of short- and long-term objectives. As part of financial planning, organizations often create “financial plans” that outline the specific actions, assets, and resources (including capital) necessary to achieve these objectives over a 1-5 year period. However, financial planning is broader than the development of a financial plan as it includes long-term capital allocation and other considerations that may extend beyond the typical 3-5 year financial plan (e.g., investment, research and development, manufacturing, and markets).
- **Annual General Meeting (AGM):** (or annual shareholder meeting) is a yearly gathering between the shareholders of a company and its board of directors. It is primarily held to enable shareholders to vote on company issues, including the selection of the company’s board of directors.

- **Alignment with a 1.5°C world:** refers to the Paris Agreement long-term temperature goal, as expressed in relevant IPCC reports, in particular [the IPCC Sixth Assessment Report \(AR6\)](#) and [the IPCC Special Report on Global Warming of 1.5°C \(SR1.5\)](#). According to the Science-based Targets initiative, aligning with a 1.5°C world currently means reducing Scope 1, 2 and 3 emissions to zero or close to zero and neutralizing any residual emissions by 2050 at the latest.

[3.6] Quantify the percentage share of your spending/revenue that is aligned with your organization’s transition to a 1.5°C world. (Source: CDP Climate Change 2022 Questionnaire)

Rationale

Data users are interested in understanding how your current and future spending and revenue is aligned with a 1.5°C world. This question provides data users with transparency on your climate transition plan in financial terms.

Response options

Please complete the following table. You are able to add rows by using the “Add Row” button at the bottom of the table.

Financial metric	Percentage share of selected financial metric aligned with a 1.5°C world in the reporting year (%)	Percentage share of selected financial metric planned to align with a 1.5°C world in 2025 (%)	Percentage share of selected financial metric planned to align with a 1.5°C world in 2030 (%)	Describe the methodology used to identify spending/revenue that is aligned with a 1.5°C world
Select from:				
<ul style="list-style-type: none"> ● Revenue ● CAPEX ● OPEX ● Other, please specify 	Percentage field [enter a percentage from 0-100]	Percentage field [enter a percentage from 0-100]	Percentage field [enter a percentage from 0-100]	Text field [maximum 4,000 characters]

[Add row]

Requested content

General

- This question aims to understand your organization’s unique financial pathway to transition your company to a business model compatible with the level of decarbonization required to keep global temperature increase to 1.5°C compared to pre-industrial temperatures.
- It is up to each company to select the relevant financial metric(s) and methodology(ies) for identifying the alignment of its expenditures/revenues with its climate transition plan. The non-exhaustive list of examples include:
 - Revenue derived from the sale of low-carbon products or services as defined by recognized taxonomies (e.g. The EU Taxonomy for environmentally sustainable economic activities, Climate Bonds Taxonomy, The IEA Energy Technology Perspectives Clean Energy Technology Guide, etc.) could be included in the percentage share aligned with a 1.5°C world.
 - Spending on the implementation of emissions reduction initiatives and/or investment in new low-carbon assets could be included in the percentage share aligned with a 1.5°C world. Equally, R&D spending for new low-carbon products and/or services as defined by recognized taxonomies (e.g. Climate Bonds Taxonomy, The IEA Energy Technology Perspectives Clean Energy Technology Guide, etc.) could be included in the percentage share aligned with a 1.5°C world.
 - Spending/revenue that is related to activities which do not directly contribute to your organization’s climate transition (e.g. revenue from sales of equipment used in both low-carbon and high-emitting assets etc.) should not be included in the percentage share aligned with a 1.5°C world.
- You can make your response more granular by adding multiple rows and selecting “Other, please specify”. For example, if in addition to total OPEX, you wish to report several distinct categories of OPEX (e.g. utilities, business travel, R&D expenses, etc.) separately, you may do so by adding multiple rows and using “Other, please specify” to specify the relevant OPEX category.
- If you are reporting any type of spending on or revenue from low-carbon products and/or services, specify in column 5 whether it pertains to mature technologies or non-mature technologies (e.g., if you finance Emerging Climate Technologies). If this pertains to both mature and non-mature technologies, please provide the breakdown for these.
- Note that this question requests information on spending/revenue that relates to climate mitigation, not climate adaptation.
- It is acknowledged that figures for future years will be estimates. Assumptions underlying these estimates should be disclosed in column 5.

Financial metric (column 1)

- Add a row for each financial metric you would like to provide information for.
- Select “Other, please specify” to provide information for a financial metric that is not listed.

Percentage share of selected financial metric aligned with a 1.5°C world in the reporting year (%) (column 2)

- Enter the spending/revenue that you consider to be aligned with your organization's climate transition for this financial metric as a percentage of your total spending/revenue for this financial metric in the reporting year.
- This figure should be based on your company-wide financial statement for the reporting year, consistent with your organizational boundary as disclosed in C0.5.

Percentage share of selected financial metric planned to align with a 1.5°C world in 2025 (%) (column 3)

- Enter the spending/revenue for this financial metric that you plan to align with your organization's climate transition as a percentage of your total planned spending/revenue for this financial metric in 2025.

Percentage share of selected financial metric planned to align with a 1.5°C world in 2030 (%) (column 4)

- Enter the spending/revenue for this financial metric that you plan to align with your organization's climate transition as a percentage of your total planned spending/revenue for this financial metric in 2030.

Describe the methodology used to identify spending/revenue that is aligned with a 1.5°C world (column 5)

- Provide the criteria used to determine the alignment of the spending/revenue with your organization's transition to a business model compatible with a 1.5°C world.
- Provide examples of the activities, assets, technologies, products and/or services for which you classified the associated spending/revenue as aligned with a 1.5°C world.
- You may also provide examples of activities, assets, technologies, products and/or services for which you did not classify the associated spending/revenue as aligned with a 1.5°C world.
- Comment on how your organization's spending/revenue that is aligned with a 1.5°C world is estimated to change over time and describe the assumptions underlying the estimation.

Explanation of terms

- **Climate transition plan:** a time-bound action plan that clearly outlines how an organization will achieve its strategy to pivot its existing assets, operations, and entire business model towards a trajectory that aligns with the latest and most ambitious climate science recommendations, i.e., halving greenhouse gas (GHG) emissions by 2030 and reaching net-zero by 2050 at the latest, thereby limiting global warming to 1.5. Please refer to the [CDP Climate Transition Plan technical note](#) for more details.
- **Alignment with a 1.5°C world:** refers to the Paris Agreement long-term temperature goal, as expressed in relevant IPCC reports, in particular [the IPCC Sixth Assessment Report \(AR6\)](#) and the [IPCC Special Report on Global Warming of 1.5°C \(SR1.5\)](#). According to the Science-based Targets initiative, aligning with a 1.5°C world currently means reducing Scope 1, 2 and 3 emissions to zero or close to zero and neutralizing any residual emissions by 2050 at the latest.
- **Emerging Climate Technology (ECT):** a commercially promising technology that addresses climate mitigation challenges but needs to attract enough investment to deploy the technology and develop business models and markets for the product or services it produces. Eventually it may become a successful innovation deployed at scale, generating new markets or profoundly disrupting established (fossil-based) ones (Auerswald et al., 2005). For a more detailed definition and guidance, refer to the [ECT initiative](#).

Example response

Financial Metric	Percentage share of selected financial metric aligned with a 1.5°C world in the reporting year (%)	Percentage share of selected financial metric planned to align with a 1.5°C world in 2025 (%)	Percentage share of selected financial metric planned to align with a 1.5°C world in 2030 (%)	Describe the methodology used to identify spending/revenue that is aligned with a 1.5°C world
Company A Response				
Revenue	2%	4%	30%	<i>Our automobile manufacturing business currently produces both vehicles with internal combustion engines and electric vehicles. We have accounted as 'aligned with a 1.5°C world' the revenue generated from sales of electric vehicles only. We estimate that our revenue from EVs will increase in the future due to regulatory requirements and shifting consumer preferences. To estimate the percentage share in 2025 and 2030 we modelled the results from a recent consumer survey. To estimate the demand of EV vehicles in different jurisdictions we carried out a policy analysis and modelled the emergence of future regulations. In our calculation we excluded revenues from ICE vehicles and revenues from sales of equipment used in both ICE and EVs, as we classed such equipment as neutral.</i>
Company B Response				

CAPEX	10%	23%	42%	We currently generate energy from both renewable energy and fossil fuel energy generation facilities. We have accounted only the CAPEX associated with our renewable energy assets as 'aligned with a 1.5°C world'. As part of our net-zero by 2045 commitment, we intend to triple our renewable energy capacity by 2030 and exit our coal generation by 2025 and gas generation by 2040. We are therefore planning to increase the CAPEX associated with renewables from 10% to 42% of our total CAPEX by 2030.
Company C Response				
Other, please specify (OPEX - R&D expenses)	18%	30%	60%	Alongside our dairy business, we produce plant-based milks and yogurt. We have accounted the R&D expenses related to these plant-based products as 'aligned with a 1.5°C world'. R&D expenses are accounted for in our financial statements as a subset of OPEX. Based on trends over the last ten years, we anticipate consumer demand for our plant-based products to continue to increase over time. Therefore, we estimate that the share of our total R&D that is on plant-based dairy alternatives will increase to 60% by 2030 to meet this demand.

[3.7] Do you classify any of your existing goods and/or services as low-carbon products? (Source: CDP Climate Change 2022 Questionnaire)

Rationale

This question provides valuable information to investors who are seeking to increase their investment in companies providing low-carbon goods and services.

Connection to other frameworks

SDG

Goal 13: Climate action

Response options

Select one of the following options:

- Yes
- No

Requested content

General

- Low-carbon products and/or services are important to aid the transition to a net-zero carbon economy and to ensure that global average temperature increase above pre-industrial level stays below 1.5°C.
- While there are various low-carbon product/service taxonomies and definitions, CDP broadly defines them as products or services which have comparatively lower emissions across their entire life cycle (i.e. from material acquisition through to product end-of-life) when compared to a baseline (business-as-usual) scenario or reference product of a similar function. Note that a product can only be considered low-carbon if its production and use does not prevent and/or contributes to reaching net-zero by 2050 or sooner. In that respect, any fossil fuel (including natural gas) energy generation not fitted with carbon capture and storage should not be considered as low-carbon. See "Additional information" for more guidance on how to define a low-carbon product or service.
- The reduction in life cycle emissions between the baseline scenario or reference product and the low-carbon product or service is commonly referred to as the "avoided emissions".
- There are various circumstances in which a company might consider that the use of its goods and services by others has the potential to reduce GHG emissions.

- For example, an insulation company might consider that the installation of its insulation in another organization's premises might reduce the consumption of gas to heat the building, with the consequent reduction of GHG emissions from the property. Similarly, a consultancy providing advice services on energy efficiency/emissions reductions or a manufacturer producing a product with lower energy use requirements compared with equivalent products on the market could also consider themselves to reduce the GHG emissions of others.
- Note that a company generating renewable electricity and selling it to a third party would be an example of this. In this case, the third party would calculate their Scope 2 market-based emissions with a zero emissions factor and, providing that the grid average factor is not zero, this would enable that third party to avoid emissions.

Explanation of terms

- **Baseline scenario:** A reference case that represents the events or conditions most likely to occur in the absence of the low-carbon product in the consequential approach to estimating avoided emissions.
- **Reference product:** The product against which the low-carbon product is compared in the attributional approach to estimating avoided emissions.
- **Attributional approach:** The most commonly used approach at present to estimate avoided emissions - measures the difference in total life-cycle GHG emissions between the low-carbon product(s) or service(s) and a reference product or service that provides an equivalent function.
- **Consequential approach:** Measures the sum of total, system-wide changes in emissions or removals occurring because of the low-carbon product(s) or service(s) when compared to a baseline (business-as-usual) scenario without the low-carbon product. This approach helps to answer the question "What are the GHG impacts related to the full share of the activities that are expected to change when producing, consuming, and disposing of the product?".

Additional information

How do you define a low-carbon product?

- Despite the increasing focus from investors on low-carbon products, there remains a level of ambiguity over the definition of what constitutes a 'low-carbon product'. Instead, there has been a greater focus on the benefits of their creation and use, one of which is aiding in the transition towards a net-zero carbon economy operating within the limits set out by leading climate scientists to ensure that global average temperature increase above pre-industrial level stays below 1.5°C.
- Taxonomies, such as the [Climate Bonds Taxonomy](#), are similarly based on this scientific criterion. At this stage, CDP encourages companies to use this criterion when evaluating whether a product is low carbon or not (i.e., companies should evaluate a product or service as low carbon if it is compatible with the level of decarbonization required to keep global temperature increase to 1.5°C compared to pre-industrial temperatures).
- Therefore, while CDP encourages the development of common definitions across global markets about what constitutes a 'low-carbon product', companies should evaluate their low-carbon products in relation to their contribution to a net-zero carbon economy. Different goods and services will have pertinent characteristics in which they can do this. This can include improving the energy efficiency of certain technologies so that they are consistent with avoiding dangerous climate change or contributing to the decarbonization of high-emitting industries.

[3.7a] (Yes) Provide details of your products and/or services that you classify as low-carbon products. (Source: CDP Climate Change 2022 Questionnaire)

Rationale

This question provides valuable information to investors who are seeking to increase their investment in companies providing low-carbon goods and services.

Connection to other frameworks

SDG

Goal 12: Responsible consumption and production

Goal 13: Climate action

2018 RobecoSAM Corporate Sustainability Assessment (DJSI)

Products

Response options

Please complete the following table. You are able to add rows by using the "Add Row" function at the bottom of the table.

Level of aggregation	Taxonomy used to classify product(s) or service(s) as low-carbon	Type of product(s) or service(s)	Description of product(s) or service(s)	Have you estimated the avoided emissions of this low-carbon product(s) or service(s)	Methodology used to calculate avoided emissions	Life cycle stage(s) covered for the low-carbon product(s) or services(s)
Select from:	Select from:	Select from dropdown list below	Text field [maximum 1,500 characters]	Select from: <ul style="list-style-type: none"> • Yes 	Select from:	Select from: <ul style="list-style-type: none"> • Cradle-to-gate

Level of aggregation	Taxonomy used to classify product(s) or service(s) as low-carbon	Type of product(s) or service(s)	Description of product(s) or service(s)	Have you estimated the avoided emissions of this low-carbon product(s) or service(s)	Methodology used to calculate avoided emissions		Life cycle stage(s) covered for the low-carbon product(s) or services(s)
<ul style="list-style-type: none"> Product or service Group of products or services 	<ul style="list-style-type: none"> Low-Carbon Investment (LCI) Registry Taxonomy Climate Bonds Taxonomy The EU Taxonomy for environmentally sustainable economic activities Green Bond Principles (ICMA) The IEA Energy Technology Perspectives Clean Energy Technology Guide No taxonomy used to classify product(s) or service(s) as low carbon Other, please specify 			<ul style="list-style-type: none"> No 	<ul style="list-style-type: none"> Addressing the Avoided Emissions Challenge-Chemicals sector The Avoided Emissions Framework (AEF) Evaluating the carbon-reducing impacts of ICT Estimating and Reporting the Comparative Emissions Impacts of Products (WRI) Guidelines for Assessing the Contribution of Products to Avoided Greenhouse Gas Emissions (ILCA) Methodology for Environmental Life-Cycle Assessment of Information and Communication Technology Goods, Networks and Services (ITU-TL.1410) Other, please specify 	<ul style="list-style-type: none"> Cradle-to-grave Cradle-to-cradle/closed loop production Cradle-to-gate + end-of-life stage Gate-to-gate Use stage End-of-life stage Other, please specify Not applicable 	
Functional unit used	Reference product/service or baseline scenario used	Life cycle stage(s) covered for the reference product/service or baseline scenario	Estimated avoided emissions (metric tons CO ₂ e per functional unit) compared to reference product/service or baseline scenario	Explain your calculation of avoided emissions, including any assumptions	Revenue generated from low-carbon product(s) or service(s) as % of total revenue in the reporting year		
Text field [maximum 500 characters]	Text field [maximum 500 characters]	Select from: <ul style="list-style-type: none"> Cradle-to-gate Cradle-to-grave Cradle-to-cradle/closed loop production Cradle-to-gate + end-of-life stage Gate-to-gate Use stage End-of-life stage Other, please specify Not applicable 	Numerical field [enter a number from 0-99,999,999,999 using a maximum of 10 decimal places and no commas]	Text field [maximum 2,500 characters]	Numerical field [enter a number from 0-100 using a maximum of 2 decimal places and no commas]		

[Add Row]

Type of product(s) or service(s) drop-down options:

Select one of the following options:

Power

- Dry steam plant
- Flash steam plant
- Flywheel

- Geothermal electricity
- Hydropower
- Large-scale light-water nuclear reactor
- Liquid air energy storage (LAES)
- Lithium-ion batteries
- Multi-junction cell
- Onshore wind
- Organic Rankine cycle
- Parabolic trough
- Pumped storage
- Seabed fixed offshore wind turbine
- Small-scale light-water nuclear reactor
- Solar PV
- Solar tower
- Other, please specify

Heat

- Geothermal heat management
- Large-scale heat pump
- Latent heat storage (LHS)
- Solar thermal district heating
- Other, please specify

Biofuels

- Anaerobic digester
- Bioethanol
- Biomass gasification
- Fatty acid methyl ester (FAME)
- Hydrogenated vegetable oil
- Other, please specify

Hydrogen

- Electrolysis
- Hydrogen pipelines
- Hydrogen storage tanks
- Salt cavern hydrogen storage
- Other, please specify

Ammonia

- Ammonia tankers
- Other, please specify

Batteries

- Copper recycling
- Cathode recycling
- Other, please specify

Road

- Compressed biogas engines
- Ethanol-fuelled diesel engine
- Hydrogen fuel cell
- Hydrogen Refuelling Station
- Liquified biogas engines
- Lithium-ion batteries

- Polymer electrolyte membrane fuel cell
- Other, please specify

Rail

- Magnetic levitation
- Other, please specify

Shipping

- Ammonia bunkering
- Cold ironing, alternative maritime power
- Foul Release Hull Coating
- Liquified biogas engines
- Rudder bulb
- Other, please specify

Aviation

- Geared Turbo Fan/ Ultra-High Bypass Ratio engine
- Other, please specify

Chemicals and plastics

- Chemical absorption of CO2
- Physical absorption of CO2
- Other, please specify

Iron and steel

- Chemical absorption of CO2
- Other, please specify

Cement and concrete

- Calcined clay
- Other, please specify

Pulp and paper

- Lignin extraction
- Black liquor gasification
- Other, please specify

Aluminum

- Additive manufacturing
- Other, please specify

CO2 storage

- CO2-enhance oil recovery
- Saline formation
- Other, please specify

Buildings construction and renovation

- Building orientation: Lighting
- Building orientation: Thermal performance
- Composite materials
- Dual flow ventilation
- Dynamic simulation
- Foam, caulk, tape or gaskets
- Modular components
- Natural ventilation
- Pre-casting
- Structural Insulated Panel
- Thick crystal products or thin-film products
- Other, please specify

Heating and cooling

- Advanced heat exchanger
- Air-source heat pump using heat recovery
- Aquifer thermal energy storage (ATES)
- Borehole thermal energy storage (BTES)
- Central heat pump water heaters
- Chilled water storage
- Ground-source heat pump
- Hot water tank
- Hydrogen boiler
- Pellets burning stove and boiler
- Solid-liquid ice storage
- State-of-the-art air-to-air technology
- Wood burning stove
- Other, please specify

Cooking

- Bag digester
- Composite material digester
- Improved biomass cooking stove
- Induction cooker
- LPG cooking stove
- Vitroceramic/hot plate cooking stoves
- Other, please specify

Lighting

- Conventional LED
- Organic LED
- Polymer LED
- Other, please specify

Systems integration

- Double smart grid
- Smart meter
- Other, please specify

CO2 transport

- Pipeline
- Other, please specify

Other

- Hybrid flexible demand and battery network
- Induction heating for large-scale industrial processes
- Infrared heating for large-scale industrial processes
- Other, please specify

Requested content**Level of aggregation (column 1)**

- Select from the drop-down menu what level of aggregation you wish to report on in this row. For example, you may only produce one product that can be classified as 'low carbon.' In this case you may want to report at the product level of aggregation. Alternatively, if your company produces several low carbon products that have a similar function, you may wish to report at the "Group of products or services" level.
- Note that you can add multiple rows to this table and report different levels of aggregation. For each row, please select the level of aggregation that is most appropriate to your stakeholders.

Taxonomy used to classify product(s) or service(s) as low carbon (column 2)

- As investors seek to increase the proportion of their portfolio invested in low carbon products there is an effort to establish standardized taxonomies to classify and define low-carbon products and services.
- Select the taxonomy used to classify the product(s) or service(s) as low-carbon. If you used a taxonomy that is not listed, select "Other, please specify" and state the taxonomy used.
- If you are reporting a product or service that you consider to be low-carbon, but it has not been classified as such by any taxonomy, select "No taxonomy used to classify product(s) or service(s) as low-carbon".

Type of product(s) or service(s) (column 3)

- Select the category and type of product or service from the list of options provided, which have been developed using the [IEA Energy Technology Perspectives \(ETP\) Clean Energy Technology Guide](#) and the [Climate Bonds Taxonomy](#).
- If the product(s) or service(s) you are disclosing does not fall into any of the types provided, select "Other". If the product(s) or service(s) is not listed within the relevant type of product/service, select "Other, please specify".

Description of product(s) or service(s) (column 4)

- Use this column to describe the product(s) or service(s) that you are disclosing in this row.
- If you have selected "No taxonomy used to classify product(s) or service(s) as low-carbon" in column 2, provide a rationale as to why you consider the product(s) or service(s) to be low-carbon.

Have you estimated the avoided emissions of this low-carbon product(s) or services(s)? (column 5)

- The reduction in life cycle emissions between a baseline (business-as-usual) scenario or reference product and the low-carbon product or service is commonly referred to as the "avoided emissions".
- Indicate whether your organization has attempted to calculate the avoided emissions of the low-carbon product(s) or service(s) described in column 4. You will be requested to provide details of your estimation approach in the subsequent columns.
- To estimate the avoided emissions of a low-carbon product or service, companies could follow either an "attributional" or "consequential" estimation approach:
 - **An attributional estimation approach** – the most commonly used approach at present - measures the difference in total life-cycle GHG emissions between the low-carbon product(s) or service(s) and a reference product or service that provides an equivalent function.
 - **A consequential estimation approach** measures the sum of total, system-wide changes in emissions or removals occurring because of the low-carbon product(s) or service(s) when compared to a baseline (business-as-usual) scenario without the low-carbon product. This approach helps to answer the question "What are the GHG impacts related to the full share of the activities that are expected to change when producing, consuming, and disposing of the product?".
- For more information on these approaches refer to WRI's paper "[Estimating and Reporting the Comparative Emissions Impacts of Products](#)" and the [Avoided Emissions Framework](#).

Methodology used to calculate avoided emissions (column 6)

- This column only appears if you select "Yes" in "Have you estimated the avoided emissions of this low-carbon product(s) or service(s)" (column 5).
- Methodologies to calculate avoided emissions are still in the infancy of their development. CDP will keep refining the list of methodologies to best reflect those that are considered best practice.

Life cycle stage(s) covered for the low-carbon product(s) or service(s) (column 7)

- This column only appears if you select "Yes" in "Have you estimated the avoided emissions of this low-carbon product(s) or service(s)" (column 5).
- Select the life cycle stages of the low-carbon product(s) or service(s) covered in your avoided emissions calculation. Refer to the "Explanation of terms" for definitions of the life cycle stages.
- Where practical, a full life-cycle approach (cradle-to-grave or cradle-to-cradle/closed loop production) should be taken to estimate the avoided emissions of the low-carbon product(s) or service(s).
- If you have not used a life cycle approach, select "Not applicable" and explain why not in column 12 "Explain your calculation of avoided emissions, including any assumptions".

Functional unit used (column 8)

- This column only appears if you select "Yes" in "Have you estimated the avoided emissions of this low-carbon product(s) or service(s)" (column 5).
- Avoided emissions are usually expressed in terms of a functional unit, which should be applicable to both the low-carbon product(s) or service(s) and the reference product/service or baseline (business-as-usual) scenario.
- The functional unit refers to the performance characteristics and services delivered by the product(s) or service(s) and should be clearly defined and measurable.
- A functional unit will typically define the following three parameters:
 - The function of the product(s) or service(s);
 - The duration or service life of the product(s) or service(s) (i.e. the amount of time needed to fulfil the function); and
 - The quality of the product(s) or service(s).

- For example, a functional unit to compare an electric vehicle with a conventional vehicle could be “operating an electric passenger vehicle for 50,000km vs. a similar-sized internal combustion engine passenger vehicle for 50,000km”.

Reference product/service or baseline scenario used (column 9)

- This column only appears if you select “Yes” in “Have you estimated the avoided emissions of this low-carbon product(s) or service(s)” (column 5).
- Specify and explain the choice of the reference product/service or baseline (business-as-usual) scenario used to calculate the estimated avoided emissions in column 11.
- Note that the reference product should represent the most likely alternative solution that would be used for a certain function in the absence of your disclosed low-carbon product(s) or service(s).

Life cycle stage(s) covered for the reference product/service or baseline scenario (column 10)

- This column only appears if you select “Yes” in “Have you estimated the avoided emissions of this low-carbon product(s) or service(s)” (column 5).
- Select the life cycle stages covered in your avoided emissions calculation for the reference product/service or baseline scenario specified in column 9. Refer to the “Explanation of terms” for definitions of the life cycle stages.
- Note that credible comparisons should cover the same life cycle stages for the low-carbon product/service and the reference product/service.
- If you have not used a life cycle approach, select “Not applicable” and explain why not in column 12 “Explain your calculation of avoided emissions, including any assumptions”.

Estimated avoided emissions (metric tons CO₂e per functional unit) compared to reference product/service or baseline scenario (column 11)

- This column only appears if you select “Yes” in “Have you estimated the avoided emissions of this low-carbon product(s) or service(s)” (column 5).
- Quantify the estimated avoided emissions of your low-carbon product(s) or service(s), compared to the reference product/service or baseline scenario specified in column 9.
- For example, if using an attributional approach, this figure can be calculated using the equation: “Life-Cycle Emissions of Reference Product – Life-Cycle Emissions of Low-Carbon Product”. If the resulting figure is positive, the assessed product emits less over its life cycle when compared to the reference product and as such, the positive figure represents the “avoided emissions” of the low-carbon product(s) or service(s).
- Note that the avoided emissions should be estimated in relation to the functional unit specified in column 8.

Explain your calculation of avoided emissions, including any assumptions (column 12)

- This column only appears if you select “Yes” in “Have you estimated the avoided emissions of this low-carbon product(s) or service(s)” (column 5).
- State whether you used an attributional or consequential approach to estimate the avoided emissions and explain the reason for your choice. If you used a consequential approach, clarify the boundary of your analysis and what effects you have included in your assessment (e.g. rebound and secondary enabling effects).
- Include the figures used in your calculation and any critical assumptions that you made (e.g., emissions factors, performance characteristics, allocation methods, data sources and any uncertainties) to help data users to assess the credibility and reliability of the results.

Revenue generated from low-carbon product(s) or service(s) as % of total revenue in the reporting year (column 13)

- State the revenue generated from the low-carbon product(s) or service(s) described in column 4 as a percentage of your organization's total revenue in the reporting year.
- Enter the figure for ‘revenue’ as would be declared in your financial statement (sometimes referred to a ‘turnover’ or ‘sales’). Under the [International Financial Reporting Standard](#) this would be the inflow of income arising in the course of an entity's ordinary activities, with deductions made (such as for sales returns, allowances and discounts). This figure is commonly used by investors to assess the income-generating ability of a business.

Example response

Worked examples of low-carbon products

Example 1: Company A is a paper production company. It has a range of products that can be classified as low-carbon as these products are made from recycled material so have comparatively lower emissions than paper made from virgin material.

Level of aggregation	Taxonomy used to classify product(s) or service(s) as low-carbon	Type of product(s) or service(s)	Description of product(s) or service(s)	Have you estimated the avoided emissions of this low-carbon product(s) or service(s)	Methodology used to calculate avoided emissions	Life cycle stage(s) covered for the low-carbon product(s) or services(s)
Product or service	Climate Bonds Taxonomy	Pulp and paper: Other, please specify	We have manufactured/sold printing paper that consists of 50% recycled material. These products can be classified as low-carbon products because manufacturing of them requires less raw materials and therefore very little emissions are embedded in the products.	Yes	Guidelines for Assessing the Contribution of Products to Avoided Greenhouse Gas Emissions (ILCA)	Cradle-to-grave

Functional unit used	Reference product/service or baseline scenario used	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	Revenue generated from low-carbon product(s) or service(s) as % of total revenue in the reporting year
75GSM printing paper supplying 1000 A4 sheets with 50% recycled material	75GSM printing paper supplying 1000 A4 sheets with industry average amount of virgin material	Cradle-to-grave	6000	<p>We followed an attributional approach to our LCA and measured the difference in total cradle-to-grave emissions between our product and an industry average product. The calculation was limited in that we were unable to calculate indicators for ocean warming or herbicide use, and freshwater or wetland disturbance due to lack of data. We used the following Global Warming Potential 20 (GWP20) factors from the IPCC 5th assessment report: Carbon Dioxide (CO2): 1, Methane (CH4): 102, Nitrous Oxide (N2O): 264, Sulfur Hexafluoride (SF6): 17,500, HFC-134a: 3,710, Nitrogen Trifluoride (NF3): 12,800, Black Carbon: 3,385, Organic Carbon: -128, Sulfur Dioxide (SO2): -274, Nitrogen Oxide (NOx) 122</p> <p>We used a mass-based allocation for energy and resource inputs where multiple products were being produced. To allocate the impacts from the recycled material we followed the most common 100-0 cut-off approach, where the environmental impacts are only included for one lifecycle of the product. In other words, recycled fiber is not allocated to any of the impacts associated with the original fiber sourcing or processing, but only the impacts of the paper recycling process.</p> <p>We identified a representative set of pulp and paper mills across our region for which mill-level data is available. Our data is then averaged across all the mills producing the same paper grade in the region. We also used environmental data from government to calculate some of the environmental impacts. We then compared these averages to our data to calculate avoided emissions.</p> <p>The estimation of avoided emissions is based on the differences that arise from our higher content of recycled material: A 30% decrease in wood use, a 10% decrease in total energy, and minor decreases in other impacts (water usage, solid waste produced, and other pollutants).</p>	65

Example 2: Company B is an automotive manufacturer. Its electric vehicles are considered low-carbon as they have comparatively lower use stage emissions when compared with their internal combustion engine vehicles.

Level of aggregation	Taxonomy used to classify product(s) or service(s) as low-carbon	Type of product(s) or service(s)	Description of product(s) or service(s)	Have you estimated the avoided emissions of this low-carbon product(s) or service(s)	Methodology used to calculate avoided emissions	Life cycle stage(s) covered for the low-carbon product(s) or services(s)
Group of products or services	The IEA Energy Technology Perspectives	Road: Lithium-ion batteries	Our company has a range of electric passenger vehicles	Yes	Guidelines for Assessing the Contribution of Products to	Use stage

Level of aggregation	Taxonomy used to classify product(s) or service(s) as low-carbon	Type of product(s) or service(s)	Description of product(s) or service(s)	Have you estimated the avoided emissions of this low-carbon product(s) or service(s)	Methodology used to calculate avoided emissions	Life cycle stage(s) covered for the low-carbon product(s) or services(s)
	Clean Energy Technology Guide		that use lithium ion batteries.		Avoided Greenhouse Gas Emissions (ILCA)	
Functional unit used	Reference product/service or baseline scenario used	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	Revenue generated from low-carbon product(s) or service(s) as % of total revenue in the reporting year	
Operating a passenger car for 10,000 passenger-kilometers.	Our range of passenger vehicles that use internal combustion engines.	Use stage	22700	<p>Our calculation of avoided emissions was based on the difference in emissions during operation. This simplified our calculations as we could set aside the emissions from energy production. This was a key limitation to our assessment, and we are working to improve our methodology to cover the full life cycle of our products.</p> <p>We calculated the emissions of our electric vehicles during use and the emissions of our internal combustion engine vehicles during use (over 10,000km as per our functional unit). We then calculated the difference as the emissions avoided by our electric vehicles. We thus took an attributional approach to the estimation.</p> <p>We obtained our emissions factors from the IPCC's 5th Assessment report, most importantly: Carbon Dioxide (CO2): 1, Nitrous Oxide (N2O): 264 Nitrogen Oxide (NOx) 122</p> <p>The estimation was based on the assumption that both types of vehicles were operated in a similar way with a similar average speed.</p>	80	

Explanation of terms

- **Baseline scenario:** A reference case that represents the events or conditions most likely to occur in the absence of the low-carbon product in the consequential approach to estimating avoided emissions.
- **Reference product:** The product against which the low-carbon product is compared in the attributional approach to estimating avoided emissions.
- **Gate-to-gate:** The emissions and removals attributed to a studied product while it is under the ownership or control of the reporting company.
- **Cradle-to-gate:** A partial life cycle assessment from material acquisition (cradle) through to when the product leaves the reporting company's gate (i.e. immediately following the product's production). Includes the material acquisition & pre-processing stage and the production stage.
- **Cradle-to-grave:** A full life cycle assessment of emissions and removals attributed to a studied product from material acquisition through to the material or product end-of-life (grave). Includes the material acquisition & pre-processing stage, production stage, use stage and end-of-life stage.
- **Cradle-to-cradle/closed loop production:** A full life cycle assessment from material acquisition through to end-of-life material or product recycling (i.e. cradle-to-grave + recycling).
- **Life cycle stages (in line with the GHG Protocol Product Life Cycle Accounting and Reporting Standard):**
 - **Material acquisition & pre-processing stage:** A life cycle stage that begins when resources are extracted from nature and ends when the product components enter the gate of the studied product's production facility.
 - **Production stage:** A life cycle stage that begins when the product components enter the production site for the studied product and ends when the finished studied product leaves the production gate.
 - **Use stage:** A life cycle stage that begins when the consumer takes possession of the product and ends when the used product is discarded.
 - **End-of-life stage:** A life cycle stage that begins when the used product is discarded by the consumer and ends when the product is returned to nature (e.g. incinerated) or allocated to another product's life cycle.

Additional information

How do you define a low-carbon product?

- Despite the increasing focus from investors on low-carbon products, there remains a level of ambiguity over the definition of what constitutes a 'low-carbon product'. Instead, there has been a greater focus on the benefits of their creation and use, one of which is aiding in the transition towards a net-zero carbon economy operating within the limits set out by leading climate scientists to ensure that global average temperature increase above pre-industrial level stays below 1.5°C.

- Taxonomies, such as the [Climate Bonds Taxonomy](#), are similarly based on this scientific criterion. At this stage, CDP encourages companies to use this criterion when evaluating whether a product is low carbon or not (i.e., companies should evaluate a product or service as low carbon if it is compatible with the level of decarbonization required to keep global temperature increase to 1.5°C compared to pre-industrial temperatures).
- Therefore, while CDP encourages the development of common definitions across global markets about what constitutes a 'low-carbon product', companies should evaluate their low-carbon products in relation to their contribution to a net-zero carbon economy. Different goods and services will have pertinent characteristics in which they can do this. This can include improving the energy efficiency of certain technologies so that they are consistent with avoiding dangerous climate change or contributing to the decarbonization of high-emitting industries.

[3.8] * Provide details of the organization's capital investment in low-carbon or other green technologies. (New Question for CASG SME Questionnaire)

Rationale

This question provides data users with an indication of the extent to which businesses are managing their business risks for the low carbon transition, and allocating their funds and/or resources to climate mitigation and adaptation products or technologies.

Response options

Please complete the following table:

Timeframe (counting from this reporting year, i.e., Year 1 refers to the next 12 months after the end of this reporting year)	Planned Capital Investments (in USD)	% of Total Planned Expenditure
Year 1		
Year 2		
Year 3		
Year 4		
Year 5		
[Add new field for additional years]		

Requested content

General

- Companies should disclose whether their business plans include investing in low-carbon technologies such as CCUS (carbon capture, utilization and storage), energy transition technology or other technologies enabling the reduction of carbon emissions across their value chain.
- Companies should assess their capital expenditure (capex) towards a change to low carbon designs or product alternatives, low carbon production methods or low embodied carbon materials / recycled materials.

Explanation of terms

- **Capital investments:** one-off acquisitions but do not include operating and maintenance costs.

[3.9] * Provide the R&D investments that have been made in low-carbon or other green technologies, no and in the future. (New Question for CASG SME Questionnaire)

Rationale

This question provides data users with an indication of the extent to which businesses are managing their business risks for the low carbon transition, and allocating their funds and/or resources to climate mitigation and adaptation products or technologies.

Response options

Please complete the following table:

Timeframe (counting from this reporting year, i.e., Year 1 refers to the next 12 months after the end of this reporting year)	Planned R&D Investments for Low-Carbon or Other Green Technologies (in USD)	Amount Invested as % of Annual Revenue	Amount invested/planned as % of Total R&D Budget	% of Total Planned Expenditure
Year 0 (this reporting year)				
Year 1		N/a		
Year 2		N/a		
Year 3		N/a		
Year 4		N/a		
Year 5		N/a		
[Add new field for additional years]		N/a		

[3.10] * Provide details of your organization's plans to cater for any emerging demand of competitive energy efficient products. (New Question for CASG SME Questionnaire)

Rationale

This question provides data users with an indication of the extent to which businesses are approaching the low-carbon energy transition by adapting their business strategy.

Response options

Please complete the following tables:

Description of Your Organization's Plan(s)	The Target of KPIs	Please Select the Initiatives that Your Organization is Planning to Take	Amount invested/planned as % of Total R&D Budget	% of Total Planned Expenditure
		<ul style="list-style-type: none"> • Renewable fuel production & consumption • Waste management • Resource consumption or efficiency • Low-carbon vehicles • Low-carbon buildings • Land use change • Methane reduction target • Fossil fuel reduction target • Engagement with suppliers • Engagement with customers • R&D investments • Green finance • Other, please specify 		

4. Reported Emissions, Targets & Performance

[4.1] Do you evaluate your organization's GHG emissions? (Source: CDP Private Markets Questionnaire 2022)

Rationale

Your response to this question will determine the questions presented in the rest of module 1.

Response options

Select one of the following options:

- Yes
- No

[4.1a] (Yes) Select the name of the standard, protocol, or methodology you have used to collect activity data and calculate emissions. (Source: CDP Private Markets Questionnaire 2022)

Rationale

CDP data users need to understand what methods have been used to calculate emissions.

Response options

Select all that apply:

- ABI Energia Linee Guida
- Act on the Rational Use of Energy
- American Petroleum Institute Compendium of Greenhouse Gas Emissions Methodologies for the Oil and Natural Gas Industry, 2009
- Australia - National Greenhouse and Energy Reporting Act
- Bilan Carbone
- Brazil GHG Protocol Programme
- Canadian Association of Petroleum Producers, Calculating Greenhouse Gas Emissions, 2003
- China Corporate Energy Conservation and GHG Management Programme
- Defra Environmental Reporting Guidelines: Including streamlined energy and carbon reporting guidance, 2019
- ENCORD: Construction CO_{2e} Measurement Protocol

- Energy Information Administration 1605(b)
- Environment Canada, Sulphur hexafluoride (SF6) Emission Estimation and Reporting Protocol for Electric Utilities
- Environment Canada, Aluminum Production, Guidance Manual for Estimating Greenhouse Gas Emissions
- Environment Canada, Base Metals Smelting/Refining, Guidance Manual for Estimating Greenhouse Gas Emissions
- Environment Canada, Cement Production, Guidance Manual for Estimating Greenhouse Gas Emissions
- Environment Canada, Primary Iron and Steel Production, Guidance Manual for Estimating Greenhouse Gas Emissions
- Environment Canada, Lime Production, Guidance Manual for Estimating Greenhouse Gas Emissions
- Environment Canada, Primary Magnesium Production and Casting, Guidance Manual for Estimating Greenhouse Gas Emissions
- Environment Canada, Metal Mining, Guidance Manual for Estimating Greenhouse Gas Emissions
- EPRA (European Public Real Estate Association) guidelines, 2011
- EPRA (European Public Real Estate Association) Sustainability Best Practice Recommendations Guidelines, 2017
- European Union Emission Trading System (EU ETS): The Monitoring and Reporting Regulation (MMR) – General guidance for installations
- European Union Emissions Trading System (EU ETS): The Monitoring and Reporting Regulation (MMR) – General guidance for aircraft operators
- French methodology for greenhouse gas emissions assessments by companies V4 (ADEME 2016)
- Hong Kong Environmental Protection Department, Guidelines to Account for and Report on Greenhouse Gas Emissions and Removals for Buildings, 2010
- ICLEI Local Government GHG Protocol
- IEA CO₂ Emissions from Fuel Combustion
- India GHG Inventory Programme
- International Wine Industry Greenhouse Gas Protocol and Accounting Tool
- IPCC Guidelines for National Greenhouse Gas Inventories, 2006
- IPIECA's Petroleum Industry Guidelines for reporting GHG emissions, 2003
- IPIECA's Petroleum Industry Guidelines for reporting GHG emissions, 2nd edition, 2011
- ISO 14064-1
- Japan Ministry of the Environment, Law Concerning the Promotion of the Measures to Cope with Global Warming, Superseded by Revision of the Act on Promotion of Global Warming Countermeasures (2005 Amendment)
- Korea GHG and Energy Target Management System Operating Guidelines
- National Development and Reform Commission (NDRC) Guidance for Accounting and Reporting of GHG Emissions for Corporates (Trial)
- New Zealand - Guidance for Voluntary, Corporate Greenhouse Gas Reporting
- Philippine Greenhouse Gas Accounting and Reporting Programme (PhilGARP)
- Programa GEI Mexico
- Recommendations for reporting significant indirect emissions under Article 173-IV (ADEME 2018)
- Regional Greenhouse Gas Initiative (RGGI) Model Rule
- Smart Freight Centre: GLEC Framework for Logistics Emissions Methodologies
- Taiwan - GHG Reduction Act
- Thailand Greenhouse Gas Management Organization: The National Guideline Carbon Footprint for organization
- The Climate Registry: Electric Power Sector (EPS) Protocol
- The Climate Registry: General Reporting Protocol
- The Climate Registry: Local Government Operations (LGO) Protocol
- The Climate Registry: Oil & Gas Protocol
- The Cool Farm Tool

- The GHG Indicator: UNEP Guidelines for Calculating Greenhouse Gas Emissions for Businesses and Non-Commercial Organizations
- The Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard (Revised Edition)
- The Greenhouse Gas Protocol Agricultural Guidance: Interpreting the Corporate Accounting and Reporting Standard for the Agricultural Sector
- The Greenhouse Gas Protocol: Public Sector Standard
- The Greenhouse Gas Protocol: Scope 2 Guidance
- The Tokyo Cap-and Trade Program
- Toitū carbonreduce programme
- Toitū carbonzero programme
- US EPA Center for Corporate Climate Leadership: Direct Fugitive Emissions from Refrigeration, Air Conditioning, Fire Suppression, and Industrial Gases
- US EPA Center for Corporate Climate Leadership: Indirect Emissions From Events and Conferences
- 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 Mandatory Greenhouse Gas Reporting Rule
- US EPA Emissions & Generation Resource Integrated Database (eGRID)
- VfU (Verein für Umweltmanagement) Indicators Standard
- WBCSD: The Cement CO₂ and Energy Protocol
- World Steel Association CO₂ emissions data collection guidelines
- Other, please specify

Requested content

General

- There are a variety of standards, methodologies, and protocols available for collecting and reporting GHG data, but the large majority of companies refer to the GHG Protocol.
- The appropriateness of an emissions calculation methodology should be determined on a case-by-case basis, and it is good practice for the methods used to estimate emissions and the underlying data to be externally verified.
- CDP makes no judgments on standards or methodologies applied by companies to produce their inventories. However, we expect that any tool used will follow the best practice and observe important aspects such as the accuracy and completeness principles of standards similar to the GHG Protocol. CDP encourages companies to use the GHG Protocol Corporate Standard when national standards are not specified.
- If the methodology(ies) you have used is not listed, select "Other, please specify;" and indicate the methodology(ies) used.

[4.2] What were your organization's gross global Scope 1 and 2 emissions in metric tons CO₂e? (Source: CDP Private Markets Questionnaire 2022)

Rationale

Reporting emissions is best practice and a prerequisite to understanding and reducing negative environmental impacts. CDP asks this question to ensure companies are measuring their carbon footprints from direct emissions.

Connection to other frameworks

TCFD

Metrics & Targets recommended disclosure b) Disclose Scope 1, Scope 2, and, if appropriate, Scope 3 greenhouse gas (GHG) emissions, and the related risks.

SDG

Goal 13: Climate action

Response options

Please complete the following table:

Gross global Scope 1 emissions (metric tons CO ₂ e)	Gross global Scope 2 emissions, Location-based (metric tons CO ₂ e)	Gross global Scope 2 emissions, Market-based (metric tons CO ₂ e)	Comment
--	--	--	---------

Numerical field [enter a range of 0-999,999,999,999 using a maximum of 3 decimal places and no commas]	Numerical field [enter a range of 0-999,999,999,999 using a maximum of 3 decimal places and no commas]	Numerical field [enter a range of 0-999,999,999,999 using a maximum of 3 decimal places and no commas]	Text field [maximum 2,400 characters]
--	--	--	---------------------------------------

Requested content

General

- This question requests emissions data from emission sources that fall within the chosen reporting boundary in PM0.8
- Please include any relevant exclusions in the Comment section (column 4).
- Emissions must be reported in gross, not net figures. Therefore, negative numbers are not allowed.
- Putting in zero suggests that you have measured your emissions and that they are equal to zero.
- Emissions estimates are acceptable, as long as there is transparency with regards to the estimation approach (what is estimated and how) and the data used for the analysis is adequate to support the objectives of the inventory.
- Gross emissions are requested so that data users can account for GHG emissions from sources owned or controlled by your organization before any reductions for offsets are made, as per the GHG Protocol Corporate Standard. This transparency is meant to provide users with the most accurate portrayal of the emissions created within your company's boundary.
- Scope 1 & 2 emissions should be reported in metric tons of CO₂e. Common conversion factors are included in the Technical Note ["Units of Measure Conversions"](#).
- Special requirements for carbon sequestration, captured & stored and transferred CO₂, transfer in – transfer out, and enhanced oil recovery are explained in the Technical Note ["Special conditions for reporting Scope 1 emissions"](#).
- For more information about CDP's current recommendations on what emission factor to use for electricity accounting, where you can find emission factors and the different types there are, please check the Technical Note ["Accounting of Scope 2 emissions."](#)

Please also note that electricity produced by either CH₄ or N₂O is to be included in the emission factor.

- For further information, please also see [GHG Protocol Scope 2 Guidance](#).
- For more detailed information beyond what is provided in this guidance and technical annexes, consult your electricity suppliers, carbon advisor, or verifier/assurer.

Note on biogas:

- Carbon dioxide emitted from the combustion of biomass/biofuel or fermentation should not be included in your response to question PM1.2. This applies to self-generated biogas.
- When gas is sourced from a shared pipeline network with multiple sources including both renewable and non-renewable sources, certificates are required to demonstrate the renewable origin of gas (i.e. "certified biogas"). To make a renewable electricity usage claim on electricity generated onsite from gas the following conditions need to be met:
 - The company combusts gas sourced from a shared gas pipeline network to produce electricity;
 - It also owns or purchases green gas certificates that originated from one of the gas producers on the pipeline network – these need not necessarily be purchased directly from the biogas producers;
 - The company permanently retains the environmental attributes of the electricity generation, including any energy attribute certificates (e.g. RECs in the U.S.) for the electricity generated.
- If the company uses biogas that is sourced from a dedicated pipeline and the source is renewable, then they do not need certificates to prove the renewable origin.
- CDP does not have specific requirements or recommendations for biogas certification. Certified biogas is defined as a contractual instrument that meets the Scope 2 Quality Criteria in GHG Protocol Scope 2 Guidance. For more information on this refer to [CDP Technical Note: Accounting of Scope 2 emissions](#).

Note for agricultural sector companies:

- Direct emissions from agricultural/forestry, processing/manufacturing and/or distribution activities should be reported as part of Scope 1 emissions in this question.
- Scope 2 emissions from the use of electricity for agricultural/forestry, processing/manufacturing and/or distribution activities should be reported as Scope 2 emissions here.

Explanation of terms

- **Electricity:** In line with GHG Protocol, this term is used as shorthand for electricity, steam, and heating/cooling. Purchased electricity is defined as electricity that is purchased or otherwise brought into the organizational boundary of the company. Scope 2 emissions physically occur at the facility where electricity is generated.
- **Biogas:** A gas derived principally from the anaerobic fermentation of biomass and solid wastes and combusted to produce heat and/or power. Included in this category are landfill gas and sludge gas (sewage gas and gas from animal slurries) and other biogas.

Additional information

- **Scope 2 emissions:** In many industries, indirect GHG emissions mostly occur from the generation of purchased electricity (and purchased heat, steam and cooling) consumed by the company, as per the GHG Protocol Corporate Standard. Non-energy-intensive companies are likely to have significantly higher Scope 2 figures than Scope 1 figures. The GHG Protocol highlights that “accounting for Scope 2 emissions allows companies to assess the risks and opportunities associated with changing electricity and GHG emissions cost.”

[4.3] Are there any sources (e.g. facilities, specific GHGs, activities, geographies, etc.) of Scope 1 and Scope 2 emissions that are within your selected reporting boundary which are not included in your disclosure? (Source: CDP Climate Change 2022 Questionnaire)

Rationale

In some cases it can be difficult to gather data for all sources. Circumstances where this might be the case include sources in countries or small facilities where data acquisition is difficult or unreliable. Structural changes to the organization including mergers, acquisitions and divestments can also be reasons where emissions data are not included in your disclosure. This question enables companies to report where these sources are not included in the disclosure and thus provides data users transparency into reported emissions inventories.

Response options

Select one of the following options:

- Yes
- No

Requested content

General

- Identify sources that would normally be within the consolidation boundary you have identified for your disclosure in C0.5 (i.e. financial control, operational control, equity share or other) but for which greenhouse gases are not reported in this disclosure. Excluded sources may be in a particular country or represent a number of very small facilities making it difficult to gather data.
- Common reasons for exclusions, both relevant or not relevant, can include the following:
 - Incomplete information for the period in question;
 - Structural changes to the organization including mergers, acquisitions and divestments;
 - Outsourcing and/or insourcing of activities; and
 - Unreliable information.
- The [GHG Protocol's Corporate Accounting and Reporting Standard](#) notes on the reporting of exclusions (page 9) that “Specific exclusions...need to be clearly identified and justified, assumptions disclosed, and appropriate references provided for the methodologies applied and the data sources used. The information should be sufficient to enable a third party to derive the same results if provided with the same source data.”

[4.3a] (Yes) Provide details of the sources of Scope 1 and Scope 2 emissions that are within your selected reporting boundary which are not included in your disclosure. (Source: CDP Climate Change 2022 Questionnaire)

Rational

In some cases it can be difficult to gather data for all sources. Circumstances where this might be the case include sources in countries or small facilities where data acquisition is difficult or unreliable. Structural changes to the organization including mergers, acquisitions and divestments can also be reasons where emissions data are not included in your disclosure. This question enables companies to report where these sources are not included in the disclosure and thus provides data users transparency into reported emissions inventories.

Response options

Please complete the following table. You are able to add rows by using the “Add Row” button at the bottom of the table.

Source	Relevance of Scope 1 emissions from this source	Relevance of location-based Scope 2 emissions from this source	Relevance of market-based Scope 2 emissions from this source (if applicable)	Explain why this source is excluded	Estimated percentage of total Scope 1+2 emissions this excluded source represents	Explain how you estimated the percentage of emissions this excluded source represents
Text field [maximum 2,400 characters]	Select from: <ul style="list-style-type: none"> ● No emissions excluded ● No emissions from this source ● Emissions are not relevant 	Select from: <ul style="list-style-type: none"> ● No emissions excluded ● No emissions from this source ● Emissions are not relevant 	Select from: <ul style="list-style-type: none"> ● No emissions excluded ● No emissions from this source ● Emissions are not relevant 	Text field [maximum 2,400 characters]	Numeric field [enter a value of 0-100 with no decimal places]	Text field [maximum 2,500 characters]

Source	Relevance of Scope 1 emissions from this source	Relevance of location-based Scope 2 emissions from this source	Relevance of market-based Scope 2 emissions from this source (if applicable)	Explain why this source is excluded	Estimated percentage of total Scope 1+2 emissions this excluded source represents	Explain how you estimated the percentage of emissions this excluded source represents
	<ul style="list-style-type: none"> Emissions are relevant but not yet calculated Emissions are relevant and calculated, but not disclosed Emissions excluded due to a recent acquisition or merger Emissions are not evaluated 	<ul style="list-style-type: none"> Emissions are relevant but not yet calculated Emissions are relevant and calculated, but not disclosed Emissions excluded due to a recent acquisition or merger Emissions are not evaluated 	<ul style="list-style-type: none"> Emissions are relevant but not yet calculated Emissions are relevant and calculated, but not disclosed Emissions excluded due to a recent acquisition or merger Emissions are not evaluated 			

[Add Row]

Requested content

Source (column 1)

- Use this text field to name and briefly describe the source you are excluding. E.g. a geographic region, business activity, or type of facility.

Relevance of Scope 1 emissions from this source (column 2)

- No emissions excluded** – select this option if you have excluded Scope 2 emissions from this source and reported this exclusion in the relevant column of this table (C3 or C4), but you have **not** excluded Scope 1 emissions from this source.
- No emissions from this source** – select this option if you have excluded Scope 2 emissions from this source and reported this exclusion in the relevant column of this table (C2 or C3), but you do not have Scope 1 emissions from this source.
- Emissions are not relevant** – select this option if you have excluded Scope 1 emissions which you have identified as not relevant from this source.
- Emissions are relevant but not yet calculated** – select this option if you have excluded Scope 1 emissions from this source, you have identified these emissions as relevant, but you have not calculated them.
- Emissions from this source are relevant and have been calculated, but are not disclosed** – select this option if you have excluded from your CDP response Scope 1 emissions from this source that you have calculated and identified as relevant.
- Emissions excluded due to a recent acquisition or merger** – select this option if you have excluded Scope 1 emissions from this source due to an acquisition or merger that has taken place during the reporting period.
- Emissions are not evaluated** – select this option if you have excluded Scope 1 emissions from this source but have not evaluated the relevance of these emissions.

Relevance of Scope 2 (location-based or market-based) emissions from this source (column 3 and 4)

- No emissions excluded** – select this option if you have excluded Scope 1 emissions from this source and reported this exclusion in column 2 of this table, but you have **not** excluded Scope 2 emissions from this source.
- No emissions from this source** – select this option if you have excluded Scope 1 emissions from this source and reported this exclusion in column 2 of this table, but you do not have Scope 2 emissions from this source.
- Emissions are not relevant** – select this option if you have excluded Scope 2 emissions which you have identified as **not** relevant from this source.
- Emissions are relevant but not yet calculated** – select this option if you have excluded Scope 2 emissions from this source, you have identified these emissions as relevant, but you have not calculated them.
- Emissions from this source are relevant and have been calculated, but are not disclosed** –select this option if you have excluded from your CDP response Scope 2 emissions from this source that you have calculated and identified as relevant.
- Emissions excluded due to a recent acquisition or merger** – select this option if you have excluded Scope 2 emissions from this source due to an acquisition or merger that has taken place during the reporting period.
- Emissions are not evaluated** – select this option if you have excluded Scope 2 emissions from this source but have not evaluated the relevance of these emissions.

Explain why this source is excluded (column 5)

- Use this text field to describe why the source is excluded and its significance.

- Note that this question asks you to report only excluded sources of emissions. If you select 'No emissions excluded' or 'No emissions from this source' for every column in every row indicating that there are no sources of emissions that have been excluded from your reported Scope 1 or Scope 2 figures in C6.1 and 6.3, you should review your answer to C6.4 and select "No".

Estimated percentage of total Scope 1+2 emissions this excluded source represents (column 6)

- This column is presented if any option other than “Emissions excluded due to recent acquisition or merger” or “Emissions are not evaluated” is selected in column 2, and in either column 3 or column 4.
- This figure should be estimated using the following formula:

$$\text{Estimated percentage of total Scope 1+2 emissions the excluded source represents} = 100\% \times (\text{Estimated Scope 1+2 emissions the excluded source represents}) / (\text{Total gross Scope 1+2 emissions reported in C6.1 and C6.3})$$
- If you have calculated the Scope 1+2 emissions from the excluded source, use the formula above to provide the percentage of your total, gross, global Scope 1+2 emissions in the reporting year that the excluded source represents.
- If you have not yet calculated Scope 1+2 emissions from the excluded source, or if activity data is unavailable, you may estimate the Scope 1+2 emissions for the excluded source. You should choose an estimation approach that is appropriate to your sector, organization, the excluded source, and the data available. For example, absolute Scope 1+2 emissions could be estimated using the Scope 1+2 emissions intensity of a similar source for which data is available, such as an industry-average emissions intensity for the type of source excluded per e.g. unit revenue, floor area, or FTE employee, or using proxy data and rough estimates. Ensure to be transparent in column 7 with regards to the estimation approach (what is estimated and how), and the data used for the estimation.

Explain how you estimated the percentage of emissions this excluded source represents (column 7)

- This column is presented if any option other than “Emissions excluded due to recent acquisition or merger” or “Emissions are not evaluated” is selected in column 2, and in either column 3 or column 4.
- Explain how you calculated the estimated percentage of your total, gross, global Scope 1+2 emissions that the exclusion represents, including details of any emissions estimations and the estimation approach used.
- State whether you used the location-based or market-based Scope 2 figure from C6.3 in your calculation.

Example response

Worked example of excluded sources

In this instance presume that the company has selected “Operational control” in C0.5. Note that this example company response would be ineligible for the climate change A List due to excluded, relevant emissions and unevaluated, potentially relevant emissions.

Source	Relevance of Scope 1 emissions from this source	Relevance of location-based Scope 2 emissions from this source	Relevance of market-based Scope 2 emissions from this source (if applicable)	Explain why this source is excluded	Estimated percentage of total Scope 1+2 emissions this excluded source represents	Explain how you estimated the percentage of emissions this excluded source represents
Four manufacturing facilities in Asia.	Emissions are not evaluated.	Emissions are relevant but not yet calculated.	Emissions are relevant but not yet calculated.	<p>At present, we are only able to disclose our emissions from our European operations, but not our Asian operations.</p> <p>In terms of Scope 1 emissions, we are aware that our manufacturing operations may be associated with leakage of refrigerants, however we have not yet had the capacity to investigate and evaluate this thoroughly.</p> <p>In terms of Scope 2 emissions, we do have records of how much electricity we purchase in our four Asian facilities, but we have not yet adopted an approach to account for the associated Scope 2 emissions. As we have operations in Europe, where there are contractual instruments, we have also calculated a market-based figure. While there are no contractual instruments for our Asian operations, we are still unable to provide a market-based figure for those operations.</p>	21%	<p>We used a benchmarking approach to estimate the emissions for our four manufacturing facilities in Asia.</p> <p>We have ten European facilities of a similar size, age and build, for which we have calculated our scope 1 and 2 location-based emissions. We used their emissions data as a proxy to estimate the emissions of the four Asian facilities based on the floor area.</p> <p>Total scope 1 + 2 (location-based) for 10 European factories = 150,000tCO2e</p> <p>Total floor area for 10 comparable European facilities = 4000m2</p> <p>Total floor area for 4 Asian facilities = 1000m2</p> <p>Estimated emissions for 4 Asian facilities = 150,000 x (1000/4000) = 37,500tCO2e</p> <p>Estimated percentage of total Scope 1+2 emissions = 100% x 37,500/(37,500+150,000) = 20%</p>

Additional information

Relevance in GHG reporting

- The GHG Protocol's Corporate Value Chain (Scope 3) Accounting and Reporting Standard (page 24) provides the following definition of relevance for GHG reporting: "A relevant GHG report contains the information that users – both internal and external to the company – need for their decision making. Companies should use the principle of relevance when determining whether to exclude any activities from the inventory boundary. Companies should also use the principle of relevance as a guide when selecting data sources. Companies should collect data of sufficient quality to ensure that the inventory is relevant (i.e., that it appropriately reflects the GHG emissions of the company and serves the decision-making needs of users) (...) and should not exclude any activities from the inventory that would compromise the relevance of the reported inventory."
- A practical rule of thumb often applied to evaluate the relevance of an emissions' source or activity is to consider the sources that contribute to 95% of the emissions inventory once sources are listed by the size of emissions. This rule is of practical value in particular when a low number of sources contribute to a large proportion of the total emissions while a large number of sources contribute to a small percentage of emissions. In order to utilize the 95% threshold, the emissions from all sources or activities need to be quantified or estimated to ensure they meet this threshold. Relevance should apply not only to the size of emissions, but also other criteria, such as the potential to drive emissions reductions, the cost-benefit of gathering the data, stakeholder expectations, and potential uses of the data.
- Relevance of emissions should not be limited to sustainability topics that have a significant financial impact on your organization, or "materiality".
- Examples of circumstances where the reasons for excluding known emissions sources from the GHG statement may not be reasonable include:
 - The entity has relevant Scope 1 emissions but only includes Scope 2 emissions in its CDP disclosure.
 - The boundary has been defined, but particular geographies within the boundary are not being reported although they represent relevant emissions; and
 - The emissions reported exclude business divisions/areas of business with relevant emissions which are only a small proportion of the total emissions included in the GHG statement (i.e., once emissions are quantified at a sufficient level of quality they should be included in the inventory, even if they represent only a small share of the total).

Methodologies for estimating emissions from excluded sources

- Where verifiable data is not available, organizations may estimate emissions data by:
 - **Direct comparison:** using data from another comparable time period to fill the gap for the excluded source e.g. emissions from the same time period in another year.
 - **Pro-rata extrapolation:** using average data from one period of time to estimate data for another shorter period e.g. using average daily emissions from 1st January to 30th November to estimate emissions for 1st to 31st December.
 - **Benchmarking:** using emissions or activity data for one asset or business activity as a proxy to estimate emissions or activity data for another asset or business activity e.g. using the annual emissions of one office to estimate emissions from another office of similar size, age or build.

[4.4] How do your gross global emissions (Scope 1 and 2 combined) for the reporting year compare to those of the previous reporting year? (Source: CDP Climate Change 2022 Questionnaire)

Rationale

Investors and data users are interested in understanding whether companies are successfully reducing their emissions year over year.

Connection to other frameworks

SDG

Goal 7: Affordable and clean energy

Goal 12: Responsible consumption and production

Goal 13: Climate action

Response options

Select one of the following options:

- Increased
- Decreased
- Remained the same overall
- This is our first year of reporting, so we cannot compare to last year
- We don't have any emissions data

Requested content

General

- This question requires you to select the option from the drop-down menu that best describes how your combined Scope 1 and 2 emissions have changed compared with the previous year.

- The change in emissions can be calculated using the following formula:
Total gross Scope 1+2 emissions for the current reporting year – previous year's total gross Scope 1+2 emissions = total change in emissions
- If the resulting figure is negative, then your company's overall emissions decreased compared to the previous year. If the resulting figure is positive, overall emissions have increased compared to the previous year. If the resulting figure is equal to zero, overall emissions have not changed compared to the previous year.
- In this context your Scope 1 emissions are the figure supplied in response to question C6.1, and your Scope 2 emissions are the figure supplied in response to question C6.3.
- If the previous year's figures have been restated, please refer to CDP's [Technical Note on "Restatements"](#) on whether to use the emissions figures originally reported to CDP or the restated figures for the calculation. The previous year compared should apply to the 12-month period directly prior to the reporting period, even if it does not completely overlap with the period previously reported to CDP.

[4.4a] ("increased", "Decreased", "Remained the same overall") 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. (Source: CDP Climate Change 2022 Questionnaire)

Rationale

When investigating how year-on-year gross global emissions (Scope 1 + 2 combined) have changed, CDP and its investors are interested in changes at a granular level; thus allowing CDP's data users to gain an insight into factors that have contributed to these changes.

Connection to other frameworks

SDG

Goal 7: Affordable and clean energy

Response options

Please complete the following table:

Reason	Change in emissions (metric tons CO ₂ e)	Direction of change	Emissions value (percentage)	Please explain calculation
Change in renewable energy consumption	Numerical field [enter a number from 0-999,999,999,999 using a maximum of 3 decimal places and no commas]	Select from: <ul style="list-style-type: none"> • Increased • Decreased • No change 	Numerical field [enter a number from 0-999 using a maximum of 4 decimal places and no commas]	Text field [maximum 2,400 characters]
Other emissions reduction activities				
Divestment				
Acquisitions				
Mergers				
Change in output				
Change in methodology				
Change in boundary				
Change in physical operating conditions				
Unidentified				
Other				

Requested content

General

- Categorize the changes that have occurred in your gross global emissions. You are asked to break down all the different factors that have influenced any overall change in Scope 1+2 emissions; whether increasing or decreasing factors.
- Break down each applicable factor, describe each in a separate row, and provide the value for the change in overall emissions that is attributed to each of the factors.
- Even if companies have experienced no change overall or an increase in absolute emissions for Scopes 1 and 2, companies should still disclose reduction activities.

- In the unlikely event that companies have genuinely not experienced any change in any of the categories, they should complete the row "Other", specifying "No change" in the text box provided and then enter 0 in column 2 'Emissions value (percentage)'.
- Emissions reduction activities could arise from a number of different sources, including reductions in energy consumption or lower emission equipment/processes. If your emissions have changed compared to the previous reporting year due to several emissions reduction activities, you should aggregate the emissions change that occurred due to these activities and provide this information in row 2 in C7.9a.
- **Any changes in emissions that are attributed to a decline or an increase in your business output (products or services) due to the COVID-19 pandemic should be reported using row "Change in output". Please state how your output was affected in "Please explain calculation".**

Reason (column 1)

- This column is fixed; however, if a row does not apply to you, for example, your company did not experience any mergers or acquisitions during the reporting year, leave that row blank.
- Further details on each of the options are provided below:
 - **Change in renewable energy consumption** (row 2)
 - Report the change in your organization's emissions because of the consumption of self-generated or purchased renewable energy.
 - In cases where you have renewable energy, you may include this on the provision that you have accounted for those renewable energy purchases in your market-based Scope 2 figure reported in C6.3 and the purchases reported here were **additional** purchases in the reporting year.
 - Due to the change in accounting practices around Scope 2 with the addition of Scope 2 market-based emissions and low-carbon energy, companies may see their Scope 2 emissions decrease. Any change in Scope 2 emissions due to the change in accounting method from Scope 2 location-based to Scope 2 market-based should not be reported here, but rather under "Change in methodology" (see below).
 - CDP requires disclosure of gross emissions. Gross means total emissions before any deductions or other adjustments are made to take account of offset credits, avoided emissions from the use of goods and services, and/or reductions attributable to the sequestration or transfer of GHGs.
 - **Other emissions reduction activities** (row 3)
 - This refers to changes in emissions that have occurred because of proactive emissions reduction initiatives or activities, for example those listed in question C4.3b, other than those caused by a change in renewable energy consumption (which should be reported in the row 'Change in renewable energy consumption').
 - **Divestment** (row 4)
 - This refers to changes that occur as a result of selling off certain aspects of the businesses.
 - **Acquisitions** (row 5)
 - This refers to changes that occur as a result of purchasing or obtaining another company/subsidiary/facility.
 - **Mergers** (row 6)
 - This refers to changes that occur as a result of business mergers.
 - **Change in output** (row 7)
 - This refers to changes that occur as a result of changes (increases or decreases) in your business output (i.e. a product or service); this could be, for example, organic growth, purchase of additional facilities due to business expansion, declines in sales due to a global recession, or release of a new product.
 - **Change in methodology** (row 8)
 - This refers to changes that occur due to modifications in the way that the inventory is calculated, for example, changes in emissions factors used or changes in methodology protocol followed.
 - Companies that have amended their Scope 2 emissions figure as a result of the changes in Scope 2 accounting practices for low carbon energy should report this here.
 - **Change in boundary** (row 9)
 - This refers to changes in the boundary used for your inventory calculation, i.e. changing from financial control to operational control. This option could also apply if you have incorporated facilities into your inventory that were excluded in previous years.
 - **Change in physical operating conditions** (row 10)
 - This refers to changes in weather that have a significant influence on how the company operates, but that cannot be accounted for under the other options available, e.g. increase production of hydroelectricity because of increased rainfall.
 - **Unidentified** (row 11)
 - Complete this row if you are not able to identify the reason for the change in emissions from year to year.
 - **Other** (row 12)
 - Complete this row if there is an alternative reason(s) for the change. Where you have used this option, please provide details of the reason(s) for the change in the 'Please explain' column.

Direction of change (column 3)

- Enter the direction of change of gross global (Scope 1 + Scope 2) emissions due to the reason specified, i.e. increased; decreased, or; No change.

Emissions value (percentage) (column 4)

- Enter the change in emissions attributed to the reason (factor) provided in column 1 as a percentage of the Scope 1 and 2 combined emissions. This value should not be greater than 999 and should not have more than four decimal places. There is no need to enter the % symbol, and direction of change will be indicated in column 3. This value should be calculated as follows:

$$\left(\frac{\text{Change in Scope 1+2 emissions attributed to the reason described in column 1}}{\text{Previous year Scope 1+ 2 emissions}} \right) \times 100$$

Please explain calculation (column 5)

- Report the figures used in the calculation for the figure in the 'emissions value %' column. Refer to Example responses for further guidance.
- Using no more than 2,400 characters you may also use this text box to provide any additional explanation that is relevant to capture the full complexity of the emissions changes.

Note for electric utility sectors

- Variations in emissions may be attributable to changes in capacity (that translated into changes in output), plant outages (which can also translate into changes in output) and weather events (changes in physical operating conditions). If so, this should be included in your answer to C7.9a.
- You can specify the specific drivers (e.g. changes in output due to the utilization of additional capacity coming in operation) in the comment box.

Example response

Worked example of reporting change in emissions

Example 1: The gross global emissions (Scope 1 + 2) of company X for this reporting year are 208 metric tons of CO₂e. Its gross global emissions for the previous reporting year were 200 metric tons of CO₂e. This means that the total change in emissions is 8 metric tons of CO₂e, equal to a 4% increase, according to the formula in the explanation of terms, above: $(8/200) * 100 = 4\%$.

The change from 200 to 208 metric tons is attributed to two reasons: 1) an increase in 12 metric tons of CO₂e emissions due to increased production (i.e. a change in output); and 2) an estimated reduction of 4 metric tons of CO₂e achieved due to emissions reduction activities.

The emissions value (percentage) for each of these two individual factors can also be calculated using the same formula described in the guidance, above. In this example, the percentage change in emissions due to increased production is: $(12/200) * 100 = 6\%$. This represents a 6% increase in emissions due to increased production.

The percentage change in emissions due to emissions reduction activities: $(-4/200) * 100 = -2\%$. This represents a 2% decrease in emissions due to emissions reduction activities.

This company should respond in the following way to questions C7.9 and C7.9a:

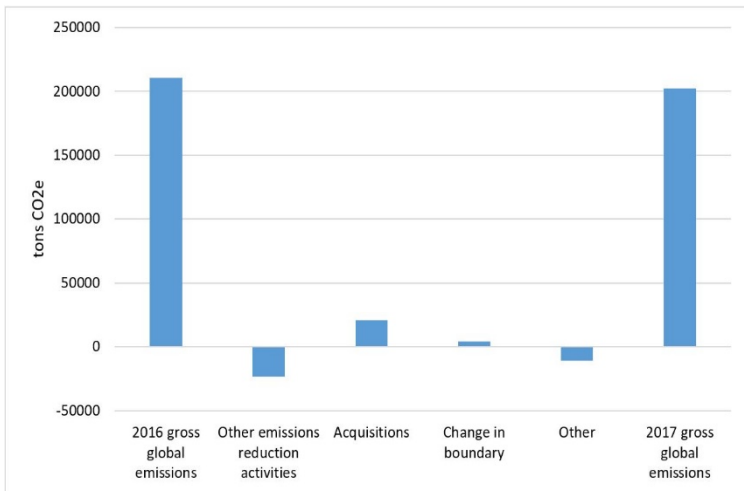
(C7.9) How do your gross global emissions (Scope 1 and 2 combined) for the reporting year compare to those of the previous reporting year?

Increased

(C7.9a) 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.

Reason	Change in emissions (metric tons CO ₂ e)	Direction of change	Emissions value (percentage)	Please explain calculation
Other emissions reduction activities	4	Decreased	2	Due to 'other emissions reduction activities' implemented during the year, despite an increase in production, emissions have not grown as high as could be expected. Last year 4 tons of CO ₂ e were reduced by our emissions reduction projects, and our total Scope 1 and Scope 2 emissions in the previous year was 200 tCO ₂ e, therefore we arrived at -2% through $(-4/200) * 100 = -2\%$ (i.e. a 2% decrease in emissions).
Change in output	12	Increased	6	If no measures had been introduced, increased demand leading to increase output would have generated an extra 6% more of emissions.

Example 2: Companies may be used to seeing emissions information presented graphically where reductions appear below the horizontal axis. The tables below the graph shows how this data can be used to complete question C7.9a.



	2016 gross global emissions	What happened during the reporting year				2017 gross global emissions
		Other emissions reduction activities	Acquisitions	Change in boundary	Other	
Emissions value (percentage)		-11	10	2	-5	-4
Tons CO ₂ e	210573	-23163	21057.3	4211.5	-10542.8	202136

(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.

Reason	Change in emissions (metric tons CO ₂ e)	Direction of change	Emissions value (percentage)	Please explain calculation
Other emissions reduction activities	23163	Decreased	11	Gross Scope 1+2 emissions decreased by 11%, due to energy efficiency activities undertaken. We have achieved energy consumption reductions of 14% in New Zealand, 9% in Australia and 8% in USA. These are due to energy efficiency measurements in all our main buildings, which have obtained maximum GreenStar certification, a tri-generation plant which increased the efficiency of our largest data center, and improved metering and monitoring of energy consumption. All have led to an overall reduction of energy consumption across our offices. Changes due to variation of emission factors associated with the grid mix have also contributed to a decrease of emissions, although that is not considered here. Through these activities we reduced our emissions by 23163 tons CO ₂ e, and our total S1 and S2 emissions in the previous year was 210573 tons CO ₂ e, therefore we arrived at -11% through $(-23163/210573) * 100 = -11\%$ (i.e. an 11% decrease in emissions).
Acquisitions	21057.3	Increased	10	In the United States, the acquisition of a major business competitor resulted in a circa 36% increase of the emissions in the USA and a 10% increase of our gross global emissions. This is mainly the result of additional buildings being included as new sources of GHG emissions.
Change in boundary	4211.5	Increased	2	Emissions increased by 2% due to the inclusion of additional inventory items for our minority positions in Asia. As an example the Hong Kong office reported for the first time the emissions due to vehicle fleet and business travel.
Other	10542.8	Decreased	5	Scope 1 emissions for our USA operations decreased 25% compared to previous year inventory. This is equivalent to a decrease of 3100 tons CO ₂ e. This decrease is due to the new gas powered tri-generation plant, substituting previous fuel oil boiler. This and other changes cumulated in a decrease of 10542.8 tons CO ₂ e, therefore we arrived at -5% through $(-10542.8/210573) * 100 = -5\%$ (i.e. an 5% decrease in emissions).

[4.5] Describe your emissions in the context of an appropriate business metric (Emissions intensity) (Source: A Climate Disclosure Framework for SME, CDP)

- Companies should disclose their gross global combined Scope 1 and 2 emissions for the reporting year, in metric tons CO₂e, per unit of physical activity or economic output (preferably per unit of total revenue).

[4.6] Did you have an emissions target that was active in the reporting year? (Source: CDP Private Markets Questionnaire 2022)

Rationale

Target setting provides direction and structure to environmental strategy. CDP data users want to understand companies' commitments to reducing emissions and whether the organization has a goal towards which they are harmonizing and focusing emissions-related efforts.

Connection to other frameworks

TCFD

Metrics & Targets recommended disclosure c) Describe the targets used by the organization to manage climate related risks and opportunities and performance against targets.

SDG

Goal 7: Affordable and clean energy

Goal 12: Responsible consumption and production

Response options

Select one or more of the following options:

- Absolute target
- Intensity target
- No target

Requested content

General

- Targets that are based on a future "business as usual" year are not equivalent to emissions reduction targets and therefore should not be reported here. Acceptable targets must determine emissions reductions through comparison to a set base year in the past, not to a projected "business as usual" emissions figure in the future.
- You have an "active target" if the target ends in or after the reporting year and the target is to reduce absolute emissions or emissions intensity.
 - Absolute target: an absolute target describes a reduction in actual emissions in a future year when compared to a base year. The target can relate to your Scope 1, Scope 2 and/or Scope 3 emissions in full or in part.
 - Intensity target: an intensity target describes a future reduction in emissions that have been normalized to a business metric when compared to the same normalized business metric emissions in a base year. The target can relate to your Scope 1, Scope 2 and/or Scope 3 emissions in full or in part.

Note for oil and gas sector companies:

- Investors request that companies disclose both company-wide targets and targets at the divisional level.

Note for electric utility sector companies:

- Investors request that companies disclose company-wide targets and, where applicable, at divisional level, and that intensity targets are also expressed as absolute targets where possible.

Note for transport OEMs sector companies:

- In addition to any absolute targets, companies should disclose company-wide CO₂ and/or fuel economy targets for products and, where relevant, for specific markets. Targets should be expressed in grams of CO₂ per kilometer.

Note for financial services sector companies:

- Consider any absolute or intensity targets related to your lending and investment portfolio (Scope 3 Investments), in addition to targets related to Scope 1, Scope 2 and other Scope 3 emissions.

Note for capital goods sector companies:

- Companies should consider reporting company-wide and/or product-level Scope 3 targets, and in particular, Scope 3 targets relating to the use of sold products.

Additional information

Examples of emissions reduction targets

The following are examples of absolute targets:

- Metric tons CO₂e or % reduction from base year
- Metric tons CO₂e or % reduction in product use phase relative to base year
- Metric tons CO₂e or % reduction in supply chain relative to base year
- Metric tons CO₂e or % reduction per year
- Metric tons CO₂e or % reduction relative to 5 year rolling average of emissions
- Cap on emissions in metric CO₂e

The following are examples of intensity targets:

- Metric tons CO₂e or % reduction per unit revenue (also per unit turnover; per unit gross sales) relative to base year
- Metric tons CO₂e or % reduction per full-time employee equivalent (also per hours worked; per operating hour; per guest night; per capita; per patient days) relative to base year

- Metric tons CO₂e or % reduction per unit of product (e.g. metric ton of paper; metric ton of aluminum) relative to base year
- Metric tons CO₂e or % reduction per passenger kilometer (also per km; per nautical mile) relative to base year
- Metric tons CO₂e or % reduction per square foot relative to base year
- Cap on emissions relative to an activity (e.g. stabilizing emissions at x metric tons CO₂e per metric ton of steel produced)
- Metric tons CO₂e or % reduction per MWh
- Metric tons CO₂e or % reduction in emissions from business flights per employee

[4.6a] (Absolute target) Provide details of your absolute emissions target(s) and progress made against those targets. (Source: CDP Private Markets Questionnaire 2022)

Rationale

The question is aimed at encouraging best practice in target setting, such as the use of science-based targets where available.

Connection to other frameworks

TCFD

Metrics & Targets recommended disclosure c) Describe the targets used by the organization to manage climate related risks and opportunities and performance against targets.

SDG

Goal 7: Affordable and clean energy

Goal 12: Responsible consumption and production

Goal 13: Climate action

Response options

Please complete the following table. You are able to add rows by using the "Add Row" button at the bottom of the table.

Target reference number	Year target was set	Base year	Covered emissions in base year (metric tons CO ₂ e)	Target year	Targeted reduction from base year (%)	Covered emissions in target year (metric tons CO ₂ e) [auto-calculated]	Covered emissions in reporting year (metric tons CO ₂ e)	% of target achieved [auto-calculated]	Is this a science-based target?	Please explain (including target coverage)
Abs1 – Abs100	Numerical field [enter a number between 1900- 2022]	Numerical field [enter a number between 1900- 2022]	Numerical field [enter a number from 0-999,999,999,999 using a maximum of 2 decimal places and no commas]	Numerical field [enter a number between 2000- 2100]	Percentage field [enter a percentage from 0-100 using a maximum of 2 decimal places]	Numerical field	Numerical field [enter a number from 0-999,999,999,999 using a maximum of 2 decimal places and no commas]	Percentage field	Select from drop-down options: <ul style="list-style-type: none"> • Yes, and this target has been approved by the Science-Based Targets initiative • Yes, we consider this a science-based target, but it has not been approved by the Science-Based Targets initiative • No, but we are reporting another target that is science-based • No, but we anticipate setting one in the next 2 years • No, and we do not anticipate setting one in the next 2 years 	Text field [maximum 2,400 characters]

[Add Row]

Requested content

General

- Note that CDP is requesting data on gross emissions. Gross means total emissions before any deductions or other adjustments are made to take account of offset credits, avoided emissions from the use of goods and services and/or reductions attributable to the sequestration or transfer of GHGs. If you have a target that will be met in part by offsetting (including carbon neutrality targets), only the proportion of the target that relates to emissions reductions (and not offset purchases) should be considered here. If you are uncertain of the proportion that will be achieved through emissions reductions, make an estimation based on the initiatives that you have in place or planned.

Target reference number (column 1)

- Select a unique target reference from the drop-down menu provided to identify the target in subsequent questions and to track progress against the target in subsequent reporting years.

Year target was set (column 2)

- Enter the year in which your company set the target.
- This must be either before or during the reporting year, but cannot be after the reporting year. It also cannot be after the target year.
- If you have a year-on-year rolling target, enter the year your first set the target. This can be before the base year.
- If you set the target based on financial years, enter the year that applies to the end of your financial year and specify this in the "Please explain (including target coverage)" section.

Base year (column 3)

- The base year is the year against which you are comparing your emissions reduction target.
- If you have a year-on-year rolling target, the base year will be the previous reporting year.
- If you have a target based on financial years, enter the year that applies to the end of your financial year and specify this in the "Please explain (including target coverage)" section.
- If you have a target based on average emissions over a period of time (e.g. 5-year average), enter the year that applies to the end of the average period and specify this in the "Please explain (including target coverage)" section.
- You cannot have a base year that is in the future.

Covered emissions in base year (metric tons CO₂e) (column 4)

- Enter the base year emissions covered by the target in this column.
- E.g. if your target is to reduce Scope 1 emissions arising from your European operations, enter the base year Scope 1 emissions for your European operations only.
- E.g. if your target relates to Scope 2 emissions of a particular business activity (e.g. office-based operations, etc.), enter the base year Scope 2 emissions relating to that business activity only.

Target year (column 5)

- If you have a year-on-year rolling target, the target year will be the reporting year.
- If you have a target based on financial years, enter the year that applies to the end of your financial year and specify in the "Please explain (including target coverage)" section.
- If you have a target based on average emissions over a period of time (e.g. 5-year average), enter the year that applies to the end of the average period and specify this in the "Please explain (including target coverage)" section.

Targeted reduction from base year (%) (column 6)

- Enter your targeted emissions reduction as a percentage reduction in emissions to be achieved in the target year, when compared to the base year.
- E.g. if your target is to reduce your Scope 1 emissions by 3000 metric tons CO₂e and your base year emissions were 150,000 metric tons CO₂e, you should enter 2 into this column (i.e. $(3000/150000) = 0.02$; then multiply by 100 for percentage value).
- If your target is to stabilize emissions at the base year level, you should enter 0 in this column.
- Note that this column is intended to describe the targeted percentage reduction from the base year that is to be achieved in the target year, and not the percentage reduction from the base year observed in the reporting year.

Covered emissions in target year (metric tons CO₂e) [auto-calculated] (column 7)

- This column will be auto-calculated.
- The emissions covered by the target in your target year will be calculated from the "Covered emissions in base year" (column 4) and the "Targeted reduction from base year" (column 6) columns. Ensure that you have entered data into these columns.
- E.g. if your base year emissions were 150,000 metric tons CO₂e, and your targeted reduction is 2%, this column will display 147,000.

Covered emissions in reporting year (metric tons CO₂e) (column 8)

- Enter the emissions in the reporting year covered by the target in this column.
- E.g. if your target is to reduce Scope 1 emissions arising from your European operations, enter the Scope 1 emissions in the reporting year for your European operations only.
- E.g. if your target relates to Scope 2 emissions of a particular business activity (e.g. office-based operations, etc.), enter the Scope 2 emissions in the reporting year relating to that business activity only.

% of target achieved [auto-calculated] (column 9)

- This column will be auto-calculated.
- The target's percentage completion (in terms of emissions) compared with the base year will be calculated from the "Covered emissions in base year" (column 4), "Targeted reduction from base year" (column 6) and the "Covered emissions in reporting year" (column 8) columns. Ensure that you have entered data into these columns.
- E.g. if your target is to reduce your Scope 1 emissions by 10% and in the reporting year your Scope 1 emissions had reduced by 3% compared to the base year, this column will display 30 as your target is 30% complete.
- Negative values indicate an increase in emissions compared to the base year.
- Values greater than 100 indicate that you have exceeded your target.

Is this a science-based target? (column 10)

- A brief description of science-based targets and why CDP is asking companies to set them is provided as additional information to this question.
- In addition, refer to the CDP [Technical Note on Science-Based Targets](#) for what qualifies as a science-based target and how to assess your target against the Science Based Targets initiative's criteria.
 - Yes, and this target has been approved by the Science Based Targets initiative: Companies are very strongly encouraged to have their targets officially evaluated by the Science Based Targets initiative (SBTi). CDP considers targets approved by the initiative to reflect best practice in science-based target setting. Select this option only if the target has been approved by the SBTi.

- Yes, we consider this a science-based target, but it has not been approved by the Science Based Targets initiative: Not all companies have had their target assessed by the SBTi. If your company has set a target and has self-assessed it to be science-based, but has not had it approved by the SBTi, or it is currently being reviewed by the SBTi, please select this option. You should use the "Please explain (including target coverage)" column to explain why you believe your target to be science-based. Do not select this option if your target has been rejected by the SBTi. If you are currently in the process of revising your target to meet SBTi criteria, indicate this by selecting "No, but we anticipate setting one in the next 2 years."
- No, but we are reporting another target that is science-based: Another target (absolute or intensity) disclosed is science-based, either in another row in this table, or in C4.1b.
- No, but we anticipate setting one in the next 2 years: While not necessary, it is recommended that the company publicly state this through the [Call to Action](#) commitment to set a science-based target.
- No, and we do not anticipate setting one in the next 2 years: No science-based targets have been set and there are no plans in place to set one in the next 2 years.

Please explain (including target coverage) (column 11)

- Please include additional information, specifically on target coverage (Scope 1, Scope 1+2, boundaries, exclusions etc).
- If the target is not company-wide (i.e. it does not apply to the whole company in line with your definition of the reporting boundary), provide further details of your target coverage in this column.
- You can use this column to identify where you have a financial year or average year-based target.
- If your target is part of a wider carbon neutrality goal, a regulatory requirement, or a longer-term target, you can also explain this here.

Additional information

Science-based targets

- Nearly 200 nations at COP21 wrote into the Paris Agreement that globally we will aim to limit warming to below 2°C and pursue efforts to limit warming to under 1.5°C. However, there is a yawning gap between the level of ambition of the country commitments and targeted temperatures. Companies, which are responsible for a vast majority of the world’s emissions, must play a critical role in filling the gap left by country commitments by raising the level of ambition in their target setting and reducing their emissions in line with climate science.
- Science-based target setting methods enable companies to set emissions targets that are consistent with conserving the remaining global emissions budget. A number of factors are taken into consideration in order to determine what is most appropriate for a given company.
- Companies are very strongly encouraged to have their targets officially evaluated by the Science Based Targets initiative (SBTi). CDP considers targets approved by the initiative to reflect best practices in science-based target setting.
- Regardless of submission to SBTi, companies are expected to report emissions reductions targets in their CDP response. Targets that did not pass the SBTi’s review process or that have not been submitted for review prior to the deadline will still be evaluated using the information disclosed by each company in their CDP response. See the Technical Note for more details.

[4.6b] (Intensity target) Provide details of your emissions intensity target(s) and progress made against those target(s). (Source: CDP Private Markets Questionnaire 2022)

Question dependencies

This question only appears if you select "Intensity target" in response to PM1.4.

Rationale

The question is aimed at encouraging best practice in target setting, such as the use of science-based targets where available.

Connection to other frameworks

TCFD

Metrics & Targets recommended disclosure c) Describe the targets used by the organization to manage climate related risks and opportunities and performance against targets.

SDG

- Goal 7: Affordable and clean energy
- Goal 12: Responsible consumption and production
- Goal 13: Climate action

Response options

Please complete the following table. You are able to add rows by using the "Add Row" button at the bottom of the table.

Target reference number	Year target was set	Intensity Metric	Base year	Intensity figure in base year (metric tons CO2e per unit of activity)	Target year	Targeted reduction from base year (%)	Intensity figure in target year (metric tons CO2e per unit of activity) [auto-calculated]	Intensity figure in reporting year (metric tons CO2e per unit of activity)	% of target achieved [auto-calculated]	Is this a science-based target?	Please explain (including target coverage)
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Int1-Int100	Numerical field [enter a number between 1900- 2022]	Select from drop-down options below.	Numerical field [enter a number between 1900- 2022]	Numerical field [enter a number from 0- 999,999,999,999 using a maximum of 10 decimal places and no commas]	Numerical field [enter a number between 2000- 2100]	Percentage field [enter a percentage from 0-100 using a maximum of 2 decimal places]	Numerical field	Numerical field [enter a number from 0-999,999,999,999 using a maximum of 10 decimal places and no commas]	Percentage field	Select from drop-down options: <ul style="list-style-type: none"> • Yes, and this target has been approved by the Science-Based Targets initiative • Yes, we consider this a science-based target, but it has not been approved by the Science-Based Targets initiative • No, but we are reporting another target that is science-based • No, but we anticipate setting one in the next 2 years • No, and we do not anticipate setting one in the next 2 years 	Text field [maximum 2,400 characters]
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[Add Row]

Intensity metric drop-down options:

Select one of the following options:

- Grams CO_{2e} per revenue passenger kilometer
- Metric tons CO_{2e} per USD(\$) value-added
- Metric tons CO_{2e} per square meter
- Metric tons CO_{2e} per metric ton of aluminum
- Metric tons CO_{2e} per metric ton of steel
- Metric tons CO_{2e} per metric ton of cement
- Metric tons CO_{2e} per metric ton of cardboard
- Grams CO_{2e} per kilometer
- Metric tons CO_{2e} per unit revenue
- Metric tons CO_{2e} per unit FTE employee
- Metric tons CO_{2e} per unit hour worked
- Metric tons CO_{2e} per metric ton of product
- Metric tons CO_{2e} per liter of product
- Metric tons CO_{2e} per unit of production
- Metric tons CO_{2e} per unit of service provided
- Metric tons CO_{2e} per square foot
- Metric tons CO_{2e} per kilometer
- Metric tons CO_{2e} per passenger kilometer
- Metric tons CO_{2e} per megawatt hour (MWh)
- Metric tons CO_{2e} per barrel of oil equivalent (BOE)
- Metric tons CO_{2e} per vehicle produced
- Metric tons CO_{2e} per metric ton of ore processed
- Metric tons CO_{2e} per ounce of gold
- Metric tons CO_{2e} per ounce of platinum

- Metric tons of CO₂e per metric ton of aggregate
- Metric tons of CO₂e per billion (currency) funds under management
- Other, please specify

Requested content

General

- Note that CDP is requesting data on gross emissions. Gross means total emissions before any deductions or other adjustments are made to take account of offset credits, avoided emissions from the use of goods and services and/or reductions attributable to the sequestration or transfer of GHGs. If you have a target that will be met in part by offsetting (including carbon neutrality targets), only the proportion of the target that relates to emissions reductions (and not offset purchases) should be considered here. If you are uncertain of the proportion that will be achieved through emissions reductions, make an estimation based on the initiatives that you have in place or planned.

Target reference number (column 1)

- Select a unique target reference from the drop-down menu provided to identify the target in subsequent questions and to track progress against the target in subsequent reporting years.

Year target was set (column 2)

- Enter the year in which your company set the target.
- This must be either before or during the reporting year, but cannot be after the reporting year. It also cannot be after the target year.
- If you have a year-on-year rolling target, enter the year you first set the target. This can be before the base year.
- If you set the target based on financial years, enter the year that applies to the end of your financial year and specify this in the "Please explain (including target coverage)" section.

Intensity metric (column 3)

- If you select "Other, please specify," provide a label for the metric.
- This should be in the format "mass CO₂ per activity," as in the drop-down options above.

Base year (column 4)

- The base year is the year against which you are comparing your emissions reduction target.
- If you have a year-on-year rolling target, the base year will be the previous reporting year.
- If you have a target based on financial years, enter the year that applies to the end of your financial year and specify this in the "Please explain (including target coverage)" section.
- If you have a target based on average emissions over a period of time (e.g. 5-year average), enter the year that applies to the end of the average period and specify this in the "Please explain (including target coverage)" section.
- You cannot have a base year that is in the future.

Intensity figure in base year (metric tons CO₂e per unit of activity) (column 5)

- Enter the emissions intensity figure in the base year covered by the target in this column.
- Note that the base year emissions intensity figure should be calculated by dividing the base year emissions covered by the target by the intensity metric denominator (e.g. unit revenue, metric ton of product etc).
- E.g. if your target is to reduce your Scope 1 emissions per full time equivalent (FTE) employee by 22%, using 2010 as the base year and 2020 as the target year, first calculate what your Scope 1 emissions were per FTE in 2010 (in this example 9 metric tons CO₂e) and enter this figure in the field.

Target year (column 6)

- If you have a year-on-year rolling target, the target year will be the reporting year.
- If you have a target based on financial years, enter the year that applies to the end of your financial year and specify this in the "Please explain (including target coverage)" section.
- If you have a target based on average emissions over a period of time (e.g. 5-year average), enter the year that applies to the end of the average period and specify this in the "Please explain (including target coverage)" section.

Targeted reduction from base year (%) (column 7)

- Enter your targeted emissions intensity reduction as a percentage reduction of the emissions intensity figure to be achieved in the target year, when compared to the base year.
- E.g. if your target is to reduce your Scope 1 emissions per FTE employee to 7 metric tons CO₂e per FTE employee and your base year emissions were 9 metric tons CO₂e per FTE employee, you should enter 22 into this column (i.e. $(9-7)/9=0.22$; then multiply by 100 for percentage value).
- If your target is to stabilize your emissions intensity at the base year level, you should enter 0 in this column.

- Note that this column is intended to describe the targeted percentage reduction from the base year that is to be achieved in the target year, not the percentage reduction from the base year observed in the reporting year.

Intensity figure in target year (metric tons CO₂e per unit of activity) [auto-calculated] (column 8)

- This column will be auto-calculated.
- The intensity figure covered by the target in your target year will be calculated from the “Intensity figure in base year” (column 5) and the “Targeted reduction from base year” (column 7) columns. Ensure that you have entered data into these columns.
- E.g. if your base year intensity figure was 9 metric tons CO₂e per FTE employee, and your targeted reduction is 22%, this column will display 7.

Intensity figure in reporting year (metric tons CO₂e per unit of activity) (column 9)

- Enter the emissions intensity figure in the reporting year covered by the target in this column.
- Note that the intensity figure in the reporting year should be calculated by dividing your reporting year emissions covered by the target by the intensity metric denominator (e.g. unit revenue, metric ton of product etc).
- E.g. if your target is to reduce your Scope 1 emissions per full time equivalent (FTE) employee from 9 metric tons CO₂e to 7 metric tons CO₂e and in the reporting year your Scope 1 emissions per FTE employee were 8 metric tons CO₂e, enter 8 in this field.

% of target achieved [auto-calculated] (column 10)

- This column will be auto-calculated.
- The target's percentage completion (in terms of emissions) compared with the base year will be calculated from the “Intensity figure in base year” (column 5), “Targeted reduction from base year” (column 7), and the “Intensity figure in reporting year” (column 9) columns. Ensure you have entered data into these columns.
- E.g. if your target is to reduce your Scope 1 emissions per FTE employee by 22% and in the reporting year your Scope 1 emissions per FTE employee had reduced by 11% compared to the base year, this column will display 50 as your target is 50% complete.
- Negative values indicate an increase in the emissions intensity figure compared to the base year.
- Values greater than 100 indicate that you have exceeded your target.

Is this a science-based target? (column 11)

- A brief description of science-based targets and why CDP is asking companies to set them is provided as additional information to this question.
- In addition, see the [Technical Note on Science-Based Targets](#) for what qualifies as a science-based target and how to assess your target against the Science Based Targets initiative's criteria.
- Yes, and this target has been approved by the Science Based Targets initiative – Companies are very strongly encouraged to have their targets officially evaluated by the Science Based Targets initiative (SBTi). CDP considers targets approved by the initiative to reflect best practice in science-based target setting. Select this option only if the target has been approved by the SBTi.
- Yes, we consider this a science-based target, but it has not been approved by the Science Based Targets initiative – Not all companies have had their target assessed by the SBTi. If your company has set a target and has self-assessed it to be science-based, but has not had it approved by the SBTi, or it is currently being reviewed by the SBTi, please select this option. You should use the Please explain column to explain why you believe your target to be science-based. Do not select this option if your target has been rejected by the SBTi. If you are currently in the process of revising your target to meet SBTi criteria, indicate this by selecting “No, but we anticipate setting one in the next 2 years.”
- No, but we are reporting another target that is science-based – Another target (absolute or intensity) disclosed is science-based, either in another row in this table, or in C4.1a.
- No, but we anticipate setting one in the next 2 years – While not necessary, it is recommended that the company publicly state this through the [Call to Action](#) commitment to set a science-based target.
- No, and we do not anticipate setting one in the next 2 years – No science-based targets have been set and there are no plans in place to set one in the next 2 years.

Please explain (including target coverage) (column 12)

- Please include additional information, specifically on target coverage (Scope 1, Scope 1+2, boundaries, exclusions etc)
- If the target is not company-wide (i.e. it does not apply to the whole company in line with your definition of the reporting boundary), provide further details of your target coverage in this column.
- You can use this column to identify where you have a financial year or average year-based target.
- If your target is part of a wider carbon neutrality goal, a regulatory requirement, or a longer-term target, you can also explain this here.

Additional information

Science-based targets

- Nearly 200 nations at COP21 wrote into the Paris Agreement that globally we will aim to limit warming to below 2°C and pursue efforts to limit warming to under 1.5°C. However, there is a yawning gap between the level of ambition of the country commitments and targeted temperatures. Companies, which are responsible for a vast majority of the world's emissions, must play a critical role in filling the gap left by country commitments by raising the level of ambition in their target setting and reducing their emissions in line with climate science.
- Science-based target setting methods enable companies to set emissions targets that are consistent with conserving the remaining global emissions budget. A number of factors are taken into consideration in order to determine what is most appropriate for a given company.
- Companies are very strongly encouraged to have their targets officially evaluated by the Science Based Targets initiative (SBTi). CDP considers targets approved by the initiative to reflect best practices in science-based target setting.
- Regardless of submission to SBTi, companies are expected to report emissions reductions targets in their CDP response. Targets that did not pass the SBTi's review process or that have not been submitted for review prior to the deadline will still be evaluated using the

information disclosed by each company in their CDP response. See the Technical Note for more details.

[4.6c] (No target) Explain why you did not have an emissions target, and forecast how your emissions will change over the next five years. (Source: CDP Private Markets Questionnaire 2022)

Question dependencies

This question only appears if you select "No target" in response to PM1.4.

Rationale

As setting a target is a pre-requisite for leadership in environmental practice, data users need to understand why companies do not have active targets guiding environmental strategy.

Response options

Please complete the following table:

Primary reason	Five-year forecast	Please explain
Select from: <ul style="list-style-type: none"> • We are planning to introduce a target in the next two years • Important but not an immediate business priority • Judged to be unimportant, explanation provided • Lack of internal resources • Insufficient data on operations • No instruction from management • Other, please specify 	Text field [maximum 2,400 characters]	Text field [maximum 2,400 characters]

Requested content

General

- If you select "Other, please specify," provide a label for the "Primary reason".

Five-year forecast (column 2)

- Provide a qualitative and quantitative description of how you forecast your emissions will change over the next five years.
- It is acknowledged that this forecast will be an estimate, but it is expected that companies will:
 - forecast the expected direction of change (e.g. whether their emissions will increase, decrease or experience no change overall over the next five years).
 - provide a quantitative description of the forecasted change in emissions (e.g. Scope 1 emissions forecasted to decrease by 30 metric tons CO₂e/ Scope 1 and Scope 2 emissions forecasted to increase by 10%/ Scope 3 emissions forecasted to decrease by 20%).
 - provide a brief description of the reasons you forecast this change, or in the unlikely event no change, in emissions over the next five years. For example, this could be due to forecasted changes in output or expected emissions reduction activities.

Please explain (column 3)

- Provide an explanation of why you do not have a target and the timeline to implement one, if applicable.

[4.7] 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. (Source: CDP Climate Change 2022 Questionnaire)

Rationale

The answer to this question enables CDP data users to understand your organization's commitment to reducing emissions beyond business-as-usual scenario (beyond standard maintenance/replacement activities).

Connection to other frameworks

SDG

Goal 7: Affordable and clean energy

Goal 13: Climate action

Response options

Select one of the following options:

- Yes

- No

Requested content

General

- It is acknowledged that maintenance activities can have a beneficial impact on carbon emissions. Only activities that have either been part of a defined program of emissions reduction activities or where additional investment beyond standard maintenance/replacement has been made for the purposes of reducing emissions should be reported here.
- It is acknowledged that diverse companies often have large number of emissions reduction initiatives operating over varying time periods and scales. You should answer this question in the context of the reporting year. This could include initiatives that have become operational within the reporting year (e.g. installation of new equipment, or instigation of new operational practices) or commitments that have been made in the reporting year (e.g. investments made which are yet to become fully operational).
- If you are reporting a market-based Scope 2 figure, you can reflect any renewable energy purchasing policies as a component of emissions reduction activities. Please bear in mind, however, that if you are already buying renewable energy instruments and accounting for them at a zero emissions factor, then emissions reduction activities can only be achieved as "additional purchases" to what you are already doing. Therefore, emissions reduction activities are established by comparing what you have done in the previous year and what you are proposing to do in the future.
- Measures taken to reduce Scope 3 emissions may be reported here.
- Initiatives do not need to relate to specific targets reported in C4.1a/b.

[4.7a] (Yes) Provide details on the initiatives implemented in the reporting year. (Source: CDP Climate Change 2022 Questionnaire)

Rationale

CDP data users are interested in understanding how you are making progress towards your emissions reduction targets, as well as other emissions-reducing actions undertaken in the reporting year.

Connection to other frameworks

SDG

Goal 7: Affordable and clean energy

Goal 13: Climate action

RE100

Response options

Please complete the following table. The table is displayed over several rows for readability. You are able to add rows by using the "Add Row" button at the bottom of the table.

Initiative category	Initiative type	Estimated annual CO ₂ e savings (metric tons CO ₂ e)	Scope(s) or Scope 3 category(ies) where emissions savings occur	Voluntary/ Mandatory	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	Comment
Select from: <ul style="list-style-type: none"> Energy efficiency in buildings Energy efficiency in production processes Waste reduction and material circularity Fugitive emissions reductions Low-carbon energy consumption Low-carbon energy generation 	Select from drop-down options below	Numerical field [enter a number from 0-999,999,999,999 using a maximum of 2 decimal places and no commas]	Select all that apply: <ul style="list-style-type: none"> Scope 1 Scope 2 (location-based) Scope 2 (market-based) Scope 3 category 1: Purchased goods & services Scope 3 category 2: Capital goods Scope 3 category 3: Fuel-and-energy-related activities (not included in Scopes 1 or 2) Scope 3 category 4: Upstream transportation & distribution 	Select from: <ul style="list-style-type: none"> Voluntary Mandatory 	Numerical field [enter a number from 0-999,999,999,999 using no decimal places, and no commas]	Numerical field [enter a number from 0-999,999,999,999 using no decimal places, and no commas]	Select from: <ul style="list-style-type: none"> <1 year 1-3 years 4-10 years 11-15 years 16-20 years 21-25 years >25 years No payback 	Select from: <ul style="list-style-type: none"> <1 year 1-2 years 3-5 years 6-10 years 11-15 years 16-20 years 21-30 years >30 years Ongoing 	Text field [maximum 1,500 characters]

Initiative category	Initiative type	Estimated annual CO ₂ e savings (metric tons CO ₂ e)	Scope(s) or Scope 3 category(ies) where emissions savings occur	Voluntary/Mandatory	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	Comment
<ul style="list-style-type: none"> Non-energy industrial process emissions reductions Company policy or behavioral change Transportation Other, please specify 			<ul style="list-style-type: none"> Scope 3 category 5: Waste generated in operations Scope 3 category 6: Business travel Scope 3 category 7: Employee commuting Scope 3 category 8: Upstream leased assets Scope 3 category 9: Downstream transportation and distribution Scope 3 category 10: Processing of sold products Scope 3 category 11: Use of sold products Scope 3 category 12: End-of-life treatment of sold products Scope 3 category 13: Downstream leased assets Scope 3 category 14: Franchises Scope 3 category 15: Investments [does not appear to FS] Scope 3: Other (upstream) Scope 3: Other (downstream) 						

[Add Row]

Initiative type drop-down options:

Select one of the following options

<p>Energy efficiency in buildings</p> <ul style="list-style-type: none"> Insulation Maintenance program Draught proofing Solar shading Building Energy Management Systems (BEMS) Heating, Ventilation and Air Conditioning (HVAC) Lighting Motors and drives Combined heat and power (cogeneration) Other, please specify 	<p>Low-carbon energy consumption</p> <ul style="list-style-type: none"> Solid biofuels Liquid biofuels Biogas Geothermal Large hydropower (>25 MW) Small hydropower (<25 MW) Hydropower (capacity unknown) Renewable hydrogen fuel cell Solar heating and cooling Solar PV
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Energy efficiency in production processes

- Waste heat recovery
- Cooling technology
- Process optimization
- Fuel switch
- Compressed air
- Combined heat and power (cogeneration)
- Wastewater treatment
- Reuse of water
- Reuse of steam
- Machine/equipment replacement
- Automation
- Electrification
- Smart control system
- Motors and drives
- Product or service design
- Other, please specify

Waste reduction and material circularity

- Waste reduction
- Product or service design
- Product/component/material reuse
- Product/component/material recycling
- Remanufacturing
- Other, please specify

Fugitive emissions reductions

- Agricultural methane capture
- Agricultural nitrous oxide reduction
- Landfill methane capture
- Oil/natural gas methane leak capture/prevention
- Refrigerant leakage reduction
- Carbon capture and storage/utilization (CCS/U)
- Other, please specify

- Solar CSP
- Nuclear
- Wind
- Tidal
- Wave
- Fossil fuel plant fitted with CCS
- Low-carbon electricity mix
- Other, please specify

Low-carbon energy generation

- Solid biofuels
- Liquid biofuels
- Biogas
- Geothermal
- Large hydropower (>25 MW)
- Small hydropower (<25 MW)
- Hydropower (capacity unknown)
- Renewable hydrogen fuel cell
- Nuclear
- Solar heating and cooling
- Solar PV
- Solar CSP
- Wind
- Tidal
- Wave
- Fossil fuel plant fitted with CCS
- Other, please specify

Non-energy industrial process emissions reductions

- Process equipment replacement
- Process material substitution
- Process material efficiency
- Carbon capture and storage/utilization (CCS/U)
- Other, please specify

Company policy or behavioral change

- Supplier engagement
- Customer engagement
- Site consolidation/closure
- Change in purchasing practices
- Resource efficiency
- Waste management
- Other, please specify

Transportation

- Business travel policy
- Teleworking
- Employee commuting
- Company fleet vehicle replacement
- Company fleet vehicle efficiency
- Other, please specify

Requested content

General

- Companies are asked to provide information on any emissions reduction initiatives made.
- There is no need to record every action – initiatives can be recorded on a programmatic level. Companies with large numbers of initiatives should prioritize those that have the potential to provide a meaningful contribution to emissions reductions.
- It is acknowledged that maintenance activities can have a beneficial impact on carbon emissions. Only those activities that have either been part of a defined program of emissions reduction initiatives or where additional investment beyond standard maintenance/replacement has been made for the purposes of reducing emissions should be reported here.
- Where initiatives are part of routine maintenance or necessary equipment replacement (e.g. necessary replacement of equipment that has an additional benefit in emissions reduction), enter the additional (premium) costs and additional monetary savings associated with the lower emissions model (if applicable).
- It should be noted that not all emissions reduction initiatives carry with them a significant cost – many initiatives, such as resource efficiency, have fairly negligible investment costs yet offer potentially high monetary savings. These initiatives should be included in the table, with the minimal investment required reflected in the "Investment required" column, and by selecting the payback of less than a year option (if this is the case).

Initiative category (column 1)

- Select the option from the drop-down list that best describes the initiative. Note that these are broad categories only, with more detailed options provided in the "Initiative type" column.
 - **Energy efficiency in buildings** – Select this option for all energy efficiency initiatives relating to buildings, including those relating to the building fabric (e.g. insulation, draught-proofing, etc.) and those relating to building services (e.g. HVAC, BEMS etc.)
 - **Energy efficiency in production processes** – Select this option for all energy efficiency initiatives relating to processes (e.g. waste heat recovery, process optimization, compressed air, combined heat and power, automation, smart control systems, product/service design to improve energy efficiency etc.)
 - **Waste reduction and material circularity** – Select this option for circular economy and waste reduction initiatives (e.g. reuse, recycling, remanufacturing, product/service design to reduce waste etc.).
 - **Fugitive emissions reductions** – Select this option for initiatives to reduce fugitive emissions (e.g. methane capture, agricultural nitrous oxide reductions, refrigerant leakage reduction etc.)
 - **Low-carbon energy consumption** – Select this option for emissions reduction initiatives relating to increasing low-carbon energy consumption i.e. energy from renewable sources, nuclear plants and fossil-fuel plants fitted with carbon capture and storage. Note that if increasing low carbon energy consumption has been a component of your emissions reduction initiatives please also report the other accompanying information in C6.2, C6.3, C7.5, and Module C8. If you select "solid biofuels" or "liquid biofuels", you should specify whether any of the biofuels are derived from sustainable biomass in the "Comment" column (column 10). Refer to [CDP's Technical note on Biofuels](#) for more information. Members of the RE100 initiative selecting this option should ensure to enter a figure in column 6 "Annual monetary savings".
 - **Low-carbon energy generation** – Select this option for initiatives relating to the installation of low-carbon energy generating facilities (renewable, nuclear or fossil-fuel plants fitted with carbon capture and storage) at your own site or at others on behalf of your clients. If you select "solid biofuels" or "liquid biofuels", you should specify whether any of the biofuels are derived from sustainable biomass in the "Comment" column (column 10). Refer to [CDP's Technical note on Biofuels](#) for more information. Members of the RE100 initiative selecting this option should ensure to enter a figure in column 6 "Annual monetary savings".
 - **Non-energy industrial process emissions reductions** – Select this option only for initiatives to reduce emissions from industrial production processes which chemically or physically transform materials (e.g. CO₂ from the calcinations step in cement manufacturing, CO₂ from catalytic cracking in petrochemical processing, PFC emissions from aluminum smelting etc.)
 - **Company policy or behavioral change** – Select this option for initiatives relating to a change in company policy (e.g. value chain engagement, a new procurement policy) or an organizational behavioral change (e.g. resource efficiency improvements such as reducing paper use, waste management improvements such as reducing food waste etc.). Note that changes in company transportation policies should not be reported here but under the initiative category "Transportation"
 - **Transportation** – Select this option for initiatives relating to employee travel and commuting and the company fleet.
 - **Other, please specify** – If none of the listed categories are applicable to your initiative, select this option and specify the initiative.
- Note that a selection must be made for both column 1 and column 2. Your data will not be saved if either column is left blank.

Initiative type (column 2)

- Select the type of initiative you have undertaken from the drop-down options provided. Note that only initiative types relative to the initiative category selected in the previous column will be displayed in the ORS.
- If none of the provided options are applicable to your initiative, select "Other, please specify" and provide details of the initiative type.
- Note that a selection must be made for both column 1 and column 2. Your data will not be saved if either column is left blank.

Estimated annual CO₂e savings (metric tons CO₂e) (column 3)

- Enter the expected annual CO₂e savings in all emission Scopes, in metric tons, occurring with the initiative in place. It is acknowledged that this figure is likely to be an estimate.
- Where savings occur on a non-annual basis, average the savings so that an annual figure can be provided.
- Where the initiative has not been in place for the entire reporting period, estimate and report the emissions that would be saved in a 12-month period, so that an annual figure can be provided.

Scope(s) (column 4)

- Select the Scope(s) and/or Scope 3 categories where the emission reductions are expected to occur.
- If the initiative covers multiple Scopes, select all Scopes and Scope 3 categories where emissions reductions are expected to occur.

Voluntary/Mandatory (column 5)

- Select whether the initiative is mandatory (i.e. to comply with regulation), or a voluntary initiative.

Annual monetary savings (unit currency – as specified in C0.4) (column 6)

- Enter the amount of monetary savings per year expected from the initiative (e.g. in reduced energy costs) once it is fully operational.
- The number entered should be appropriate to the currency selected in C0.4.
- Where savings occur on a non-annual basis, please average out so that an annual figure can be provided.

Investment required (unit currency – as specified in C0.4) (column 7)

- Enter the total investment required for the initiative over its lifetime.
- The number entered should be appropriate to the currency selected in question C0.4.

Payback period (column 8)

- The payback period reflects the time it takes for the investment made to be offset by the monetary savings from the initiative (Payback Period = Investment/Annual monetary savings).
- The payback period is not applicable (therefore select "No payback") if:
 - the initiative does not require any investment and you have entered 0 (zero) in column 7 (Investment required (unit currency, as specified in C0.4)) AND/OR
 - the initiative does not bring any monetary savings and you have entered 0 (zero) in column 6 (Annual monetary savings (unit currency – as specified in C0.4))

Estimated lifetime of the initiative (column 9)

- This column refers to the duration of cash flow savings from carbon mitigation investments. This data point, in years, allows data users to calculate the Internal Rate of Return of the project, also using the "Annual monetary savings," "Investment required" and "Payback period" information.
- If you have multiple emissions reduction initiatives for each initiative type, select the median to answer this column.

Comment (column 10) (optional)

- If you select "solid biofuels" or "liquid biofuels" as the "Initiative type" (column 2), specify whether any of the biofuels are derived from sustainable biomass here.

Note for electric utility sector companies:

- For electric utilities, emissions reduction initiatives may include fuel switching at existing plants or investment in lower-emitting methods of generation. Please disclose this information if applicable.

Note for agricultural sector companies:

- Agricultural sector companies are specifically asked to report on initiatives implemented to reduce emissions from agricultural/forestry, processing/manufacturing activities. E.g.:
 - Adoption of low impact agriculture/forestry practices
 - Increased efficiency of energy use during manufacturing
 - Reduced fleet use of fossil fuels or increased use of renewable fuels in transportation

Explanation of terms

- **Building energy management system (BEMS):** An integrated system comprising hardware, software, and services that leverage information and communication technology for monitoring, automating, and controlling energy consumption. Examples include smart meters and smart billing, data analytics, performance optimization and others.
- **Low-carbon energy:** In line with the IEA definition, low-carbon technologies are technologies that produce low – or zero – greenhouse-gas emissions while operating. In the power sector this includes fossil-fuel plants fitted with carbon capture and storage, nuclear plants and renewable-based generation technologies. Natural gas, combined cycle gas turbine and fossil fuel-based combined heat and power (cogeneration), despite being less carbon intensive than other means of electricity production like coal, are not considered low-carbon.
- **Renewable energy:** CDP follows the definition of renewable energy given in the GHG Protocol, i.e. "energy taken from sources that are inexhaustible, e.g. wind, water, solar, geothermal energy and biofuels."
- **Process emissions:** emissions from industrial production processes which chemically or physically transform materials (e.g. CO₂ from the calcinations step in cement manufacturing, CO₂ from catalytic cracking in petrochemical processing, PFC emissions from aluminum smelting, etc.)

5. Energy

[5.1] Report your organization's energy consumption totals (excluding feedstocks) in MWh. (Source: CDP Climate Change 2022 Questionnaire)

Rationale

Given the importance of energy consumption in emissions accounting, this question attempts to provide transparency to data users on the consumption of energy by the organization. The question provides the opportunity for organizations to disclose their total energy consumption and distinguish renewable and non-renewable forms of energy.

Connection to other frameworks

SDG

Goal 7: Affordable and clean energy

Goal 12: Responsible consumption and production

Goal 13: Climate action

Response options

Please complete the following table:

Activity	Heating value	MWh from renewable sources	MWh from non-renewable sources	Total (renewable + non-renewable) MWh
Consumption of fuel (excluding feedstock)	Select from: <ul style="list-style-type: none"> LHV (lower heating value) HHV (higher heating value) Unable to confirm heating value 	Numerical field [enter a number from 0 to 9,999,999,999 using up to 2 decimal places and no commas]	Numerical field [enter a number from 0 to 9,999,999,999 using up to 2 decimal places and no commas]	Numerical field [enter a number from 0 to 9,999,999,999 using up to 2 decimal places and no commas]
Consumption of purchased or acquired electricity	N/A			
Consumption of purchased or acquired heat	N/A			
Consumption of purchased or acquired steam	N/A			
Consumption of purchased or acquired cooling	N/A			
Consumption of self-generated non-fuel renewable energy	N/A		N/A	
Total energy consumption	N/A			

Requested content

General

- Figures you provide should be for the reporting year only (as defined by your answer to C0.2).
- If you have reported a market-based Scope 2 figure in question C6.3, you should use the market-based approach to calculate the share of renewable energy consumed in this question. This should be based on the same data sources as your applied emission factors and should be consistent with the market-based Scope 2 emission factor hierarchy. For example, if you purchased Energy Attribute Certificates (EACs) to claim half of your electricity consumption as renewable, you will need to use the relevant data source(s) from the emission factor hierarchy (e.g. residual mix data) to work out the share of renewables in the remaining half.
- If you have only reported a location-based Scope 2 figure in question C6.3, you should use the location-based approach to calculate the share of renewable energy consumed in this question using the location-based Scope 2 emission factor hierarchy.
- If you do not consume an energy carrier, then you should enter zero (0) in the relevant field.
- This table is for gross energy consumption data only. You should not provide net consumption nor deduct for energy produced or exported from the organizational boundary. Because feedstock fuels are excluded from this question, this approach should not lead to double counting.
- You should enter all energy data in Mega-Watt-hours (MWh). If your raw data is in energy units other than MWh, such as Giga-Joules (GJ) or British Thermal Units (Btu), then you should convert to MWh. For e.g., 1 Giga-Joule (GJ) = 0.277778 MWh, so if your data is in GJ then should multiply your data by 0.277778. If your data is in million Btu, then you need to multiply your data by 0.29307.

- Conversion factors from other energy units are available from a variety of online calculation tools, including from [IEA](#) and [OnlineConversion.com](#), or from conversion tables such as those in [EPA AP-42 \(Annex A\)](#).
- If your raw data is in volume units, e.g. cubic feet or gallons, or in mass units, e.g. kilograms (kg) or pounds (lb), then you should convert to energy units using factors for fuel heating/calorific values. These are available from numerous sources, some of which are listed below:
 - [IPCC Guidelines for National GHG Inventories \(Volume 2, Table 1.2, p1.18-1.19\)](#)
 - [EPA AP-42 \(Annex A\)](#)
 - [IEA Statistics Manual \(Annex 3, p180-183\)](#)
 - [API Compendium \(Table 3-8, p3.20-3.21\)](#)
- Further guidance on unit conversion is available in the following Technical Note: "[Conversion of fuel data to MWh](#)".

Activity (column 1)

- This column is driven by the activities for which you selected 'Yes' in response to C8.2.

Consumption of fuel (excluding feedstock)

- All fuel consumed for energy purposes inside the organizational boundary should be included, regardless of whether the fuel was purchased or produced by the organization. If a fuel is consumed as a feedstock for the production of another fuel, then the feedstock should not be included, but combustion of the produced fuel should be included. Ultimately, if a fuel is combusted, i.e. consumed for energy purposes and not as a feedstock, then it should be included (see 'Explanation of terms' for more detail).
- Consumption of renewable fuels should be accounted for here. This includes biomass (solid and liquid biofuels and biogas), biomass-derived wastes and renewably derived hydrogen.
- If you do not have exact consumption data, you may alternatively estimate your company's consumption by reviewing fuel and energy purchasing orders.

Consumption of purchased or acquired electricity, heat, steam, cooling

- If your raw data for steam is in physical units, e.g. pounds (lb) or kilograms (kg), then you should convert to energy units. The energy content of steam varies with temperature and pressure. Organizations can refer to [The Climate Registry's General Reporting Protocol](#), Chapter 15, section 15.2, step 1, which explains how to calculate the energy content of steam.
- Cooling is frequently purchased in refrigeration-ton hours; 1 ton-hour is equal to 12,000 Btu, which is equal to 0.003516 MWh.

Consumption of self-generated non-fuel renewable energy

- If your organization produces renewable energy that is not based on fuel (such as solar, wind, hydro, geothermal, marine), then any consumption of this energy should be entered here.
- Consumption of renewable fuels (such as solid and liquid biofuels and biogas) should be excluded because these should be accounted for in the row "Consumption of fuel (excluding feedstock)".
- All forms of non-fuel renewable energy - electricity, heat, steam, or cooling – shall be included.

Total energy consumption

- Enter the total energy consumption by your organization in this row, alongside total energy from renewable sources and non-renewable sources.
- The sum of renewable and non-renewable energy consumption should equal the total MWh entered in the last column.
- The data entered in each column of this row should also equal the sum of all the above rows (if the above rows have been fully disclosed for).
- If you do not disclose data for specific energy carriers in the rows above, but you are able to enter the total energy consumed by your organization, then you should do so.

Heating value (column 2)

- This column is only applicable to the consumption of fuels because it is a measure of combustion energy.
- Energy from fuel combustion can be measured by the higher heating value (HHV) or lower heating value (LHV) of the combusted fuel.
- Higher heating value (HHV) is also known as gross calorific value (GCV), and lower heating value (LHV) is also known as net calorific value (NCV). Typically, LHV/HHV ratio is 0.95 for solid and liquid hydrocarbon fuels, such as coal and oil, and 0.9 for gaseous hydrocarbon fuels, such as natural gas.
- Fuel energy data in HHV is typically used in the United States and Canada, whereas LHV is more commonly the unit used in other countries and by international bodies. If you do not know the unit applicable to your raw data, you may wish to infer it based on the location from which the data is sourced, i.e. if the fuel related data is sourced from outside of the United States and Canada, then it is likely that LHV is applicable.

MWh from renewable sources (column 3)

- Renewable energy is energy taken from sources that are inexhaustible such as wind, solar, hydropower, geothermal, biomass and marine (tidal and wave energy).
- Waste energy should not be included if it is derived from fossil fuels.
- Hydrogen should not be included if it is derived from fossil fuels.
- Blended fuels deriving from both renewable and non-renewable sources should be split by the proportion contained from each source. For municipal waste and refuse-derived fuel, only the fraction of the fuel that is derived from biomass can be included as renewable energy, when calculating renewable energy consumption totals. Further explanations of municipal waste and a glossary of fuel definitions is provided in the CDP Technical Note: "[Fuel Definitions](#)".

MWh from non-renewable sources (column 4)

- All energy not identified as deriving from renewable sources should be entered, e.g. coal, oil, natural gas, etc.
- Direct consumption of nuclear fuel should not be included, as this is covered in more detail in questions for electric utilities. Consumption of purchased or acquired electricity, steam, heat and/or cooling from nuclear sources, however, should be included.

Total (renewable + non-renewable) MWh (column 5)

- Total MWh is equal to the sum of MWh from renewable sources (column 3) and MWh from non-renewable sources (column 4). If you have entered data in column 3 and column 4, then you should ensure that the sum of this data is equal to the data in column 5.

Explanation of terms

- **Renewable energy:** CDP follows the definition of renewable energy given in the GHG Protocol, i.e. "energy taken from sources that are inexhaustible, e.g. wind, water, solar, geothermal energy and biofuels."
- **Excluding feedstocks:** Fuels consumed as feedstocks are fuels that are not combusted for energy purposes. For example, naphtha and ethane are feedstocks that may be converted into petrochemical products such as ethylene, and should **not** be included. The steel industry is a special case because coke and fuel injectants consumed at the blast furnace serve as feedstocks and a source of energy. These fuels are considered feedstocks and should **not** be counted. However, all fuels consumed for energy, i.e. combusted, that are derived from fuel feedstocks, e.g. blast furnace gas, coke oven gas, and smelting reduction gas, should be counted. Companies that consume fuel as feedstocks will have the opportunity to disclose these fuels in sector specific questions.
- **Heating Value:** Lower heating value (LHV) and Higher heating value (HHV), also known as net calorific value (NCV) and gross calorific value (GCV) respectively, are different measures of heat energy released from fuel combustion. Figures measured in HHV are larger because HHV includes the latent heat of water vaporization from combustion, whereas LHV does not. The difference between LHV and HHV is related to the fuel's hydrogen content.
- **Purchased or acquired electricity, steam, heat, cooling:** Specific information on these energy carriers can be found in section 5.3.1 and Appendix A of the [GHG Protocol Scope 2 Guidance](#). The terms 'purchased' and 'acquired' are used when your organization has received the energy from a third party. This rules out energy that is sourced from within the organizational boundary. It should be noted that purchased or acquired heat does not include the heat content, or calorific value, of fuels that are purchased or acquired by the organization. This is accounted for at the point of fuel consumption, which falls inside the Scope 1 boundary. You should also be aware that steam, heat or cooling received via direct line as 'waste' from a third party's industrial processes, should still be accounted for if it is consumed.

[5.2] Report your organization's consumption of purchased or acquired electricity in MWh, broken down by country/region. (Source: CDP Private Markets Questionnaire 2022)

Question dependencies

This question only appears if you select "Yes" to PM0.9.

Rationale

Given the importance of electricity consumption in emissions accounting, this question provides transparency to data users on the consumption of electricity by the organization. It is also an essential input for modelling emissions.

Connection to other frameworks

SDG

- Goal 7: Affordable and clean energy
- Goal 12: Responsible consumption and production
- Goal 13: Climate action

Response options

Please complete the following table. You are able to add rows by using the "Add Row" button at the bottom of the table.

Country / Region	MWh from renewable sources	MWh from non-renewable sources	Total (renewable + non-renewable) MWh [auto-calculated]	Comment
------------------	----------------------------	--------------------------------	---	---------

Select from: [Country/region drop-down list]	Numerical field [enter a number from 0 to 9,999,999,999 using up to 2 decimal places and no commas]	Numerical field [enter a number from 0 to 9,999,999,999 using up to 2 decimal places and no commas]	Numerical field	Text field [maximum 2,400 characters]
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[Add Row]

Requested content

General

- Figures you provide should be for the reporting year only (as defined by your answer to PM0.3).
- All figures should be reported in Megawatt hours of electricity (MWh).
- If you only have electricity consumption data on part of your operations, you may extrapolate the rest, but please include a note in the “Comment” section (column 5).
- For more information on fuel definitions, please view the [CDP Technical Note: Fuel Definitions](#).

Country / Region (column 1)

- Country / Region should match what was reported in PM0.7

MWh from renewable sources (column 2)

- Renewable energy is energy taken from sources that are inexhaustible such as wind, solar, hydropower, geothermal, biomass and marine (tidal and wave energy).
- Waste energy should not be included if it is derived from fossil fuels.
- Hydrogen should not be included if it is derived from fossil fuels.

MWh from non-renewable sources (column 3)

- Any source not identified as deriving from renewable sources should be included, e.g. coal, oil, natural gas, etc.
- Consumption of purchased or acquired electricity, steam, heat and/or cooling from nuclear sources should be included.

Total (renewable + non-renewable) MWh [auto-calculated] (column 4)

- This field is auto-calculated using your response in column 2 and column 3. Please ensure that both fields are filled out.

Comment (column 5)

- Ensure to include any comments about calculation methodology, data extrapolations, assumptions, etc.

[5.3] * Any captive power generation? (New Question for CASG SME Questionnaire)

Response Option

This is an open text question.

Requested Content

General

- Companies should describe any captive power generation activities within the organization, if applicable (such as, aluminium smelters, steel plants, chemical plants, solar panels on roof etc.)
- Companies may consider providing details on how they generate power for their business operations apart from sourcing energy from the grid
- The following items may be disclosed as relevant to the company’s circumstances:
 - Whether they have any onsite installation to generate their power? If so, what fuel do they use?
 - How many sites have captive power generation? Across these sites, what proportion of their energy is supported by these activities vs. grid supply?
 - Do they have any on site installations for renewables such as solar roofs?
 - Do they participate in any feed-in tariff schemes if there is excess power generation? If so, provide details of the schemes participated in.

6. Carbon Pricing

[6.1] Are any of your operations or activities regulated by a carbon pricing system (i.e. ETS, Cap & Trade or Carbon Tax)? (Source: CDP Climate Change 2022 Questionnaire)

Rationale

Companies are requested to report whether they are subject to, or potentially subject to, mandatory carbon pricing systems. This question has evolved to include whether companies are currently regulated by a carbon pricing system – including carbon markets or taxation – or whether they expect to be regulated in the future. Companies responding "Yes" will be further prompted to identify the systems in which they participate and to provide additional details about their exposure to these systems. This information allows investors to consistently track and analyze corporate expectations and the associated costs of carbon pricing regulations, and forces unregulated companies to consider potential future exposure.

Connection to other frameworks

SDG

Goal 13: Climate action

Response options

Select one of the following options:

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

Requested content

General

- Companies responding "Yes" will be further prompted to identify the systems in which they participate and to provide additional details about their exposure to these systems.

Additional information

- **Carbon pricing policies:** Carbon pricing is a key policy mechanism to drive greenhouse gas emissions reductions and mitigate the dangerous impacts of climate change. Policies primarily manifest in one of two ways; or, in some countries and regions, both ways:
 - An emissions trading scheme, also known as a cap and trade system, is a market-based allowance system in which participants can buy and sell a set amount of allowances based on their emissions levels. Low emitters will have allowances left over for sale, which higher emitters will buy to offset their emissions – operating in a demand and supply scenario.
 - A carbon tax attaches a fee to carbon emissions.

These policies in practice vary specifically on a case-by-case basis.

For more information, please see:

- [State and Trends of Carbon Pricing 2021](#). World Bank, 2021.
- [Carbon Pricing Dashboard](#)
- [CDP's Carbon Pricing web page](#)
- CDP's Technical Note [Carbon Pricing: CDP Disclosure Best Practice](#)

[6.2] Complete the following table for each of the emissions trading schemes you are regulated by. (Source: CDP Climate Change 2022 Questionnaire)

Rationale

As the number of jurisdictions with carbon pricing policies has doubled over the last decade, users of CDP data are interested in understanding how companies are affected by these schemes. This question provides investors and data users with a sense of the regulatory environments in which companies operate and the potential for future regulation which may impact a company's operations.

Connection to other frameworks

SDG

Goal 13: Climate action

Response options

Please complete the following table.

System name	% of Scope 1 emissions covered by the ETS	% of Scope 2 emissions covered by the ETS	Period start date	Period end date		
Fixed table rows are populated by selection in C11.1a	Numerical field [enter a number from 0-100 using a maximum of 2 decimal places and no commas]	Numerical field [enter a number from 0-100 using a maximum of 2 decimal places and no commas]	Enter the start date that applies to the data in the row. Use the calendar button or enter dates manually in the format DD/MM/YYYY. Please note that the period reported should overlap with the reporting year.	Enter the finish date that applies to the data in the row. Use the calendar button or enter dates manually in the format DD/MM/YYYY. Please note that the period reported should overlap with the reporting year.		
Allowances allocated	Allowances purchased	Verified Scope 1 emissions in metric tons CO ₂ e	Verified Scope 2 emissions in metric tons CO ₂ e	Details of ownership	Comment	
Numerical field [enter a number from 0-99,999,999,999 using a maximum of 2 decimal places and no commas]	Numerical field [enter a number from 0-99,999,999,999 using a maximum of 2 decimal places and no commas]	Numerical field [enter a number from 0-99,999,999,999 using a maximum of 2 decimal places and no commas]	Numerical field [enter a number from 0-99,999,999,999 using a maximum of 2 decimal places and no commas]	Select from: <ul style="list-style-type: none"> Facilities we own and operate Facilities we own but do not operate Facilities we operate but do not own Other, please specify 	Text field [maximum 2,400 characters]	

Requested content

General

- Although some emission trading schemes may apply solely to the operators of facilities, the financial position of facility owners is also affected indirectly by the operation of the scheme. This question therefore applies to both owners and operators of facilities covered by trading schemes.
- Even if your company does not wholly own facilities, please give the total number of emissions and allowances.

System name (column 1)

- This column is driven by the emission trading schemes selected in C11.1a. You should enter information for all applicable schemes.

% of Scope 1 emissions covered by the ETS (column 2)

- This percentage should be calculated based on your gross global Scope 1 emissions over the monitoring period of the emissions trading scheme as specified in columns 4 and 5.

% of Scope 2 emissions covered by the ETS (column 3)

- This percentage should be calculated based on your gross global Scope 2 emissions over the monitoring period of the emissions trading scheme as specified in columns 4 and 5.
- Note that in this question you should only report Scope 2 emissions for which you are directly regulated, i.e. Scope 2 emissions for which you receive allowances directly within an emissions trading scheme. If you do not have direct compliance obligations for Scope 2 emissions, enter zero here.

Period start date and end date (columns 4 and 5)

- The period start date and end date refer to the annual compliance cycle of the emission trading schemes, and not the overall phase of the scheme. For example, the current European Union ETS third phase ran from 2013 to 2020, however the monitoring period of the annual compliance cycle ran from 1st January to 31st December.
- CDP recognizes that emissions trading systems verification deadlines don't always align with the reporting year disclosed in C0.2. However, please note that the period start date and end dates reported should overlap with the reporting year. If you are using the Export/Import functionality, please check that the imported date is correct.

Verified Scope 1 emissions in metric tons CO₂e (column 8)

- Companies participating in systems with verification deadlines at a later date than the CDP disclosure period, such as the California Cap and Trade (CaT), should submit estimates to the best of their knowledge. CDP does not wish to penalize companies for something out of their control.
- You can use the further information field at the end of the questionnaire to correct any submissions from past years that were estimated incorrectly. If doing so reference the question number C11.1b.

Verified Scope 2 emissions in metric tons CO₂e (column 9)

- If you do not have direct compliance obligations for Scope 2 emissions (i.e. you have entered 0 in column 3), also enter 0 in this column.

Details of ownership (column 10)

- Select the option that best describes your ownership arrangements for the facilities subject to the scheme identified.
- If you select "Other, please specify," provide a label for the Details of ownership.

Comment (column 11) (optional)

- If you have selected "Other ETS, please specify" in C11.1a then please provide the full name of the emission trading scheme in this column.

Additional information

Emissions Trading Schemes (ETS)

Further resources on current and proposed emissions trading systems:

- [State and Trends of Carbon Pricing 2021](#). World Bank, 2021
- [Carbon Pricing Dashboard](#)
- [CDP's Carbon Pricing web page](#)
- [CDP's Technical Note Carbon Pricing: CDP Disclosure Best Practice](#)

[6.3] * Provide details of your organization's carbon price pass through targets and progress made against those target(s). (New Question for CASG SME Questionnaire)

Rationale

This question seeks to assess whether future carbon price risk can affect the business model and whether carbon pass through targets have been set as a response.

Response Option

This is an open text question.

Requested Content

General

- Companies should disclose whether they consider carbon pricing as part of their company's climate strategy and whether an internal carbon price has been developed to influence strategy formulation and risk & opportunity assessment.
- If companies have considered carbon pricing in their strategy, they should provide details of how this has impacted strategic planning and has been provided for in the business model.
- Companies should provide details of how the targets set help them mitigate carbon risk.

7. Other Environmental Risks

[7.1] What are the total volumes of water withdrawn, discharged, and consumed across all your operations, and how do these volumes compare to the previous reporting year? (Source: CDP Private Markets Questionnaire 2022)

Question dependencies

This question is only presented if in PM0.6 activities are selected from an activity group classified as high impact, and more 50% of your revenue is associated with the activity: [Water Risk Matrix](#).

Rationale

This question incentivizes companies to have a complete view of their water balance at the corporate level.

Total volumes can indicate the organization's relative significance as a user of water and provide a baseline figure for other calculations. Along with trend data, these volumes can also suggest the level of risk posed by future disruptions to water supplies or increases in the cost of water.

Water consumption measures water that is no longer available for use by the ecosystem or local community in the reporting period. Reporting the volume of water consumption contributes to an organization's understanding of the overall scale of its impact due to water withdrawal on downstream water availability.

Connection to other frameworks

CEO Water Mandate

Current state: Performance

Response options

Please complete the following table:

Water aspect	Volume (megaliters/year)	Comparison with previous reporting year	Please explain
Total withdrawals	Numerical field [enter a range of 0 to +/- 999,999,999,999 using a maximum of two decimal places]	Select from: <ul style="list-style-type: none"> • Much lower • Lower • About the same • Higher • Much higher • This is our first year of measurement 	Text field [maximum 2,000 characters]
Total discharges			
Total consumption			

Requested content

General

- This question is asking you to report aggregated company-wide volumetric data. If you do not have the aggregated data, if you are estimating or extrapolating to provide complete coverage, please give an explanation in column 4 (Please explain). Please remember that a zero should only be used for reporting zero volumes and not for an absence of data.
- Please refer to CDP's water accounting definitions before completing this question. **Report volumetric data in megaliters per year for the reporting year** (the time period you stated in response to PM0.3). (1 megaliter = 1 million liters or 1,000 m³).
- **Cooling water:** Cooling water (freshwater or sea water) is often withdrawn in large quantities and discharged back to its original source with negligible losses or variation in quality. However, this should be included in your water accounts.
- **Rainwater:** If a company is managing rainwater (for example, by harvesting for use or storage, or to prevent flooding), or is dependent on it for production of goods or the delivery of services, it should try to estimate and disclose it as a withdrawal from the hydrological system into the company boundary. Note that in some jurisdictions rainwater is considered a withdrawal source and organizations are required to report its collection and use.
 - Companies may choose to exclude collected rainwater and domestic sewage from their water withdrawal/discharge volumes only if the resulting error in their water balance would be less than 5%. (This avoids your discharge volumes being larger than your withdrawals).
 - Including rainwater helps companies better understand their water dependency and risks. For some companies, precipitation/rainwater volumes may constitute a principal input of water at site level. This includes run-off where it has to be managed. In these cases, excluding rainwater from water accounting – withdrawal and discharge - would not be a true reflection of site water balance. In addition, there may be reduced impacts from using rainwater in place of other local freshwater sources.

Volumes (column 2)

- If you do not have data, please leave the relevant box blank. Do NOT report 0.
- Please report volumetric data in megaliters per year for the reporting year (the time period you stated in response to PM0.3). (1 megaliter = 1 million liters or 1,000 m³).
- For withdrawals, data may be collected from several sources, including “water meters, water bills, calculations derived from other available water data or the organization's own estimates (if neither water meters nor bills or reference data exist).
- Before deciding whether your withdrawals, discharges or consumption can be reported as zero (0), please refer to [CDP's Technical Note on Water Accounting Definitions](#).
- If reporting “zero consumption” please remember to check your discharge volumes.

Comparison with previous year (column 3)

- CDP does not define the threshold for considering a value as ‘much higher’ rather than simply ‘higher’ (or ‘much lower’/‘lower’). CDP requests this information from many different industries with huge variations in water use, and it would therefore be difficult to provide a universal threshold that is meaningful (as proportions will equate to different absolute values and impacts).
- CDP recommends that you define your own threshold for what is ‘much higher’ (and ‘much lower’) and apply it consistently so that the reported data for this question is comparable and data users can track your water accounts more effectively each year. A company-specific explanation for these thresholds should be provided in column 4 (Please explain).

Please explain (column 4)

- Include any contextual information necessary to understand how the volumetric data have been compiled, such as any standards, methodologies, and assumptions used.
- If you have left column 2 blank because you do not have the data, please describe the barriers to reporting that data and any plans to collect and report it.
- Describe the thresholds for what is ‘much higher’ and ‘much lower’ for the change in volume for each water aspect compared to the previous year.
- You should account for the change compared to last year and also indicate the anticipated future trends for these volumes, if known.

- If there is any level of uncertainty in your 'Total' figures in column 2, or if there is an estimated figure, you should explain it in this field and give the range of uncertainty. Uncertainty can arise from data gaps, assumptions, metering/measurement constraints including equipment accuracy, data management, etc.
- **Note:** CDP expects withdrawals, discharges and consumption figures to balance (approximately; +/- 5%) so if there is a good reason why this cannot happen, it should be explained in here.

Please explain – additional guidance for consumption volume (row 3)

- For the “water consumption” row, you should indicate if your figure is based on an aggregation of local measurements, an aggregation of local calculations, or is a company-wide calculation (for example using withdrawals minus discharges).
- If known, please provide a breakdown of this figure (with reference to CDP’s definition of consumption) and a brief explanation. Breakdowns include:
 - Volume incorporated into products, crops or waste;
 - Volume evaporated or transpired;
 - Volume consumed by humans or livestock;
 - Net volume stored in a controlled manner;
 - Net volume stored for future use;
 - Volumes otherwise excluded from discharges out of the organization’s boundary.
- It is important that you explain a negative consumption figure where this is the case. This would indicate that your discharges are larger than your withdrawals for the reporting year - due to a net release of water from storage, for example.

Explanation of terms

- **Water balance:** An account of the volumes of water flowing into and leaving an organization across its boundary. When the two volumes are equal, the net water balance will be zero.
- **Water consumption:** The amount of water that is drawn into the company boundary and not discharged back to the water environment or a third party. It is important to distinguish the term ‘consumption’ from the term ‘water withdrawal’ or ‘water use’.

Water consumed is water that during the reporting year:

- has been incorporated into products, crops or waste;
- has evaporated or transpired;
- consumed by humans or livestock;
- has been stored in a controlled manner because it is polluted to the point of being unusable by other users, and so that it does not leave the organization’s boundary;
- has been stored during the reporting year for use or discharge in a subsequent reporting period;
- is otherwise excluded from discharges out of the organization’s boundary so that it is no longer available for use by the ecosystem or local community.

Consumption may be measured directly or modelled, or it can be calculated by subtracting the total water discharge from company boundary from total water withdrawn into the company boundary during the reporting period. As CDP data users require comparability, all disclosing companies should use this method.

If the company discharges more water than it withdraws, for example, because it has used and then discharged previously stored water, a negative consumption value is possible. This would indicate a net contribution to the water environment in the reporting year.

- **Water discharges – total volumes:** The sum of effluents and other water leaving the organization’s boundary and released to surface water, groundwater or to third parties over the course of the reporting year. This includes all water leaving the company boundary, whether it is:
 - considered used or unused;
 - released through a defined discharge point (point source discharge), or;
 - released over land in a dispersed or undefined manner (non-point source discharge), or as;
 - wastewater removed from the organization via truck.

Water discharge can be authorized (in accordance with discharge consent) or unauthorized (if discharge consent is exceeded).

Example response

Water aspect	Volume (megaliters/year)	Comparison with previous reporting year	Please explain
Total withdrawals	32,596,140	Higher	Hydropower operations represent the main share of our water withdrawals. After two consecutive drier-than-average hydrological years in Cohahuila, Mexico, where our hydropower facilities are, the current reporting year was wetter and river inflow, precipitation and runoff increased significantly.

Total discharges	23,827,590	Higher	Hydropower operations represent the main share of our water discharges. After two consecutive drier-than-average hydrological years in Cohahuila, Mexico, where our hydropower facilities are, the reporting year was wetter and dam discharges increased following requests from the regional water agency.
Total consumption	8,799,710	Higher	Hydropower operations represent the main share of our water consumption. After two consecutive drier-than-average hydrological years in Cohahuila, Mexico, where our hydropower facilities are, the reporting year was wetter and stored water volumes increased despite the increase in discharges. This makes our consumption figure higher.

[7.2] Provide details of your water goal(s) that are monitored at the corporate level, and the progress made. (Source: CDP Water Security Questionnaire 2022)

Rationale

CDP data users wish to know if your organization has any qualitative goals (without a tracked, time-specific, quantitative target) related to water and how they contribute to water security, reducing other water-related risks, and/or achieving other water commitments or strategic business objectives.

Connection to other frameworks

CEO Water Mandate

Response: Policies, governance and targets

SDG

Goal 6: Clean water and sanitation

Response options

Please complete the following table. You are able to add rows by using the "Add Row" button at the bottom of the table.

Goal	Level	Motivation	Description of goal	Baseline year	Start year	End year	Progress
Select from: <ul style="list-style-type: none"> Response drop-down options below table 	Select from: <ul style="list-style-type: none"> Company-wide Business Business activity Site/facility Brand/product Country level Basin level Other, please specify 	Select from: <ul style="list-style-type: none"> Response drop-down options below table 	Text field [maximum 1,500 characters]	Numerical field [enter a number between 1900 and 2022 with no decimal places]	Numerical field [enter a number between 1900 and 2022 with no decimal places]	Numerical field [enter a number between 2017 and 2100 with no decimal places]	Text field [maximum 1,500 characters]

[Add Row]

Goal (column 1)

<input type="checkbox"/> Providing access to safely managed Water, Sanitation and Hygiene (WASH) in workplace <input type="checkbox"/> Providing access to safely managed Water, Sanitation and Hygiene (WASH) in local communities <input type="checkbox"/> Engaging with local community <input type="checkbox"/> Engaging with customers to help them minimize product impacts <input type="checkbox"/> Engagement with public policy makers to advance sustainable water management and policies <input type="checkbox"/> Engagement with suppliers to help them improve water stewardship	<input type="checkbox"/> Engagement with suppliers to reduce the water-related impact of supplied products <input type="checkbox"/> Promotion of sustainable agriculture practices <input type="checkbox"/> Watershed remediation and habitat restoration, ecosystem preservation <input type="checkbox"/> Promotion of water data transparency <input type="checkbox"/> Reduce environmental impact of product in use phase <input type="checkbox"/> Improve wastewater quality beyond compliance requirements <input type="checkbox"/> Other, please specify
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Motivation (column 3)

<ul style="list-style-type: none"> Brand value protection Cost savings Increased revenue Sales of new products / services Reduced environmental impact Recommended sector best practice Risk mitigation 	<ul style="list-style-type: none"> Commitment to the UN Sustainable Development Goals Increasing freshwater availability for users/natural environment within the basin Corporate social responsibility Shared value Water stewardship Climate change adaptation and mitigation strategies Other, please specify
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Requested content

General

- A goal is considered to be a qualitative outcome or a change in behavior or circumstances (such as 'improving water governance'), whereas a target is generally a specific, measurable output to be achieved within a specific timeline. A target could act to support a goal - as a quantitative assessment of progress.
- This question requests information about your goals that are currently monitored at the corporate level. These may or may not be company-wide goals but if progress is monitored at the corporate level, this goal may be reported here.
- We are not requesting details of goals set or monitored at the facility, business, basin level etc., unless they are significant to the business as a whole and therefore monitored at the corporate level.
- Only report goals that are ongoing or have reached completion during the reporting year.
- To add goals, use the "Add Row" button. You may report up to 25 goals.

Goal (column 1)

- Select the option that best matches your organization's goal. If there is not an option that is applicable, select "Other, please specify" to provide a label for the goal.
- You should provide more details of your goal in column 4.

Level (column 2)

- Select the organizational/geographic/other level or scope that the goal applies to. For example, the goal may apply to a particular product or a particular industrial process within your business. If you select "Other, please specify," provide a label for the level.

Motivation (column 3)

- Select the most applicable motivation behind the goal you are reporting. If you select "Other, please specify," provide a label for the primary motivation.

Description of goal (column 4)

- Provide additional details that will help data users to understand your organization's goal, its contribution to water security and why it was chosen.
- Include a company-specific rationale for the goal and its level of ambition, why it's important, and why it is being monitored at the corporate level.
- You should also include:
 - Why this goal was adopted for the level indicated in column 2;
 - If the goal is the same for all basins/facilities/products, or if it is aligned with local risk levels, for example;
 - How your company is implementing the goal at the associated level. You may give details of the financial and personnel resources that have been committed to achieving it.

Baseline year (column 5)

- Please enter a whole number between 1900 and 2022 to indicate the baseline against which your goal is assessed.
- The baseline year may be before, after, or the same as the start year.

Start year (column 6)

- Please enter a whole number between 1900 and 2022 to indicate the year that the goal was set.
- If you have a year-on-year rolling goal, this will be the same as the baseline year in column 5.
- If you have a goal based on financial years, please enter the start year for that period.
- If you have a goal based on an average (e.g. five years average), enter the year that applies to the start of the average period.

End year (column 7)

- Please enter a whole number between 2017 and 2100.
- If you have a year-on-year rolling goal, your end year will be the current reporting year.

- If you have a goal based on financial years, please enter the end year for that period.
- If you have a goal based on an average (e.g. five years average), enter the year that applies to the end of the average period.
- The end year should be in the future, or the current reporting year at the earliest. You should not report any goal that was completed before the start of the reporting year.

Progress (column 8)

- For each goal, specify the progress that has been achieved by the end of the reporting year.
- Provide details as to how your organization assesses the progress made, the indicators you use and how will you know when the goal has been achieved, e.g. the thresholds of success.

[7.3] * Provide details of the organization's waste disposal goals, and the initiatives implemented to achieve the target. (New Question for CASG SME Questionnaire)

Response Option

Please complete the following table (one row per target, add new row for additional targets):

Target(s) on waste disposal or management	Metric used for target set	Initiatives implemented to achieve the target	Description of initiatives implemented
<ul style="list-style-type: none"> - metric tons of waste diverted from landfill - metric tons of waste recycled - metric tons of waste reused - metric tons of waste generated - Percentage of total waste generated that is recycled - Percentage of sites operating at zero-waste to landfill - Other, please specify 	<ul style="list-style-type: none"> - KWh - MWh - GJ - Btu - Boe - Other, please specify 	<ul style="list-style-type: none"> - Energy efficiency in production processes - Waste heat recovery - Wastewater treatment - Waste reduction and material circularity - Waste reduction - Product or service design - Product/component/material reuse - Product/component/material recycling - Remanufacturing - Other, please specify . 	[Open text]

**Requested Content
General**

- Companies should consider the following in responding to this question:
 - Does the company measure how much waste is generated from their business, and how the waste is handled?
 - What proportion of waste is sent to landfill, recycled or reused?
 - Does the company have any zero-waste policy and practice?
 - Does the company have any initiatives to reduce waste generation from the beginning to the end of their value chain, e.g. product design, choice of materials, product end of life, etc.

SC. Supply Chain

[SC1] * Have you begun the process of measuring Scope 3 emissions? (New Question for CASG SME Questionnaire)

Response options

Select one of the following options:

- Yes
- No

[SC1a] (Yes) Account for your organization's gross global Scope 3 emissions, disclosing and explaining any exclusions. (Source: CDP Private Markets Questionnaire 2022)

Question dependencies

This question only appears if you select "Yes" in PM1.3.

Rationale

For most companies, the majority of emissions occur in the supply chain. CDP asks this question to gauge the thoroughness of companies' accounting processes and to understand how companies are analyzing their emissions footprints.

Connection to other frameworks

TCFD

Metrics & Targets recommended disclosure b) Disclose Scope 1, Scope 2, and, if appropriate, Scope 3 greenhouse gas (GHG) emissions, and the related risks.

SDG

Goal 12: Responsible consumption and production

Goal 13: Climate action

Response options

Please complete the following table:

Scope 3 category	Evaluation status	Metric tons CO2e	Please explain
Purchased goods and services	Select from: <ul style="list-style-type: none"> • Relevant, calculated • Relevant, not yet calculated • Not relevant, calculated • Not relevant, explanation provided • Not evaluated 	Numerical field [enter a number from 0-999,999,999,999 using a maximum of 3 decimal places and no commas]	Numerical field [enter a number from 0-999,999,999,999 using a maximum of 3 decimal places and no commas]
Capital goods			
Fuel-and-energy-related activities (not included in Scope 1 or 2)			
Upstream transportation and distribution			
Waste generated in operations			
Business travel			
Employee commuting			
Upstream leased assets			
Downstream transportation and distribution			
Processing of sold products			
Use of sold products			
End of life treatment of sold products			
Downstream leased assets			
Franchises			
Investments			
Other (upstream)			
Other (downstream)			

Requested content

General

- According to the GHG Protocol's [Corporate Value Chain \(Scope 3\) Accounting and Reporting Standard](#) (page 107): "Any estimates of avoided emissions must be reported separately from a company's Scope 1, Scope 2, and Scope 3 emissions, rather than included or deducted from the Scope 3 inventory".
- You should complete every row of the table (with the exception of the last two rows "Other (upstream)" and "Other (downstream)" which are optional), but not necessarily all columns.
- The columns that you need to complete in response to question 1.3a will depend on your selection made in the "Evaluation status" column and are summarized in the guidance below for column 2 "Evaluation status".

Scope 3 category (column 1)

- This column is already completed in the ORS and all categories will appear. The categories of Scope 3 emissions have been taken from the Greenhouse Gas Protocol's [Corporate Value Chain \(Scope 3\) Accounting and Reporting Standard](#), published in September 2011. Companies should refer to the standard for information on the emissions sources that each category comprises and additional information on how to calculate these emissions.

Evaluation status (column 2)

- This column should be completed for all Scope 3 categories, with the exception of "Other (upstream)" and "Other (downstream)" – these two rows should only be used if companies have a source of Scope 3 emissions that is not provided in the categories above. The evaluation status includes two components: whether a Scope 3 category is relevant to your business and whether you have calculated the emissions in that category. Relevance should be determined with reference to the GHG Protocol Scope 3

standard – see **Additional Information for the Scope 3 relevance criteria.**

Select from:

- **Relevant, calculated** - Select this option if the Scope 3 category is relevant to your business and you have calculated emissions from at least part of this source.
- **Relevant, not yet calculated** - Select this option if you are aware that the Scope 3 category is relevant to your business but you have not yet calculated the emissions associated with it.
- **Not relevant, calculated** - Select this option if you know that this source is not one of the most important for your business but as part of your Scope 3 work, you have been able to calculate the emissions associated with it.
- **Not relevant, explanation provided** - Select this option if you have investigated this source of Scope 3 emissions and have been able to determine that it is not relevant. This could be based on quantitative or qualitative investigations.
- **Not evaluated** - Select this option if you have not yet investigated this Scope 3 source and therefore do not know whether or not it is relevant for your business.

Metric tons CO₂e (column 3)

- Complete this column for all sources that you have identified as “Relevant, calculated” or “Not relevant, calculated” in the “Evaluation status” column. Enter the emissions appropriate to each source identified in metric tons CO₂e, entering numbers only up to 99,999,999,999 without commas and up to two decimal places. Negative numbers are not allowed as reporting needs to be gross, not net figures. Emission figures should be for the reporting year only.
- Entering 0 implies that you have calculated emissions from this source and they are equal to zero.

Please explain (column 4)

- Complete this column for all sources that you have identified as “Not relevant, explanation provided” in the “Evaluation status” column. You should provide details of how you have reached the conclusion that the source is not relevant and include any qualitative or quantitative reasoning.
- If you wish to provide additional context to any of the other rows in the table, including methodology used, any exclusions within a source, or to explain why emissions have decreased or increased, you can also do that in this column.

Note for agricultural sector companies:

- Organizations reporting Scope 3 emissions data associated with the transportation of raw materials should do so in this question.

Note for oil & gas and coal sector companies:

- CDP has produced sector-specific guidance for estimating Scope 3 category 11 (use of sold products) emissions for the [Oil & Gas](#) and [Coal](#) sectors.

Note for financial services sector companies:

- As the majority of emissions occur in relation to financial products and services and/or investments, financed emissions, or Scope 3 Category 15 “Investments” emissions as defined by the GHG Protocol is the most relevant category to financial services organizations.

Note for real estate sector companies:

- For real estate companies, the categories that are likely to be highly relevant and should always be evaluated are:
 - Capital goods
 - Use of sold products
 - End-of-life treatment of sold products
 - Downstream leased assets
- You may wish to refer to “[Guide to Scope 3 Reporting in Commercial Real Estate](#)” (UK Green Building Council, 2019) that has been specifically developed to build consensus and promote common approaches to reporting Scope 3 emissions. It aims to provide clarity on interpreting the GHG Protocol for commercial real estate companies and enable consistency in reporting across the sector.

Note for capital goods sector companies:

- For capital goods companies, the categories that are likely to be highly relevant and should always be evaluated are:
 - Purchased goods and services
 - Use of sold products
 - End-of-life treatment of sold products

Additional information

- **Relevance criteria for Scope 3 emissions sources:** Companies should not exclude any activity that would compromise the relevance of the reported inventory. The table below from the [Corporate Value Chain \(Scope 3\) Accounting and Reporting Standard of the GHG protocol](#) provides a list of criteria for determining relevance.

Table [6.1] Criteria for identifying relevant scope 3 activities

Criteria	Description
Size	They contribute significantly to the company's total anticipated scope 3 emissions (see section 7.1 for guidance on using initial estimation methods)
Influence	There are potential emissions reductions that could be undertaken or influenced by the company (see box 6.2)
Risk	They contribute to the company's risk exposure (e.g., climate change related risks such as financial, regulatory, supply chain, product and customer, litigation, and reputational risks) (see table 2.2)
Stakeholders	They are deemed critical by key stakeholders (e.g., customers, suppliers, investors, or civil society)
Outsourcing	They are outsourced activities previously performed in-house or activities outsourced by the reporting company that are typically performed in-house by other companies in the reporting company's sector
Sector guidance	They have been identified as significant by sector-specific guidance
Other	They meet any additional criteria for determining relevance developed by the company or industry sector

- **Scope 3 screening tool:** To help facilitate the adoption of the Scope 3 Standard and assist companies in determining the relevance of Scope 3 emissions sources, the GHG Protocol, in collaboration with Quantis, have released a free [Scope 3 screening tool](#). This tool asks a number of relatively simple questions to approximate your Scope 3 inventory, and can be used by companies of all sizes and all sectors. Please note that this tool is not a data collection tool and should only be used to make a first approximation of your Scope 3 emissions. Having used the tool to help determine the relevance of Scope 3 categories, companies should then develop more accurate approaches for categories shown to be a relevant source of emissions.

[SC2] * Do your suppliers or vendors disclose their carbon emissions (Including Scope 1,2 & 3)? Do you have a plan to receive climate disclosure data from your suppliers, or do you support your suppliers in the collection of such climate disclosure data? (New Question for CASG SME Questionnaire)

Response Option:

This is an open text question.

**Requested Content
General**

- Companies should consider whether their suppliers have assessed their exposure to climate change and how they are impacted.
- Companies should disclose:
 - Whether the company's suppliers or vendors inventory their own GHG emissions and monitor their own carbon footprint
 - Whether the company engages the supply chain and influence their suppliers to disclose their climate related info
- The following factors may be considered in responding to this question:
 - Does the company monitor or assess suppliers' climate disclosure practice?
 - Are suppliers required to report climate data to the company as part of their vendor appraisal and selection process?
 - Does the company collect relevant climate change datapoints from their vendors?
 - Does the company have any internal mechanisms or procedures to collect data from their suppliers

[SC3] * Do you engage with your suppliers or vendors on climate-related issues? (New Question for CASG SME Questionnaire)

Response Option:

Companies should select all that apply from the following value-chain options:

- Yes, our suppliers
- Yes, our customers
- Yes, other partners in the value chain
- No, we do not engage

[SC3a] * (Yes) Do your suppliers or vendors assess their climate risks? Do you have a plan to receive climate risk data from your suppliers, or do you support your suppliers in the collection of such climate risk data? (New Question for CASG SME Questionnaire)

Response Option:

This is an open text question.

**Requested Content
General**

- Companies should consider disclosing the following in responding to this question:

- How does the company manage their supply chain risk through supplier engagement, e.g. any established processes, annual appraisals on their climate performance, etc.?
- How does the company engage with suppliers in case of poor performance?
- How does the company integrate climate-related considerations into vendor selection and appraisal processes, e.g. what KPIs are used to assess them?
- How does the company influence their suppliers' transition to low carbon economy, e.g. sustainable sourcing and production, use of recycled materials, etc.?

[SC4] * Do you use climate-related weighted criteria for evaluation in competitive tenders and purchase agreements? (New Question for CASG SME Questionnaire)

Response options

Select one of the following options:

- Yes
- No

[SC5] * Does your organization use life cycle analysis to measure climate-related impacts across the supply chain? (New Question for CASG SME Questionnaire)

Response options

Select one of the following options:

- Yes
- No

[SC6] * Does your organization utilize a socialized cost of carbon (SCC) for establishing life cycle costs and benefits? (New Question for CASG SME Questionnaire)

Response options

Select one of the following options:

- Yes
- No

[SC6a] * If yes, what is it and does it escalate over time? (New Question for CASG SME Questionnaire)

[SC7] * Does your organization use a lower discount rate for evaluating low carbon solutions? (New Question for CASG SME Questionnaire)

Response options

Select one of the following options:

- Yes
- No

[SC8] * Please give an assessment of the physical risk impacts on your supply chain. (New Question for CASG SME Questionnaire)

Response Option:

Please select one of the following levels of impact that apply to your business:

- Very high
- High
- Medium
- Low
- Very Low

[SC9] * Please briefly explain the strategy that your organization uses to mitigate or adapt to current and future physical risks to your supply chain. (New Question for CASG SME Questionnaire)

Response Option:

This is an open text question.

Requested Content

General

- Companies should consider disclosing the following in responding to this question:
 - Has the company conducted climate risk assessment on its supply chain?
 - Does the company understand their risk exposure from the supply chain, e.g. how that can impact their business if their suppliers have an operational base in coastal areas?
 - Does the company have a risk mitigation plan, e.g. through vendor due diligence?
 - Does the company have a long-term strategy to decarbonize their supply chain, e.g. adoption of lower carbon methods or sourcing of more sustainable raw materials?