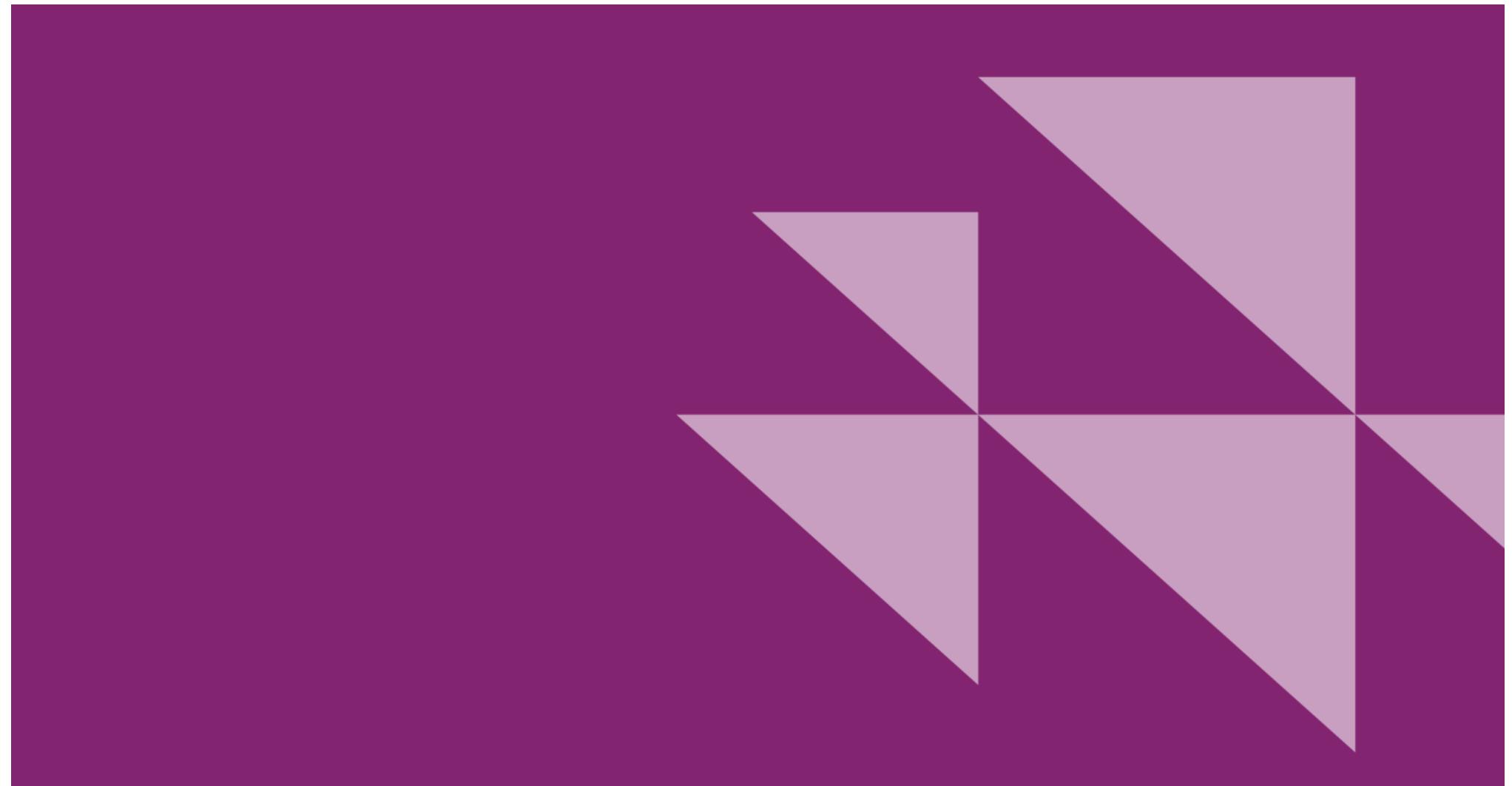

CDP Climate Change 2019 Reporting Guidance



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CDP Climate Change Questionnaire Preview and Reporting Guidance 2019 - Version Control

Version number	Release/Revision date	Revision summary
0.1	Released: Dec 17, 2018	The 2019 climate change questionnaire preview and the general preliminary version of the reporting guidance was released.
0.2	Revised: March 14, 2019	<ul style="list-style-type: none"> • The terms for submitting your response to CDP have been updated for 2019 <p><i>General questions</i></p> <ul style="list-style-type: none"> • Question linkages to the TCFD were revised in 'Connection to other frameworks' for C2.2b, C2.2c, C2.3a, C2.4a, C3.1d, C3.1f, C3.1g, C4.1c, C4.2, C6.2, and C9.1 • C1.1a: Modifications to 'Requested content': the requirement to "Provide a rationale..." removed and replaced with "Explain how the responsibilities..." • C2.2c: Clarifications to 'Requested content' for "Please explain" column • C2.2d: Modifications to 'Rationale' and 'Requested content', and new 'Explanation of terms' • C2.3a: Modifications to 'Requested content' for "Management method" column • C2.4a: Modifications to 'Requested content' for "Strategy to realize opportunity" column • C2.5: Modifications to 'Rationale' and 'Requested content' • C2.6: Modifications to 'Rationale' and 'Requested content', and new 'Explanation of terms' • C4.1a: Modifications to column headers (columns 4 and 10) • C4.1b: Modifications to column headers (columns 4, 8 and 11) • C6.1: Clarifications to the "Note on biogas" • C7.3b: Modifications to 'Requested content' <p><i>Agricultural commodities, Food, beverage & tobacco and Paper & forestry sectors</i></p> <ul style="list-style-type: none"> • C-AC6.6a/C-FB6.6a/CPF6.6a: Clarifications to text in column 1 <p><i>Cement, Chemicals, Coal, Electric Utilities, Metals & Mining, Oil & Gas, Steel, Transport OEMs and Transport Services sectors</i></p> <ul style="list-style-type: none"> • C-CE7.4/C-CH7.4/C-CO7.4/C-EU7.4/C-MM7.4/C-OG7.4/C-ST7.4/C-TO7.4/C-TS7.4: Clarifications to 'Additional Information' regarding biogas. <p><i>General questions and all sectors</i></p> <ul style="list-style-type: none"> • Numeric limits and/or decimal places modified in C2.3a, C2.4a, C4.1b, C4.2, C4.3b, C6.3, C6.10, C-TS6.15, C-OG7.1b, C-TO7.8, C-TO8.4, C-OG9.3b, C-CE9.6, C-CH9.6, C-CO9.6/C-EU9.6/C-OG9.6, C-MM9.6, C-TO9.6/C-TS9.6, C-ST9.6, SC0.1
0.3	Revised: June 5, 2019	<p><i>General questions</i></p> <ul style="list-style-type: none"> • C2.1: Modifications to 'Requested content' for long-term time horizon • C4.3b: Modifications to 'Requested content' for columns 'Description of initiative', 'Estimated annual CO₂e savings (metric tons CO₂e)' and 'Scope'
0.4	Revised: July 10, 2019	<p><i>General question</i></p> <ul style="list-style-type: none"> • C4.3b: Modification to 'Requested content' for 'Payback period' column.

CDP disclosure cycle 2019

Accessing questionnaire previews, reporting guidance, and scoring methodologies

CDP's corporate questionnaire previews, reporting guidance, and scoring methodologies can be accessed by program (climate change, forests, and water security) from the [guidance for companies](#) page of CDP's website. You will be presented with three prompt screens that allow you to select the sectors and other details relevant to your organization. Questionnaires are valid for information requests from investors, as well as from customers that are members of CDP's supply chain program. As there are sector-specific questions throughout the questionnaires, you might find that question numbers skip since not all questions will be applicable to your organization.

Responses to questionnaires are submitted via CDP's online response system (ORS), which is part of CDP's online disclosure platform. Please refer to [Using CDP's Online Disclosure Platform](#) for more detail. Note that while the questions themselves are the same in the questionnaire preview as they are in the ORS, the format may differ, particularly for drop-down options and tables.

Full and Minimum versions of the questionnaire

For all CDP questionnaires, there are two versions: minimum and full. The minimum version contains identical but fewer questions, and no sector-specific questions or data points.

- The minimum version of a questionnaire can be completed by:

- *Organizations disclosing to that questionnaire for the first time; OR*
- *Organizations not disclosing to that questionnaire for the first time, but with an annual revenue of less than EUR/US\$250 million*

Although any organizations meeting the above criteria may opt to complete a minimum version, they may not be eligible for scoring.

For more information on scoring eligibility and implications, please see [Scoring Introduction](#).

For previous responders with an annual revenue of less than EUR/US\$250 million, CDP reserves the right to remove the option of a minimum version questionnaire due to the organization's potential or existing environmental impact.

Note that companies eligible to complete the minimum version of a questionnaire can choose to answer the full version if they consider this to provide greater benefit to their organization or stakeholders.

Timeline:

December 2018	• Preview of questionnaires and preliminary version of reporting guidance released on CDP website.
March 2019	• Final version of reporting guidance and scoring methodologies released on CDP website.
April 2019	• Access will be provided to CDP's online response system (ORS).
July 2019	• Responses to investor and supply chain requests must be submitted by 31st July 2019 to be automatically eligible for scoring and inclusion in CDP reports (where applicable).

For any disclosure-related enquiries, please contact respond@cdp.net.

CDP climate change questionnaire

Introduction to CDP's climate change program and questionnaire

CDP works to reduce companies' greenhouse gas emissions and mitigate climate change risk.

The 2015 Paris Agreement was a tipping point in the global approach to climate change. By agreeing to limit global temperature rises to well below 2°C, governments have committed to transforming to a low-carbon economy. This transition will create winners and losers within and across business sectors, as the manifestation of climate-related opportunities and risks accelerates in both size and scope. Business as usual will not be a good indicator of how companies will perform.

We believe that improving corporate awareness through measurement and disclosure is essential to the effective management of carbon and climate change risk. We request information on climate risks and low-carbon opportunities from the world's largest companies on behalf of over 525 institutional investor signatories with a combined US\$96 trillion in assets.

Regulators have begun to respond to the risks, notably with the Task Force on Climate-related Financial Disclosures (TCFD). Established by the Financial Stability Board, the TCFD has moved the climate disclosure agenda forward by emphasizing the link between climate-related risk and financial stability. The Task Force has recommended that both companies and investors disclose climate change information. This includes whether they are conducting scenario analysis in line with a 2-degree pathway and then setting out how climate-related issues impact their strategy and financial planning. This amplifies the longstanding call from CDP's investor signatories for companies to disclose comprehensive, comparable environmental data in their mainstream reports, driving climate-related risk management further into the boardroom.

Commit to Action

CDP and its partners in the [We Mean Business](#) coalition have created a central platform for companies to take action on key climate issues, with hundreds of companies from every economic sector and geography taking action to date. The We Mean Business "[Take Action](#)" platform gives companies a clear pathway for building the Paris Agreement into their business strategies and to future-proof growth, giving policy makers the confidence in raising their ambitions as governments prepare to ratchet up their national pledges in 2020.

Companies who have made commitments through We Mean Business can track progress against them via CDP's annual disclosure requests.

For example – Report on your commitment to adopt a science-based emissions reduction target by answering to C4.1 and C4.2 sub-questions in detail.

For more specific information on each commitment and how companies can report on their progress in the relevant sections of the CDP's questionnaires, please refer to the [Commit to Action Technical note](#).

Climate change questionnaire developments

The CDP climate change questionnaire was redesigned in 2018 in response to market needs and the following developments were included:

- Integration of sector-specific questions
- Inclusion of the TCFD recommendations
- Increased emphasis on forward-looking metrics and improved alignment with other reporting frameworks

Sector approach

For climate change, CDP has incorporated sector-specific questions for 12 high-impact sectors. The rationale for developing a refined questionnaire for each of these sectors is outlined in the relevant sector introduction. Companies with business activities outside of these sectors will receive a general questionnaire, as in previous years.

Each question number in the climate change questionnaire begins with the letter C. Questions that are unique to companies in a particular sector are labelled using a two-letter abbreviation within the question number. These abbreviations are noted below.

2019 climate change sectors:

- Agriculture: Agriculture commodities (AC); Food, beverage & tobacco (FB); Paper & forestry (PF)
- Energy: Coal (CO); Electric utilities (EU); Oil & gas (OG)
- Materials: Cement (CE); Chemicals (CH); Metals & mining (MM); Steel (ST)
- Transport: Transport services (TS); Transport OEMs (TO)

Note for financial services sector companies:

Financial institutions can play a pivotal role in accelerating the transition to a low-carbon future. The TCFD recommendations highlight the importance of climate-related financial disclosures by this sector to enable stakeholders to better understand the concentrations of carbon-related assets in the financial sector and the financial system's exposures to climate-related risks. The supplemental guidance provided by the Task Force focuses on the importance of considering the impacts of climate-related issues in the context of their financial activities such as lending, financial intermediary, investment and/or insurance underwriting activities.

Financial services sector companies should respond to the CDP climate change questionnaire in the context of these activities, in addition to operational activities. Where necessary, specific guidance has been included to clarify the type of information banks, insurance companies and asset managers should consider in their response. For further information, a [Technical Note on Financial Services](#) will be made available.

Questionnaire changes in 2019

The questionnaire is stabilized for 2019 so there are no major changes. There are some minor revisions to reflect feedback and a correction of errors. There are no new sectors questions. Revisions and changes are indicated within the questionnaire as: "no change", "minor change" or "modified question". "Minor change" indicates wording edits and revisions to drop-down options or a simple clarification, while a "modified question" indicates that a data request has been revised.

A detailed document on climate change question changes from 2018 to 2019 is available on the [CDP website](#).

Preparing and submitting your CDP response

CDP disclosure support

Reporting guidance

CDP reporting guidance includes the following sections. Please be sure to review the guidance for all questions to which you are submitting a response, even if you have previously disclosed to CDP.

- Module-level guidance: for select modules this guidance provides an overview, key changes, sector-specific content for the module, and important disclosure notes. This section also presents question pathway diagrams showing the flow of questions through each module.
- Question-level guidance: at the question level, guidance is separated into the following components, to provide clarity around questions, terminology and requirements.
 - Rationale: provides reasoning behind the inclusion of each question;
 - Connections to other frameworks: notes linkages to the SDGs, RobecoSAM Corporate Sustainability Assessment (DJSI), and TCFD for each relevant question in the climate change questionnaire;
 - Requested content: offers context around each question and requested criteria;
 - Explanation of terms: provides detailed definitions for specific terminology;
 - Example responses: for select questions, this provides an example of a response that would include all information requested; and
 - Additional information: for select questions, this provides optional contextual information and sources related to the subject of the disclosure request.
- Glossary: viewable at the end of the reporting guidance, the glossary contains a subset of "Explanation of terms"
- Appendix: Agricultural/Forestry management practices

If you have any questions that are not answered in the reporting guidance, or the additional guidance noted below, please contact your local CDP office or respond@cdp.net.

Additional CDP guidance

Links to CDP questionnaires, guidance, scoring methodologies, and select technical notes can be found on the [guidance for companies](#) page of CDP's website. The full suite of these materials will also be accessible from the guidance tool, after signing in.

The technical notes for the 2019 disclosure cycle will be published in the first quarter of 2019 and will include some minor updates from the technical notes for the 2018 disclosure cycle. The 2018 technical notes are currently linked in the 2019 guidance and can be used to support your disclosure, given that the updates for 2019 are minor.

Webinars and workshops

CDP is hosting a series of events, online and in person, to help companies with their disclosure. Visit the [workshops and webinars](#) and [climate change](#) pages of CDP's website for more details.

CDP reporter services

CDP reporter services offers tailored support, enhanced data access and thought leadership on managing and reporting environmental risk to your business. Access the tools you need to move from disclosure to leadership on integrating climate, water security and forests management into your wider business strategy. For year-round, personalized disclosure support from a CDP account manager, a gap analysis of your previous response,a final review of your draft response before submission, and analytics tools to benchmark yourself against peers and understand best practice, contact reporterservices@cdp.net and visit the [reporter services](#) page of CDP's website for more information.

CDP accredited solutions providers

CDP partners with [leading service and software providers](#) that can support companies throughout all stages of the measurement, reporting and management of their climate and sustainability data. All CDP solution

providers have met specific accreditation criteria. Learn more about the areas they can help you with below:

- **Carbon reduction:** These solution providers offer technology and services that help reduce carbon emissions and improve energy efficiency.
- **Consultancy services:** CDP-accredited consultancies have a wide range of technical expertise to support companies with establishing and implementing climate change and sustainability strategies.
- **Science-based targets:** the services provided by these organizations can help companies looking to set and implement science-based targets.
- **Education & training:** Carbon management training can improve employee awareness and understanding of how climate change affects their organization.
- **Renewable energy:** CDP works with renewable energy solution providers to provide corporations that want to be leaders in sustainable energy the opportunity to procure, track, and generate renewable power.
- **Software solutions:** The tools and services provided by these organizations can help companies switch from complex, Excel spreadsheets to accurately collecting, monitoring and reporting their data using integrated management systems.
- **Verification:** CDP encourages the verification / assurance of information disclosed to us. CDP-accredited third-party verification and assurance providers can help companies to disclose accurate data and improve internal processes.

As well as clicking on the links above, you can also contact partnerships@cdp.net to find out more.

Notes for completing your disclosure

Acronyms

Avoid using bespoke internal acronyms unless required for your organization's response, in which case please provide their meaning to enable correct analysis and scoring.

Blank responses

Leaving a response blank is interpreted as non-disclosure. For numeric fields, values of zero (0) imply a measurement has been made, and the value is zero (0). For numeric fields where no measurement has been made, please leave the field blank and provide an explanation in an open text field for that same question (e.g. 'Comment' or 'Please explain'). If there is no open text field for the question, you may provide an explanation in the 'Further information' field in the online response system (ORS) at the end of your disclosure. Leaving a response blank and entering a value of zero (0) have different scoring implications. Please see the scoring methodology for more details.

Character limits

Limits noted in the guidance and the online response system (ORS) include spaces.

Company-specific information

Some questions request company-specific information. 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. A company-specific explanation should include details that make the answer true for the responding company and are distinct from other companies in the same industry and/or geography. This level of detail gives data users confidence that the issue at hand has been thoroughly considered in the context of the responder's own business and not simply assessed in general terms.

Consistency

CDP encourages a comprehensive and consistent response. Please ensure there is no conflicting information in your responses, both within a question and across the questionnaire.

Copy from last year

The 'copy from last year' functionality will be available in the ORS for 2019 disclosure.

Note that it may be disabled for modified data points. The reporting guidance will indicate which questions have been revised, and your responses should always be checked before submitting.

Drop-down options ('Other, please specify')

Please select from the categories provided whenever possible, and only select 'Other, please specify' when none of the listed options is appropriate. This greatly assists data analysis.

'Further information' field

At the end of the questionnaire, there is an opportunity to provide additional information or context that you feel is relevant to your organization's response. This field is optional and not scored.

Mergers and acquisitions (M&As)

All disclosure should be defined by the organizational boundary applicable at the time of the stated reporting period. (Note that for CDP disclosure, organizations are encouraged to align their reporting period and organizational boundaries with their financial reporting). Regarding forward-looking disclosure, organizations should include information that was correct at the time of the stated reporting period (for example, for data points referring to the future or "the next two years"). Organizations undergoing (or that have undergone) M&As need to consider the timing of the M&As and reporting periods as follows:

- Organizations that were acquired *after* the end of the current reporting period: these should respond with what was planned (strategy, targets, etc.) before being acquired (i.e., during the reporting period). For transparency, where possible they may state where they consider that the forward-looking information may be subject to change due to the very recent acquisition.
- Organizations that were acquired *during* the reporting period: these should provide information that was applicable and correct to the best of their knowledge at the end of the reporting period. At the time of submitting their response to CDP, this information may not be the most up to date due changes underway following the acquisitions. For transparency, the company may state this in their disclosure where possible.

Personal data

It is important that you do not include the name of any individual or any other personal data in your response. For questions that ask for the positions of staff, out of respect for personal data privacy we are asking only for the position and not for the individual's name or any other information relating to them.

Submitting your response through CDP's online response system (ORS)

Please refer to [Using CDP's Online Disclosure Platform](#) for more details.

How do I provide feedback to CDP?

The opportunity to provide feedback to CDP on the content of our questionnaire and supporting documents is available through our online [Technical Feedback Form](#). You will not receive a reply to your feedback unless required. If you represent a responding organization and would like an immediate response, please email respond@cdp.net

C0 Introduction

Module Overview

This module requests information about your organization's disclosure to CDP and will help data users to interpret your responses in the context of your business operations, timeframe and reporting boundary.

The information provided here should apply consistently to your responses throughout the questionnaire and be complete and accurate as it may determine response options presented in subsequent modules.

For this reason, you should respond to every question in this module and save your response before accessing the rest of the questionnaire.

Key changes

None.

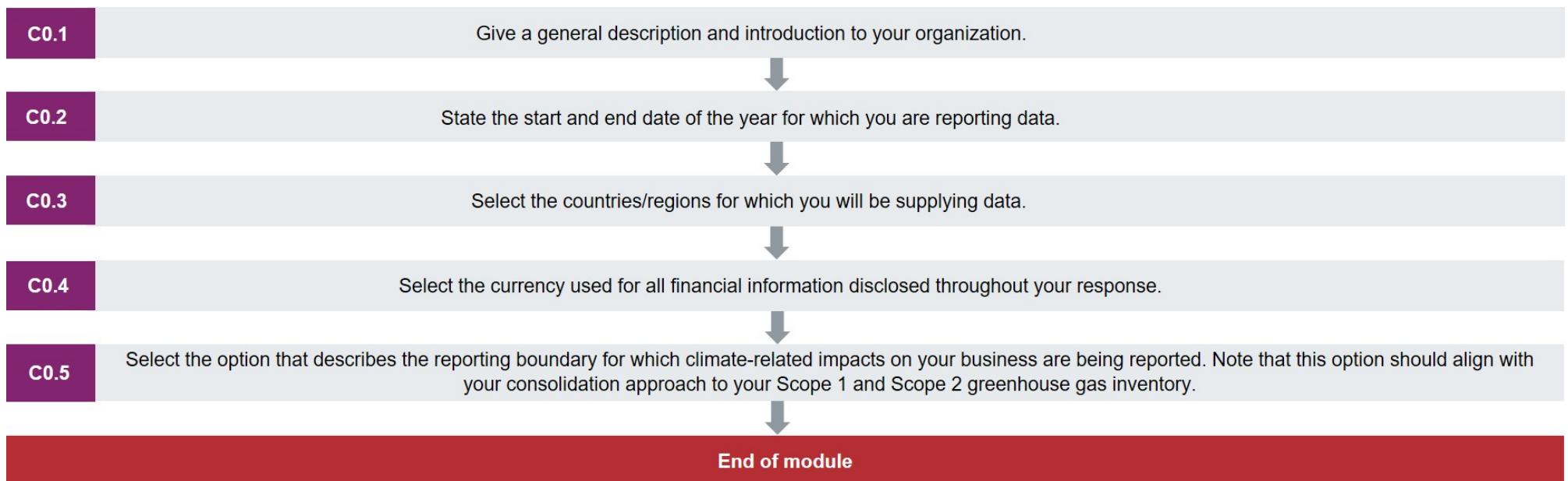
Sector-specific content

Additional questions on organizational activities for the following high-impact sectors:

- Agricultural commodities
- Food, beverage and tobacco
- Paper & forestry
- Coal
- Electric utilities
- Oil & gas
- Cement
- Chemicals
- Metals & mining
- Steel
- Transport original equipment manufacturers (OEMs)
- Transport services

Pathway diagram - questions

This diagram shows the general questions contained in module C0. To access question-level guidance, use the menu on the left to navigate to the question.



Introduction

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

Change from 2018

No change

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. If you chose not to answer questions C7.3a/c and C7.6a/c regarding emissions breakdowns by business activity, please describe the business divisions and activities included in your GHG inventory and how they contribute to your company's total Scope 1, 2 and/or 3 emissions.
- 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 (C0.2) from previous CDP disclosures (e.g. from reporting calendar year to financial year, or vice versa).

(C0.2) State the start and end date of the year for which you are reporting data.

Change from 2018

No change

Rationale

This will help data users interpret your responses.

Response options

Please complete the following table.

Start date	End date	Indicate if you are providing emissions data for past reporting years	Select the number of past reporting years you will be providing emissions data for
From: [DD/MM/YYYY]	To: [DD/MM/YYYY]	Select from: <input type="radio"/> Yes <input type="radio"/> No	Select from: <input type="radio"/> 1 year <input type="radio"/> 2 years <input type="radio"/> 3 years

Requested content

General

- 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.
- If you are using the Export/Import functionality, please check that the imported date is correct.
- 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 C6.4 the sources of Scope 1 and 2 emissions within your selected reporting boundary and not included in your disclosure.

- Select No in column 3 (Indicate if you are providing data for past reporting years) unless you are a first time responder providing emissions from past years or a previous responder to CDP who is restating your emissions data. For more information on this see the note for first-time responders and the note for restating data below.
- If multiple years of data are provided, only data pertaining to the most recent reporting year will be scored.

Note for first-time responders:

- If you have not provided emissions data before, supply gross global Scope 1 and Scope 2 emissions data for the three years prior to the current reporting year in the emissions accounting questions (C6.1 and C6.3).
- To report emissions data for years prior to the current reporting year select Yes in Column 3 (Indicate if you are providing emissions data for past reporting years). Then select how many years of emissions data you will be providing.
- This will enable you to enter multiple years of data when you reach questions C6.1 and C6.3.

Note for restating data:

- You may also choose to restate your emissions data previously supplied to CDP, for example to ensure that your historical data reflects your current organizational boundary.
- **Reporting recalculated figures for these years is optional** However, if you wish to do this it can provide transparency to stakeholders using your data.
- If you choose to restate data previously supplied to CDP, report the dates of those reporting periods here by selecting Yes in Column 3 (Indicate if you are providing emissions data for past reporting years). Then select how many years of emissions data you will be providing.
- This will enable you to enter multiple years of data when you reach questions C6.1 and C6.3.
- When you arrive at the relevant questions that need to be restated (C6.1 and C6.3), use the comment column to identify the reason for the restatement.
- For more information on restatements see CDP's technical note on restatements [here](#).

(C0.3) Select the countries/regions for which you will be supplying data.

Change from 2018

Minor change

Rationale

This will help data users interpret your responses.

Response options

Please complete the following table:

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

Requested content

General

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

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

Change from 2018

No change

Rationale

CDP encourages companies to report financial figures associated with their impacts, risks, and opportunities. Establishing a single currency will facilitate the collection of comparable financial information. This will benefit investors and other data users when assessing the costs and benefits reported by your organization.

Response options

Please complete the following table:

Currency
Select from: [Currency drop-down list]

Requested content

General

- Select the currency to be applied to all financial information reported in this disclosure.
- For example, if you select USD(\$), provide metric tons CO₂e per USD(\$) as the financial intensity metric in question C6.10.

(C0.5) Select the option that describes the reporting boundary for which climate-related impacts on your business are being reported. Note that this option should align with your consolidation approach to your Scope 1 and Scope 2 greenhouse gas inventory.

Change from 2018

No change

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.

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.

- 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.

Explanation of terms

- **Company:** Throughout this information request, "your company" refers collectively to all the companies, businesses, organizations, other entities or groups that fall within your definition of the reporting boundary.
- **Consolidation approach:** The identification of companies, businesses, organizations etc. for inclusion within the reporting boundary of the responding organization is known as the "consolidation approach". 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.
- **Organization:** This term is used interchangeably with "your company". CDP recognizes that some disclosing organizations may not consider themselves to be, or be formally classified, as "companies".
- **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.

C1 Governance

Module Overview

Board-level oversight of climate-related issues is considered best practice and provides an indication of the importance of climate-related issues to the organization.

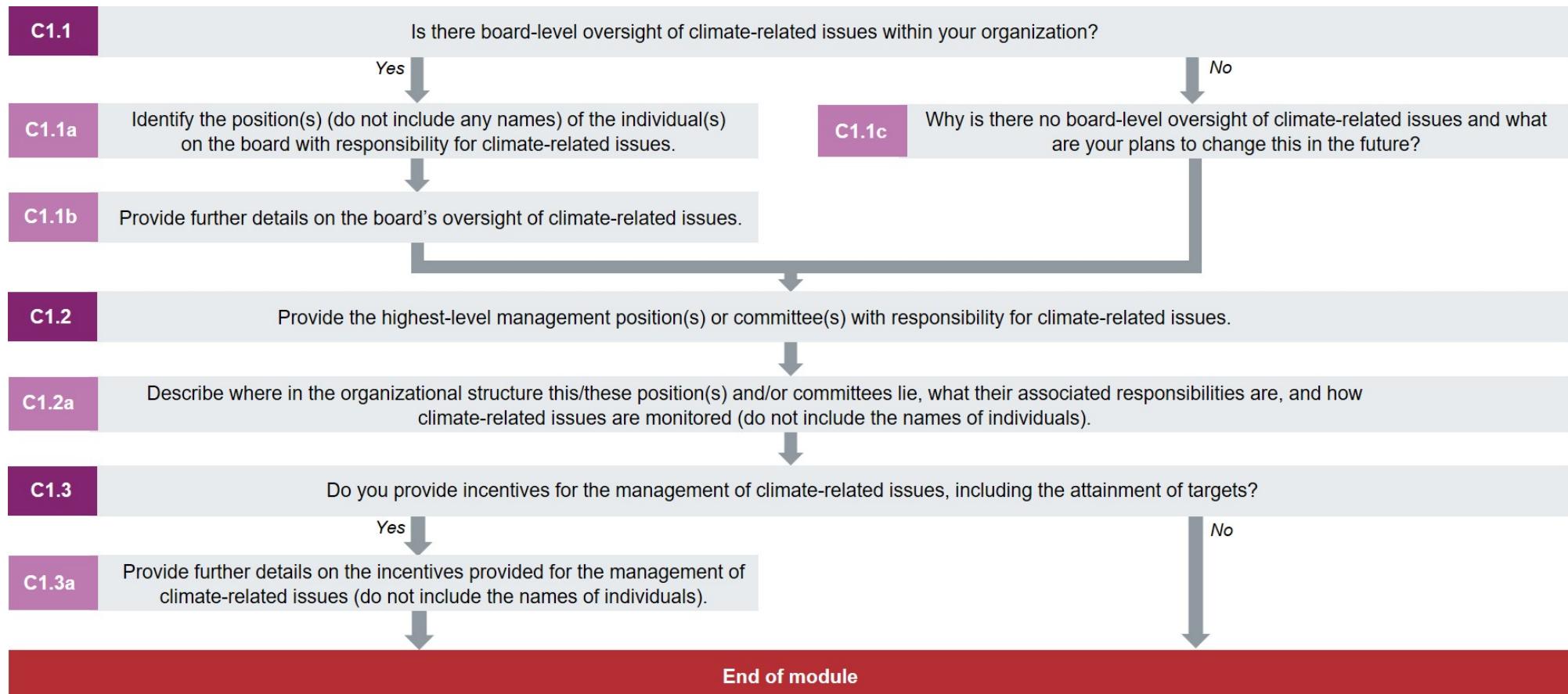
This module is intended to capture the governance structure of your company with regard to climate change, and provides data users with an understanding of the organization's approach to climate-related issues at the board level and below board-level.

Key changes

- Question 1.2 has been added to the minimum version of the questionnaire.
- Additional guidance for financial services sector companies has been added for question C1.1.

Pathway diagram - questions

This diagram shows the general questions contained in module C1. To access question-level guidance, use the menu on the left to navigate to the question.



Board oversight

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

Change from 2018

No change

Rationale

This question provides an indication of the importance of climate-related issues to your business. Investors and data users are interested in organizations' understanding and approach to climate-related risks at the board level; how aligned this is with organizational strategy, plans of action, management policies, and performance objectives; and how the board monitors progress against targets and goals. This question supports TCFD's Governance recommendation a) Describe the board's oversight of climate-related risks and opportunities.

Connection to other frameworks

Goal 12: Responsible consumption and production

Response options

Select one of the following options:

- Yes
- No

Requested content**General**

- In answering this question, consider whether the board and/or board committees consider climate-related issues when reviewing and guiding their business strategy, major plans of action, risk management policies, annual budgets, and budget plans as well as setting the organization's performance objectives, monitoring implementation and performance, and overseeing major capital expenditures, acquisitions, and divestitures.
- If any of these options is true, please select 'Yes.'
- If your organization has board-level oversight of an integrated environmental risk assessment that considers any climate-related risks and opportunities among other environmental aspects, select 'Yes.' You'll be able to provide details in subsequent questions.

Note for financial services sector companies:

- Consider whether the board and/or board committees have oversight of climate-related issues in relation to the financial activities undertaken by your organization such as lending, financial intermediary, investment and/or insurance underwriting activities, in addition to operational activities.
- Further details can be provided in subsequent questions C1.1a and C1.1b

Explanation of terms

- **Board:** Or "Board of Directors" refers to a body of elected or appointed members who jointly oversee the activities of a company or organization. Some countries use a two-tiered system where "board" refers to the "supervisory board" while "key executives" refers to the "management board".

Additional information

Board oversight of climate-related issues: The board has responsibilities across the organization in areas such as business and risk strategy, financial stability and regulatory compliance. When disclosing board oversight of climate-related issues, consider:

- The processes and frequency by which the board and/or board committees (e.g., audit, risk, or other committees) are informed about climate-related issues;
- Whether a specific board member or committee has responsibility for climate-related policies, strategy and information;
- How responsibility for climate-related policies, strategy, and information is delegated and how management is held accountable and/ or incentivized for implementation of the organization's policies;
- The nature and reliability of the underlying information and control systems used by the board to prepare climate-related information and provide related disclosures;
- Whether the organization's climate-related policies and strategies are subject to the same governance processes and disclosure controls and procedures that are used for financial management;
- Who approves the release of climate-related information; and,
- How the board monitors and oversees progress against goals and targets for addressing climate-related issues.

For further information on board-level oversight in governance, see [TCFD's recommendations](#) and [CDP's technical note on the TCFD's recommendations](#)

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

This question only appears if you select "Yes" in response to C1.1.

Change from 2018

Rationale

This question provides an indication of the importance of climate-related issues to your business and aims to identify the highest-level individual(s) on the board with direct responsibility for climate-related issues. This question supports TCFD's Governance recommendation a) Describe the board's oversight of climate-related risks and opportunities.

Connection to other frameworks

SDG

Goal 12: Responsible consumption and production

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.

Position of individual(s)	Please explain
Select from: ● Board Chair ● Director on board ● Chief Executive Officer (CEO) ● Chief Financial Officer (CFO) ● Chief Operating Officer (COO) ● Chief Procurement Officer (CPO) ● Chief Risk Officer (CRO) ● Chief Sustainability Officer (CSO) ● Other C-Suite Officer ● President ● Board-level committee ● Other, please specify	Text field [maximum 1,000 characters]

[Add Row]

Requested content

General

- Report where in the board the responsibility for oversight of climate-related issues lies. This may be with an individual member of the board or a board-level committee, e.g. sustainability committee, risk committee, etc.
- Note that this question is asking about direct responsibility for oversight. In practical terms, this is the person or committee at the top of the chain of command specifically managing information on climate-related issues, making decisions about what the company will do and adapting those decisions based on climate-related information.
- The CEO is ultimately responsible for everything in the company; however this question is looking to identify board-level responsibility specifically on climate-related issues. While this may be the CEO, it is not necessarily always the case.

Position of individual(s) (column 1)

- Select the position of the individual on the board responsible for climate-related issues. If the position is not listed here please select the closest match for your organization and provide the position title in column 2 ("Please explain").
- If oversight falls jointly to the members of a committee, rather than an individual position, you should select "Board-level committee" and provide the name of the committee in column 2 ("Please explain").
- Note that this question asks about the position and not about the names of the staff holding these positions. Do not include the name of any individual or any other personal data in your response.**
- If there is more than one position, please add a row.

Please explain (column 2)

- Provide a description of the position(s)/committee(s) in the corporate structure and the level of responsibility they have towards climate-related issues; and
- Explain how the responsibilities of the position(s)/committee(s) are related to climate issues.
- **Note that this question asks about the position and not about the names of the staff holding these positions. Do not include the name of any individual or any other personal data in your response.**
- You can use this text field to enter any relevant information.

Explanation of terms

- **C-suite:** A term used to collectively refer to the most senior executive team.

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

Question dependencies

This question only appears if you select "Yes" in response to C1.1.

Change from 2018

No change

Rationale

This question provides an indication of the importance of climate-related issues to your business. Investors are interested in organizations' understanding and approach to climate-related risks at the board level; how aligned this is with organizational strategy, plans of action, management policies, and performance objectives; and how the board monitors progress against targets and goals. This question supports TCFD's Governance recommendation a) Describe the board's oversight of climate-related risks and opportunities.

Connection to other frameworks

TCFD

Governance recommended disclosure a) Describe the board's oversight of climate related risks and opportunities.

SDG

Goal 12: Responsible consumption and production

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.

Frequency with which climate-related issues are a scheduled agenda item	Governance mechanisms into which climate-related issues are integrated	Please explain
Select from: <ul style="list-style-type: none">● Scheduled - all meetings● Scheduled - some meetings● Sporadic - as important matters arise● Other, please specify	Select all that apply: <ul style="list-style-type: none">● Reviewing and guiding strategy● Reviewing and guiding major plans of action● Reviewing and guiding risk management policies● Reviewing and guiding annual budgets● Reviewing and guiding business plans● Setting performance objectives● Monitoring implementation and performance of objectives● Overseeing major capital expenditures, acquisitions and divestitures● Monitoring and overseeing progress against goals and targets for addressing climate-related issues● Other, please specify	Text field [maximum 3,000 characters]

[Add Row]

Requested content

General

- Note that your response to this question may refer to the position of employees relevant to board oversight mechanisms. In this case, do not include the name of any individual or any other personal data in your response.
- You should consider the frequency that climate-related issues are a scheduled agenda item for the principal board-level committee having oversight for climate-related issues. This may be a subcommittee of the board, or the full board itself.
- If you select "Other, please specify," provide a label for the Frequency with which climate-related issues are a scheduled agenda item.

Governance mechanisms into which climate-related issues are integrated (column 2)

- Select from the drop-down all of the governance mechanisms in which climate-related issues are included as a scheduled agenda item and presented to the board.

Please explain (column 3)

- Describe the governance mechanisms selected in column 2 and how, given the frequency reported in column 1, these mechanisms contribute to the board's overall oversight of climate-related issues.
- You may also include such details as who briefs the board and on which matters (e.g. "a report from each Business Head regarding performance against climate targets is reviewed quarterly.")
- As much as possible, please give examples from the reporting year.

(C1.1c) Why is there no board-level oversight of climate-related issues and what are your plans to change this in the future?

Question dependencies

This question only appears if you select "No" in response to C1.1.

Change from 2018

No change

Rationale

As board-level oversight of climate-related issues is considered best practice, CDP and its data users are interested in understanding why companies do not follow this practice. This information sheds light on a company's management and prioritization of climate-related issues and is useful for data users to analyze climate management practices across companies.

Response options

Please complete the following table:

Primary reason	Board-level oversight of climate-related issues will be introduced in the next two years.	Please explain
Text field [maximum 1,000 characters]	Select from: <ul style="list-style-type: none">● Yes, we plan to do so within the next two years● No, we do not currently plan to do so	Text field [maximum 2,400 characters]

Requested content

Primary reason (column 1)

- Provide your organization's rationale for not currently having board-level oversight of climate-related issues.
- While there may be multiple reasons for this, please describe the overarching primary justification.

Please explain (column 3)

- Use this column to provide any explanation of what you plan to implement in the next two years, or why you do not currently plan to do so.

Management responsibility

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

Change from 2018

Minor change

Rationale

While it is most important for a member of the board to have responsibility for climate-related issues, assigning management-level responsibility indicates to CDP data users that the organization is committed to implementing a climate-related strategy.

Connections to other frameworks

TCFD

Governance recommended disclosure b) Describe management's role in assessing and managing climate related risks and opportunities.

SDG

Goal 12: Responsible consumption and production

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.

Name of the position(s) and/or committee(s)	Responsibility	Frequency of reporting to the board on climate-related issues
Select from: <ul style="list-style-type: none"> ● Chief Executive Officer (CEO) ● Chief Financial Officer (CFO) ● Chief Operating Officer (COO) ● Chief Procurement Officer (CPO) ● Chief Risks Officer (CRO) ● Chief Sustainability Officer (CSO) ● Other C-Suite Officer, please specify ● President ● Risk committee ● Sustainability committee ● Safety, Health, Environment and Quality committee ● Corporate responsibility committee ● Other committee, please specify ● Business unit manager ● Energy manager ● Environmental, Health, and Safety manager ● Environment/Sustainability manager ● Facility manager ● Process operation manager ● Procurement manager ● Public affairs manager ● Risk manager ● There is no management level responsibility for climate-related issues ● Other, please specify 	Select from: <ul style="list-style-type: none"> ● Assessing climate-related risks and opportunities ● Managing climate-related risks and opportunities ● Both assessing and managing climate-related risks and opportunities ● Other, please specify 	Select from: <ul style="list-style-type: none"> ● More frequently than quarterly ● Quarterly ● Half-yearly ● Annually ● Less frequently than annually ● As important matters arise ● Not reported to the board

[Add Row]

Requested content

General

- Please provide details of the highest management-level position or committee with a responsibility for climate-related issues.
- The responsibility may be for assessing and/or managing climate-related risks and opportunities, among others.

Name of the position(s) and/or committee(s) (column 1)

- Select the best match for the position/committee in your organization, or select 'Other, please specify' and a text box will appear for you to complete.
- The list includes senior positions that may sometimes but not always be at board level.
- **Note that this question asks about the position and not about the names of the staff holding these positions. Do not include the name of any individual or any other personal data in your response.**
- Note that positions already listed in C1.1a are also listed here, select one of those only if the individual in the position has effective management responsibility for climate-related issues.
- If there is more than one position/committee with high management-level responsibility and you would like to describe this, you may use the Add row button. This is optional.
- If you are selecting more than one position or committee by adding rows, make sure that the position/committee with the highest level of responsibility is in the top row of the table.

Explanation of terms

- **Highest management-level position(s) or committee(s):** The most senior individual or committee with operational responsibility for the implementation of decisions taken at the board level and day-to-day management.

(C1.2a) Describe where in the organizational structure this/these position(s) and/or committees lie, what their associated responsibilities are, and how climate-related issues are monitored (do not include the names of individuals).

Change from 2018

Minor change

Rationale

While it is most important for a member of the board to have responsibility for climate-related issues, assigning management-level responsibility indicates to CDP data users that the organization is committed to implementing a climate-related strategy.

Connection to other frameworks

TCFD

Governance recommended disclosure b) Describe management's role in assessing and managing climate related risks and opportunities.

SDG

Goal 12: Responsible consumption and production

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

- Use the text box to describe where the highest management-level position(s) or committee(s) with responsibility for climate-related issues sit in the organizational structure, their responsibilities, and how climate-related issues are monitored.
- Your answer should be company-specific and cover the following:
 - i. Where in the organizational structure this position(s) and/or committee(s) lie;
 - ii. A rationale of why responsibilities for climate-related issues have been assigned to this/these position(s) or committee(s); and
 - iii. Specific responsibilities of every position and/or committee with regard to assessment and management of climate-related issues.
- Note that this question asks about the position and not about the names of the staff holding these positions. Do not include the name of any individual or any other personal data in your response.
- If there is no management level responsibility for climate-related issues below the board-level, please state so here.

Employee incentives

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

Change from 2018

Minor change

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

Select one of the following options:

- Yes
- No

Requested content

General

- Note that incentives can be positive (i.e. give people something) or negative (prevent access to something).
- If you wish to comment on your selection, you may click on the "speech bubble" icon. This is optional.

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

Question dependencies

This question only appears if you select "Yes" in response to C1.3.

Change from 2018

Minor change

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.

Who is entitled to benefit from these incentives?	Types of incentives	Activity incentivized	Comment
Select from: <ul style="list-style-type: none"> ● Board Chair ● 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) ● 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 ● Buyers/purchasers ● All employees ● Other, please specify 	Select from: <ul style="list-style-type: none"> ● Monetary reward ● Recognition (non-monetary) ● Other non-monetary reward 	Select from: <ul style="list-style-type: none"> ● Emissions reduction project ● 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 ● Other, please specify 	Text field[maximum 2,400 characters]

[Add Row]

Requested content

General

- The employee (selected in column 1) should be matched to the incentive type (column 2) and activity incentivized (column 3). Entries in columns 1, 2 and 3 should be selected from the lists shown in the table.

Who is entitled to benefit from these incentives? (column 1)

- Corporate executive team - the team running the company rather than a team of individuals at the corporate executive level.
- If incentives are provided to specific lower-level employees, select "Other, please specify" (column 1) and explain in the "Comment" column (column 4).
- If "There are no incentives..." is selected, please explain why not in the "Comment" column (column 4) and any plans to incorporate these in the future.
- **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.**

Types of incentives (column 2)

- Select one of the following. Incentive types include:

- **Monetary** - a bonus or some form of financial remuneration;

- **Recognition (non-monetary)** - employee award (e.g. employee of the year) or career progression scheme, but not tied directly to any form of financial remuneration;
- **Other non-monetary reward** - including increased holiday allowances, special assignment, parking allocations etc.

Activity incentivized (column 3)

- Select one of the provided options. Incentives performance indicators include:
 - The implementation of projects that are actively realizing savings in emissions, energy, and/or that are promoting efficiency;
 - Targets: Performance that is resulting in progress towards your company's target(s);
 - Behavior change: including indicators such as contribution towards corporate global reputation improvement, rate of participation of employees to environmental activities, educating employees.
- If you select "Other, please specify", provide a label for the Activity incentivized.

Comment (column 4)

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

C2 Risks and opportunities

Module Overview

Evaluating exposure to climate-related risks and opportunities over a range of time horizons allows for a strategy for the transition to a low-carbon economy recognized in the Paris Agreement and UN SDGs. This module focuses on processes for identifying, assessing, and managing climate-related issues as well as on the climate-related risks and opportunities identified by your organization. This information helps investors assess the potential impacts to valuations and the adequacy of the company's risk response.

Many of the challenges you face when reporting on climate-related issues are common to other aspects of corporate reporting, requiring you to provide statements about your prospective condition. Some organizations, particularly accounting firms and their governing bodies, have published guidance about how to prepare statements that contain forward-looking information.

You may wish to consult with your financial, legal, and/or compliance departments for advice on your company's general approach to the provision of forward-looking statements and information concerning risks.

Note that the questions relate to "inherent" risk and not the "residual" risk after management measures have been taken into account.

Note for financial services sector companies:

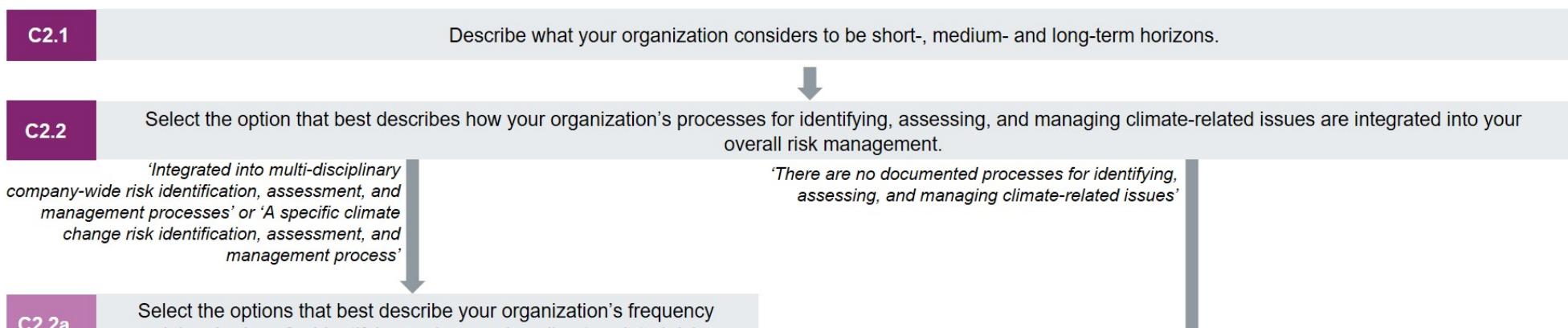
- The TCFD recommendations highlight the importance of the financial sector considering the impacts of climate-related issues in the context of their financial activities. When evaluating exposure to climate-related risks and opportunities, financial services sector companies should primarily consider the impact on their lending, financial intermediary, investment and/or insurance underwriting activities, in addition to operational activities.
- For further information please see CDP's [Technical Note on Financial Services](#).

Key changes

- Questions C2.3a and C2.4a now allow companies to report financial impact figures associated with risks and opportunities as either a single figure or range.
- Questions C2.5 and C2.6 now only appear if you select "Yes" in response C2.3 and/or C2.4.
- Additional guidance for financial services sector companies has been added for questions C2.2, C2.2c and C2.3a.

Pathway diagram - questions

This diagram shows the general questions contained in module C2. To access question-level guidance, use the menu on the left to navigate to the question.



and time horizon for identifying and assessing climate-related risks.

C2.2b Provide further details on your organization's process(es) for identifying and assessing climate-related risks.

C2.2c Which of the following risk types are considered in your organization's climate-related risk assessments?

C2.2d Describe your process(es) for managing climate-related risks and opportunities.

C2.2e Why does your organization not have a process in place for identifying, assessing, and managing climate-related risks and opportunities, and do you plan to introduce such a process in the future?

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

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

C2.3b Why do you not consider your organization to be exposed to climate-related risks with the potential to have a substantive financial or strategic impact on your business?

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

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

C2.5 Describe where and how the identified risks and opportunities have impacted your business.

C2.6 Describe where and how the identified risks and opportunities have been factored into your financial planning process.

'No' or 'Yes, we have identified opportunities but are unable to realize them', and you selected 'Yes' in response to C2.3

'No' or 'Yes, we have identified opportunities but are unable to realize them', and you selected 'No' in response to C2.3

End of module

Time horizons

(C2.1) Describe what your organization considers to be short-, medium- and long-term horizons.

Change from 2018

No change

Rationale

CDP has added this question to understand the different timescales at which businesses consider climate-related issues in their strategy and financial planning. Subsequent questions on risk and opportunity disclosure as well as transition planning, relate to different time horizons, hence their definition is requested here. This question supports TCFD Strategy recommendation a): Describe the climate-related risks and opportunities the organization has identified over the short, medium, and long term.

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 horizon is open-ended you may leave the column "To (years)" blank.

Comment (column 4)

- Please specify if this time horizon for assessing climate-related risks and opportunities is aligned with other business practice time horizons.
- 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 likely to adjust and shift 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 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.

Management processes

(C2.2) Select the option that best describes how your organization's processes for identifying, assessing, and managing climate-related issues are integrated into your overall risk management.

Change from 2018

No change

Rationale

This question aims to understand how climate-related issues are identified, assessed and managed, particularly in relation to other issues (risks and opportunities) that your company faces.

Connection to other frameworks

TCFD

Risk Management recommended disclosure c) Describe how processes for identifying, assessing, and managing climate related risks are integrated into the organization's overall risk management.

2018 RobecoSAM Corporate Sustainability Assessment (DJSI)

Governance and management incentives

Response options

Select one of the following options:

- Integrated into multi-disciplinary company-wide risk identification, assessment, and management processes
- A specific climate change risk identification, assessment, and management process
- There are no documented processes for identifying, assessing, and managing climate-related issues

Requested content

General

- If your organization has more than one procedure in place, select the one that is most commonly employed. You will have the opportunity to expand further in subsequent questions.
 - Integrated into multi-disciplinary company-wide risk identification and assessment processes: a documented process where climate change risks and opportunities are identified and assessed in an integrated way into the company's centralized enterprise risk management program covering all possible types/sources of risks and opportunities
 - A specific climate change risk identification and assessment process: a documented process that identifies and assesses climate change risks and opportunities separate from other business risk opportunities

Note for financial services sector companies:

- The climate-related issues to be considered should relate to the lending, financial intermediary, investment and/or insurance underwriting activities of your organization, in addition to your operational activities. Further

details can be provided in subsequent questions in this module.

- For further information please see CDP's [Technical Note on Financial Services](#).

(C2.2a) Select the options that best describe your organization's frequency and time horizon for identifying, and assessing climate-related risks.

Question dependencies

This question only appears if you select "Integrated into multi-disciplinary company-wide risk identification, assessment, and management processes" or "A specific climate change risk identification, assessment, and management process" in response to C2.2.

Change from 2018

No change

Rationale

Understanding a company's timeframe for risk analyses provides insight into the thoroughness of the assessment procedures employed by organizations. Companies that frequently assess risk and examine risks far into the future may be better equipped to handle longer-term uncertainties and liabilities.

Response options

Please complete the following table:

Frequency of monitoring	How far into the future are risks considered?	Comment
Select from: <ul style="list-style-type: none">● Six-monthly or more frequently● Annually● Every two years● Not defined● Never	Select from: <ul style="list-style-type: none">● Up to 1 year● 1 to 3 years● 3 to 6 years● > 6 years● Unknown	Text field [maximum 1,000 characters]

Requested content

Frequency of monitoring (column 1)

- Select the option that describes how often climate-related risks are examined. If climate-related risk management is integrated into company-wide risk identification and assessment policies then the frequency of monitoring will be the same throughout the enterprise risk management process.

How far into the future are risks considered? (column 2)

- Choose the timeframe that best describes the furthest into the future your company assesses risk. For example, if you only consider risks that may impact your business in the next 5 years, you should select "3 to 6 years." If you analyze risks that may arise up to 10 years in the future, you should select "> 6 years."

(C2.2b) Provide further details on your organization's process(es) for identifying and assessing climate-related risks.

Question dependencies

This question only appears if you select "Integrated into multi-disciplinary company-wide risk identification, assessment, and management processes" or "A specific climate change risk identification, assessment, and management process" in response to C2.2.

Change from 2018

No change

Rationale

Identifying and assessing risk are the first steps in managing them. Investors and data users are interested in understanding how thoroughly companies are identifying and assessing risks.

Connection to other frameworks

TCFD

Risk Management recommended disclosure a) Describe the organization's processes for identifying and assessing climate-related risks.

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

- This question is asking about the process of identifying risks related to climate change, and not about the specific inherent risks that your organization may face - these are disclosed in question C2.3a.
- Include in your answer:

- How climate-related risks are identified and assessed at a company level (e.g. reputational risk can impact the full corporation);
 - How climate-related risks are identified and assessed at an asset level (e.g. physical impacts can affect individual facilities). Please note that asset level is defined as anything below company level, such as individual sites and subsidiaries;
 - The process you have in place for assessing the potential size and scope of identified risks;
 - The process by which your organization determines the relative significance of climate-related risks in relation to other risks;
 - The definitions of risk terminologies used (or references to existing risk classification frameworks utilized by your company);
 - How your organization defines substantive financial or strategic impact on your business:
- What constitutes a substantive impact will vary between companies. For example, a 1% reduction in profits will have different effects on different companies depending on their respective profit margins. Companies are therefore asked to provide details as to how they recognize an impact to be substantive at the corporate level and to include details of any qualitative or quantitative metrics. Factors to consider may include: (a) The proportion of business units affected; (b) The size of the impact on those business units, and (c) The potential for shareholder or customer concern. A substantive financial impact of relatively high magnitude could occur because of a large change in one of these aspects, or small changes in all three combining to create a larger impact.

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

Question dependencies

This question only appears if you select "Integrated into multi-disciplinary company-wide risk identification, assessment, and management processes" or "A specific climate change risk identification, assessment, and management process" in response to C2.2.

Change from 2018

Modified guidance

Rationale

Data users need to know which risk types are considered in climate-related risk assessments. Not all risk types are relevant to each organization. The aim of this question is to ascertain how thoroughly companies examine multiple risk types as an indication of the comprehensiveness of the risk assessment.

Connection to other frameworks

TCFD

Risk Management recommended disclosure a) Describe the organization's processes for identifying and assessing climate-related risks.

Response options

Please complete the following table:

Risk type	Relevance & inclusion	Please explain
Current regulation	Select from: <ul style="list-style-type: none">● Relevant, always included● Relevant, sometimes included● Relevant, not included● Not relevant, included● Not relevant, explanation provided● Not evaluated	Text field [maximum 2,400 characters]
Emerging regulation		
Technology		
Legal		
Market		
Reputation		
Acute physical		
Chronic physical		
Upstream		
Downstream		

Requested content

Please explain (column 3)

- Your response should explain:

- Your decision on the relevance and inclusion of this risk type in your risk assessment, in line with your organization process(es) described in C2.2b.
- For every risk type deemed relevant, an example of a specific risk considered in your assessment, and an explanation of how it is included.
- If you choose 'Not relevant, explanation provided': why this risk type is not deemed relevant.

Note for financial services sector companies:

- Consider how climate-related risks apply to your lending, financial intermediary, investment and/or insurance underwriting activities, in addition to your operational risks.
- For further information please see CDP's [Technical Note on Financial Services](#).

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 detraction 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.

- **Upstream and downstream risks:** defined based on the location of the risks in your value chain and can also refer to any of the risk types above i.e. emerging regulation, technology, legal, market reputation etc.

(C2.2d) Describe your process(es) for managing climate-related risks and opportunities.

Question dependencies

This question only appears if you select "Integrated into multi-disciplinary company-wide risk identification, assessment, and management processes" or "A specific climate change risk identification, assessment, and management process" in response to C2.2.

Change from 2018

Modified guidance

Rationale

Investors and data users are interested in understanding how thoroughly companies are addressing climate-related risks and opportunities.

Connection to other frameworks

TCFD

Risk Management recommended disclosure b) Describe the organization's processes for managing climate related risks.

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

- Please discuss your company's approach to managing climate-related risks and opportunities including how your organization makes decisions to mitigate, transfer, accept or control the identified climate-related risks and to capitalize on opportunities.
 - Include in your response a case study or example of how the process has been applied to at least one transition risk and/or opportunity and at least one physical risk and/or opportunity. If you have not identified any relevant risks or opportunities in either of these categories, please state so.
- Note that your response to this question may refer to the position of employees relevant to your risk management processes. In this case, do not include the name of any individual or any other

personal data in your response.

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 detraction 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.

- **Risk management:** refers to a set of processes that are carried out by an organization's board and management to support the achievement of the organization's objectives by addressing its risks and managing the combined potential impact of those risks.

(C2.2e) Why does your organization not have a process in place for identifying, assessing, and managing climate-related risks and opportunities, and do you plan to introduce such a process in the future?

Question dependencies

This question only appears if you select "There are no documented processes for identifying, assessing, and managing climate-related issues" in response to C2.2.

Change from 2018

No change

Rationale

A thorough risk and opportunity assessment is integral to addressing climate-related issues. Therefore data users want to understand why your company does not carry out such assessments, as well as any plans to do so in the future. Without a process for managing risks and opportunities, companies may be unable to determine the best ways to prepare for future uncertainties and liabilities, or to capitalize on available opportunities.

Response options

Please complete the following table:

Primary reason	Please explain
Select from: <ul style="list-style-type: none">● We are planning to introduce a risk identification, assessment, and management process 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 Text field [maximum 1,500 characters]

Requested content

Primary reason (column 1)

- Select the primary reason why your company does not have a process in place to identify, assess, and manage climate-related issues.
- Select only one option from the drop-down menu. If multiple options reasonably apply to your company, explain any additional reasons in column 2.
- If you select "Other, please specify", provide a label for the primary reason.

Please explain (column 2)

- Ensure your explanation is company-specific and provides additional details as to why you do not have a process in place, including any specific plans to create a process and the anticipated timeline for its creation. For instance, you may include details on how you are exploring creating a process, using concrete examples from your company's experience.
- Please also include details of how climate-related risks are addressed as they do arise (such as environmental legislation, weather-related events, or reputational risks related to climate change). Include company-specific examples in your description.

Risk disclosure

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

Change from 2018

No change

Rationale

Investors and data users are interested in learning whether your organization has knowledge at the corporate level of any substantive climate-related risks, across any part of your value chain.

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.

SDG

Goal 13: Climate action

Response options

Select one of the following options:

- Yes
- No

Requested content

General

- Please indicate if you have identified any inherent climate-related risks.
- For the purposes of this response, the risks reported should only be those which:
 - may pose substantive financial or strategic impacts; and
 - are inherent (risks that exist in the absence of controls, i.e. not taking into account any potential mitigation or management measures that have been or could be implemented).

- What constitutes a substantive impact will vary between companies. For example, a 1% reduction in profits will have different effects on different companies depending on their respective profit margins. Factors to consider may include: (a) The proportion of business units affected; (b) The size of the impact on those business units,a and (c) The potential for shareholder or customer concern. A substantive financial impacts of relatively high magnitude could occur because of a large change in one of these impacts, or small changes in all three combining to create a larger impact.

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

Question dependencies

This question only appears if you select "Yes" in response to C2.3.

Change from 2018

Modified question

Rationale

Your response to this question will allow CDP 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.

This question supports TCFD Strategy recommendations a): Describe the climate-related risks and opportunities the organization has identified over the short, medium, and long term; and b): Describe the impact of climate-related risks and opportunities on the organization's businesses, strategy, and financial planning.

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.

Please note: columns 1-7 align with the TCFD recommendations.

SDG

Goal 12: Responsible consumption and production

Goal 13: Climate action

Response options

Please complete the following table. For clarity, the table is displayed over several rows. You are able to add rows by using the "Add Row" function at the bottom of the table.

Identifier	Where in the value chain does the risk driver occur?	Risk type	Primary climate-related risk driver	Type of financial impact	Company-specific description	Time horizon
Select from: • Risk1 - Risk100	Select from: • Direct operations • Supply chain • Customer • Investment chain	Select from: • Transition risk • Physical risk	See drop-down options below	See drop-down options below	Text field [maximum 2,400 characters]	Select from: • Current • Short-term • Medium-term • Long-term • Unknown

Likelihood	Magnitude of impact	Are you able to provide a potential financial impact figure?	Potential financial impact figure (currency)	Potential financial impact figure - minimum (currency)	Potential financial impact figure - maximum (currency)
Select from: • Virtually certain • Very likely • Likely • More likely than not • About as likely as not • Unlikely • Very unlikely • Exceptionally unlikely • Unknown	Select from: • High • Medium-high • Medium • Medium-low • Low • Unknown	Select from: • 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]	Numerical field [enter a number from 0 to 999,999,999,999,999 using up to 2 decimal places]	Numerical field [enter a number from 0 to 999,999,999,999,999 using up to 2 decimal places]

Explanation of financial impact figure	Management method	Cost of management	Comment
Text field [maximum 1,000 characters]	Text field [maximum 1,500 characters]	Numerical field [enter a number from 0-999,999,999,999,999 using a maximum of 2 decimal places]	Text field [maximum 1,000 characters]

[Add Row]

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

Select one of the following options:

<p>Transition risks</p> <ul style="list-style-type: none"> ● Policy and legal: Increased pricing of GHG emissions ● Policy and legal: Enhanced emissions-reporting obligations ● Policy and legal: Mandates on and regulation of existing products and services ● Policy and legal: Exposure to litigation ● Policy and legal: Other ● Technology: Substitution of existing products and services with lower emissions options ● Technology: Unsuccessful investment in new technologies ● Technology: Costs to transition to lower emissions technology ● Technology: Other ● Market: Changing customer behavior ● Market: Uncertainty in market signals ● Market: Increased cost of raw materials ● Market: Other ● Reputation: Shifts in consumer preferences ● Reputation: Stigmatization of sector ● Reputation: Increased stakeholder concern or negative stakeholder feedback ● Reputation: Other 	<p>Physical risks</p> <ul style="list-style-type: none"> ● Acute: Increased severity of extreme weather events such as cyclones and floods ● Acute: Other ● Chronic: Changes in precipitation patterns and extreme variability in weather patterns ● Chronic: Rising mean temperatures ● Chronic: Rising sea levels ● Chronic: Other
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Type of financial impact drop-down options (column 5)

Select one of the following options:

<p>Transition risks</p> <p>If primary climate-related risk driver is <i>Policy and legal</i>:</p> <ul style="list-style-type: none"> ● Increased operating costs (e.g., higher compliance costs, increased insurance premiums) ● Write-offs, asset impairment, and early retirement of existing assets due to policy changes ● Increased costs and/or reduced demand for products and services resulting from fines and judgements ● Increased credit risk (e.g., increased probability of default and/or loss given default) ● Increased insurance claims liability arising from climate-related impacts ● Other, please specify <p>If primary climate-related risk driver is <i>Technology</i>:</p> <ul style="list-style-type: none"> ● Write-offs and early retirement of existing assets due to technology changes ● Reduced demand for products and services ● Research and development (R&D) expenditures in new and alternative technologies ● Capital investments in technology development ● Costs to adopt/deploy new practices and processes ● Increased credit risk (e.g., increased probability of default and/or loss given default) ● Increased insurance claims liability arising from climate-related impacts ● Other, please specify <p>If primary climate-related risk driver is <i>Market</i>:</p> <ul style="list-style-type: none"> ● Reduced demand for goods and/or services due to shift in consumer preferences ● Increased production costs due to changing input prices (e.g., energy, water) and output requirements (e.g., waste treatment) ● Abrupt and unexpected shifts in energy costs ● Change in revenue mix and sources resulting in decreased revenues ● Re-pricing of assets (e.g., fossil fuel reserves, land valuations, securities valuations) ● Increased credit risk (e.g., increased probability of default and/or loss given default) ● Increased insurance claims liability arising from climate-related impacts ● Other, please specify <p>If primary climate-related risk driver is <i>Reputation</i>:</p> <ul style="list-style-type: none"> ● Reduced revenue from decreased demand for goods/services ● Reduced revenue from decreased production capacity (e.g., delayed planning approvals, supply chain interruptions) ● Reduced revenue from negative impacts on workforce management and planning (e.g., employee attraction and retention) ● Reduction in capital availability ● Increased credit risk (e.g., increased probability of default and/or loss given default) ● Increased insurance claims liability arising from climate-related impacts ● Other, please specify 	<p>Physical risks</p> <ul style="list-style-type: none"> ● Reduced revenue from decreased production capacity (e.g., transport difficulties, supply chain interruptions) ● Reduced revenue and higher costs from negative impacts on workforce (e.g., health, safety, absenteeism) ● Write-offs and early retirement of existing assets (e.g., damage to property and assets in "high-risk" locations) ● Increased operating costs (e.g., inadequate water supply for hydroelectric plants or to cool nuclear and fossil fuel plants) ● Increased capital costs (e.g., damage to facilities) ● Reduced revenues from lower sales/output ● Increased insurance premiums and potential for reduced availability of insurance on assets in "high-risk" locations ● Increased credit risk (e.g., increased probability of default and/or loss given default) ● Increased insurance claims liability arising from climate-related impacts ● 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. Please select from Risk1-Risk100.

Risk type (column 3)

- See C2.2c for the explanation of terms.

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. If you select any of the "Other" options, please provide further details in column "Company-specific description" (column 6).

Type of financial impact (column 5)

- This column refers to the potential financial impact that the risk could have on your organization and will depend on the risk driver chosen in column 4. 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. You can provide additional details on other financial impacts in the column Explanation of financial impact figure (column 14). If you select "Other, please specify", provide a label for the Type of financial 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.

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.

Are you able to provide a potential financial impact figure? (column 10)

- Your selection will determine whether column 11 or columns 12 and 13 will be presented.
- 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 14 ('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 11)

- 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 the same currency that you

selected in question C0.4 for all financial information disclosed throughout your response.

- An example would be the cost of destruction of facilities from extreme weather (before taking into consideration how much insurance coverage you have).

Potential financial impact figure - minimum/maximum (currency) (columns 12, 13)

- Provide the estimated range for the inherent financial impact (before taking into consideration any controls you may have in place to mitigate the impacts). This figure should be in the same currency that you selected in question C0.4 for all financial information disclosed throughout your response.
- **Potential financial impact figure – minimum (currency):** use this field to report the lower point of your estimated financial impact associated with the risk. For example, if the range is from US \$5,000 to \$50,000, '5,000' should be reported here.
- **Potential financial impact figure – maximum (currency):** use this field to report the upper point of your estimated financial impact associated with the risk. For example, if the range is from US \$5,000 to \$50,000, '50,000' should be reported here.

Explanation of financial impact figure (column 14)

- Use this open text field to explain the figure provided in the "Potential financial impact" (columns 10, 11, 12);
- If 'We do not have this figure' was selected in column 10, 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".
- You can also describe here other financial impacts of the selected climate-related risk (other than the main impact identified in column 5), and provide more details on the nature of the impact in case you selected "Other, please specify" in column 5.

Management method (column 15)

- Use this text field to provide information on the methods you are using to manage the risks. Make sure to include an example of company-specific activities, projects, products and/or services which are aiming to manage the risk. Make sure to include:

- An example of company-specific activities, projects, products, and/or services which are aiming to manage the risk; and
- An explanation of how the figure for the cost of your risk management actions (in columns 16) was calculated.

Cost of management (column 16)

- Provide a quantitative figure for the cost of your risk management actions. If there are no costs to managing the risk, enter 0.
- If you cannot provide absolute values, you may provide a percentage value in the "Comment" column (column 17).
- This figure should be in the same currency that you selected in question C0.4 for all financial information disclosed throughout your response.

Comment (column 17)

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

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 [here](#) 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 mitigate 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.
- For further information please see CDP's [Technical Note on Financial Services](#).

Explanation of terms

- **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%.

(C2.3b) Why do you not consider your organization to be exposed to climate-related risks with the potential to have a substantive financial or strategic impact on your business?

Question dependencies

This question only appears if you select "No" in response to C2.3.

Change from 2018

No change

Rationale

A risk assessment may identify no substantive climate-related risks. This conclusion is important to disclose and explain. Knowing why your organization has concluded that it is not exposed to risks is crucial for data users to understand your business.

Response options

Please complete the following table:

Primary reason	Please explain
Select from: <ul style="list-style-type: none">● Risks exist, but none with potential to have a substantive financial or strategic impact on business● Evaluation in process● Not yet evaluated● Other, please specify	Text field [maximum 2,400 characters]

Requested content

Primary reason (column 1)

- Select the reason that best describes why you consider your organization to not be exposed to climate-related risks with the potential to have a substantive financial or strategic impact on your business, given your definition of substantive as reported in C2.2b.
- If none of the reasons listed are applicable, select "Other, please specify". If you select "Other, please specify", provide a label for the Primary reason.

Please explain (column 2)

- Your explanation should include company-specific details such as your evaluation process or specific reasons why you have not yet conducted a risk assessment or why there are no climate-related risks to your organization.

Opportunity disclosure

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

Change from 2018

No change

Rationale

Investors and data users wish to know whether your organization has identified at the corporate level any substantive climate-related opportunities, presented across any part of your value chain.

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.

SDG

Goal 13: Climate action

Response options

Select one of the following options:

- Yes
- Yes, we have identified opportunities but are unable to realize them
- No

Requested content

General

- Regulation on climate change as well as physical changes related to climate may present opportunities for your organization in a variety of ways, for example through the adoption of low-emission energy sources, the development of new products and services and access to new markets. Further details of such opportunities are provided in the guidance for question C2.4a.
- Please note that opportunities can be:

- Currently being experienced or expected to arise in the future
- Being managed or newly identified
- Well understood or with high levels of uncertainty with regard to the likelihood of the opportunity materializing and the extent to which it will impact the business

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

Question dependencies

This question only appears if you select "Yes" in response to C2.4.

Change from 2018

Modified question

Rationale

Your response to this question will allow CDP data users to see, in one place, details of the opportunities posed to your organization by climate-related issues, and also the estimated potential scale of these opportunities at the corporate level and your response strategy to take advantage of these opportunities.

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.

Please note: columns 1-7 align with the TCFD recommendations.

SDG

Goal 7: Affordable and clean energy

Goal 12: Responsible consumption and production

Goal 13: Climate action

Response options

Please complete the following table. For clarity, the table is displayed over several rows. 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 opportunity occur?	Opportunity type	Primary climate-related opportunity driver	Type of financial impact	Company-specific description	Time horizon
Select from: ● Opp1 - Opp100	Select from: ● Direct operations ● Supply Chain ● Customer ● Investment chain	Select from: ● Resource efficiency ● Energy source ● Products and services ● Markets ● Resilience	See drop-down options below	See drop-down options below	Text field [maximum 2,400 characters]	Select from: ● Current ● Short-term ● Medium-term ● Long-term

Likelihood	Magnitude of impact	Are you able to provide a potential financial impact figure?	Potential financial impact figure (currency)	Potential financial impact figure - minimum (currency)	Potential financial impact figure - maximum (currency)
Select from: ● Virtually certain ● Very likely ● Likely ● More likely than not ● About as likely as not ● Unlikely ● Very unlikely ● Exceptionally unlikely ● Unknown	Select from: ● High ● Medium-high ● Medium ● Medium-low ● Low ● Unknown	Select from: ● 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]	Numerical field [enter a number from 0 to 999,999,999,999,999 using up to 2 decimal places]	Numerical field [enter a number from 0 to 999,999,999,999,999 using up to 2 decimal places]

Explanation of financial impact figure	Strategy to realize opportunity	Cost to realize opportunity	Comment
Text field [maximum 1,000 characters]	Text field [maximum 1,500 characters]	Numerical field [enter a number from 0 to 999,999,999,999,999 using up to 2 decimal places]	Text field [maximum 1,000 characters]

[Add Row]

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

Select one of the following options:

<p>Resource efficiency</p> <ul style="list-style-type: none"> ● Use of more efficient modes of transport ● Use of more efficient production and distribution processes ● Use of recycling ● Move to more efficient buildings ● Reduced water usage and consumption ● Other <p>Energy source</p> <ul style="list-style-type: none"> ● Use of lower-emission sources of energy ● Use of supportive policy incentives ● Use of new technologies ● Participation in carbon market ● Shift toward decentralized energy generation ● Other 	<p>Products and services</p> <ul style="list-style-type: none"> ● Development and/or expansion of low emission goods and services ● Development of climate adaptation and insurance risk solutions ● Development of new products or services through R&D and innovation ● Ability to diversify business activities ● Shift in consumer preferences ● Other <p>Markets</p> <ul style="list-style-type: none"> ● Access to new markets ● Use of public-sector incentives ● Access to new assets and locations needing insurance coverage ● Other <p>Resilience</p> <ul style="list-style-type: none"> ● Participation in renewable energy programs and adoption of energy-efficiency measures ● Resource substitutes/diversification ● Other
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Type of financial impact drop-down options (column 5)

Select one of the following options:

<p>Resource efficiency</p> <ul style="list-style-type: none"> ● Reduced operating costs (e.g., through efficiency gains and cost reductions) ● Increased production capacity, resulting in increased revenues ● Increased value of fixed assets (e.g., highly rated energy-efficient buildings) ● Benefits to workforce management and planning (e.g., improved health and safety, employee satisfaction resulting in lower costs) ● Other, please specify <p>Energy source</p> <ul style="list-style-type: none"> ● Reduced operational costs (e.g., through use of lowest cost abatement) ● Reduced exposure to future fossil fuel price increases ● Reduced exposure to GHG emissions and therefore less sensitivity to changes in cost of carbon ● Returns on investment in low-emission technology ● Increased capital availability (e.g., as more investors favor lower-emissions producers) ● Reputational benefits resulting in increased demand for goods/services ● Other, please specify 	<p>Products and services</p> <ul style="list-style-type: none"> ● Increased revenue through demand for lower emissions products and services ● Increased revenue through new solutions to adaptation needs (e.g., insurance risk transfer products and services) ● Better competitive position to reflect shifting consumer preferences, resulting in increased revenues ● Other, please specify <p>Markets</p> <ul style="list-style-type: none"> ● Increased revenues through access to new and emerging markets (e.g., partnerships with governments, development banks) ● Increased diversification of financial assets (e.g., green bonds and infrastructure) ● Other, please specify <p>Resilience</p> <ul style="list-style-type: none"> ● Increased market valuation through resilience planning (e.g., infrastructure, land, buildings) ● Increased reliability of supply chain and ability to operate under various conditions ● Increased revenue through new products and services related to ensuring resiliency ● Other, please specify
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Requested content

General

- For the purposes of this response, the opportunities identified should only be those which may pose substantive impacts in your business operations, revenue, or expenditure.

Identifier (column 1)

- Select a unique identifier from the drop down menu provided to identify the opportunity in subsequent questions, if required, and to track the status of the opportunity in subsequent reporting years. Please select from Opp1-Opp100.

Opportunity type (column 3)

- Select an option from the drop-down menu that best describes the type of the identified opportunity:

- Resource efficiency – opportunities related to improving resource efficiency across production and distribution processes, buildings, machinery/appliances, and transport/mobility.
- Energy source - opportunities related to shifting energy usage toward low emission energy sources.
- Products and services - opportunities related to innovation and development of new low-emission and climate adaptation products and services.
- Markets – opportunities in new markets or types of assets that may help organizations to diversify their activities and better position themselves for the transition to a lower-carbon economy.
- Resilience – opportunities related to the development of adaptive capacity to respond to climate change. They may be especially relevant for organizations with long-lived fixed assets or extensive supply or distribution networks; those that depend critically on utility and infrastructure networks or natural resources in their value chain; and those that may require longer-term financing and investment.

Primary climate-related opportunity driver (column 4)

- Opportunity driver describes the source of the opportunity and will depend on the opportunity type selected in column 3. Select an option from the drop-down menu that best describes the identified opportunity. If you select "Other", please provide further details in column Company-specific description (6).

Type of financial impact (column 5)

- This column refers to the potential financial impact that the opportunity could have on your organization. The financial impacts of climate-related opportunities 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 opportunity;
- Select the option that you deem to have the biggest impact. You can provide additional details on other financial impacts in the column Explanation of financial impact figure (column 14);
- If you select "Other, please specify", provide a label for the Type of financial impact driver.

Company-specific description (column 6)

- Provide further context on the opportunity 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.

Likelihood of impact (column 8)

- The likelihood of the impact occurring, along with the magnitude (see below) 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 opportunity might be similar to the probability of the climate event itself.
- For example, if the opportunity relates to a piece of new legislation which has already been prepared in draft form, the likelihood of the impact associated with that opportunity 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. This should consider the business as a whole and therefore the magnitude can reflect both the opportunity and the extent to which it applies throughout the organization.
- It is not possible to accurately define terms for magnitude as they will vary from company to company. 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 response.

Are you able to provide a potential financial impact figure? (column 10)

- Your selection will determine whether column 11 or columns 12 and 13 will be presented.
- It is acknowledged that these will be estimates and, where possible, assumptions made in arriving at a financial impact figure should be stated in the column 14 ('Explanation of financial impact').
- If you are unable to provide a figure for a financial impact, you may use column 14 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 11)

- Provide a single figure for the financial impact of the opportunity. This figure should be in the same currency that you selected in question C0.4 for all financial information disclosed throughout your response.

Potential financial impact figure (currency) (columns 12, 13)

- Provide the estimated range for the financial impact of the opportunity. This figure should be in the same currency that you selected in question C0.4 for all financial information disclosed throughout your response.
- **Potential financial impact figure – minimum (currency):** use this field to report the lower point of your estimated financial impact associated with the opportunity. For example, if the range is from US \$5,000 to \$50,000, '5,000' should be reported here.
- **Potential financial impact figure – maximum (currency):** use this field to report the upper point of your estimated financial impact associated with the opportunity. For example, if the range is from US \$5,000 to \$50,000, '50,000' should be reported here.

Explanation of financial impact figure (column 14)

- Use this open text field to explain the figure provided in the "Potential financial impact" (columns 10, 11, 12).
- If 'We do not have this figure' was selected in column 10, 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".
- You can also describe here other financial impacts of the selected climate-related opportunity (other than the main impact identified in column 5), and provide more details on the nature of the impact in case you selected "Other, please specify" in column 5.

Strategy to realize opportunity (column 15)

- Use this text field to provide information on methods you are using or plan to use to exploit the opportunity and maximize its potential realization. Make sure to include an example of company specific activities, projects, products and/or services which are aiming to realize the opportunity. Make sure to include:

- An example of company-specific activities, projects, products and/or services which are aiming to realize the opportunity; and
- An explanation of how the figure for the cost to realize opportunity (in column 16) was calculated.

Cost to realize opportunity (column 16)

- Provide numerical data on the cost to realize opportunity. If there are no costs to this, enter 0.
- If you cannot provide absolute values you may provide a value in the "Comment" column (column 17).

Comment (column 17)

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

Note for electric utility sector companies:

- In answering the questions above, please consider:

- Opportunities that may arise from emissions trading;
- The opportunities that national or international targets on energy efficiency and demand management might present for your company e.g. revenue implications from energy services business units;
- Your company's views on any opportunities that may result from policies on renewable energy or low emissions technologies e.g. current or planned investments in these areas; and
- The extent to which you receive financial incentives to reduce the electricity use of customers.

Note for agricultural sector companies:

- Agricultural companies should report on opportunities that the revenue associated with the agricultural/forestry, processing/manufacturing and/or distribution of raw materials and goods. For example, opportunities might arise from:

- Increased efficiency by reducing energy use during the production of raw materials and/or the manufacture of food, beverage and other goods;
- Reduced costs due to carbon payments by adopting practices or technology to reduce carbon footprint;
- Government of private financial incentives for adoption low impact agriculture/forestry.

Explanation of terms

- **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%.

(C2.4b) Why do you not consider your organization to have climate-related opportunities?

Question dependencies

This question only appears if you select "No" or "Yes, we have identified opportunities but are unable to realize them" in response to C2.4.

Change from 2018

No change

Rationale

Investors and other data users are interested to know whether you are aware of climate-related opportunities. An explanation of why your organization has concluded that it is not exposed to opportunities is crucial for understanding your business strategy.

Response options

Please complete the following table:

Primary reason	Please explain
Select from: <ul style="list-style-type: none"> Opportunities exist, we are unable to realize them Opportunities exist, but none with potential to have a substantive financial or strategic impact on business Evaluation in progress Judged to be unimportant No instruction from management to seek out opportunities Not yet evaluated Other, please specify 	Text field [maximum 2,400 characters]

Requested content

Primary reason (column 1)

- Select the reason that best describes why you consider your organization to not be exposed to climate-related opportunities with the potential to have a substantive financial or strategic impact on your business.
- If you select "Other, please specify", provide a label for the Primary reason. Explain the reason in more detail in column 2.

Please explain (column 2)

- Please explain further why there are no climate-related opportunities for your company or, if they exist, why you are unable to realize them;
- If relevant to your selection in column 1, please:

- make reference to how you identified opportunities;
- include how you have defined 'substantive' impact in the context of an opportunity, and reference the definition of substantive impact you gave in C2.2b if applicable;
- describe when you will next repeat an assessment of opportunities;
- include specific reasons why you have not yet conducted an opportunity assessment/why it is considered unimportant for your business;
- provide any other company-specific details such as your evaluation process.

Business impact assessment

(C2.5) Describe where and how the identified risks and opportunities have impacted your business.

Question dependencies

This question only appears if you select "Yes" in response to C2.3 and/or C2.4.

Change from 2018

Modified guidance

Rationale

This question is seeking to understand in which areas of your business the identified risks and opportunities have or are expected to materialize.

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

Response options

Please complete the following table:

Area	Impact	Description
Products and services	Select from: <ul style="list-style-type: none">● Impacted● Impacted for some suppliers, facilities, or product lines● Not yet impacted● Not impacted● Not evaluated● We have not identified any risks or opportunities	Text field [maximum 2,400 characters]
Supply chain and/or value chain		
Adaptation and mitigation activities		
Investment in R&D		
Operations		
Other, please specify		

General

- Each row in the table corresponds to a particular area of a company's business. For each row, select how the identified climate-related risks and opportunities have impacted or are expected to impact each particular area of your business (column 2).
- For example, you may identify in C2.4a that climate change poses an opportunity for your company to develop more low-emissions products and services. You should report that in row 1 here, and likely in row 4, if you anticipate a change in your investment in R&D.
- If you are reporting in the "Other, please specify" row, please specify what area this applies to in the 'Description' column (column 3).

Description (column 3)

- Include a company-specific description of how each business area has been or will be impacted by the risks and opportunities identified in C2.3a and C2.4a. For example, if in C2.3a you identified that extreme weather events may pose a risk to your supply chain, explain in column 3 how you have integrated this risk into your business strategy and planning when evaluating your supply chain. If the business area is not impacted, explain why not.
- If you are reporting in the "Other, please specify" row, please specify what area this applies to here.
- When 'Impacted' OR 'Impacted for some suppliers, facilities or product lines' is selected, include:
 - Reference the specific risk(s) and/or opportunity(ies) that relate to this area of the business and state the aggregate magnitude of that impact.
- When 'Not yet impacted' is selected, include:
 - Reference the specific risk(s) and/or opportunity(ies) that relate to this area of the business and state the aggregate potential magnitude and time horizon of that impact.
- When 'Not impacted' is selected, include:
 - A company-specific description of why this area of your business has not been impacted.
- The magnitude describes the extent to which the impact(s) affect the business area. 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 (e.g high, medium, low).
- If you are reporting in the "Other, please specify" row, please specify what area this applies to here.

Financial planning assessment

(C2.6) Describe where and how the identified risks and opportunities have been factored into your financial planning process.

Question dependencies

This question only appears if you select "Yes" in response to C2.3 and/or C2.4.

Change from 2018

Modified guidance

Rationale

This question is seeking to understand where the identified risks and opportunities have affected or may affect your financial statements.

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:

Area	Relevance	Description
Revenues	Select from: <ul style="list-style-type: none">● Impacted● Impacted for some suppliers, facilities, or product lines● Not impacted● Not yet impacted● Not evaluated● We have not identified any risks or opportunities	Text field [maximum 2,400 characters]
Operating costs		
Capital expenditures/capital allocation		
Acquisitions and divestments		
Access to capital		
Assets		
Liabilities		
Other		

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 and if not, whether you expect this to happen in the future.
- Each row in the table corresponds to a particular area of a company's financial statements. For each row, select how climate-related risks and opportunities have, in aggregate, impacted each element of the financial statement (identified in column 1).
- For example, you may identify in C2.3a that a number of risks may result in decreased demand for your existing products, and in C2.4a that there is an opportunity to diversify your portfolio with low-carbon products. This may impact your long-term capital allocation by increasing investment into research and development. This should be reflected in "Capital expenditures/capital allocation" row of the table. The reduced demand for existing products may also affect revenues which can be reflected in the "Revenues" row.
- If you are reporting in the "Other" row, please specify what area this applies to in the 'Description' column (column 3).

Description

- Please reference the specific risk(s) and/or opportunity(ies) that relate to this financial statement element and state the aggregate magnitude of that impact(s). The magnitude describes the extent to which the impact(s) affect a particular area of a company's financial statements. It is not possible for CDP to accurately define terms for magnitude as they will vary from company to company. Therefore, companies are asked to determine magnitude on a qualitative scale (e.g. high, medium, low).
- If a certain financial statement element is not expected to be impacted, explain why not.
- If you are reporting in the "Other, please specify" row, please specify what area this applies to here.

Explanation of terms

- **Acquisition:** Acquisition refers to obtaining ownership and control by one firm, in whole or in part, of another firm or business entity.
- **Assets:** Assets are 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).
- **Capital Allocation:** A key process in positioning capital to increase value. There are five types of capital from where goods and services are derived:
 1. Natural capital – resources, sinks, processes
 2. Human capital – health, knowledge, skills
 3. Social capital – maintaining and developing human capital through partnerships
 4. Manufactured capital – material goods or fixed assets that contribute to production processes
 5. Financial capital – monetary value of other types of capital
- **Divestment:** A process for managing a portfolio of assets, commonly based on the selling of 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).
- **Expenditure:** Capital expenditure measures the value of purchases of fixed assets i.e. those assets that are used repeatedly in production processes for more than a year. The value is at full cost price. Sales of fixed assets are not deducted.
- **Financial planning:** In line with TCFD recommendations, financial planning refers to an organization's consideration of how it will achieve and fund its objectives and strategic goals. The process of 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).
- **Liabilities:** A liability is 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.
- **Operating costs** (also known as 'indirect costs' 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 job or the provision of a particular service - they are standard costs that apply regardless of the volume of goods produced.

- **Revenue** (also recognized as “top line” or “turnover”): the total monetary income received over a specific period.

C3 Business strategy

Module Overview

CDP data users are interested in organizations' forward looking strategies and financial decisions that are driven by climate-related future market opportunities, public policy objectives, and corporate responsibilities. This module allows organizations to disclose whether they have acted upon integrating climate-related issues in to their business strategy. The module includes questions on scenario analysis and transition planning which are important evolutions in strategic environmental planning.

Given the importance of forward-looking assessments of climate-related risks and opportunities, scenario analysis is an important and useful tool for an organization to use, both for understanding strategic implications of climate-related risks and opportunities, and for informing stakeholders of how the organization is positioning itself in recognition of these issues. It also can aid investors, lenders, and insurance underwriters in informing their own financial decision making.

Transition planning is also an important evolution of strategic environmental planning, and includes all the relevant changes that need to be made to the company's business model before the company can adjust to a low-carbon future. This is especially relevant for companies operating in high impact sectors.

Climate-related scenario analysis and transition planning disclosure was piloted by CDP in the [Assessing Low-Carbon Transition \(ACT\)](#) initiative in 2016. Further information on conducting and disclosing scenario analysis can be found in [CDP Technical Note on Scenario Analysis](#).

Responses given in this module should be relevant to the reporting period, even if revisions have been made to the strategy between the reporting period and the time of submission of your CDP response. Where this is the case, you can include more up to date information in C-FI field at the end of the questionnaire. This will not be scored but will be available to the investors and customers (in the case of those responding on behalf of Supply Chain members) that view your response.

Note for financial services sector companies:

- Financial services sector companies are asked to consider how climate-related risks and opportunities will affect business strategy in relation to their lending, financial intermediary, investment and/or insurance underwriting activities, in addition to operational activities.
- For further information please see CDP's [Technical Note on Financial Services](#).

Key changes

- Additional guidance for financial services sector companies has been added for question C3.1.

Sector-specific content

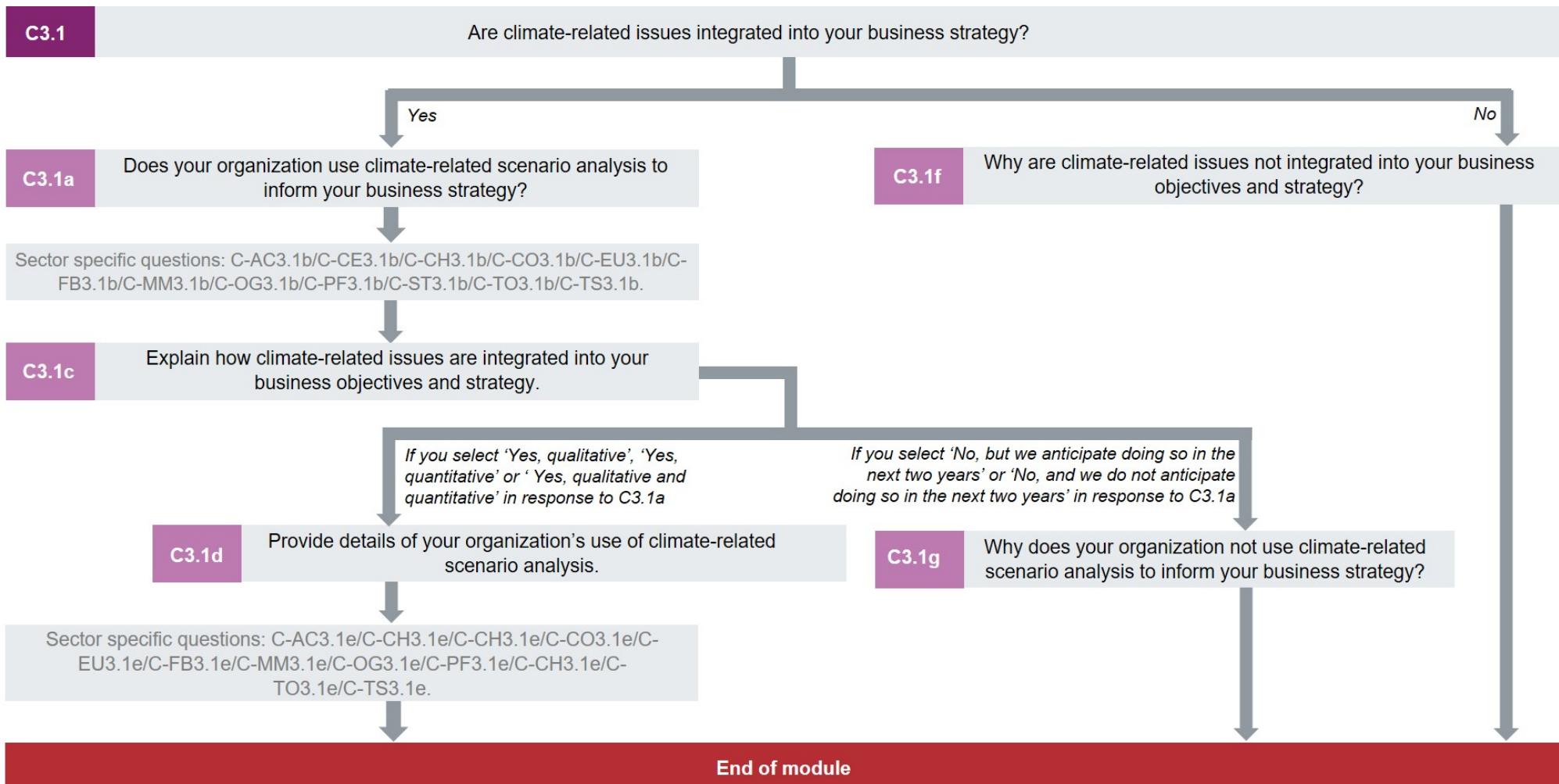
Additional questions on low-carbon transition plan for the following high-impact sectors:

- Agricultural commodities
- Food, beverage and tobacco
- Paper and forestry
- Coal
- Electric utilities
- Oil & gas
- Cement

- Chemicals
- Metals & mining
- Steel
- Transport original equipment manufacturers (OEMs)
- Transport services

Pathway diagram - questions

This diagram shows the general questions contained in module C3. To access question-level guidance, use the menu on the left to navigate to the question.



Business strategy

(C3.1) Are climate-related issues integrated into your business strategy?

Change from 2018

No change

Rationale

Investors and data users are interested in forward looking strategies and financial decisions that are driven by future market opportunities, public policy objectives, and corporate responsibilities. This question allows organizations to disclose whether they have acted upon integrating climate-related issues in to their business strategy.

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

Select one of the following options:

- Yes
- No

Requested content

General

- You should answer "Yes" when one of the following is integrated in to your overall business strategy:
 - The need to reduce carbon or other greenhouse gas emissions;
 - The need to adapt to climate change, the Paris Agreement, and related energy impacts (positive or negative);
 - The need to capitalize on opportunities presented by climate change, and/or;
 - The need to communicate on/learn more about climate change.
- As such, climate-related issues are part of the 'top line growth' strategy of the company, rather than being dealt with solely at the operational level. Note that the above named aspects of climate change and their related issues do not constitute an exhaustive list of climate-related issues that may be integrated into business strategies. If your business strategy incorporates and addresses additional climate-related issues, please discuss those in C3.1c.
- You should answer "No" if climate change impacts/opportunities or carbon or other greenhouse emissions reductions have no influence on your company's overall strategy for developing your business. You will have the opportunity to explain further in C3.1f.

Note for financial services sector companies:

- You should answer "Yes" when one of the following is integrated into your overall business strategy:

- The need to understand how climate-related issues will impact your client relationships, financial products and services, investments and/or operations; and/or
- The need to provide financial flows to capitalize on opportunities presented by the transition to a low-carbon, climate-resilient future.

- For further information please see CDP's [Technical Note on Financial Services](#)

(C3.1a) Does your organization use climate-related scenario analysis to inform your business strategy?

Question dependencies

This question only appears if you select "Yes" in response to C3.1.

Change from 2018

No change

Rationale

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

Connection to other networks

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

Select one of the following options:

- Yes, qualitative
- Yes, quantitative
- Yes, qualitative and quantitative
- No, but we anticipate doing so in the next two years
- No, and we do not anticipate doing so in the next two years

Requested content

General

- Please state if your organization uses climate-related scenario analysis to inform your business strategy.
- If yes, what type of scenario analysis, and if no, please clarify if you anticipate using it as a tool in the future.

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.

2°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". A 2°C scenario provides a reference point that is generally aligned with the objectives of the Paris Agreement. There are publicly available scenarios (such as IEA 2DS, IEA 450, Deep Decarbonization Pathways Project, and International Renewable Energy Agency) organizations can use, as a direct tool, or a reference point for tailored scenarios.

Publicly available 2°C scenarios: Taken from [TCFD recommendations](#), "Publicly available 2°C scenarios" refer to 2°C 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.

Additional information

Rationale from the TCFD on importance of scenario analysis

- "The TCFD believes all organizations exposed to climate-related risks should consider (1) using scenario analysis to help inform their strategic and financial planning processes and (2) disclosing how resilient their strategies are to a range of plausible climate-related scenarios. The Task Force recognizes that, for many organizations, scenario analysis is or would be a largely qualitative exercise. However, organizations with more significant exposure to transition risk and/or physical risk should undertake more rigorous qualitative and, if relevant, quantitative scenario analysis with respect to key drivers and trends that affect their operations.
- A critical aspect of scenario analysis is the selection of a set of scenarios (not just one) that covers a reasonable variety of future outcomes, both favorable and unfavorable. In this regard, the Task Force recommends organizations use a 2°C or lower scenario in addition to two or three other scenarios most relevant to their circumstances, such as scenarios related to Nationally Determined Contributions (NDCs), physical climate-related scenarios, or other challenging scenarios. In jurisdictions where NDCs are a commonly accepted guide for an energy and/or emissions pathway, NDCs may constitute particularly useful scenarios to include in an organization's suite of scenarios for conducting climate-related scenario analysis.
- For an organization in the initial stages of implementing scenario analysis or with limited exposure to climate-related issues, the Task Force recommends disclosing how resilient, qualitatively or directionally, the organization's strategy and financial plans may be to a range of relevant climate change scenarios. This information helps investors, lenders, insurance underwriters, and other stakeholders understand the robustness of an organization's forward-looking strategy and financial plans across a range of possible future states.
- Organizations with more significant exposure to climate-related issues should consider disclosing key assumptions and pathways related to the scenarios they use to allow users to understand the analytical process and its limitations. In particular, it is important to understand the critical parameters and assumptions that materially affect the conclusions drawn".

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](#).

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

Analytical choices for consideration in scenario analysis: In constructing scenarios there are three major categories of choices and considerations that affect consistency and comparability between scenarios:

- Parameters – e.g. discount rate, GDP
- Assumptions made – e.g. assumptions related to changes in policy, technology, energy mix, commodity price, physical and transitional impacts
- Analytical choices – e.g. choice of scenarios, time horizons, supporting data and models

(C3.1c) Explain how climate-related issues are integrated into your business objectives and strategy.

Question dependencies

This question only appears if you select "Yes" in response to C3.1.

Change from 2018

No change

Rationale

Investors and data users are interested to know how companies are approaching climate change from a strategic perspective. Companies following best practice guidelines will have fully and thoroughly integrated climate-related issues into their overall business strategies. Answers to this question provide transparency into companies' strategy development processes and shed light on the comprehensiveness of companies' approach to climate-related issues.

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

This is an open text question with a limit of 7,000 characters.

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

Requested content

General

- This question asks about the process by which your strategy was influenced, and the outcomes of that process. If you wish, you may provide a description of your business strategy for additional context.
- 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.
- Your response should cover the following points:

- i. A company-specific explanation of how business objectives and strategy have been influenced by climate-related issues;
- ii. Explanation of whether your business strategy is linked to an emissions reductions target or energy reduction target;
- iii. What have been the most substantial business decisions made during the reporting year that have been influenced by the climate change driven aspects of the strategy (e.g. investment, location, procurement, mergers and acquisitions (M&A), research and development (R&D). Both the business decision and the aspect of climate change that has influenced the business decision must be made clear in the answer. If there are none to report, this should be stated;

- You may also wish to include in your response (optional):

- iv. What aspects of climate change have influenced the strategy (e.g. need for adaptation, regulatory changes, or opportunities to develop green business);
- v. How the short-term strategy has been influenced by climate change;
- vi. How the long-term strategy has been influenced by climate change;
- vii. How this is gaining a strategic advantage over your competitors;
- viii. How the Paris Agreement has influenced the business strategy (e.g. the process of transition planning alongside the ratcheting of Intended Nationally Determined Contributions (INDCs)).

- In case you chose to cover points v. and vi., indicate whether the short- and long-term time horizons referenced there, are consistent with the time horizons used in C2.1.

- It is preferable, although not essential, that your response is formatted to distinguish between the points set out above, numbering your paragraphs to coincide with the relevant points.

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

- Companies in these sectors should read the sector specific guidance for the risks and opportunities questions before answering this question.
- The guidance contains a number of issues that investor groups 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.
- Do not cross-refer to the risks and opportunities answers in your response to the questions above.
- Please provide a complete answer to these questions on business strategy in the input fields provided. Additional issues are also covered below.

Note for oil & gas sector companies:

- Companies should 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:

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

Note for automotive and automotive component manufacturers:

- Companies should discuss links between risks and your targets for your products at group level and, where relevant, for specific markets on fuel economy or GHG emissions reductions per unit distance (expressed as gCO₂e/unit distance) and include a reference to any regulatory drivers and the baseline against which performance is measured; expansion into hybrid/fully electric vehicles and fuel cell technology.

Note for companies with coal reserves:

- Companies with coal reserves can refer [here](#) on how to disclose demand and stranded asset risk.

Additional information

- There is a wide range of forward-looking scenarios your company can choose from to inform your businesses, strategy, and/or financial planning. Many of these are 2°C scenarios, although there are of course scenarios which look at 4°C or higher. Despite the Paris Agreement and intention to limit warming to 1.5°C, there remains limited material on such scenarios.
- Since the ratification of the Paris Agreement and the ratcheting mechanisms it contains, investors are urging companies not to select 4°C scenarios but ensure they use appropriate 2°C scenarios. These include IEA 2DS, IEA 450, DDPP, and IRENA. For more information about why CDP and investors are asking for this information and why companies are required to select 2°C scenarios, please see Box 1.

(C3.1d) Provide details of your organization's use of climate-related scenario analysis.

Question dependencies

This question only appears if you select "Yes, qualitative", "Yes, quantitative" or "Yes, qualitative and quantitative" in response to C3.1a.

Change from 2018

Minor change

Rationale

Scenario analysis as a planning tool has emerged as 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 b) Describe the impact of climate-related risks and opportunities on the organization's businesses, strategy, and financial planning.

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 scenarios	Details
Select all that apply: <ul style="list-style-type: none">● 2DS● IEA 450● Greenpeace● DDPP● IRENA● RCP 2.6● RCP 4.5● RCP 6● RCP 8.5● IEA B2DS● IEA Sustainable development scenario● IEA NPS● IEA CPS● BNEF NEO● REMIND● MESSAGE-GLOBIOM● Nationally determined contributions (NDCs)● Other, please specify	Organizations should disclose their inputs, assumptions and analytical methods used for this scenario. For existing scenarios (e.g. IEA 450 etc.), organizations should disclose how they have altered/changed the inputs, assumptions or analytical methods to cater to their needs. Text field [maximum 4,000 characters]

[Add Row]

Requested content

Climate-related scenarios (column 1)

- Select the drop-down options for the climate-related scenarios that are used when undertaking climate-related scenario analysis.
- If you conducted climate-related scenario analysis using different scenarios simultaneously or collectively then select all the applicable scenarios that were used when undertaking scenario analysis.

Details (column 2)

- The details provided should be company-specific and include:
 - What boundaries and time horizons were used in the organizations scenario analysis?
 - Provide details of the methodology used including:

- Inputs;
- Assumptions;
- Analytical methods, and;
- Changes from the reference scenario which were considered.

- Summarize results and outcomes from scenario analysis, how they are used within the organization, and indicate how they were reported.
- Were there any changes to the organization's strategy or business model resulting from the climate change scenario analysis? If yes, describe any major changes.
- Provide a case study/example of how the results of scenario analysis have directly influenced your business objectives and strategy.
- Have any monitoring procedures been implemented as a result?
- To whom are the results reported to within the organization, and are the results made public?
- Provide any other relevant information.

Note for energy sectors

Focus in particular on why current investments in new reserves and/or assets are not particularly exposed to the risk of lower demand and stranded assets, how current capital expenditure is affected by any considerations you make with regards to future short-to-long term risk of stranded assets, and what probability/liability you assign to that risk. Please make reference to your organization's energy outlook, how it is reflected in your business strategy, and the flexibility of that strategy to adjust to significant changes in the demand for your products.

Explanation of terms

- **2DS:** IEA's WEO (World Energy Outlook) 2DS scenario is built on a projected warming limit of 2°C and is part of a separate annual publication, the "Energy Technology Perspectives", providing scenario analysis based on the development of lower carbon technology and 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. The IEA ETP 2DS 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. The IEA ETP 2DS 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 WEO 450 scenario has been updated and now is expressed as realising 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. The IEA 450 scenario 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.
- **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 decarbonised 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 WEO 2014 Current Policies Scenario serves as the reference point in the development of Greenpeace's Advanced Energy Revolution scenario.
- **DDPP:** Deep Decarbonization Pathways Project (DDPP) framework is a collaboration between scientific research teams from leading research institutions in 16 of the world's largest GHG emitting countries; and represents a clear and tangible understanding of what will be required for countries to reduce emissions, in alignment with the 2°C limit. The framework was developed sector by sector and over time, tailored for the physical infrastructure of the 16 countries, to provide decision makers with the technological and cost requirements of different options for meeting the country's emissions reduction goal. Deep decarbonization pathways begin with a 2050 emissions target to determine the steps on how to get there.
- **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.
- **RCP 2.6:** Representative Concentration Pathway (RCP) 2.6 is the IPCC's low emissions scenario pathway. The RCP's are time and space dependant trajectories of concentrations of GHGs and pollutants from human activities (including changes in land use). RCPs provide a quantitative description of atmospheric pollutants over time, as well as radiative forces in 2100. 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.

- **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. 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 NPS:** IEA's New Policies Scenario (NPS) incorporates existing energy policies as well as an assessment of the results likely to stem from the implementation of announced policy intentions.
- **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.
- **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. BNEF NEO places focus on technology that is driving change in markets and business models across the sector, such as solar, wind and battery technology. NEO includes price forecasts for coal, oil and gas around the world, and assesses the impact of the energy transition on fossil fuel demand and materials.
- **REMIND:** REMIND is a global multi-regional model incorporating the economy, the climate system and a detailed representation of the energy sector. It solves for an inter-temporal Pareto optimum in economic and energy investments in the model regions, fully accounting for interregional trade in goods, energy carriers and emissions allowances. REMIND allows for the analysis of technology options and policy proposals for climate mitigation.
- **MESSAGE-GLOBIOM:** The International Institute for Applied Systems Analysis (IIASA) integrated assessment models (IAMs) framework consists of a combination of five different models or modules - the energy model MESSAGE, the land use model GLOBIOM, the air pollution and GHG model GAINS, the aggregated macro-economic model MACRO and the simple climate model MAGICC - which complement each other and are specialized in different areas. All models and modules together build the IIASA IAM framework, also referred to as MESSAGE-GLOBIOM owing to the fact that the energy model MESSAGE and the land use model GLOBIOM are its most important components.

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](#).

(C3.1f) Why are climate-related issues not integrated into your business objectives and strategy?

Question dependencies

This question only appears if you select "No" in response to C3.1.

Change from 2018

No change

Rationale

As a comprehensive business strategy which incorporates climate-related issues is best practice and key to successfully managing these issues, investors are keen to learn why some companies do not integrate climate change and its related effects/components into the overarching business strategy. Understanding why organizations are not in line with best practice will enable investors to evaluate those organizations' overall approach and potential resilience to climate change.

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

- Your answer should be company-specific and include:

- i. Why climate-related issues are not integrated into your business strategy, and;
- ii. Whether you expect them to be in the future. For example, climate change may have little effect on your business because of the nature of your goods/services. Please give as complete an explanation as possible.

Note for oil and gas sector companies:

- Companies should 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:

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

Note for transport OEMs sector companies:

- Companies should discuss links between risks and your targets for your products at group level and, where relevant, for specific markets on fuel economy or GHG emissions reductions per unit distance (expressed as gCO₂e/unit distance) and include a reference to any regulatory drivers and the baseline against which performance is measured; expansion into hybrid/fully electric vehicles and fuel cell technology.

(C3.1g) Why does your organization not use climate-related scenario analysis to inform your business strategy?

Question dependencies

This question only appears if you select "No, but we anticipate doing so in the next two years" or "No, and we do not anticipate doing so in the next two years" in response to C3.1a.

Change from 2018

No change

Rationale

Companies not using climate-related scenario analysis to inform their business strategies are not in line with recommended practices in corporate climate governance. Answers to this question will provide investors with more transparency into companies' decision-making processes regarding climate planning and strategy setting.

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

- Your answer should be company-specific and include:

- i. Why climate-related scenario analysis is not used to inform your business strategy, and;
- ii. Whether you expect it to be in the future.

C4 Targets and performance

Module Overview

Questions in this module focus on emission targets, additional climate-related targets, details on emission reduction initiatives and low-carbon products.

Target setting provides direction and structure to environmental strategy. Providing information on quantitative targets and qualitative goals, and progress made against these targets, can demonstrate your organization's commitment to improving climate-related issues management at a corporate level. This information is relevant to investors' understanding of how your company is addressing and monitoring progress regarding the risks and opportunities disclosed.

Questions on emission reduction initiatives allow CDP data users to understand the organization's commitment to reducing emissions beyond business-as-usual scenario.

Questions on low-carbon products provide valuable information to investors who are seeking to increase their investment in companies providing low-carbon and climate resilient goods and services.

Note for agricultural sectors:

The 'Land management practices' section includes questions around both adaption and mitigation mechanisms adopted by companies to address climate change. This information demonstrates that organizations are committed to using practices that help reducing emissions and improve their resilience. Organizations can report up to 20 practices adopted on their land. Those practices that have brought or are expected to bring the largest benefits should be prioritized.

Key changes

- Additional guidance for financial services sector companies has been added for question C4.1.
- Question C-EU4.6 now only appears if you select "Electricity generation", "Gas storage transmission and distribution", "Coal mining and/or Gas extraction and production" in response to C-EU0.7.

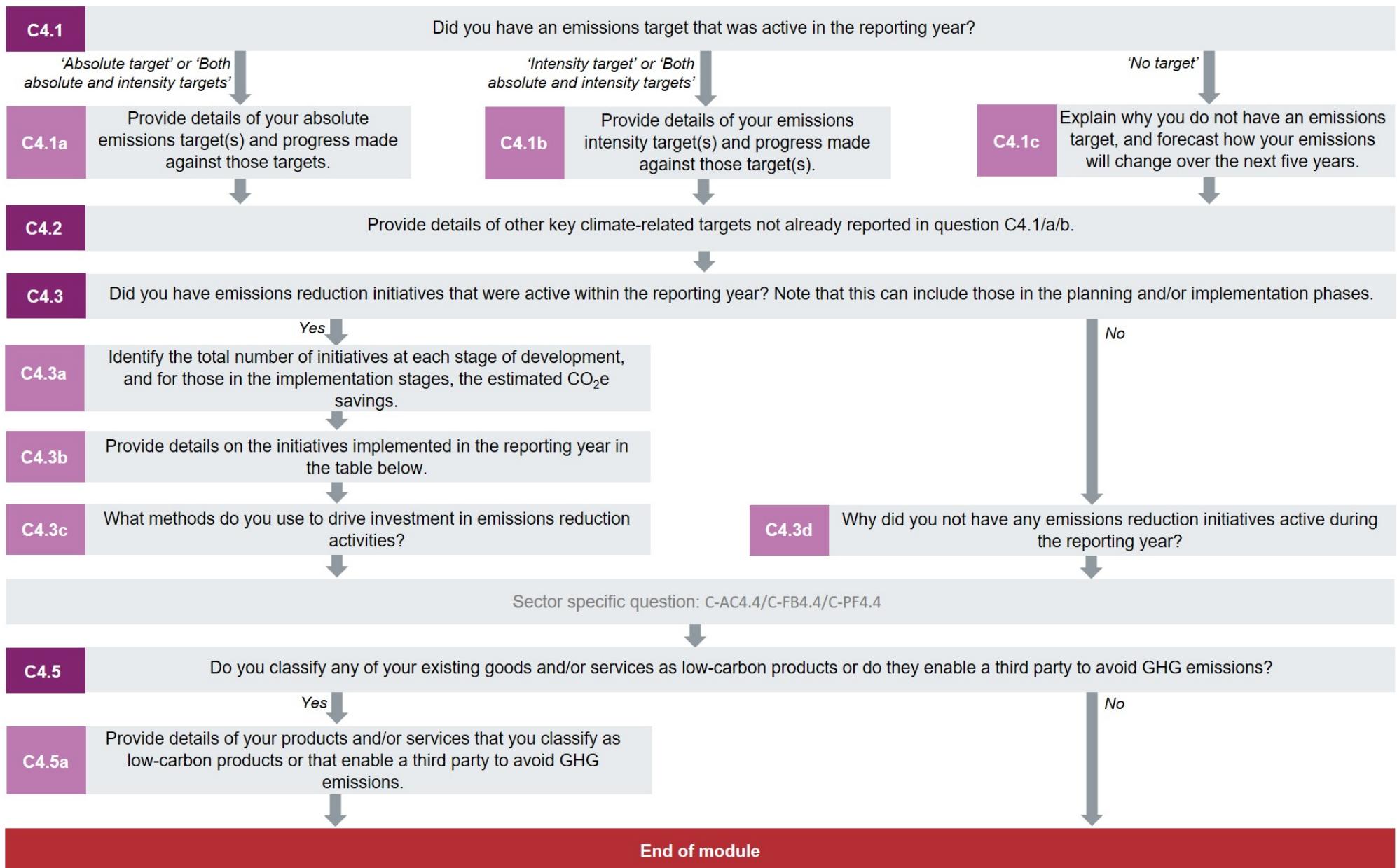
Sector-specific content

Additional questions on targets, initiatives, and best available techniques for the following high-impact sectors:

- Agricultural commodities
- Food, beverage & tobacco
- Paper and forestry
- Coal
- Electric utilities
- Oil & gas
- Cement
- Steel

Pathway diagram - questions

This diagram shows the general questions contained in module C4. To access question-level guidance, use the menu on the left to navigate to the question.



Targets

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

Change from 2018

No change

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 of the following options:

- Absolute target
- Intensity target
- Both absolute and intensity targets
- 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

- Investors request that companies disclose targets at the group and subsidiary/divisional levels.

Note for electric utility sector companies:

- Investors request that companies disclose targets at the group level and where applicable at subsidiary/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, you should disclose your CO₂ and/or fuel economy targets for products at group level 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.
- For further information please see CDP's [Technical Note on Financial Services](#).

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

(C4.1a) Provide details of your absolute emissions target(s) and progress made against those targets.

Question dependencies

This question only appears if you select "Absolute target" or "Both absolute and intensity targets" in response to C4.1.

Change from 2018

Minor change

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

2018 RobecoSAM Corporate Sustainability Assessment (DJSI)

Climate-related targets

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.

Target reference number	Scope	% emissions in Scope	Targeted % reduction from base year	Base year	Start year	Base year emissions covered by target (metric tons CO2e)
Select from: Abs1-Abs100	Select from drop-down options below	Percentage field [enter a percentage from 0-100 using a maximum of 2 decimal places]	Percentage field [enter a percentage from 0-100 using a maximum of 2 decimal places]	Numerical field [enter a number between 1900- 2019]	Numerical field [enter a number between 1900- 2019]	Numerical field [enter a number from 0-999,999,999,999 using a maximum of 2 decimal places and no commas]

Target year	Is this a science-based target?	% of target achieved	Target status	Please explain
Numerical field [enter a whole number between 2000- 2100]	Select from drop-down options below	Percentage field [enter a percentage from 0-100 using a maximum of 2 decimal places]	Select from: ● New ● Underway ● Achieved ● Expired ● Revised ● Replaced ● Retired	Text field [maximum 2,400 characters]

[Add Row]

Scope drop-down options:

Select one of the following options:

- Scope 1
- Scope 2 (location-based)
- Scope 2 (market-based)
- Scope 1+2 (location-based)
- Scope 1+2 (market-based)

- Scope 1+2 (location-based) +3 (upstream)
- Scope 1+2 (location-based) +3 (downstream)
- Scope 1+2 (location-based) +3 (upstream & downstream)
- Scope 1+2 (market-based) +3 (upstream)
- Scope 1+2 (market-based) +3 (downstream)
- Scope 1+2 (market-based) +3 (upstream & downstream)
- Scope 3 (upstream)
- Scope 3 (downstream)
- Scope 3 (upstream & downstream)
- Scope 3: Purchased goods and services
- Scope 3: Capital goods
- Scope 3: Fuel and energy-related activities (not included in Scopes 1 or 2)
- Scope 3: Upstream transportation and distribution
- Scope 3: Waste generated in operations
- Scope 3: Business travel
- Scope 3: Employee commuting
- Scope 3: Upstream leased assets
- Scope 3: Investments
- Scope 3: Downstream transportation and distribution
- Scope 3: Processing of sold products
- Scope 3: Use of sold products
- Scope 3: End-of-life treatment of sold products
- Scope 3: Downstream leased assets
- Scope 3: Franchises
- Other, please specify

Is this a science-based target? drop-down options:

Select one of the following options:

- Yes, this target has been approved as science-based by the Science-Based Targets initiative
- Yes, we consider this a science-based target, but this target has not been approved as science-based 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

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.
- Targets to reduce emissions in the product use phase or to reduce emissions from the supply chain should be captured as Scope 3 targets.
- The categories of Scope 3 emissions have been taken from the Greenhouse Gas Protocol's [Corporate Value Chain \(Scope 3\) Accounting and Reporting Standard](#). Refer to the Standard for additional information on

the sources that each category comprises and how to calculate these emissions. If you are specifying a Scope 3 source under "Other, please specify" please make it clear whether it is an upstream or downstream source.

Target reference number (column 1)

- Select a unique target reference from the drop-down menu provided to identify that target in subsequent questions and to track progress against this target in subsequent reporting years. For absolute targets please select from Abs1-Abs100.
- If you reported a target to CDP in 2018 and will be reporting progress against the same target in 2019, ensure you use the same Reference number from 2018 in 2019 and outline this in the Please explain column (column 12).

Scope (column 2)

- This refers to the Scope(s) of emissions to which the target relates. Note that this does not have to comprise all emissions within a particular Scope – see % of emissions in Scope column for further information.
- If you select "Other, please specify," provide a label for the Scope.

% emissions in Scope (column 3)

- Identify the percentage of the total measured emissions in the base year of the Scope your target applies to. When a target encompasses multiple Scopes, the percentage should be based upon the total emissions in all Scopes identified.
- E.g. if your target is to reduce Scope 1 emissions arising from your European operations, and these European operations accounted for 80% of your total Scope 1 emissions in the base year, then you should enter 80 into this column.
- E.g. your target relates to a particular business activity (e.g. production facility, office-based operations, etc.). If you have selected a Scope sub-category in the previous column (e.g. Scope 3: Business travel) you should specify the percentage of emissions in that sub-category rather than the Scope 3 as a whole.
- Note that entering a value of 100% of emissions in Scope indicates that the target covers your company's total, global gross emissions in the base year for the Scope selected in column 2. If the target covers less than 100% of emissions in Scope, please explain what areas of your business this target applies to (e.g. geographies, business units, products, etc.) and what is not covered by this target in the space provided in the Please explain column.

Targeted % reduction from base year (column 4)

- Enter your emissions reduction targets as a percentage reduction of 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. If your target is to cap emissions at the baseline level, you should enter 0 in this column.
- Note that this field 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.

Base year (column 5)

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

Start year (column 6)

- The start year is the year in which your company has set the target.
- It is not possible to have a start year that is before your base year.
- It is not possible to have a start year after your target year.
- The start year must be either before or during the reporting year, but cannot be after the reporting year.
- If you have a start year based on financial years, please enter the year that applies to the end of your financial year and specify in the Please explain column.

Base year emissions covered by target (metric tons CO₂e) (column 7)

- Enter the base year emissions relevant to 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 the European operations only.

Target year (column 8)

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

Is this a science-based target? (column 9)

- 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, this target has been approved as science-based 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 this target has not been approved as science-based 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 C4.2.
- 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.

% of target achieved (column 10)

- State the target's percentage completion (in terms of emissions) against the base year emissions.
- For example, if your target is to reduce your Scope 1 emissions by 10% by 2017 compared with a 2010 base year, and in your reporting year your Scope 1 emissions had reduced by 3% compared to that target base year, your target is 30% complete $((3/10)*100)$.
- If you have met your target in the reporting year, indicate 100% complete.
- It is not possible to put values greater than 100% in this field; however if you have exceeded your target, explain in the Please explain column.
- If you set an absolute target to stabilize your greenhouse gas emissions against a base year, enter 0 (zero) until the target year. For example, a company sets an absolute target to cap emissions using a 2008 base year and a 2019 target year. For reporting years until 2019, they would enter 0 (zero) in this column, before entering 100% in 2019 if they have achieved their target. A worked example of a stabilization target is provided as an example response.

Target status (column 11)

- New - Select this for targets that have been set in the reporting year and are still in progress.
- Underway - Select this option for targets that were set before the reporting year, with a target year in the future, that have not been achieved and continue to be pursued.
- Achieved - Select this option for targets which have been achieved in the reporting year.
- Expired - Select this option for targets with a target year of the reporting year, that have not been achieved and have expired in the reporting year.
- Revised - Select this for the targets that were set before the reporting year but a revision has been made to any of the elements in columns 2 to 8 in the reporting year, for example due to a recalculation of the base year emissions or a change to the target year.
- Replaced - Select this for previously reported targets that have been replaced with another target in the reporting year, for example where a facility target has been incorporated into a company-wide target.
- Retired - Select this option for targets with a target year in the future, that have not been achieved, but will no longer be pursued. Provide more information as to why this target was retired in the Please explain column.

Please explain (column 12)

- If 100% of emissions in Scope are not covered in this target, explain what areas of your business this targets applies to (e.g. geographies, business units, products, etc.) and what is not covered by this target.

- If you reported a target to CDP in 2018 and are reporting progress against the same target in 2019, you can outline it in this column. If you have access to the reference number used to report the target in 2018 then outline this here.
- You can use this column to identify where you have a financial year or average year based target (see above, "Base year emissions covered by target").
- If your target was originally in a different format, you may wish to give the original target before it was converted into a % reduction format for the purposes of this table. 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.

Example response

Worked example of absolute target table

The following table shows three absolute target examples:

- A target to reduce total Scope 1 emissions by 80% in 2050 compared with the base year's Scope 1 emissions of 830,000 metric tons CO2e (ID=Abs1);
- A target to stabilize emissions from European operations at 2007 levels by 2019 (ID Abs2);
- A target to reduce total Scope 2 emissions by 15% by 2017 compared with the base year's Scope 2 emissions of 55,000 metric tons (ID=Abs3);

Target reference number	Scope	% of emissions in Scope	Targeted % reduction from base year	Base year	Start year
Abs 1	1	100	80	2007	2016
Abs 2	1	80	0	2007	2015
Abs 3	2 (market-based)	100	15	2010	2014

Base year emissions	Target year	Is this a science-based target?	% of target achieved	Target status	Please explain
830000	2050	Yes, and this target has been approved as science-based by the Science Based Targets initiative	5	Underway	Our organization submitted this target in April 2016. It has been successfully approved by the SBTi. By the reporting year we have achieved a reduction of 33,200 CO 2e
315000	2019	No, but we are reporting another target which is science-based	0	Underway	This is a stabilization target for our domestic vehicle fleet, which covers 80% of our total Scope 1 emissions; we aim to stabilize our emissions at 2007 levels by 2019
55000	2017	No, but we are reporting another target which is science-based	100	Expired	This was achieved through reductions in electricity consumption

Worked examples on how to convert a target to reduce energy consumption to an emissions reduction target

- Companies may have targets to reduce their energy consumption. Reducing energy consumption is likely to lead to reduced emissions and therefore this target can be converted into an emissions reduction target.
- The equivalent reductions of an energy target are set based on a consequential approach to accounting. Thus, the principles to be followed are the ones set in the GHG Project Protocol, although the rigor required is not the same.

Target for reduction of electricity consumption

- A company has an electricity consumption in the base year of the target equal to 1,205,789 MWh. In the base year the company is being supplied by the grid and is using an average grid emission factor, which we will assume equals to 0.55 metric tons CO2e per MWh.

- Therefore, the emissions in the base year from electricity consumption are $(1,205,789 \times 0.55) = 663,184$ metric tons CO2e.
- The company has set a target of 20% reduction in electricity consumption for the next 10 years.
- Assuming that the emissions factor remains the same in the target year, a 20% reduction in electricity consumption will result in a 20% reduction in emissions.
- Therefore, electricity consumption emissions in the target year are $(663,184 - (663,184 \times (20/100))) = 530,547$ metric tons CO2e.
- Please note that the fundamental assumption here is that the grid emissions factor remains the same. In most cases this is very unlikely to happen, however, for the purposes of responding to this question and the rigor involved, it can be an acceptable assumption. This would be more related to a location-based Scope 2 figure.
- From a market-based Scope 2 perspective this target could also be achieved not by reducing consumption of electricity but by purchasing renewable energy. The target would be the same even though the ways to achieve it would be different, although would be reported differently. Because each option has its own consequences, it is important to distinguish how it is proposed to achieve the target.
- Please also note that if in the base year the company is already accounting for a certain amount of its electricity consumption as low emission electricity, then following the same principle of using the conditions of the base year of the target, that amount also needs to be reflected for the purpose of the calculation of the emissions reductions.
- Thus, if 50% of the electricity was renewable electricity with a 0 tCO2e emission factor, the emissions in the base year would be:

$$\left(\frac{1,205,789}{2} * 0.55 + \frac{1,205,789}{2} * 0 \right) = 331,591.5 \text{ tCO2e}$$

- There are two ways of calculating the emissions reductions in the target year then. One assuming that the % of RE will stay the same; another assuming that the amount of RE purchased will stay the same.
- In the first case, the corresponding expected emissions in the target year would be:

$$\begin{aligned} & \left[(1 - 0.2) * \left(\frac{1,205,789}{2} \times 0.55 + \frac{1,205,789}{2} \times 0 \right) \right] \\ &= 265,273.6 \text{ tCO2e} \end{aligned}$$

- As in the past example, the assumption is that the "average grid factor" of the electricity contracted by the company stays the same.
- In the second case, the corresponding expected emissions in the target year would be:

$$\left[\left((0.8 \times 1,205,789) - \frac{1,205,789}{2} \right) \times 0.55 \right] = 198,955.2 \text{ tCO2e}$$

- Please be aware that in this example a commitment is made to maintain the same purchase amounts of RE power through the entire period of the target.

Additional information

Science-based targets

- The world is on a trajectory leading to a 4°C temperature increase above pre-industrial levels, which will have adverse effects on the planet. Nearly 200 nations at COP21 wrote into the Paris Agreement that globally we will aim to limit warming to below 2°C and even 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 disaggregate the remaining global carbon budget and assign companies their fair share of emissions reductions. A number of factors are taken into consideration in order to determine what is most appropriate for a given company. Please see the [Technical Note on Science Based Targets](#) and the 2019 climate change scoring methodology for information on best practices in target setting what CDP considers a science-based target.
- 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. Targets submitted to the SBTi for an official evaluation by the April 15 2019 deadline (to be confirmed), with all information needed to assess the target, will be used for scoring in CDP's 2019 climate questionnaire.
- 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.

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

Question dependencies

This question only appears if you select "Intensity target" or "Both absolute and intensity target" in response to C4.1.

Change from 2018

Minor change

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

2018 RobecoSAM Corporate Sustainability Assessment (DJSI)

Climate-related targets

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.

Target reference number	Scope	% emissions in Scope	Targeted % reduction from base year	Metric	Base year	Start year	
Select from: Int1-Int100	Select from drop-down options below	Percentage field [enter a percentage from 0-100 using a maximum of 2 decimal places]	Percentage field [enter a percentage from 0-100 using a maximum of 2 decimal places]	Select from drop-down options below	Numerical field [enter a whole number between 1900- 2019]	Numerical field [enter a whole number between 1900- 2019]	
Normalized base year emissions covered by target (metric tons CO2e)	Target year	Is this a science-based target?	% of target achieved	Target status	Please explain	% change anticipated in absolute Scope 1+2 emissions	% change anticipated in absolute Scope 3 emission
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 whole number between 2000- 2100]	Select from drop-down options below	Percentage field [enter a percentage from 0-100 using a maximum of 2 decimal places]	Select from: <ul style="list-style-type: none">● New● Underway● Achieved● Expired● Revised● Replaced● Retired	Text field [maximum 2,400 characters]	Percentage field [enter a percentage from -999 - 999 using a maximum of 2 decimal places]	Percentage field [enter a percentage from -999 - 999 using a maximum of 2 decimal places]

[Add Row]

Scope drop-down (column 2)

Select one of the following options:

<ul style="list-style-type: none">● Scope 1● Scope 2 (location-based)● Scope 2 (market-based)● Scope 1+2 (location-based)● Scope 1+2 (market-based)● Scope 1+2 (location-based) +3 (upstream)● Scope 1+2 (location-based) +3 (downstream)● Scope 1+2 (location-based) +3 (upstream & downstream)● Scope 1+2 (market-based) +3 (upstream)● Scope 1+2 (market-based) +3 (downstream)● Scope 1+2 (market-based) +3 (upstream & downstream)● Scope 3 (upstream)● Scope 3 (downstream)● Scope 3 (upstream & downstream)● Scope 3: Purchased goods and services● Scope 3: Capital goods● Scope 3: Fuel and energy-related activities (not included in Scopes 1 or 2)	<ul style="list-style-type: none">● Scope 3: Upstream transportation and distribution● Scope 3: Waste generated in operations● Scope 3: Business travel● Scope 3: Employee commuting● Scope 3: Upstream leased assets● Scope 3: Investments● Scope 3: Downstream transportation and distribution● Scope 3: Processing of sold products● Scope 3: Use of sold products● Scope 3: End-of-life treatment of sold products● Scope 3: Downstream leased assets● Scope 3: Franchises● Other, please specify
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Metric drop-down options (column 5)

Select one of the following options from the drop-down menu below. Those with an asterisk (*) are the metrics that can be evaluated against science-based target setting methods (see [Technical Note on Science-Based Targets](#)):

<ul style="list-style-type: none">● Grams CO₂e per revenue passenger kilometer*● Metric tons CO₂e per USD(\$) value-added*● Metric tons CO₂e per square meter*● Metric tons CO₂e per metric ton of aluminum*● Metric tons CO₂e per metric ton of steel*● Metric tons CO₂e per metric ton of cement*● Metric tons CO₂e per metric ton of cardboard*● Grams CO₂e per kilometer*● Metric tons CO₂e per unit revenue● Metric tons CO₂e per unit FTE employee● Metric tons CO₂e per unit hour worked● Metric tons CO₂e per metric ton of product● Metric tons of CO₂e per liter of product● Metric tons CO₂e per unit of production	<ul style="list-style-type: none">● Metric tons CO₂e per unit of service provided● Metric tons CO₂e per square foot*● Metric tons CO₂e per kilometer● Metric tons CO₂e per passenger kilometer*● Metric tons CO₂e per megawatt hour (MWh)*● Metric tons CO₂e per barrel of oil equivalent (BOE)● Metric tons CO₂e per vehicle produced● Metric tons CO₂e per metric ton of ore processed● Metric tons CO₂e per ounce of gold● Metric tons CO₂e 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
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Is this a science-based target? drop-down options (column 10)

Select one of the following options:

<ul style="list-style-type: none"> Yes, this target has been approved as science-based by the Science Based Targets initiative Yes, we consider this a science-based target, but this target has not been approved as science-based by the Science Based Targets initiative 	<ul style="list-style-type: none"> 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
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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.
- The categories of Scope 3 emissions have been taken from the Greenhouse Gas Protocol's [Corporate Value Chain \(Scope 3\) Accounting and Reporting Standard](#). Refer to the Standard for additional information on the sources that each category comprises and how to calculate these emissions. If you are specifying a Scope 3 source under "Other," please make clear whether it is an upstream or downstream source.

Target reference number (column 1)

- Select a unique ID in this field from the drop-down menu provided to identify that target in subsequent questions. For intensity targets please select from Int1-Int100.

Scope (column 2)

- This refers to the Scope(s) of emissions to which the target relates. Note that this does not have to comprise all emissions within a particular Scope – see % of emissions in Scope column for further information.
- If you select "Other, please specify," provide a label for the Scope.

% emissions in Scope (column 3)

- Identify the percentage of the total measured emissions in the base year of the Scope your target applies to. When a target encompasses multiple Scopes, the percentage should be based upon the total emissions in all Scopes identified.
- E.g. if your target is to reduce Scope 1 emissions arising from your European operations, and these European operations accounted for 80% of your total Scope 1 emissions in the base year, then you should enter 80 into this column.
- E.g. your target relates to a particular business activity (e.g. production facility, office-based operations, etc.). If you have selected a Scope sub-category in the previous column (e.g. Scope 3: Business travel) you should specify the percentage of emissions in that sub-category rather than the Scope 3 as a whole.
- Note that entering a value of 100% of emissions in Scope indicates that the target covers your company's total, global gross emissions in the base year for the Scope selected in column 2. If the target covers less than 100% of emissions in Scope, please explain what areas of your business this target applies to (e.g. geographies, business units, products, etc.) and what is not covered by this target in the space provided in the Please explain column.

Targeted % reduction from base year (column 4)

- Enter your emissions reduction targets as a percentage reduction of the intensity (normalized) emissions to be achieved in the target year compared with the base year.
- For example, if your target is to reduce your Scope 1 emissions per full time equivalent (FTE) employee to 7 metric tons CO₂ per FTE employee and your base year emissions were 9 metric tons per FTE employee, you should enter 22 into this column (i.e. ((9-7)/9)=0.22; then multiply by 100 for percentage value).

Metric (column 5)

- 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 options above.

Base year (column 6)

- The base year is the year against which you are comparing your reduction target.
- If you have a year-on-year rolling target, your base year will be the previous reporting year.
- If you have a target based on financial years, please enter the year that applies to the end of your financial year and specify in the Please explain column.

- If you have a target based on average emissions over a period of time (e.g. 5-year average), please enter the year that applies to the end of the average period and specify in the Please explain column.
- You cannot have a base year that is in the future.

Start year (column 7)

- The start year is the year in which your company has set the target.
- It is not possible to have a start year that is before your base year.
- It is not possible to have a start year after your target year.
- The start year must be either before or during the reporting year, but cannot be after the reporting year.
- If you have a start year based on financial years, please enter the year that applies to the end of your financial year and specify in the Please explain column.

Normalized base year emissions covered by target (metric tons CO₂e) (column 8)

- Enter the intensity (normalized) base year emissions relevant to the target in this column.
- Note that you should enter the intensity (normalized) base year emissions relevant to the target (i.e. total emissions divided by the intensity denominator), not the total Scope emissions.
- For example, if your target is to reduce emissions per FTE employee by 30%, using 2010 as your base year and 2016 as your target year, first calculate what your emissions were per FTE in 2010 (in this example 10 metric tons CO₂e) and enter this figure in the field. Your target in 2016 would be 7 metric tons CO₂e.

Target year (column 9)

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

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, 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, this target has been approved as science-based 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 this target has not been approved as science-based 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 C4.2.
- 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.

% of target achieved (column 11)

- State the target's percentage completion (in terms of emissions) against the base year emissions.
- For example, if your target is to reduce your Scope 1 emissions by 10% by 2017 compared with a 2010 base year, and in your reporting year your Scope 1 emissions had reduced by 3% compared to that target base year, your target is 30% complete ((3/10)*100).
- If you have met your target in the reporting year, indicate 100% complete.
- It is not possible to put values greater than 100% in this field; however if you have exceeded your target, explain in the Please explain column.
- If you set an intensity target to stabilize your greenhouse gas emissions against a base year, enter 0 (zero) until the target year. For example, a company sets an intensity target to cap emissions per unit of production using a 2008 base year and a 2020 target year. For reporting years until 2020, they would enter 0 (zero) in this column, before entering 100% in 2020 if they have achieved their target.

Target status (column 12)

- New - Select this for targets that have been set in the reporting year and are still in progress.
- Underway - Select this option for targets that were set before the reporting year, with a target year in the future, that have not been achieved and continue to be pursued.
- Achieved - Select this option for targets which have been achieved in the reporting year.
- Expired - Select this option for targets with a target year of the reporting year, that have not been achieved and have expired in the reporting year.
- Revised - Select this for the targets that were set before the reporting year but a revision has been made to any of the elements in columns 2 to 9 in the reporting year, for example due to a recalculation of the base year emissions or a change to the target year.
- Replaced - Select this for previously reported targets that have been replaced with another target in the reporting year, for example where a facility target has been incorporated into a company-wide target.
- Retired - Select this option for targets with a target year in the future, that have not been achieved, but will no longer be pursued. Provide more information as to why this target was retired in the Please explain column.

Please explain (column 13)

- If 100% of emissions in Scope are not covered in this target, explain what areas of your business this targets applies to (e.g. geographies, business units, products, etc.) and what is not covered by this target.
- If you reported a target to CDP in 2018 and are reporting progress against the same target in 2019, you can outline it in this column. If you have access to the reference number used to report the target in 2018 then outline this here.
- You can use this column to identify where you have a financial year or average year based target (see above, "Base year emissions covered by target").
- If your target was originally in a different format, you may a wish to give the original target before it was converted into a % reduction format for the purposes of this table. 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.

% change anticipated in absolute Scope 1+2 emissions (column 14)

- Complete this column if your target relates to Scope 1 and/or 2 emissions. If your target does not include Scope 1+2 emissions, enter 0 (zero) in this column.
- This column asks for the percentage change in absolute emissions expected, based on the calculations described in the previous column. This column accepts numeric values up to 999, allowing up to two decimal places. This should reflect the percentage change of the total measured emissions within the Scope category chosen for the target (i.e. column 2 of table C4.1b).

% change anticipated in absolute Scope 3 emissions (column 15)

- Complete this column if your target relates to Scope 3 emissions. If your target does not include Scope 3 emissions, enter 0 (zero) in this column.
- This column asks for the percentage change in absolute emissions expected, based on the calculations described in column 13 'Please explain'. This column accepts numeric values up to 999, allowing up to two decimal places. This should reflect the percentage change of the total measured emissions within the scope category chosen for the target (i.e. column 2 of table C4.1b).

Additional information

Science-based targets

- The world is on a trajectory leading to a 4°C temperature increase above pre-industrial levels, which will have adverse effects on the planet. Nearly 200 nations at COP21 wrote into the Paris Agreement that globally we will aim to limit warming to below 2°C and even 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 disaggregate the remaining global carbon budget and assign companies their fair share of emissions reductions. A number of factors are taken into consideration in order to determine what is most appropriate for a given company. Please see the [Technical Note on Science Based Targets](#) and the 2019 climate change scoring methodology for information on best practices in target setting what CDP considers a science-based target.
- 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. Targets submitted to the SBTi for an official evaluation by the April 15 2019 deadline (to be confirmed), with all information needed to assess the target, will be used for scoring in CDP's 2019 climate questionnaire.
- 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.

(C4.1c) Explain why you do not have an emissions target, and forecast how your emissions will change over the next five years.

Question dependencies

This question only appears if you select "No target" in response to C4.1.

Change from 2018

Modified guidance

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%).
- 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.

Other climate-related targets

(C4.2) Provide details of other key climate-related targets not already reported in question C4.1/a/b.

Change from 2018

Minor change

Rationale

Emissions reduction targets are not the only type of relevant targets that organizations use to drive change. CDP asks this question to allow companies to report climate goals separate from emissions reductions, recognizing that there are multiple types of targets. This question increases transparency of corporate environmental commitments.

Connection to frameworks

TCFD

Metrics & Targets recommended disclosure a) Disclose the metrics used by the organization to assess climate-related risks and opportunities in line with its strategy and risk management process.

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

2018 RobecoSAM Corporate Sustainability Assessment (DJSI)

Climate-related targets

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.

Target	KPI – Metric numerator	KPI – Metric denominator (intensity targets only)	Base year	Start year	Target year
Select from: <ul style="list-style-type: none">● Energy productivity● Renewable electricity consumption● Renewable electricity production● Renewable energy target including electricity, heat, steam and cooling● Renewable fuel● Waste● Zero/low-carbon vehicle● Energy usage● Land use● Methane reduction target● Engagement with suppliers● R&D investments● Other, please specify	Text field [maximum 200 characters]	Text field [maximum 200 characters]	Numerical field [enter a number between 1900- 2019]	Numerical field [enter a number between 1900- 2019]	Numerical field [enter a whole number between 2000- 2100]

KPI in baseline year	KPI in target year	% achieved in reporting year	Target Status	Please explain	Part of emissions target	Is this target part of an overarching initiative?
Numerical field [enter a number from 0 to 999,999,999,999 using up to 10 decimal places and no commas]	Numerical field [enter a number from 0 to 999,999,999,999 using up to 10 decimal places and no commas]	Percentage field [enter a percentage from 0-100 using a maximum of 2 decimal places]	Select from: ● New ● Underway ● Achieved ● Expired ● Revised ● Replaced ● Retired	Text field [maximum 2,400 characters]	Text field [maximum 2,400 characters] [emissions reduction target ID]	Select from: ● RE100 ● EP100 ● EV100 ● Below50 – sustainable fuels ● Science-based targets initiative ● Reduce short-lived climate pollutants ● Remove deforestation ● Low-Carbon Technology Partnerships initiative ● No, it's not part of an overarching initiative ● Other, please specify

[Add Row]

Requested content

KPI – Metric numerator (column 2)

- Specify the metric numerator of your climate-related target

KPI – Metric denominator (intensity targets only) (column 3)

- Specify the metric denominator of your climate-related intensity target. If this is not an intensity target, leave blank. Common examples include:

- per revenue passenger kilometer
- per USD(\$) value-added
- per square meter
- per metric ton of aluminum
- per metric ton of steel
- per metric ton of cement
- per metric ton of cardboard
- per kilometer
- per unit revenue
- per unit FTE employee
- per unit hour worked
- per metric ton of product
- per liter of product
- per unit of production
- per unit of service provided
- per square foot
- per kilometer

- per passenger kilometer
- per megawatt hour (MWh)
- per barrel of oil equivalent (BOE)
- per vehicle produced
- per metric ton of ore processed
- per ounce of gold
- per ounce of platinum
- per metric ton of aggregate
- per billion (currency) funds under management

Base year (column 4)

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

Start year (column 5)

- The start year is the year in which your company has set the target.
- It is not possible to have a start year that is before your base year.
- It is not possible to have a start year after your target year.
- The start year must be either before or during the reporting year, but cannot be after the reporting year.

Target year (column 6)

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

KPI in baseline year (column 7)

- Enter the base year value of your climate-related target.

KPI in target year (column 8)

- Enter the target year value of your climate-related target.

% achieved in reporting year (column 9)

- State the target's percentage completion against the base year.
- E.g. if your target is to reduce your Scope 1 emissions by 10% by 2017 compared with a 2010 base year, and in your reporting year your Scope 1 emissions had reduced by 3% compared to that target base year, your target is 30% complete ($(3/10)*100$).
- If you have met your target in the reporting year, indicate 100% complete.
- It is not possible to put values greater than 100% in this field; however if you have exceeded your target, explain in the Please explain column.

Target status (column 10)

- New - Select this for targets that have been set in the reporting year and are still in progress.
- Underway - Select this option for targets that were set before the reporting year, with a target year in the future, that have not been achieved and continue to be pursued.
- Achieved - Select this option for targets which have been achieved in the reporting year.

- Expired - Select this option for targets with a target year of the reporting year, that have not been achieved and have expired in the reporting year.
- Revised - Select this for the targets that were set before the reporting year but a revision has been made in the reporting year, for example due to a change to the target year.
- Replaced - Select this for previously reported targets that have been replaced with another target in the reporting year, for example where a facility target has been incorporated into a company-wide target.
- Retired - Select this option for targets with a target year in the future, that have not been achieved, but will no longer be pursued. Provide more information as to why this target was retired in the Please explain column.

Please explain (column 11)

- Explain what areas of your business this target applies to (e.g. geographies, business units, products, etc.) and what is not covered by this target.
- 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.

Part of emissions target (column 12)

- If the climate-related target is part of an emissions reduction target, please enter the emissions reduction target reference number here.

Is this target part of an overarching initiative? (column 13)

- If the climate-related target is part of an overarching initiative please select the initiative or select "Other, please specify" to outline the overarching initiative.
- If you select "Other, please specify," provide a label for the "Is this target part of an overarching initiative?"

Note for oil and gas and coal sector:

- If you have a methane-specific emissions reduction target that is not detailed as a separate target in C4.1/a/b, please provide those details here by selecting "Methane reduction target" (column 1).
- If methane emissions were incorporated into targets reported in C4.1/a/b (but not detailed as a separate target), please select "Methane reduction target" (column 1) and indicate which target reference number(s) (from column 1 in C4.1/a/b) incorporate methane emissions (column 10) and specify the portion of those targets that is comprised of methane in the "Please explain" field (column 9).
- If you engage in oil and gas or coal mining activities and do not provide a methane-specific emissions reduction target in this question you will receive a follow up question (C-CO4.2a/ C-OG4.2a) requesting information on why you do not have a methane-specific emissions reduction target or incorporate methane into your target(s) reported in C4.2, and will be asked to forecast how your methane emissions will change. If methane emissions are not applicable to your organization, you will be given the opportunity to explain this in the follow up question.

Explanation of terms

- **KPI:** Key Performance Indicator (KPI) is a quantifiable measure used to evaluate success.

Emissions reduction initiatives

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

Change from 2018

No change

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 question C4.1.

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

Question dependencies

This question only appears if you select “Yes” in response to C4.3.

Change from 2018

Minor change

Rationale

This question demonstrates to CDP data users your organization’s progress towards reducing emissions through implementing emissions reduction initiatives.

Connection to other frameworks

SDG

Goal 7: Affordable and clean energy

Goal 13: Climate action

Response options

Please complete the following table:

Stage of development	Number of initiatives	Total estimated annual CO2e savings in metric tons CO2e (only for rows marked *)
Under investigation	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 from 0-999,999,999,999 using a maximum of 2 decimal places and no commas]
To be implemented*		
Implementation commenced*		
Implemented*		
Not to be implemented		

Requested content

Stage of development (column 1)

- Report the initiatives in the following stages of development:
 - Under investigation: A potential initiative to reduce emissions that is being evaluated but not yet approved by your company during the reporting year.
 - To be implemented: An initiative to reduce emissions that has been approved for implementation by your company but its implementation has not yet commenced during the reporting year.
 - Implementation commenced: An initiative to reduce emissions was started/activated in the reporting year, but by the end of the reporting period it was not yet fully active/functional in realizing emissions reductions.
 - Implemented: An initiative that has fully come into effect in the reporting year e.g. it has become fully operational/functional in realizing CO2e savings.
 - Not to be implemented: A potential initiative to reduce emissions that was evaluated but not pursued by your company during the reporting year.

- Companies should report on these stages of development in the context of the reporting year. Unless the project was new to one of the stages of development in the reporting year, it should not be reported.

Number of initiatives (column 2)

- Where there are no projects in a stage of development, state 0 (zero). This column should be completed for all rows.

Total estimated annual CO2e savings in metric tons CO2e (column 3)

- Enter the aggregated estimated annual emissions savings in metric tons CO2e in column 3 for all initiatives in those stages marked with an * (to be implemented, implementation commenced, and implemented).
- It is acknowledged that the CO2e savings will be an estimate. More detail is requested on individual initiatives (or programs of activity) that have been implemented in the reporting year in C4.3b. Initiatives do not need to relate to specific targets disclosed in the questionnaire.

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

Question dependencies

This question only appears if you select "Yes" in response to C4.3.

Change from 2018

Minor change

Rationale

CDP data users are interested in understanding how you are making progress towards your emissions reductions 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

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 type	Description of initiative	Estimated annual CO2e savings (metric tons CO2e)	Scope	Voluntary/ Mandatory
Select from: <ul style="list-style-type: none"> ● Energy efficiency: Building fabric ● Energy efficiency: Building services ● Energy efficiency: Processes ● Fugitive emissions reductions ● Low-carbon energy purchase ● Low-carbon energy installation ● Process emissions reductions ● Other, please specify 	Select from drop-down options below	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"> ● Scope 1 ● Scope 2 (location-based) ● Scope 2 (market-based) ● Scope 3 	Select from: <ul style="list-style-type: none"> ● 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
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]

[Add Row]

Description of initiative drop-down options (column 2)

Select one of the following options:

<p>Energy efficiency:Building fabric</p> <ul style="list-style-type: none"> ● Insulation ● Maintenance program ● Other, please specify <p>Energy efficiency:Building services</p> <ul style="list-style-type: none"> ● Building controls ● HVAC ● Lighting ● Motors and drives ● Combined heat and power ● Other, please specify <p>Energy efficiency:Processes</p> <ul style="list-style-type: none"> ● Heat recovery ● Cooling technology ● Refrigeration ● Process optimization ● Fuel switch ● Compressed air ● Combined heat and power ● Waste water treatment ● Water reuse ● Reuse of steam ● Machine replacement ● Waste recovery ● Other, please specify <p>Fugitive emissions reductions</p> <ul style="list-style-type: none"> ● Agriculture methane capture ● Agriculture N2O reductions, ● Landfill methane capture, ● Oil/natural gas methane leak capture/prevention ● Refrigerant leakage reduction ● Other, please specify 	<p>Low-carbon energy purchase</p> <ul style="list-style-type: none"> ● Biomass ● Biogas ● Fuel Cells ● Geothermal ● Hydro ● Solar Hot Water ● Solar PV ● Solar CPV ● Nuclear ● Wind ● Other, please specify <p>Low-carbon energy installation</p> <ul style="list-style-type: none"> ● Biomass ● Biogas ● Carbon Capture & Storage ● Fuel Cells ● Geothermal ● Hydro ● Solar Hot Water ● Solar PV ● Solar CPV ● Natural Gas ● Wind ● Other, please specify <p>Process emissions reductions</p> <ul style="list-style-type: none"> ● New equipment ● Product design ● Changes in operations ● Behavioral change ● Process materials selection ● Process water ● Other, please specify
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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 activities, 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 type (column 1)

- Select from one of the following options. Please note that these are broad categories only, with more detailed options provided in the "Description of initiative" column.

- Energy efficiency: Building fabric - Also referred to as building shell or building envelope, e.g. insulation, maintenance program.
- Energy efficiency: Building services - E.g. building controls, HVAC, lighting, motors and drives, combined heat and power, etc.
- Energy efficiency: Processes - E.g. heat recovery, refrigeration, process optimization, fuel switch, compressed air, combined heat and power, waste water treatment, process water, machine replacement etc.
- Fugitive emissions reductions - E.g. agriculture methane capture, agriculture N₂O reductions, landfill methane capture, oil/natural gas methane leak capture/prevention, refrigerant leakage reduction, etc.
- Low-carbon energy purchase - E.g. biomass, fuel cells, geothermal, hydro, solar, solar hot water, biogas, etc. If low carbon energy purchases have been a component of your emissions reduction activities please also report the other accompanying information in C6.2,C6.3, C7.5 and C8.2f and read the information provided in the worked example of green power accounting.
- Low-carbon energy installation - This includes installation of clean energy generating facilities at your own site or at others on behalf of your clients.
- Process emissions reductions - Initiatives to reduce process emissions from manufacturing, e.g. new equipment, changes in operations, process materials selection, etc. Process emissions are emissions from physical or chemical processes such as CO₂ from the calcinations step in cement manufacturing, CO₂ from catalytic cracking in petrochemical processing, PFC emissions from aluminum smelting, etc.
- Other, please specify – If you select “Other, please specify,” provide a label for the Activity type.

Description of initiative (column 2)

- Use this column to select from the drop-down options provided the initiative you have undertaken.
- If you select “Other, please specify,” provide a label for the Description of initiative type.

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. Please enter a number of no more than 9999999999 and up to 2 decimal places.
- Where savings occur on a non-annual basis, please average them out so that an annual figure can be provided.
- Where the initiative has not been in place for the entire reporting period, please estimate and report the emissions that would be saved in a 12 month period, so that an annual figure is provided.

Scope (column 4)

- Select the Scope where the largest share of estimated emission savings occurs. If the initiative covers multiple Scopes, state the additional Scopes in the “Comment” column.
- If you select Scope 3, specify the Scope 3 category(-ies) in the “Comment” column.

Voluntary/Mandatory (column 5)

- Select one of the following options:

- Voluntary
- Mandatory

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 question C0.4 in the Introduction page and should be entered in full and without commas (e.g. one million should be entered as 1000000). Where savings occur on a non-annual basis, please average out so that an annual figure can be provided. Values can be entered up to 99999999999999 with no decimal places.

Investment required (unit currency, as specified in CC0.4) (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 in the Introduction page and should be entered in full and without commas (e.g. one million should be entered as 1000000). Values can be entered up to 99999999999999 with no decimal places.

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 activities for each activity type, please select the median to answer this column.

Note for electric utility sector companies:

- For electric utilities, activities to reduce emissions/energy use 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, e.g.:

- Adoption of low impact agriculture/forestry practices
- Increased efficiency of water and energy use during manufacturing
- Reduced fleet use of fossil fuels or increased use of renewable fuels in transportation

Example response

Worked examples of emissions reduction activities

Example 1: Reporting an emissions reduction activity that was implemented in the reporting year

Company A implemented 35 individual projects focused on improving energy efficiency across production locations in Europe and North America. These projects included lighting retrofits and compressed air optimization and were primarily aimed to reduce Scope 2 emissions (location-based). The estimated annual CO₂ savings are 10,000 tCO₂.

The projects overall required an investment of around US\$5,000,000 and were only implemented in the reporting year.

Example 2: Reporting an emissions reduction activity that was re-evaluated in the reporting year

Company B has set a company-wide emissions reduction activity to ensure that 80% of their facilities have some form of low carbon installation by 2020. In 2015, they began the first phase where photovoltaic power generation was implemented on their European facilities. This cost around US\$1.2 million, saved approximately 400 metric tons CO₂e and was reported in their 2016 CDP response. In the current reporting year, they have expanded the project to their facilities in Eastern Africa, requiring an additional investment of US\$700,000, saving additional 262 metric tons CO₂e.

Example 3: Worked examples of how to account for low carbon purchases as an emissions reduction activity

In the previous reporting year company C consumed 15000 MWh, of which 8000MWh were accounted for as low carbon through the purchase of RECs in their Scope 2 (market-based) figure. In the current reporting year, their overall energy consumption remained stable at 15000MWh, however they purchased 10000MWh through RECs and accounted these purchases in their Scope 2 (market-based) figure. Any purchase of renewable energy that is additional in the reporting year compared to the previous year can be reported as an emissions reduction activity. In this case this would be emissions from 2000 MWh. Since this initiative is estimated to provide no monetary savings, payback period is not applicable here and can be left blank.

Please note that Company C only accounted for the additional purchase of RECs in the current reporting year.

The estimated savings of 1100 CO₂e (column 3) that was attributed to this emissions reduction activity can be used in C7.9a when calculating the change in global emissions from the previous year due to emissions reduction activities. Company A must also report all 10000MWh in their responses to C7.5 and C8.2f.

Example 1

Activity type	Description of activity	Estimated annual CO ₂ e savings (metric tons CO ₂ e)	Scope	Voluntary/ Mandatory
Energy efficiency: Building services	Compressed air	10,000	Scope 2 (location-based)	Voluntary

Annual monetary savings (unit currency, as specified in C0.4)	Investment required (unit currency, as specified in C0.4)	Payback period	Estimated lifetime of the initiative	Comment
1,000,000	5,000,000	4-10 years	11-15 years	Implemented 35 individual projects focused on improving energy efficiency across production locations in Europe and North America and Asia Pacific. The individual project lifetimes range from a couple of years, through to more than 30 years. Therefore, the median was used to calculate this column.

Example 2

Activity type	Description of activity	Estimated annual CO2e savings (metric tons CO2e)	Scope	Voluntary/Mandatory
Low-carbon energy installation	Solar PV	262	Scope 2 (location-based)	Voluntary

Annual monetary savings (unit currency, as specified in C0.4)	Investment required (unit currency, as specified in C0.4)	Payback period	Estimated lifetime of the initiative	Comment
40,000	700,000	16-20 years	>30 years	Installation of photovoltaic power generation in our facilities in Eastern Africa. This installation is part of a wider project to implement low carbon installation across 80% of our facilities. There are pre-existing low carbon installations in our European facilities.

Example 3

Activity type	Description of activity	Estimated annual CO2e savings (metric tons CO2e)	Scope	Voluntary/Mandatory
Low-carbon energy purchase	Hydro	1,100	Scope 2 (market-based)	Voluntary

Annual monetary savings (unit currency, as specified in C0.4)	Investment required (unit currency, as specified in C0.4)	Payback period	Estimated lifetime of the initiative	Comment
No payback	4,000	[blank]	<1 year	Our company has purchased RECs since 2014. RECs purchases now represent two thirds of our annual energy consumption.

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

Question dependencies

This question only appears if you select "Yes" in response to C4.3.

Change from 2018

No change

Rationale

This question provides data users with more transparency into your organization's approach to realizing emissions reductions and progress towards targets.

Connection to other frameworks

SDG

Goal 7: Affordable and clean energy

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.

Method	Comment
Select from: <ul style="list-style-type: none">● Compliance with regulatory requirements/standards● Dedicated budget for energy efficiency● Dedicated budget for low-carbon product R&D● Dedicated budget for other emissions reduction activities● Employee engagement● Financial optimization calculations● Internal price on carbon● Internal incentives/recognition programs● Internal finance mechanisms● Lower return on investment (ROI) specification● Marginal abatement cost curve● Partnering with governments on technology development● Other	Text field [maximum 2,400 characters]

[Add Row]

Requested content

General

- This question is intended to gather information on the ways in which capital is directed towards emissions reduction activities within your company, and/or the way in which activities are identified. If your company uses an internal carbon price you are encouraged to report this here in addition to in C11.

Method (column 1)

- Select the types of methods that you employ to help to channel funds towards emissions reduction activities.

Comment (column 2)

- Provide additional details or examples as necessary.

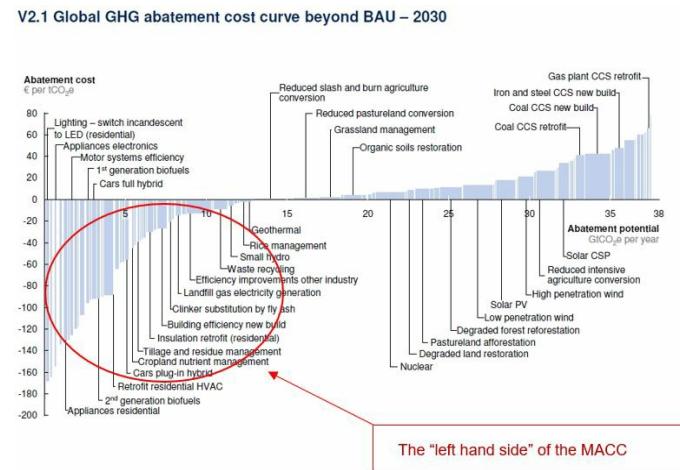
Additional information

Marginal Abatement Cost Curves

- Marginal Abatement Cost Curves, or MACCs, provide a method of evaluating potential emissions reduction activities. They provide a visual comparison of the marginal abatement costs for different projects.
- MACCs can be generated to evaluate options at any level of organization – from individual business divisions, to the overall business and to sectors and countries, evaluating individual projects, programs or policies.
- Marginal abatement costs are calculated by dividing the costs of the project (calculated from the initial cost minus any savings made as a result of the project) by the greenhouse gas emissions saved over a specified investment timeframe.

$$MAC = \frac{\text{Initial costs} - \text{savings generated}}{\text{GHG emissions saved}}$$

- These are then arranged with the lowest costs (sometime negative cost) on the left, increasing in cost to the right, creating the curve. An example taken from McKinsey & Company [Impact of the financial crisis on carbon economics: Version 2.1 of the global greenhouse gas abatement cost curve](#)



- Those projects/initiatives on the “left hand side” of the MACC are those where there are cost savings to be made over the lifetime of the project as a result of the emissions savings made, and therefore, even without a commitment to carbon reduction investment, should be implemented from a cost saving point of view. Where the bars extend above the line, positive costs are associated with the proposals. Here the MACC curve can be used to suggest the lowest cost options for achieving a particular target. Using the example above, savings of 9.5MtCO₂ can be made at costs of less than €40/tonCO₂.
- As with all evaluation methods, the accuracy of the MACC will depend on that of the input data.

(C4.3d) Why did you not have any emissions reduction initiatives active during the reporting year?

Question dependencies

This question only appears if you select “No” in response to C4.3.

Change from 2018

No change

Rationale

Emissions reduction initiatives are crucial to meeting emissions targets and reducing negative environmental impacts. CDP data users need to know why you do not engage in the best practice of actively reducing your emissions.

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 a company-specific explanation as to why you do not have any emissions reduction initiatives active in the reporting year, and if you have any plans to implement them in the future. If you plan to pursue emissions reduction initiatives in the future, estimate a timeframe of when you will begin to implement them.
- If you do not have active emissions reduction initiatives in the reporting year because you have not identified any, provide more information regarding your process for identifying potential initiatives and a specific example of an area of activities that were investigated but did not result in potential initiatives and why these investigated activities did not come to fruition.

Question C4.4 only applies to organizations with activities in the following sectors:

- Agricultural commodities
- Food, beverage & tobacco
- Paper & forestry

Low-carbon products

(C4.5) Do you classify any of your existing goods and/or services as low-carbon products or do they enable a third party to avoid GHG emissions?

Change from 2018

No change

Rationale

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

- 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.

Additional information

Low-carbon products

Why is CDP asking about low-carbon products?

- As the pressing need for reducing greenhouse gas emissions continues, investors are looking at different mechanisms to reduce the carbon intensity of their investments. In response to this, investors are signing up to the "Global Investor Statement on Climate Change", which sets out the contribution that investors can make to increasing low-carbon and climate resilient investments. One way in which investors can take action is through the Low Carbon Investment (LCI) Registry, which is a publicly accessed online database of low-carbon and clean energy investments globally. In addition, legislative developments in certain jurisdictions are also accelerating the need for investors to show evidence that they are driving a transition towards a low-carbon economy.
- One of the challenges facing investors calculating their investments in companies which have low-carbon products is that there is no singular database in which companies can register their low carbon products or the percentage of their revenue generated through low carbon products. CDP has expanded its focus of C4.5 beyond avoided emissions to include low carbon products to address this vacuum, providing valuable information to investors who are seeking to increase the proportion of their portfolio invested in low carbon products.

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 low-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 2°C.
- Taxonomies, such as the Climate Bonds Taxonomy, similarly function within this scientific parameter. At this stage, CDP encourages companies to use this parameter when evaluating whether a product is low carbon or not. 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 low-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 contribute to the adaptation side of dangerous climate change, among others.
- While CDP does not want to constrict the definition of low-carbon products, they can be loosely defined as a product with low embedded emissions, while avoided emissions refers to a product/service that allows a third party to avoid emissions.

More information

- [Low Carbon Investment Registry](#): This is a database of low carbon and emissions reducing investments made by institutional investors.
- [Low Carbon Registry Climate Bonds Initiative \(CBI\)](#): This is a taxonomy of eligible goods and services have been defined as meeting the requirements of low carbon.
- [Investor Statement on Climate Change](#): Initiative by institutional investors to accelerate action on climate change.

(C4.5a) Provide details of your products and/or services that you classify as low-carbon products or that enable a third party to avoid GHG emissions.

Question dependencies

This question only appears if you select "Yes" in response to C4.5.

Change from 2018

No change

Rationale

This question provides valuable information to investors who are seeking to increase their investment in companies providing low-carbon and climate resilient 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" button at the bottom of the table.

Level of aggregation	Description of product/ Group of products	Are these low-carbon product(s) or do they enable avoided emissions?	Taxonomy, project, or methodology used to classify product(s) as low-carbon or to calculate avoided emissions	% revenue from low-carbon product(s) in the reporting year	Comment
Select from: ● Product ● Group of products ● Company-wide	Text field [maximum 2,400 characters]	Select from: ● Low-carbon product ● Avoided emissions ● Low-carbon product and avoided emissions	Select from: ● Low-Carbon Investment (LCI) Registry Taxonomy ● Climate Bonds Taxonomy ● Addressing the Avoided Emissions Challenge- Chemicals sector ● Evaluating the carbon reducing impacts of ICT ● Other, please specify	Numerical field [enter a number from 0-100 using a maximum of 2 decimal places and no commas]	Text field [maximum 2,400 characters]

[Add Row]

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 hundreds of low carbon products, you may wish to report at a company-wide level. Please 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.

Description of product/ Group of products (column 2)

- Use this column to describe the product/s that you are disclosing in this row.

Are these low-carbon product(s) or do they enable avoided emissions? (column 3)

- Select from the drop-down options whether you are reporting on low carbon products and/or avoided emissions in this row. Often a product is either a low carbon product or allows a third party to avoid emissions. However, in some cases a product has the potential to be both a low carbon product and allow a third party to avoid emissions. In this case, please select the option 'Low carbon product and avoided emissions.' Please note that you should only select this option if the product/service fits into both classifications.

Taxonomy, project or methodology used to classify product/s as low carbon or to calculate avoided emissions (column 4)

- As investors seek to increase the proportion of their portfolio invested in low carbon products there is an effort to establish standardized methodologies. As for avoided emissions, methodologies to calculate avoided emissions are still in the infancy of their development. In the future CDP will refine the list of methodologies to best reflect those that are considered best practice.
- If you select "Other, please specify," provide a label for the "Taxonomy, project or methodology used to classify product/s as low carbon or to calculate avoided emissions".

% revenue from low carbon product(s) in the reporting year (column 5)

- State the proportion of your revenue during the reporting year from your products that you classify as low-carbon products or that enable a third party to avoid GHG emissions. Revenue is defined as sales, net of taxes.

Comment (column 6)

- You can use this text field to enter any other information that you consider relevant. This could include how you expect to change your investments in low carbon products, the estimated emissions savings from avoided emissions, or how you expect to meet stakeholder expectations.

Example response

Worked example of low-carbon products and products that allow third parties to avoid GHG emissions

There is a distinction between products that are low-carbon and products that allow third parties to avoid GHG emissions. While a product/service is often classified as either a low-carbon product or avoided emissions, they are not mutually exclusive concepts and, in some cases, maybe classified in both, although this is far more uncommon and it is most likely that your product/service will fall into one category. Please use the following examples to determine which category your products/services would fall into.

Example 1: Reporting a product that can be classified as a low-carbon product. Company A is a paper production company. It has a range of products that can be classified as low-carbon as these products have less carbon embedded in them.

Level of aggregation	Description of product/Group of products	Are these low-carbon product(s) or do they enable avoided emissions?	Taxonomy, project or methodology used to classify product(s) as low-carbon or to calculate avoided emissions	% revenue from low-carbon product(s) in the reporting year	Comment
Group of products	We have manufactured/sold printing paper and packaging materials that consist 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.	Low-carbon product	Climate Bonds Taxonomy	30	30% of revenue is an estimate based on the ratio of recycled materials to raw materials used in our products.

Example 2: Reporting a product that can be classified as a product that allows a third party to avoid GHG emissions. Company B is an automotive manufacturer. Its innovative energy-saving technologies, such as hybrid vehicles, are available throughout its product portfolio, allowing customers to select energy efficient models.

Level of aggregation	Description of product/ Group of products	Are these low-carbon product(s) or do they enable avoided emissions?	Taxonomy, project or methodology used to classify product/s as low-carbon or to calculate avoided emissions	% revenue from low-carbon product/s in the reporting year	Comment
Company-wide	<p>Our company has a wide range of eco-efficient automobiles available. We also have a wide variety of energy-saving technologies, such as light-weight construction and low-rolling resistance tires. We also offer a range of products that run on alternative-energy.</p>	Avoided Emissions	Other: ISO 14040, life cycle assessment	80	<p>Since 2009, our company has been calculating the carbon footprint of new vehicles associated with their production, use and disposal/ recycling, expressed in CO2-equivalent. The data is then used to achieve further reductions in the carbon footprint in all relevant vehicle models. We invested \$50 million in 2017 into research and development of energy-saving technologies.</p>

C5 Emissions methodology

Module Overview

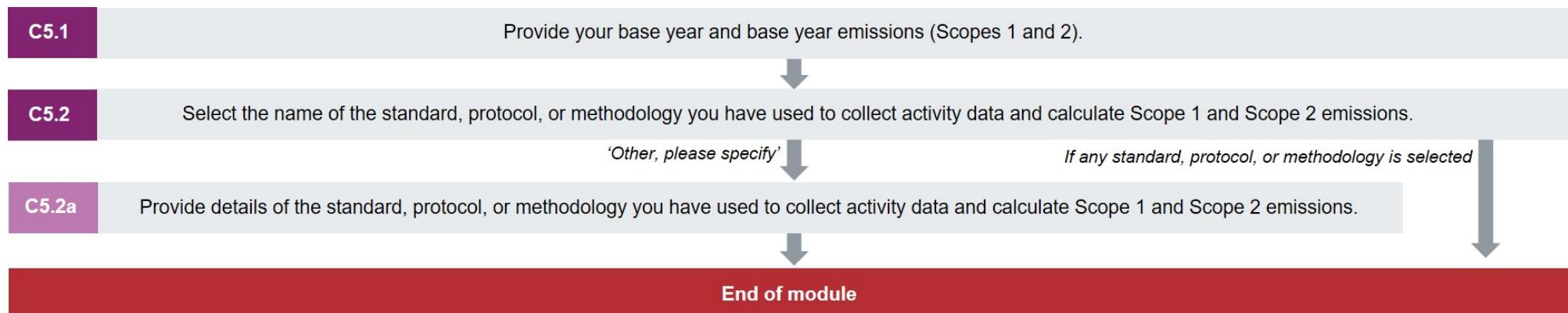
A meaningful and consistent comparison of emissions over time is an essential step in environmental reporting. This module allows companies to provide the base year and base year emissions and provide details of the standard, protocol, or methodology used to collect activity data and calculate Scope 1 and Scope 2 emissions.

Key changes

None.

Pathway diagram - questions

This diagram shows the general questions contained in module C5. To access question-level guidance, use the menu on the left to navigate to the question.



Base year emissions

(C5.1) Provide your base year and base year emissions (Scopes 1 and 2).

Change from 2018

No change

Rationale

A meaningful and consistent comparison of emissions over time requires that companies set a performance datum with which to compare current emissions.

Response options

Please complete the following table:

Scope	Base year start	Base year end	Base year emissions (metric tons CO2e)	Comment
Scope 1	Use the calendar button or enter dates manually in the format DD/MM/YYYY	Use the calendar button or enter dates manually in the format DD/MM/YYYY	Numerical field [enter a number from 0-999,999,999,999 using a maximum of 2 decimal places and no commas]	Text field [maximum 2,400 characters]
Scope 2 (location-based)				
Scope 2 (market-based)				

Requested content

General

- This question asks about the base year for your greenhouse gas inventory. This may be the same as the base year for your targets, but not necessarily. If your organization has changed structurally through acquisitions and/or divestments, the methodology or boundary used to calculate your emissions has changed, you have found significant errors in previous calculations, or if there have been changes to your excluded sources, you should recalculate your base year emissions so that they can be directly compared with your current/reporting year emissions.
- If your company has measured its emissions in the past, you can use the oldest year for which it has available emissions information – preferably verified or assured – as your base year. If your company is measuring its emissions for the first time, you may choose the current reporting year as the base year.
- The GHG Protocol Corporate Standard suggests that structural changes in an organization should trigger a recalculation of base year emissions. A company may, however, decide not to do this if the new emissions are not material or significant. It is up to each company to determine the threshold for what is considered significant or material.
- Companies should ensure that the base year inventory includes both a location-based and market-based Scope 2 total, if applicable and feasible. This ensures “like with like” comparisons over time. If the Scope 2 base year chosen was calculated only according to the location-based method, you should also recalculate and report a market-based total if contractual information or residual mix totals are available for the base year. If not, you should state in the comment field that the location-based result has been used as a proxy since a market-based figure cannot be calculated.
- If you are using the Export/Import functionality, please check that the imported date is correct.

Additional information

- **Setting a base year:** Setting a base year is an essential GHG accounting step that a company must take to be able to observe trends in its emissions information. According to the GHG Protocol Corporate Standard, a base year is “a historic datum (a specific year or an average over multiple years) against which a company’s emissions are tracked over time.” See Chapter 5 of the [GHG Protocol Corporate Standard](#) for more information on setting and recalculating a base year.

Emissions methodology

(C5.2) Select the name of the standard, protocol, or methodology you have used to collect activity data and calculate Scope 1 and Scope 2 emissions.

Change from 2018

No change

Rationale

This will provide CDP data users with transparency with regards to the methods used to calculate your emissions.

Response options

Select all that apply from the following options:

- 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 Voluntary 2017 Reporting Guidelines
- ENCORD: Construction CO2e Measurement Protocol
- Energy Information Administration 1605B
- 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
- 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
- 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
- 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
- New Zealand - Guidance for Voluntary, Corporate Greenhouse Gas Reporting
- Philippine Greenhouse Gas Accounting and Reporting Programme (PhilGARP)
- Programa GEI Mexico
- 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 Tokyo Cap-and Trade Program
- US EPA Climate Leaders: Direct Emissions from Iron and Steel Production
- US EPA Climate Leaders: Direct Emissions from Municipal Solid Waste Landfilling
- US EPA Climate Leaders: Direct HFC and PFC Emissions from Manufacturing Refrigeration and Air Conditioning Equipment
- US EPA Climate Leaders: Direct HFC and PFC Emissions from Use of Refrigeration and Air Conditioning Equipment
- US EPA Climate Leaders: Indirect Emissions from Purchases/ Sales of Electricity and Steam
- US EPA Climate Leaders: Direct Emissions from Stationary Combustion
- US EPA Climate Leaders: Direct Emissions from Mobile Combustion Sources
- US EPA Mandatory Greenhouse Gas Reporting Rule
- 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 which you may use to aid in the collection and reporting of GHG data, but the large majority of companies refer to the GHG Protocol as their basic reference.
- CDP encourages companies to use the GHG Protocol Corporate Standard when national standards are not specified.
- If the one you have used is not included in the drop down, or if you have used a combination of methodologies, select "Other, please specify;" you will be given an opportunity to provide more details in response to question C5.2a.
- If you select "Other, please specify," provide a label for the standard, protocol, or methodology you have used to collect activity data and calculate Scope 1 and Scope 2 emission.

Best practice

- CDP makes no judgments on standards or methodologies applied by companies to produce their inventories.
- As such, it is impossible for CDP to explicitly accept/reject a specific calculation methodology.
- We expect that any tool used to calculate emissions for an inventory will follow the best practice and observe important aspects such as the accuracy and completeness principles of standards similar to the GHG Protocol.

Verifying methodology

- Appropriate application of an emissions calculation methodology should be determined on a case-by-case basis.
- Therefore, evaluating whether a certain practice is appropriate for a given purpose is best completed by verifiers/assurers. We expect companies that follow best practice to verify/assure their inventories, namely the methods used to estimate emissions and underlying data.

(C5.2a) Provide details of the standard, protocol, or methodology you have used to collect activity data and calculate Scope 1 and Scope 2 emissions.

Question dependencies

This question only appears if you select "Other, please specify" in response to C5.2.

Change from 2018

No change

Rationale

This will provide CDP data users with transparency with regards to the methods used to calculate your emissions.

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

- Use the text box provided to give a description of the methodology(ies) you used to collect activity data and calculate your Scope 1 and Scope 2 emissions.
- Please give the name of the published methodology you have used that is not on the list in question C5.2 or give a description of an in-house methodology or a combination of in-house and published methodologies.

C6 Emissions data

Module Overview

Reporting emissions is best practice and a pre-requisite to understanding and reducing negative environmental impacts.

This module examines emissions data details and is aligned with TCFD Metrics & Targets recommended disclosure b) Disclose Scope 1, Scope 2, and, if appropriate, Scope 3 greenhouse gas (GHG) emissions, and the related risks.

Key changes

- Additional guidance for financial services sector companies has been added for question C6.5.

Sector-specific content

Additional questions on emission intensity metrics for the following high-impact sectors:

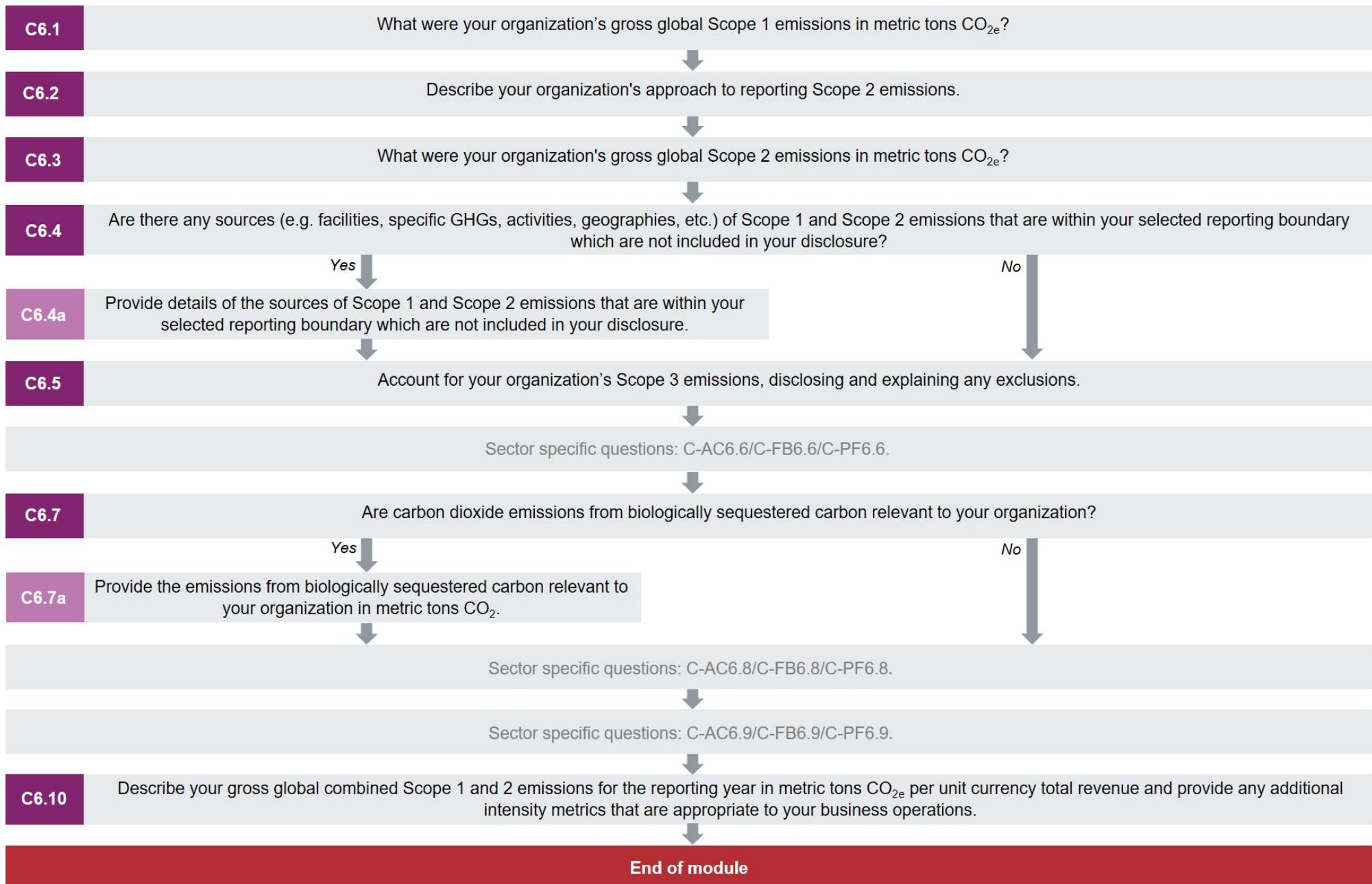
- Oil & gas
- Cement
- Steel
- Transport services

Additional questions on Scope 3 emissions, biogenic carbon and agricultural commodities emissions for the following high-impact sectors:

- Agricultural commodities
- Food, beverage and tobacco
- Paper and forestry

Pathway diagram - questions

This diagram shows the general questions contained in module C6. To access question-level guidance, use the menu on the left to navigate to the question.



Scope 1 emissions data

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

Change from 2018

No change

Rationale

Reporting emissions is best practice and a pre-requisite 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

Complete the following table:

Gross global Scope 1 emissions (metric tons CO ₂ e)	Comment
Numerical field [enter a range of 0-999,999,999,999 using a maximum of 2 decimal places and no commas]	Text field [maximum 2,400 characters]

Requested content

General

- 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.
- 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 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](#)".
- 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. If applicable to your organization's reporting of Scope 1 emissions, please outline this in the comment column.

Note for first-time responders

- If you are a first-time responder, please provide gross global Scope 1 emissions data for the current reporting year and the three years prior to the current reporting year.
- Please input the gross global Scope 1 emissions data for the current reporting year in the first row and work backwards from the current reporting year.
- 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.

- Use the comment column to report relevant information regarding your organization's past Scope 1 emissions data.

Note for restatements

- If you have chosen to restate your organization's gross global Scope 1 emissions data previously supplied to CDP by adding additional reporting years to C0.2, you may do so here.
- Reporting recalculated figures for these years is optional.
- All years Scope 1 emissions data needs to be entered in reverse order, with the current reporting year first, i.e. you should first input the current reporting year emissions data and work backwards from the most recent reporting year.
- 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.
- Use the comment column to identify that this is restated data and the reason for the restatement.
- For more information on restatements see CDP's technical note on restatements[here](#).

Note on biogas:

- Carbon dioxide emitted from the combustion of biomass/biofuel or fermentation should not be included in your response to question C6.1 but instead should be reported in C6.7. 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 electricity 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.

Explanation of terms

- **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.

Scope 2 emissions reporting

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

Change from 2018

No change

Rationale

The purpose of this question is to allow companies to disclose their approach to calculating their Scope 2 emissions. This is particularly relevant when considering market-based Scope 2 emissions, as it is important to differentiate between companies that have not reported a market-based figure as they do not have operations where there are those contractual instruments, and those companies that do have operations where there are contractual instruments but have chosen not to disclose a market-based figure. CDP asks this question to enable accurate comparability across companies.

Connection to other frameworks

Response options

Please complete the following table:

Scope 2, location-based	Scope 2, market-based	Comment
Select from: <ul style="list-style-type: none"> ● We are reporting a Scope 2, location-based figure ● We are not reporting a Scope 2, location-based figure 	Select from: <ul style="list-style-type: none"> ● We are reporting a Scope 2, market-based figure ● We have no operations where we are able to access electricity supplier emission factors or residual emission factors, and are unable to report a Scope 2, market-based figure ● We have operations where we are able to access electricity supplier emission factors or residual emissions factors, but are unable to report a Scope 2, market-based figure 	Text field [maximum 2,400 characters]

Requested content**General**

- The [GHG Protocol Scope 2 Guidance](#) was published in January 2015. Part of the requirements of the guidance is that companies shall account for their Scope 2 emissions using two methodologies: a location-based method and a market-based method. The market-based method is for those companies who have any operations in markets providing product- or supplier-specific data in the form of contractual instruments. If this is not applicable to your company, you only need to provide one location-based figure.
- Per the GHG Protocol Corporate Standard, a contractual instrument is "any type of contract between two parties for the sale and purchase of energy bundled with attributes about the energy generation, or for unbundled attribute claims." Different markets will have different contractual instruments, which can include energy attribute certificates, direct contracts such as PPAs, and supplier-specific emission rates.
- It is important to consider the definition of contractual instruments when determining whether your company needs to calculate a market-based figure **if your company can access emissions factors from your energy supplier for any of your operations, you are required to calculate and report a market-based figure**. Therefore, when responding to this question, if you do have operations where there are contracts such as RECs and Guarantees of Origin, supplier specific emissions factors, or a residual emissions factor such as in the US and Europe – regardless of whether or not you purchase them – then you should **not** select "We have no operations where we are able to access electricity supplier emissions factors or residual emissions factors and are unable to report a Scope 2, market-based figure". For full details please view the [GHG Protocol Scope 2 Guidance](#). You can also reference [CDP's Technical Note on Accounting of Scope 2 emissions](#).

Scope 2 emissions data**(C6.3) What were your organization's gross global Scope 2 emissions in metric tons CO2e?****Change from 2018**

No change

Rationale

Reporting emissions is best practice and a pre-requisite to understanding and reducing negative environmental impacts. CDP asks this question to ensure companies are measuring emissions from purchased or acquired electricity, steam, heat, and cooling.

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.

Response options

Please complete the following table:

Scope 2, location-based	Scope 2, market-based (if applicable)	Comment
Numerical field [enter a range of 0-99,999,999,999 using a maximum of 2 decimal places and no commas]	Numerical field [enter a range of 0-99,999,999,999 using a maximum of 2 decimal places and no commas]	Text field [maximum 2,400 characters]

Requested content

General

- Negative numbers are not allowed as reporting needs to be gross, not net figures. If you answered in C6.2 that you are not reporting a Scope 2 location-based figure and/or you answered that you are unable to report a Scope 2 market-based figure, please leave the corresponding column(s) in C6.3 blank.
- Putting in zero would suggest 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.
- 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 for first-time responders

- If you are a first-time responder, please provide gross global Scope 2 emissions data for the current reporting year and the three years prior to the current reporting year.
- Please input the gross global Scope 2 emissions data for the current reporting year in the first row and work backwards from the current reporting year.
- 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.
- Use the comment column to report relevant information regarding your organization's past Scope 2 emissions data.

Note for restatements

- If you have chosen to restate your organization's gross global Scope 2 emissions data previously supplied to CDP by adding additional reporting years to C0.2, you may do so here.
- Reporting recalculated figures for these years is optional.
- All years Scope 2 emissions data needs to be entered in reverse order, with the current reporting year first, i.e. you should first input the current reporting year emissions data and work backwards from the most recent reporting year.
- 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.
- Use the comment column to identify that this is restated data and the reason for the restatement.
- For more information on restatements, see CDP's technical note on restatements [here](#).

Note for agricultural sector companies:

- 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.

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.”

Exclusions

(C6.4) 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?

Change from 2018

No change

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.”

(C6.4a) 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.

Question dependencies

This question only appears if you select “Yes” in response to C6.4.

Change from 2018

No change

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

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
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● Emissions are relevant but not yet calculated● Emissions are relevant and calculated, but not disclosed● Emissions excluded due to recent acquisition● Emissions are not evaluated	Select from: <ul style="list-style-type: none">● No emissions excluded● No emissions from this source● Emissions are not relevant● Emissions are relevant but not yet calculated● Emissions are relevant and calculated, but not disclosed● Emissions excluded due to a recent acquisition● Emissions are not evaluated	Select from: <ul style="list-style-type: none">● No emissions excluded● No emissions from this source● Emissions are not relevant● Emissions are relevant but not yet calculated● Emissions are relevant and calculated, but not disclosed● Emissions excluded due to a recent acquisition● Emissions are not evaluated	Text field [maximum 2,400 characters]

[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** – select this option if you have excluded Scope 1 emissions from this source due to an acquisition that has taken place in the last 12 months prior to the submission date of your response to CDP.
- **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**– select this option if you have excluded Scope 2 emissions from this source due to an acquisition that has taken place in the last
- **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. If possible, provide an estimate of the percentage of total emissions contained within the reported boundary that the exclusion represents. If a recent acquisition has taken place, please include the time of acquisition in this text field.
- 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".

Example response

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
We are excluding emissions from our direct operations in Asia where we have four manufacturing facilities.	Emissions are not evaluated.	Emissions are relevant but not yet calculated.	Emissions are relevant but not yet calculated.	<p><i>At present, we are only able to disclose our emissions from our European operations, but not our Asian operations.</i></p> <p><i>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.</i></p> <p><i>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 location-based figure for those operations.</i></p>

Additional information

- 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, but are only a small proportion of the total emissions included in the GHG statement.

Scope 3 emissions data

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

Change from 2018

No change

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

2018 RobecoSAM Corporate Sustainability Assessment (DJSI)

Scope 3

Response options

Please complete the following table:

Sources of Scope 3 emissions	Evaluation status	Metric tons CO2e	Emissions calculation methodology	Percentage of emissions calculated using data obtained from suppliers or value chain partners	Explanation
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 2 decimal places and no commas]	Text field [maximum 2,400 characters]	Numerical field [enter a number from 0-100 using a maximum of 2 decimal places and no commas]	Text field [maximum 2,400 characters]
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". In the context of your CDP response, you can provide information on actions you take to reduce your Scope 3 emissions in question C4.3b on emissions reduction initiatives.
- 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 C6.5 will depend on your selection made in the Evaluation status column and are summarized in the guidance below for column 2 'Evaluation status'.

Sources of Scope 3 emissions (column 1)

- This column is already completed in the disclosure platform and all sources 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 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 sources, with the exception of Other (upstream) and Other (downstream) – these two categories should only be used if companies have a source of Scope 3 emissions that is not provided above. The evaluation status includes two components: whether a Scope 3 source is relevant to your business and what you have done to investigate that source. 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 source 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 measured and calculated emissions from this source and they are equal to zero.

Emissions calculation methodology (column 4)

- Complete this column for all sources that you have identified as "Relevant, calculated" or "Not relevant, calculated" in the Evaluation status column. Your response should include a short description of the types and sources of data used to calculate emissions (e.g. activity data, emission factors and GWP values), and a short description of the methodologies, assumptions and allocation methods used to calculate emissions. Please use no more than 2400 characters to complete this response.

Percentage of emissions calculated using data obtained from suppliers or value chain partners (column 5)

- This column is optional for all sources that you have identified as "Relevant, calculated" or "Not relevant, calculated" in the Evaluation status column.
- Such data obtained from suppliers or value chain partners may take the form of primary activity data, or emissions data calculated by suppliers that are specific to suppliers' activities. More information on this can be found in Chapter 7, Collecting Data, of the GHG Protocol's [Corporate Value Chain \(Scope 3\) Accounting and Reporting Standard](#).

Explanation (column 6)

- 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 any exclusions within a source, or to explain why emissions have decreased or increased, you can also do that in this column. Use no more than 2400 characters in your response.

Note for agricultural sectors

- 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

- 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:

- For financial services sector companies the majority of emissions occur in the investment chain, in relation to your financial products and services and/or investments. Scope 3 Investments is the most relevant category to financial services organizations.
- You should report your Scope 3 emissions data for the Investments category, at the group level if applicable. In addition, you are encouraged to provide emissions data for all other listed Scope 3 categories that are relevant to you.
- You may include the percentage of emissions calculated using data obtained from investment chain partners in column 5.
- The "Explanation" column can be used to provide a figure for the proportion of portfolio coverage (including all relevant asset classes), as well as the emissions intensity.
- Insurance companies:

-As asset owners, insurance companies are asked to provide in the "Explanation" column their weighted average carbon intensity, where data are available or can be reasonably estimated, for each fund or investment strategy.

- Asset managers:

-Asset managers are asked to provide in the "Explanation" column their weighted average carbon intensity, where data are available or can be reasonably estimated, for each product or investment strategy.

- For further information please see CDP's [Technical Note on Financial Services](#).

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](#) 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.

Emissions from biologically sequestered carbon

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

Change from 2018

No change

Rationale

The GHG Protocol's Corporate Accounting and Reporting Standard outlines that emissions from the combustion of biomass shall be reported separately. Therefore organizations can identify here whether they have carbon dioxide emissions from biologically sequestered carbon that data users, both internal and external, may need for decision making.

Connection to other frameworks

SDG

Goal 7: Affordable and clean energy

Response options

Select one of the following options:

- Yes
- No

Requested content

General

- You should respond "Yes" to this question if carbon dioxide emissions from biologically sequestered carbon (i.e. carbon dioxide emission from burning biomass/biofuels) are relevant to your organization, regardless of whether you have the data available to provide a total emissions figure (this is the subject of question C6.7a below). In this context "relevant" is as defined in the GHG Protocol's Corporate Accounting and Reporting Standard (page 8), meaning "that it contains the information that users—both internal and external to the company—need for their decision making".

Explanation of terms

Biologically sequestered carbon: carbon removed from the atmosphere by biological sinks and stored in plant tissue. Biologically sequestered carbon does not include GHGs captured through carbon capture and storage.

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

Question Dependencies

This question only appears if you select "Yes" in response to C6.7.

Change from 2018

Minor change

Rationale

This question provides data users insight into the CO₂ emissions from biologically sequestered carbon. Reporting these emissions separately aligns with best practice environmental reporting and the GHG Protocol's Corporate Accounting and Reporting Standard.

Connection to other frameworks

Goal 7: Affordable and clean energy

Response options

Please complete the following table:

Emissions from biologically sequestered carbon (metric tons CO2)	Comment
Numerical field [enter a range of 0-999,999,999,999 using a maximum of 2 decimal places and no commas]	Text field [maximum 2,400 characters]

Requested content

General

- Please enter your total direct emissions of CO2 from biologically sequestered carbon in the data field provided.
- This figure specifically requests information on direct CO2 emissions that occur from sources that are owned or controlled by the company, for example, CO2 emissions from combustion of biofuels. However if you have information on your indirect emissions from biologically sequestered carbon you can report this in the Comment column, outlining the quantity and source(s) of these emissions.
- Do not include other GHGs emitted from the combustion of biologically sequestered carbon or fermentation (e.g. nitrous oxide and methane are emitted from the combustion of biomass/biofuel). These should be reported within Scope 1, 2 or 3 (whichever is relevant to your company).

Additional information

Biogenic materials: Biogenic materials, including biomass, biofuels, and biogas, are increasingly used as a resource for energy generation. While biomass can produce fewer GHG emissions than fossil fuels and may be grown and used on a shorter time horizon, it still produces GHG emissions and should not be treated with a "zero" emission factor.

Based on the [GHG Protocol Corporate Accounting and Reporting Standard](#) any emissions of CH4 or N2O from biologically sequestered carbon shall be reported in scope 1, 2 or 3, while the emissions of CO2 shall be reported outside the scopes. In practice, for Scope 2 emissions this means that any market-based method data that includes biofuels should report the CO2 portion of the biofuel combustion separately from the scope. Please refer to [GHG Protocol Scope 2 Guidance](#) for more details.

Questions C6.8 and C6.9 only apply to organizations with activities in the following sectors:

- Agricultural commodities
- Food, beverage & tobacco
- Paper & forestry

Emissions intensities

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

Change from 2018

Modified guidance

Rationale

Intensity measures describe an organization's CO2e emissions in the context of another business metric. In this way, the emissions are normalized to account for growth etc. Many companies and investors have historically tracked environmental performance with intensity ratios.

Connection to other frameworks

Goal 13: Climate action

Response options

Please complete the following table. It is requested that you first report your emissions intensity figure per unit of currency total revenue. You are able to add rows by using the "Add Row" button at the bottom of the table.

Intensity figure	Metric numerator (Gross global combined Scope 1 and 2 emissions)	Metric denominator	Metric denominator: Unit total	Scope 2 figure used	% change from previous year	Direction of change	Reason for change
Numerical field [enter a number from 0-999,999,999,999 using a maximum of 10 decimal places and no commas]	Metric tons CO2e Numerical field [enter a number from 0-999,999,999,999 using a maximum of 2 decimal places and no commas]	Select from: <ul style="list-style-type: none">● unit total revenue● barrel of oil equivalent (BOE)● billion (currency) funds under management● full time equivalent (FTE) employee● kilometer● liter of product● megawatt hour generated (MWh)● megawatt hour transmitted (MWh)● metric ton of product● ounce of gold● ounce of platinum● passenger kilometer● room night produced● square foot● square meter● metric ton of aggregate● metric ton of aluminum● metric ton of coal● metric ton of ore processed● metric ton of steel● unit hour worked● unit of production● unit of service provided● vehicle produced● Other, please specify	Numerical field [enter a number from 0-999,999,999,999 using a maximum of 2 decimal places and no commas]	Select from: <ul style="list-style-type: none">● Location-based● Market-based	Numerical field [enter a number from 0-999 using a maximum of 2 decimal places]	Select from: <ul style="list-style-type: none">● Increased● Decreased● No change	Text field [maximum 2,400 characters]

[Add Row]

Requested content*General*

- It is requested that you first report your emissions intensity figure per unit of currency total revenue and if applicable provide any additional intensity metrics that are appropriate to your business operations. The

currency reported here should be the same one selected in C0.4. Emissions intensity per unit of revenue is one the most common and easy means to calculate emissions intensity, which is why it is requested that you provide this figure. However, this is not necessarily always the most appropriate to individual businesses and therefore you can also report an additional intensity or normalized metric that is most appropriate to your organization's own operations.

- If you are a privately held organization, you may report whichever intensity is relevant for you. Please note that per unit of revenue is the preferred disclosure.
- If you did not disclose to CDP last year, or did not use this data point, please use last year's inventory and financial data to provide a calculation of percentage change. If you did not measure your emissions last year, complete column 1 and explain why you do not have the data available in column 8.

Intensity figure (column 1)

- Intensity ratios express GHG impact per unit of physical activity or unit of economic output.
- Your intensity figure per unit of currency total revenue is calculated by dividing total Scope 1 and 2 emissions by unit revenue, making sure that the revenue figure used applies to the same organizational boundary as your emissions data.
- Important points to remember when calculating intensity are:

- Intensity = Emissions (metric tons CO₂e) (Numerator) / Business metric (e.g. revenue) (Denominator)
- Numerator units: the intensity metrics requested in question C6.10 should have emissions in metric tons CO₂e as the numerator. They should include Scope 1 and Scope 2 emissions combined. This figure can be obtained by summing the figures given in answer to questions C6.1 and C6.3.
- Denominator units: When calculating your intensity, you should ensure that the units of your data match those specified in the intensity metric. For example, question C6.10 requests for intensity in metric tons CO₂e per unit currency revenue. This means that your revenue figure (the denominator) should be in the currency you specified in C0.4 and in single units, i.e. if your revenue is 5 Million US\$ your unit revenue is 5000000. Another example would be metric tons CO₂e per MWh – if your data is in kWh you must convert it to MWh before using it in the calculation.
- Boundary and Exclusions: You should ensure that the organizational boundary and any exclusions specified for your numerator is the same as for your denominator. For example, when entering your emissions per FTE employee you should ensure that you only include those FTE employees that are within the sections of the organization covered by the organizational boundary of your emissions and take into account any exclusions (as specified in question C6.4a).

Metric numerator (column 2)

- This column is fixed and specifies that the emissions should be in metric tons CO₂e, derived from your gross global Scope 1 emissions figure (question C6.1) plus your gross global Scope 2 emissions figure (question C6.3).

Metric denominator (column 3)

- To report your organization's emissions intensity per unit currency total revenue, select 'unit total revenue' in column 3 (metric denominator) for this figure.
- Please note that the denominator in the selection "unit total revenue" is per single unit (1) of the currency specified in question C0.4. Please do not report your revenue emissions intensity based on multiples of your selected currency (e.g. do not report in multiples of Yen). It is understood that this will likely result in your intensity figure being quite small (less than 0.01).
- If you select "Other, please specify", provide a label for the Metric denominator.

Metric denominator: Unit total (column 4)

- Ensure that the metric denominator figure provided in this column is the same unit that was chosen in column 3.
- For example, if your chosen metric in the previous column was FTE, you should input here how many FTE you had during the reporting year.

Scope 2 figure used (column 5)

- Indicate which Scope 2 figure has been used in your metric numerator.

% change from previous year (column 6)

- If you have experienced no change, please enter 0 (zero) in this column.
- If the previous year's figure has been reported but recalculated since, please use the recalculated figure for the calculation of percentage change and note this in the last column (8). 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.

Direction of change (column 7)

- A declining intensity ratio reflects a positive performance (improvement), while an increasing intensity ratio reflects a negative performance (decline).
- If the percentage change from last year is 0 (zero) select "No change".

Reason for change (column 8)

- Describe why your emissions intensity has changed. Explain the primary reasons behind the change and the degree to which different factors have influenced the figures.

Note for coal sector:

- Coal sector companies are requested to provide an emissions intensity figure per unit of currency total revenue and in addition, per metric ton of coal.

Note for electric utility sector:

- Electric utility sector organizations are requested to provide an emissions intensity figure per unit of currency total revenue and in addition, report your organization's gross global combined Scope 1 and 2 emissions intensity per MWh of gross power generated and/or per MWh of power transmitted – make sure to select megawatt hour generated (MWh) and/or megawatt hour transmitted (MWh).

Note for oil and gas sector:

- Oil and gas sector organizations are requested to provide an emissions intensity figure per unit of currency total revenue.
- Please note that question C-OG6.12 asks oil and gas organizations to provide the intensity figures for Scope 1 emissions (metric tons CO₂e) per unit of hydrocarbon category.

Note for transport OEMs and transport services sector:

- Transport OEMs and transport services sector organizations are requested to provide an emissions intensity figure per unit of currency total revenue.
- Please note that, dependent on the extent you are able to disaggregate your emissions intensity for each transport mode between Scopes 1, 2, and 3: Category 4 upstream transportation and distribution, transport services organizations are asked to provide primary intensity (activity-based) metrics that are appropriate to emissions from transport activities in Scope 1, 2, and 3 in question C-TS6.15.

Explanation of terms

- **Intensity metrics:** Intensity metrics describe an organization's CO₂e emissions in the context of another business metric. In this way, the emissions are normalized to account for growth. Intensity is calculated by dividing the CO₂e emissions figure (the numerator) by an alternative business metric (the denominator), such as the number of full-time equivalent employees, the revenue or tons of aggregate produced.
- **Revenue:** Also recognized as "top line" or "turnover", the total monetary income received over a specific period.

Example response

Worked example of calculating emissions intensities figures

A reporting organization has gross total combined Scope 1 and 2 emissions of 300,000 metric tons CO₂e, revenue of 5 Million US\$ and 3,000 FTE employees. In this case, the company could calculate and report its emission intensity figures by revenue and by FTE as follows:

1. Emissions intensity in metric tons CO₂e per unit currency total revenue

Intensity = 300,000 (metric tons CO₂e)/5,000,000 (US\$)= 0.06

2. Emissions intensity in metric tons CO₂e per FTE employee

Intensity = 300,000 (metric tons CO₂e)/3,000 (FTE employee)= 100

Intensity figure	Metric numerator (Gross global combined Scope 1 and 2 emissions)	Metric denominator	Metric denominator: Unit total	Scope 2 figure used	% change from previous year	Direction of change	Reason for change
0.6	300,000	<i>unit total revenue</i>	5,000,000	<i>Market-based</i>	3	<i>Decreased</i>	<i>Our organization has reduced our emissions as we transition our fleet to electric vehicles</i>
100	300,000	<i>full time equivalent (FTE)</i>	3,000	<i>Market-based</i>	4	<i>Decreased</i>	<i>In addition to reducing our emissions by shifting to electric vehicles we have hired more full time employees in the reporting year</i>

C7 Emissions breakdown

Module Overview

This module enables respondents to break down Scope 1 and Scope 2 emissions by country, business division, facility, and sector.

By breaking down emissions by country or regional level, information and data can be made available to regions, states, and sub-national bodies to help guide the development of emissions-related legislation.

Breaking down emissions by business division, facility, and activity grants data users and investors transparency into the sources of a company's Scope 1 and 2 emissions and allows tracking the performance of divisions and individual facilities over time.

The module also requests data on emissions other than carbon dioxide. Because these gases are often only reported in CO₂-equivalents (CO₂e), their contribution to overall emissions is sometimes masked.

Key changes

- Questions C7.3b and C7.6b have additional guidance on reporting emissions breakdowns from non-stationary sources.
- Question C-OG7.1b has been modified to reduce the reporting effort and allow more flexibility in reporting emissions breakdowns.

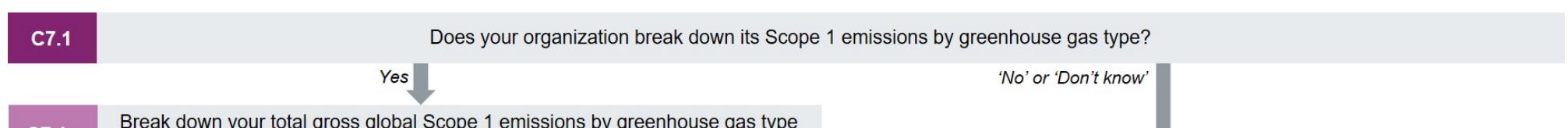
Sector-specific content

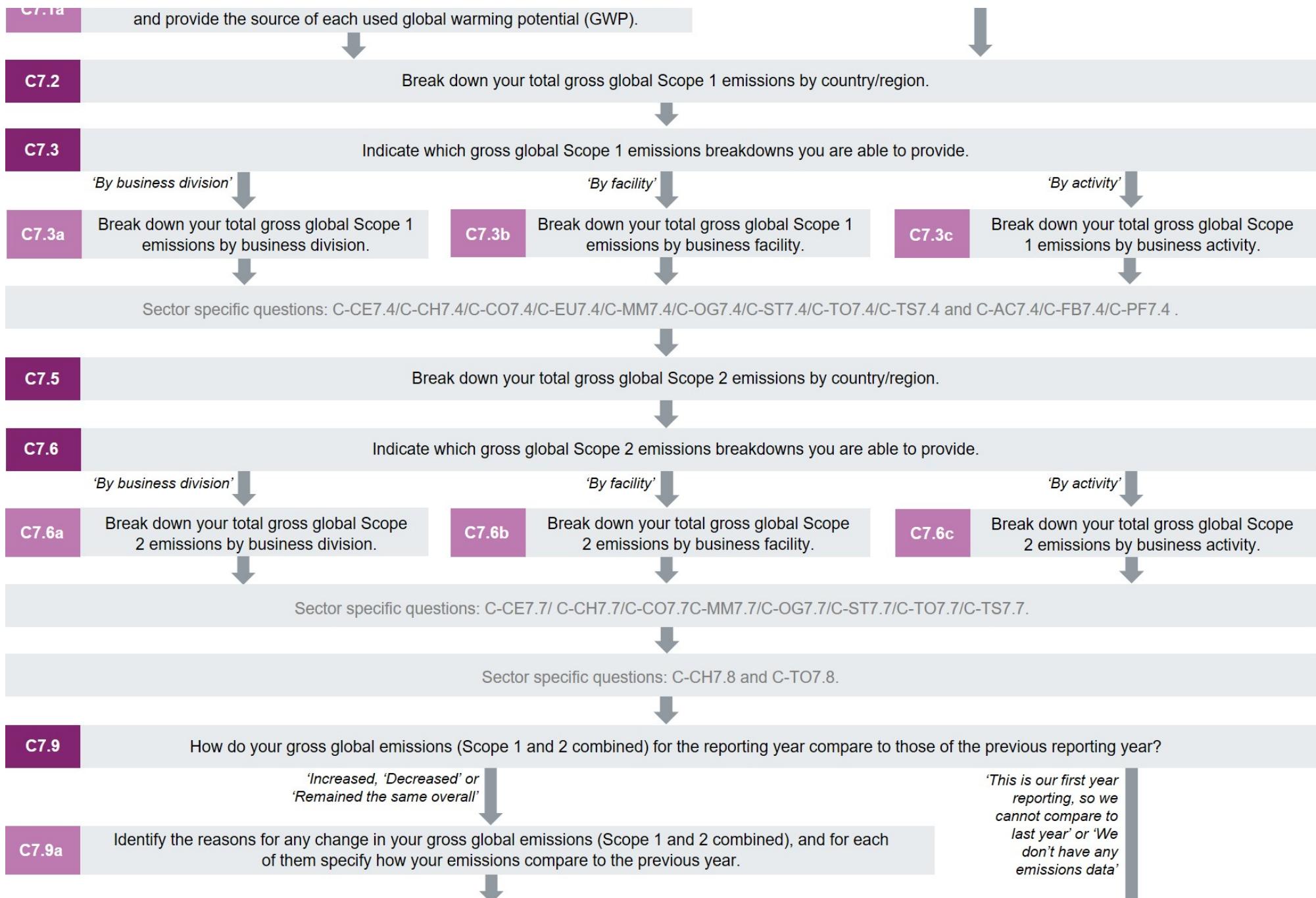
Additional questions on emission breakdowns for the following high-impact sectors:

- Agricultural commodities
- Food, beverage & tobacco
- Paper and forestry
- Coal
- Electric utilities
- Oil & gas
- Cement
- Chemicals
- Metals & mining
- Steel
- Transport original equipment manufacturers (OEMs)
- Transport services

Pathway diagram - questions

This diagram shows the general questions contained in module C7. To access question-level guidance, use the menu on the left to navigate to the question.





C7.9b

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



End of module



Scope 1 breakdown: GHGs

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

Change from 2018

Minor change

Rationale

For many sectors and business activities, greenhouse gases other than carbon dioxide are significant and relevant. Within the emissions stream, because these gases are often only reported in CO₂-equivalents (CO₂e), their contribution to overall emissions is sometimes masked. CDP therefore proposes this new question for companies to report their gross Scope 1 emissions by GHG type.

Response options

Select one of the following options:

- Yes
- No
- Don't know

Requested content

General

- Select "Yes" if your organization's gross Scope 1 emissions inventory contains greenhouse gases other than carbon dioxide; for example, any of the other five greenhouse gases covered by the Kyoto Protocol (methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride).

Additional information

- **Preparing an emissions inventory:** The [GHG Protocol Corporate Accounting and Reporting Standard](#) provides requirements and guidance for companies and other organizations preparing a corporate-level GHG emissions inventory.

(C7.1a) Break down your total gross global Scope 1 emissions by greenhouse gas type and provide the source of each used global warming potential (GWP).

Question Dependencies

This question only appears if you select "Yes" in response to C7.1.

Change from 2018

No change

Rationale

For many sectors and business activities, greenhouse gases other than carbon dioxide are significant and relevant. Within the emissions stream, because these gases are often only reported in CO₂-equivalents (CO₂e), their contribution to overall emissions is sometimes masked. CDP therefore proposes this new question for companies to report their gross Scope 1 emissions by GHG type.

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.

Greenhouse gas	Scope 1 emissions (metric tons in CO2e)	GWP Reference
Select from: <ul style="list-style-type: none"> ● CO2 ● CH4 ● N2O ● HFCs ● PFCs ● SF6 ● NF3 ● Other, please specify 	Numerical field [enter a range of 0-999,999,999,999 using a maximum of 2 decimal places and no commas]	Select from: <ul style="list-style-type: none"> ● IPCC Fifth Assessment Report (AR5 – 100 year) ● IPCC Fourth Assessment Report (AR4 - 100 year) ● IPCC Third Assessment Report (TAR - 100 year) ● IPCC Second Assessment Report (SAR - 100 year) ● IPCC Fourth Assessment Report (AR4 - 50 year) ● IPCC Third Assessment Report (TAR - 50 year) ● IPCC Second Assessment Report (SAR - 50 year) ● IPCC Fifth Assessment Report (AR5 – 20 year) ● IPCC Fourth Assessment Report (AR4 - 20 year) ● IPCC Third Assessment Report (TAR - 20 year) ● IPCC Second Assessment Report (SAR - 20 year) ● Other, please specify

[Add Row]

Requested content

General

- Please report your organization's emissions of the Kyoto greenhouse gases, which are:

- Carbon dioxide (CO2);
- Methane (CH4);
- Nitrous oxide (N2O);
- Hydrofluorocarbon family of gases (HFCs);
- Perfluorocarbon family of gases (PFCs);
- Sulfur hexafluoride (SF6).

- Nitrogen trifluoride (NF3) has been included in the basket of mandated GHGs as it is now considered a potent contributor to climate change and is therefore mandated to be included in national inventories under the United Nations Framework Convention on Climate Change (UNFCCC). Similarly, following an amendment issued by the Greenhouse Gas Protocol on May 2013, NF3 should also be included in GHG inventories under the Corporate Standard and the Corporate Value Chain (Scope 3) Standard.

- The total value for emissions reported in column 2, Scope 1 emissions (metric tons of CO2e), should equal the value for gross global Scope 1 emissions reported in C6.1.

Greenhouse gas (column 1)

- You can add rows for multiple greenhouse gas types and we request that you also add a row to report CQ.

Scope 1 emissions (metric tons of CO2e) (column 2)

- Report your organization's emissions of the greenhouse gas selected in column 1, in CQ-equivalents (CO2e)

GWP Reference (column 3)

- Identify the global warming potential your organization has applied to the selected greenhouse gas in order to standardize it to a carbon dioxide equivalent (CQe). Your gross Scope 1 emissions are reported in carbon dioxide equivalents in C6.1. If you have used a calculation tool and do not know which GWPs have been applied to your data, consult the tool documentation or reference sources.
- If you select "Other, please specify", provide a label for the GWP Reference.

Explanation of terms

- **Global warming potential (GWP):** The [Intergovernmental Panel on Climate Change \(IPCC\)'s Fifth Assessment Report \(AR5\)](#) defines the Global Warming Potential (GWP) as "an index, based on radiative properties of greenhouse gases, measuring the radiative forcing following a pulse emission of a unit mass of a given greenhouse gas in the present day atmosphere integrated over a chosen time horizon, relative to that of carbon dioxide. The GWP represents the combined effect of the differing times these gases remain in the atmosphere and their relative effectiveness in causing radiative forcing. The Kyoto Protocol is based on GWPs from pulse emissions over a 100-year time frame." By using GWPs, GHG emissions from multiple gases can be standardized to a carbon dioxide equivalent (CO₂e).

Additional information

- **Changes in Global Warming Potentials (GWPs):** Estimates of GWPs have changed over time as scientific understanding has developed. GWP factors are reassessed every few years in the IPCC Assessment Reports and accordingly, CDP recommends that companies use the latest GWPs given in the [IPCC's Fifth Assessment Report \(AR5\)](#). This approach is aligned with the [GHG Protocol Corporate and Accounting Reporting Standard](#), which states that the company "shall use 100-year GWP values from the IPCC and should use GWP values from the most recent Assessment Report, but may choose to use other IPCC Assessment Reports."

Scope 1 breakdown: country

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

Change from 2018

No change

Rationale

By breaking down emissions to country or regional level, information and data can be made available to regions, states and sub-national bodies to help guide the development of emissions-related legislation.

Connection to other frameworks

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.

Country/Region	Scope 1 emissions (metric tons CO ₂ e)
Select from a drop-down list of countries and regions. Please see the Technical Note " Country Regions " for details around the available regions and their constituent countries.	Numerical field [enter a number from 0-999,999,999,999 using a maximum of 2 decimal places and no commas]

[Add Row]

Requested content

General

- Breaking down emissions to the country level is useful to investors as this is often the level at which emissions-related legislation is introduced. Emissions should be attributed to individual countries wherever possible. CDP considers reporting emissions broken down by country best practice.
- Where states (or other sub-national entities) have the right to introduce emissions-related legislation, companies operating in these states (or other sub-national entities) may consider that breaking down emissions to a

sub-national level is more informative. To provide this breakdown, select "Other: please specify" and provide a label for the sub-national entity.

- Where emissions are sufficiently low, or for parts of your business where your inventory does not allow for a country level of granularity, use the available region options. Please see CDP's [Technical Note "Countries and Regions"](#) for details around the available regions and their constituent countries.
- If you disclose the value for a region that overlaps with a country you are also disclosing, you should report the value for the region minus the emissions of that country. If all emissions breakdowns are added, they should add to your Scope 1 total.
- Due to the difficulties of delineating Asia, CDP has not provided a single 'Asia' category. Companies may choose either Asia Middle East (AME) or Asia Pacific (JAPA). Please see the Technical Note "Country and regions" for more information.

Country/Region (column 1)

- Select country/region in accordance with CDP's [Technical Note on "Country and regions"](#).

Scope 1 emissions (metric tons CO₂e) (column 2)

- Report your organization's greenhouse gas emissions in CO₂-equivalent for the country/region selected in column 1.
- Negative numbers are not allowed as organizations are to report gross, not net figures.
- Emissions figures should be for the reporting year only (as defined by your answer to C0.2).

Scope 1 breakdown: business breakdown

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

Change from 2018

No change

Rationale

By requesting companies to break down emissions by business division, facility, and activity, CDP grants data users and investors transparency into the sources of a company's Scope 1 emissions.

Response options

Select all that apply from the following options:

- By business division
- By facility
- By activity

Requested content

General

- You should identify breakdowns that are relevant to your business/sector, and as such those that investors would find interesting.
- Identify the category of emissions that are relevant by ticking the boxes provided in the disclosure platform adjacent to each of the three options.
- **By business division**

- This breakdown can give an indication of the relative GHG performance of your company's divisions. When reported over time, your company and information users will be able to review improvements or declines in division performance. This breakdown can be used alongside revenue segments found in company annual filings to understand companies' emissions profiles in greater detail. To facilitate this process, it is recommended that companies match the divisions reported here with those found in company filings and financial statements.

- **By facility**

- The GHG Protocol stationary combustion tool document states that a *'facility includes all buildings, equipment, structures and other stationary items which are located on a single site or on contiguous or adjacent sites and which are owned or operated by the same person or entity (or by any person or entity which controls, is controlled by or is under common control, with such person or entity)'*.
- Facilities may also be referred to as installations. More than one business activity may take place at a facility and a facility may include more than one combustion unit, such as a boiler. It is preferable that the facility type is included. Some examples of facility type are: gas works, refinery, coal mine, integrated steelworks, cement plant, and office buildings.
- Reporting at this level can provide a useful indicator for making comparisons between facilities. In some cases, individual facilities may come within the scope of particular legislation, requiring baselining and subsequent reduction of GHG emissions through improvements in energy efficiency. This is particularly the case for industrial plants. Therefore, providing facility-level emission figures may give data users insight into your organization's current/potential exposure to regulation in this area.

● By activity

- Relevant activities are defined by the reporting company and could include stationary combustion, mobile combustion (transport), fugitive emissions, process activities, office activities, etc. These activities can take place over multiple business divisions, countries, or facilities. Reporting by activity allows a more in-depth understanding of business risk related to future regulation. To facilitate comparability of data between companies, you are asked to report a breakdown of your activities using language that would be clear to someone outside of your organization and avoid using company-specific terminology. Furthermore, the level of aggregation of activities should be set so that it is meaningful to investors or customers viewing your response. Each activity should be broken down to a level granular enough to provide a data user with a relevant and complete understanding of your company's activities and how these contribute to your emissions profile. Each activity should be broken down to a level sufficient for understanding the complete activity emissions profile and where further disaggregation would not add value for data users to understand the associated GHG emissions.
- Integrated companies should attempt, where possible, to provide a breakdown of emissions associated with each stage of their owned value chain.
- Companies that generate their own electricity should include it here as a separate activity, preferably with separation by fuel type.
- Companies involved in extracting and/or processing/refining natural resources should consider reporting these activities separately for each product type.

Note for organizations responding to high-impact sector requests

- If you select "By activity", you will be presented with question 7.3c. If your company's primary CDP sector is one of the twelve high-impact sectors, the response to 7.3c is not required. Organizations responding to these requests are presented with additional questions on this topic (C-CE7.4/C-CH7.4/C-CO7.4/C-EU7.4/C-MM7.4/C-OG7.4/C-ST7.4/C-TO7.4/C-TS7.4; C-AC7.4/C-FB7.4/C-PF7.4, C-MM9.3a, C-MM9.3b, C-CO7.1b, C-EU7.1b, C-OG7.1b) relating specifically to activities in the sector. Your primary CDP sector is displayed in your response dashboard.

(C7.3a) Break down your total gross global Scope 1 emissions by business division.

Question dependencies

This question only appears if you select "By business division" in response to C7.3.

Change from 2018

No change

Rationale

This question can give an indication of the relative GHG performance of your company's divisions. When reported over time, your company and CDP's data users will be able to review improvements or declines in division performance.

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.

Business division	Scope 1 emissions (metric tons CO ₂ e)
Text field [maximum 500 characters]	Numerical field [enter a range of 0- 999,999,999,999 using a maximum of 2 decimal places and no commas]

[Add Row]

Requested content

Business division (column 1)

- Using no more than 500 characters, state the business division you are disclosing Scope 1 emissions for.
- For more details on reporting your business divisions, see guidance to C7.3.

Scope 1 emissions (metric tons CO₂e) (column 2)

- Report your organization's greenhouse gas emissions in CO₂-equivalent for the business division stated in column 1.
- Negative numbers are not allowed as organizations are to report gross, not net figures.
- Emissions figures should be for the reporting year only (as defined by your answer to C0.2).

(C7.3b) Break down your total gross global Scope 1 emissions by business facility.

Question Dependencies

This question only appears if you select "By facility" in response to C7.3.

Change from 2018

Modified guidance

Rationale

Providing facility-level emission figures may give data users insight into your organization's current/potential exposure to regulation in this area. Reporting at this level can provide a useful indicator for making comparisons between facilities.

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.

Facility	Scope 1 emissions (metric tons CO ₂ e)	Latitude	Longitude
Text field [maximum 500 characters]	Numerical field [enter a range of 0-999,999,999,999 using a maximum of 2 decimal places and no commas]	Enter the latitude of your facility here using numbers between 90.000000 and -90.000000, e.g. 51.524810	Enter the longitude of your facility using numbers between 180.000000 and -180.000000, e.g. -0.106958

[Add Row]

Requested content

General

- CDP provides a place for companies to provide basic data for the geo-location of their facilities. This information will be useful to link CDP data with other sources of information and can help investors assess physical risks of climate change and exposure of assets. It will also help CDP to link the information requested by investors to cities preparing their inventory for CDP.
- If using the Export/Import functionality, it is essential that you check that data has entered correctly into each field in a question.

Facility (column 1)

- Using no more than 500 characters, identify the facility you are disclosing Scope 1 emissions for.
- For more details on reporting your facilities, see guidance to C7.3.
- If your organization has Scope 1 emissions from non-stationary sources (i.e. transportation vehicles) that cannot be attributed to a specific facility then you can report the emissions from these sources collectively in one row. You can identify these emissions by inputting 'Non-stationary sources' in this column.

Scope 1 emissions (metric tons CO₂e) (column 2)

- Report your organization's greenhouse gas emissions in CO₂-equivalent for the facility identified in column 1.
- Negative numbers are not allowed as organizations are to report gross, not net figures.
- Emissions figures should be for the reporting year only (as defined by your answer to C0.2).

Latitude (column 3)

- Using standard geographic coordinates specify the north-south position (+90° to -90°) of the facility that you are reporting Scope 1 emissions for in column 2.

Longitude (column 4)

- Using standard geographic coordinates specify the east-west position (+180° to -180°) of the facility that you are reporting Scope 1 emissions for in column 2.

Additional information

- Latitude and longitude:** Latitude and longitude are geographic coordinates that specify, respectively, the north-south and east-west position, of a point on the Earth's surface. They are expressed as angular measures and thus, latitude can vary from +90° to -90° and longitude from +180° to -180°.

- The geodetic system that should be used is the WGS 84, which is the system used by GPS (Global Positioning System), Google Maps, Google Earth, and all major web applications providing coordinates to users. If you want to report information to CDP but have the coordinates in another geodetic system (or datum) we ask you to please attach the information to this question.
- If you don't have this information and want to locate your facilities using the internet, there are various web tools available to assist companies getting latitude and longitude coordinates according to WGS84. For example, [iTouch Map](#) allows you to enter an address or identify a location on a map and will return the latitude and longitude coordinates.
- Google Maps also allows you to find the latitude and longitude of any point. When you are in Google Maps, if you right-click anywhere, you will find an option "What's here?". If you click that option, the latitude and longitude will be displayed in the information that appears.

(C7.3c) Break down your total gross global Scope 1 emissions by business activity.

Question Dependencies

This question only appears if you select "By activity" in response to C7.3.

Change from 2018

No change

Rationale

Reporting emissions by activity allows a more in-depth understanding of business risks related to future regulation and climate-related issues, and allows organizations to identify potential opportunities to reduce emissions associated with operational activities.

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.

Activity	Scope 1 emissions (metric tons CO2e)
Text field [maximum 500 characters]	Numerical field [enter a range of 0-999,999,999,999 using a maximum of 2 decimal places and no commas]

[Add Row]

Requested content

Activity (column 1)

- Using no more than 500 characters, state the activity you are disclosing Scope 1 emissions for.
- For more details on which activities to report, see guidance to C7.3.

Scope 1 emissions (metric tons CO2e) (column 2)

- Report your organization's greenhouse gas emissions in CO2-equivalent for the activity stated in column 1.
- Negative numbers are not allowed as organizations are to report gross, not net figures.

- Emissions figures should be for the reporting year only (as defined by your answer to C0.2).

Note for organizations responding to high-impact sector requests

- If your company's primary CDP sector is one of the twelve high-impact sectors, the response to 7.3c is not required. Organizations responding to these requests are presented with additional questions on this topic (C-CE7.4/C-CH7.4/C-CO7.4/C-EU7.4/C-MM7.4/C-OG7.4/C-ST7.4/C-TO7.4/C-TS7.4; C-AC7.4/C-FB7.4/C-PF7.4, C-MM9.3a, C-MM9.3b, C-CO7.1b, C-EU7.1b, C-OG7.1b) relating specifically to activities in the sector. Your primary CDP sector is displayed in your response dashboard.

Question C7.4 only applies to organizations with activities in the following sectors:

- Agricultural commodities
- Food, beverage & tobacco
- Paper & forestry
- Coal
- Electric utilities
- Oil and gas
- Cement
- Chemical
- Metals and mining
- Steel
- Transport OEMs
- Transport services

Scope 2 breakdown: country

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

Change from 2018

No change

Rationale

By breaking down emissions to country or regional level, information and data can be made available to regions, states and sub-national bodies to help guide the development of emissions-related legislation.

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	Scope 2, location-based (metric tons CO2e)	Scope 2, market-based (metric tons CO2e)	Purchased and consumed electricity, heat, steam or cooling (MWh)	Purchased and consumed low-carbon electricity, heat, steam or cooling accounted in market-based approach (MWh)
Select from a drop-down list of countries and regions. Please see the Technical Note " Country Regions ", for details around the available regions and their constituent countries.	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 of 0-999,999,999,999 using a maximum of 2 decimal places and no commas]	Numerical field [enter a number of 0-999,999,999,999 using a maximum of 2 decimal places and no commas]

[Add Row]

Requested content

General

- Breaking down emissions to the country level is useful to investors as this is often the level at which emissions-related legislation is introduced. Please note that emissions should be attributed to individual countries wherever possible. CDP considers reporting emissions broken down by country best practice.
- Where emissions are sufficiently low, or for parts of your business where your inventory does not allow for a country level of granularity, use the available region options from the dropdown menu to group emissions from a number of countries. Please see CDP's [Technical Note on "Country and regions"](#) for details around the available regions and their constituent countries.
- For countries like USA, Canada, or Brazil where several grids can exist within a country and emission factors are calculated at state/sub-regional level, companies are welcome to provide further breakdown details using "Other, please specify" option.
- Please note that further disclosure related to emissions accounted for at zero or low-carbon emissions factors is required in the energy section (C8.2f).

Country/Region (column 1)

- Select country/region in accordance with CDP's [Technical Note on "Country and regions"](#).
- If you wish to report your emissions at sub-national level, select "Other, please specify" and provide a label for the sub-national entity.

Scope 2, location-based (metric tons CO2e) (column 2)

- Report your organization's Scope 2 emissions in CO2-e for the country/region selected in column 1, on a location-based method, i.e. reflecting the average emissions intensity of grids on which energy consumption occurs.
- Negative numbers are not allowed as organizations are to report gross, not net figures.
- Emissions figures should be for the reporting year only (as defined by your answer to C0.2).

Scope 2, market-based (metric tons CO2e) (column 3)

- Report your organization's Scope 2 emissions in CO2-e for the country/region selected in column 1, on a market-based method, i.e. reflecting emissions from electricity that companies have purposefully chosen (or their lack of choice).
- Negative numbers are not allowed as organizations are to report gross, not net figures.
- Emissions figures should be for the reporting year only (as defined by your answer to C0.2).

Purchased and consumed electricity, heat, steam, or cooling (MWh) (column 4)

- This column relates to the total amount of energy consumed and that constitutes the "activity data" for your Scope 2 figure.
- Electricity consumed is usually the largest portion of a company's reported Scope 2 emissions. However, if your company has also included purchased and consumed steam, heating and cooling in its Scope 2 figure, that activity data should also be reported in here.

Purchased and consumed low carbon electricity, heat, steam or cooling (MWh) (column 5)

- This column should be used to disclose the amounts of electricity (and heat, steam, or cooling) that was accounted at a zero emission factor (0 metric tonnes CO2e/MWh) or that can be considered "low carbon" (please see "Additional Information") and that are supported by appropriate tracking instruments (please refer to CDP's [Technical Note on "Accounting of Scope 2 emissions"](#) for criteria on what are considered "appropriate

tracking instruments").

- Any proportion of electricity (and heat, steam, or cooling) that comes from renewable/low carbon sources and is incorporated into a distribution grid average/residual mix and is not backed by some kind of instrument retired by the company, or by someone on their behalf should not be counted.
- Please note that it is logically expected that "Purchased and consumed low carbon electricity, heat, steam or cooling (MWh)" will be a subset of "Purchased and consumed electricity, heat, steam or cooling (MWh)"; i.e., the former figure should be equal to or lower than the latter.

Explanation of terms

Low-carbon energy: There is no precise, generally accepted definition of what "low-carbon energy" is. No definition is found in either the GHG Protocol standards or ISO. Nevertheless, it can be reasonably established that "low-carbon energy" will be any type of energy that will have no direct emissions and which the indirect emissions can usually be considered as negligible considering the life cycle of the given technology. Power technologies such as wind, solar, tidal, geothermal and most hydro power are generally accepted as low-carbon. Nuclear power is also usually considered low-carbon, although other considerations make it a more contentious technology. Natural gas, combined cycle gas turbine and Combined Heat and Power (cogeneration), despite being less carbon intensive than other means of electricity production like coal, are not considered low-carbon.

Additional information

- **Electricity tracking instruments:** Certain jurisdictions might have electricity tracking instruments for all types of power, including technologies such as cogeneration, gas, or coal. In this case (which is expected to occur in exceptional cases) companies can also disclose the use of those instruments in question C8.2f, but should not consider that power as low carbon for purpose of question C7.5, in accordance with the explanation provided on "low-carbon energy."

Scope 2 breakdown: business breakdowns

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

Change from 2018

No change

Rationale

By requesting companies to break down emissions by business division, facility, and activity, CDP grants data users and investors transparency into the sources of a company's Scope 2 emissions.

Response options

Select all that apply from the following options:

- By business division
- By facility
- By activity

Requested content

General

- You should identify breakdowns that are relevant to your business/sector and as such, those that investors would find interesting.
- Identify those that are relevant by ticking the boxes provided in the disclosure platform adjacent to each of the three options.
- **By business division**

- This breakdown can give an indication of the relative GHG performance of your company's divisions. When reported over time, your company and the information users will be able to review improvements or

declines in division performance. This breakdown can be used alongside revenue segments found in company annual filings to understand companies' emissions profiles in greater detail. It is recommended that companies match the divisions reported here with those found in company filings and financial statements to facilitate this process.

- **By facility**

- The GHG Protocol stationary combustion tool document states that a "facility includes all buildings, equipment, structures and other stationary items which are located on a single site or on contiguous or adjacent sites and which are owned or operated by the same person or entity (or by any person or entity which controls, is controlled by or is under common control, with such person or entity)".
- Facilities may also be referred to as installations. More than one business activity may take place at a facility and a facility may include more than one combustion unit, such as a boiler.
- Reporting at this level can provide a useful indicator for making comparisons between facilities. In some cases, individual facilities may come within the scope of particular legislation, requiring baselining and subsequent reduction of GHG emissions through improvements in energy efficiency. This is particularly the case for industrial plants. Therefore, providing facility-level emission figures may give data-users insight into your organization's current/potential exposure to regulation in this area.

- **By activity**

- Relevant activities should be defined by the reporting company but could include process activities, office activities etc. These activities can take place over multiple business divisions, countries or facilities. Reporting by activity allows a more in depth understanding of business risk to future regulation. To facilitate comparability of data between companies, you are asked to report a breakdown of your activities using language that would be clear to someone outside of your organization and avoid using company-specific terminology. Furthermore, the level of aggregation of activities should be set so it is meaningful to investors or customers viewing your response. Each activity should be broken down to a level granular enough to provide a data user with a relevant and complete understanding of your company's activities and how these contribute to your emissions profile. Each activity should be broken down to a level sufficient for understanding the complete activity emissions profile and where further disaggregation would not add value for data users to understand the associated GHG emissions.

Note for agricultural sectors

- You should consider the business activity areas that are relevant to your organization, as indicated in C-AC0.6/C-FB0.6/C-PF0.6 (i.e., if you selected 'Own land only/Direct operations only' or 'Both own land/direct operations and elsewhere in your value chain' for the following activities: agriculture/forestry, processing/manufacturing, and/or distribution).

Note for organizations responding to high-impact sector requests

- If you select "By activity", you will be presented with question 7.6c. If your company's primary CDP sector is one of the following: OG, CO, TO, TS, MM, ST, CH or CE, the response to 7.6c is not required. Organizations responding to these requests are presented with additional questions on this topic (C-CE7.7/C-CH7.7/C-CO7.7/C-MM7.7/C-OG7.7/C-ST7.7/C-TO7.7/C-TS7.7, C-MM9.3a, MM9.3b) relating specifically to activities in the sector. Your primary CDP sector is displayed in your response dashboard.

(C7.6a) Break down your total gross global Scope 2 emissions by business division.

Question dependencies

This question only appears if you select "By business division" in response to C7.6.

Change from 2018

No change

Rationale

This question can give an indication of the relative GHG performance of your company's divisions. When reported over time, your company and CDP's data users will be able to review improvements or declines in division performance.

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.

Business division	Scope 2, location-based (metric tons CO2e)	Scope 2, market-based (metric tons CO2e)
Text field [500 maximum characters]	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]

[Add Row]

Requested content

Business division (column 1)

- Using no more than 500 characters, state the business division you are disclosing Scope 2 emissions for.

Scope 2, location-based (metric tons CO2e) (column 2)

- Report your organization's Scope 2 emissions in CO2-e for the business division stated in column 1, on a location-based method, i.e. reflecting the average emissions intensity of grids on which energy consumption occurs.
- Negative numbers are not allowed as organizations are to report gross, not net figures.
- Emissions figures should be for the reporting year only (as defined by your answer to C0.2).

Scope 2, market-based (metric tons CO2e) (column 3)

- Report your organization's Scope 2 emissions in CO2-e for business division stated in column 1, on a market-based method, i.e. reflecting emissions from electricity that companies have purposefully chosen (or their lack of choice).
- Negative numbers are not allowed as organizations are to report gross, not net figures.
- Emissions figures should be for the reporting year only (as defined by your answer to C0.2).

(C7.6b) Break down your total gross global Scope 2 emissions by business facility.

Question dependencies

This question only appears if you select "By facility" in response to C7.6.

Change from 2018

Modified guidance

Rationale

Providing facility-level emission figures may give data users insight into your organization's current/potential exposure to regulation in this area. Reporting at this level can provide a useful indicator for making comparisons between facilities.

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.

Facility	Scope 2, location-based (metric tons CO2e)	Scope 2, market-based (metric tons CO2e)
Text field [maximum 500 characters]	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]

[Add Row]

Requested content

Facility (column 1)

- Using no more than 500 characters, identify the facility you are disclosing Scope 1 emissions for.
- If your organization has Scope 2 emissions from non-stationary sources that cannot be attributed to a specific facility then you can report the emissions from these sources collectively in one row. You can identify these emissions by inputting 'Non-stationary sources' in this column.

Scope 2, location-based (metric tons CO₂e) (column 2)

- Report your organization's Scope 2 emissions in CO₂e for the facility identified in column 1, on a location-based method, i.e. reflecting the average emissions intensity of grids on which energy consumption occurs.
- Negative numbers are not allowed as organizations are to report gross, not net figures.
- Emissions figures should be for the reporting year only (as defined by your answer to C0.2).

Scope 2, market-based (metric tons CO₂e) (column 3)

- Report your organization's Scope 2 emissions in CO₂e for the facility identified in column 1, on a market-based method, i.e. reflecting emissions from electricity that companies have purposefully chosen (or their lack of choice).
- Negative numbers are not allowed as organizations are to report gross, not net figures.
- Emissions figures should be for the reporting year only (as defined by your answer to C0.2).

(C7.6c) Break down your total gross global Scope 2 emissions by business activity.

Question dependencies

This question only appears if you select "By activity" in response to C7.6.

Change from 2018

No change

Rationale

Reporting emissions by activity allows a more in-depth understanding of business risks related to future regulation and climate-related issues, and allows organizations to identify potential opportunities to reduce emissions associated with operational activities.

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.

Activity	Scope 2, location-based (metric tons CO ₂ e)	Scope 2, market-based (metric tons CO ₂ e)
Text field [maximum 500 characters]	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]

[Add Row]

Requested content

Activity (column 1)

- Using no more than 500 characters, disclose the activity you are disclosing Scope 2 emissions for.

Scope 2, location-based (metric tons CO₂e) (column 2)

- Report your organization's Scope 2 emissions in CO₂e for the activity reported in column 1, on a location-based method, i.e. reflecting the average emissions intensity of grids on which energy consumption occurs.
- Negative numbers are not allowed as organizations are to report gross, not net figures.
- Emissions figures should be for the reporting year only (as defined by your answer to C0.2).

Scope 2, market-based (metric tons CO₂e) (column 3)

- Report your organization's Scope 2 emissions in CO₂e for the activity reported in column 1, on a market-based method, i.e. reflecting emissions from electricity that companies have purposefully chosen (or their lack of choice).
- Negative numbers are not allowed as organizations are to report gross, not net figures.
- Emissions figures should be for the reporting year only (as defined by your answer to C0.2).

Note for agricultural sectors

- You should provide Scope 2 emissions data pertaining to all your relevant business activity areas (i.e., agriculture/forestry, processing/manufacturing, and/or distribution), as indicated in C-AC0.6/C-FB0.6/C-PF0.6.

Note for organizations responding to high-impact sector requests

- If your company's primary CDP sector is one of the following: OG, CO, TO, TS, MM, ST, CH or CE, the response to 7.6c is not required. Organizations responding to these requests are presented with additional questions on this topic (C-CE7.7/C-CH7.7/C-CO7.7/C-MM7.7/C-OG7.7/C-ST7.7/C-TO7.7/C-TS7.7, C-MM9.3a, MM9.3b) relating specifically to activities in the sector. Your primary CDP sector is displayed in your response dashboard.

Question C-CE7.7/C-CH7.7/C-CO7.7/C-MM7.7/C-OG7.7/C-ST7.7/C-TO7.7/C-TS7.7 only applies to organizations with activities in the following sectors:

- Cement
- Chemicals
- Coal
- Metals & mining
- Oil & gas
- Steel
- Transport OEMS
- Transport services

Question C7.8 only applies to organizations with activities in the following sectors:

- Chemicals
- Transport manufacturers

Emissions performance

(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?

Change from 2018

No change

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.

(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.

Question dependencies

This question only appears if you select "Increased", "Decreased" or "Remained the same overall" in response to C7.9.

Change from 2018

No change

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 than 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 CO2e)	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 2 decimal places and no commas]	Select from: ● Increased ● Decreased ● No change	Numerical field [enter a number from 0-999 using a maximum of 2 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.

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. Please refer to the Example 3 in C4.3b for the clarification of how to account for low carbon purchases as an emissions reduction activity.
- 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 C4.3 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, 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 two 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 tonnes is attributed to two reasons: 1) an increase in 12 metric tonnes of CO₂e emissions due to increased production (i.e. a change in output); and 2) an estimated reduction of 4 metric tonnes 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:

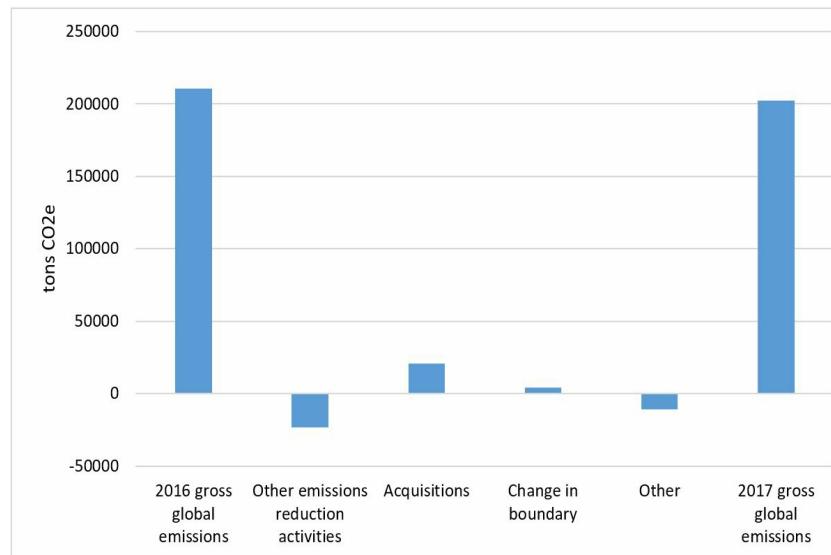
(C7.9) How do your gross global emissions (Scope 1 and 2 combined) for the reporting year compare to those of the previous reporting year?

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 CO2e)	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 2e, and our total S1 and S2 emissions in the previous year was 210573 tons CO 2e, 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 2e. 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 2e, therefore we arrived at -5% through $(-10542.8/210573) * 100 = -5\%$ (i.e. an 5% decrease in emissions).

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

Question dependencies

This question only appears if you select "Increased", "Decreased" or "Remained the same overall" in response to C7.9.

Change from 2018

No change

Rationale

This question provides more transparency on how your organization's emissions performance figures are derived.

Response options

Select one of the following options:

- Location-based
- Market-based
- Don't know

Requested content

General

- In alignment with the GHG Protocol Scope 2 Guidance, companies are only required to compare their Scope 2 emissions for either their location-based or market-based figure, but are required to be transparent about which figure they use.

- You should only select one option, as your market-based figure may inherently be a combination of location-based and market-based calculations if you have operations in regions where there are contractual instruments, and other operations in regions where there are not contractual instruments.

C8 Energy

Module Overview

Energy related activities represent, for many sectors, the most significant GHG emission sources. This module provides transparency on the consumption and generation of energy by organizations to enable greater insight into this emissions source.

Accurate emissions accounting depends on a comprehensive account of energy. It is expected that organizations have already collected the necessary energy data for the disclosure of emissions in previous modules. Energy data requested in this module are in alignment with Scope 1 and Scope 2 emissions, as defined by the [Greenhouse Gas Protocol](#). For further information, you should refer to the [GHG Protocol Corporate Standard](#) and the [GHG Protocol Scope 2 Guidance](#).

Key changes

- A new drop-down option "Unable to confirm heating value" has been added to all questions requesting to specify the type of heating value used.
- Question C8.2f has a new column to facilitate tracking of the region of consumption of low-carbon energy.

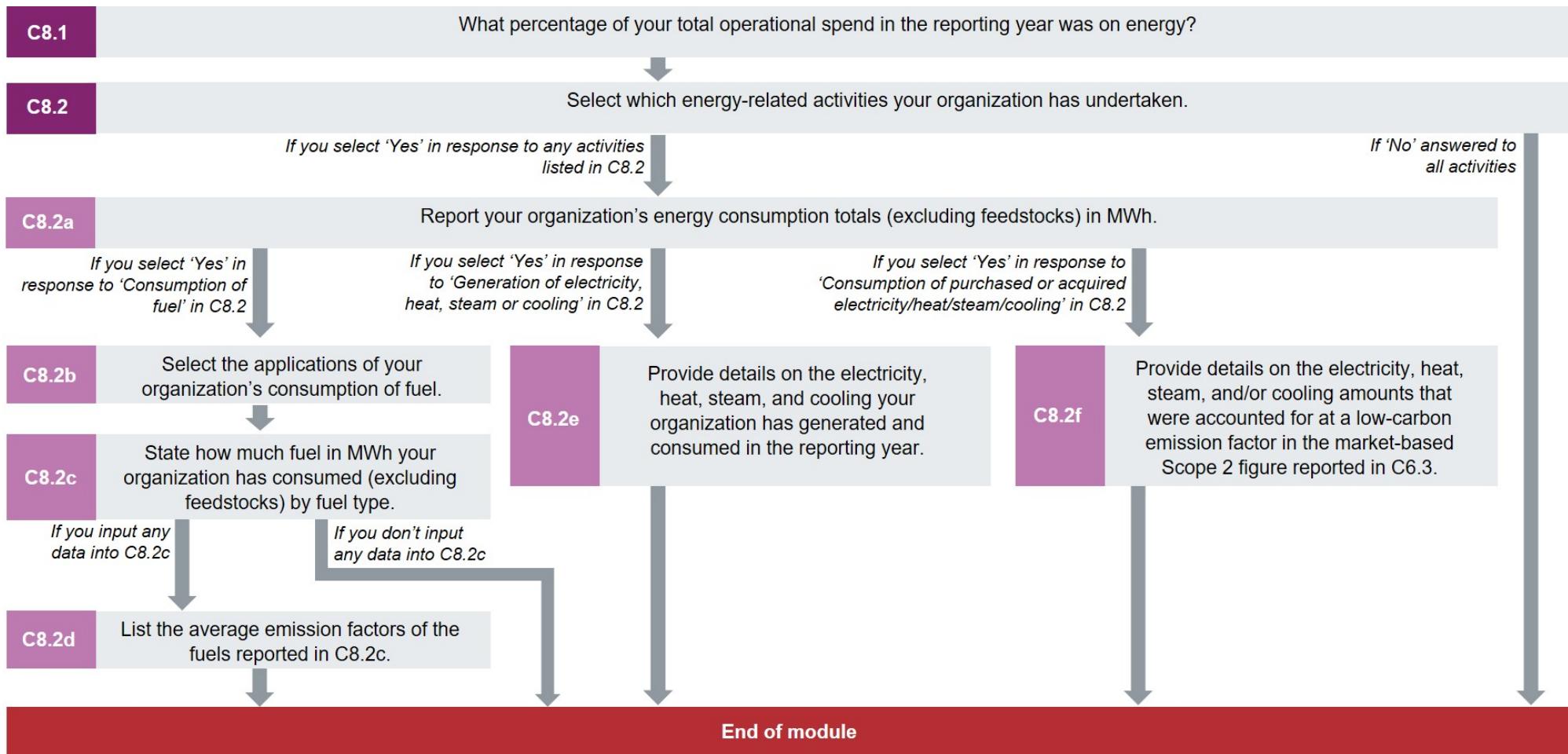
Sector-specific content

Additional questions on energy-related activities for the following high-impact sectors:

- Electric utilities
- Cement
- Chemicals
- Metals & mining
- Steel
- Transport original equipment manufacturers (OEMs)
- Transport services

Pathway diagram - questions

This diagram shows the general questions contained in module C8. To access question-level guidance, use the menu on the left to navigate to the question.



Energy spend

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

Change from 2018

No change

Rationale

The aim of this question is to identify the degree to which your organization's activities are sensitive to energy costs and energy supply.

Response options

Select one of the following options:

- 0%
- More than 0% but less than or equal to 5%
- More than 5% but less than or equal to 10%
- More than 10% but less than or equal to 15%
- More than 15% but less than or equal to 20%
- More than 20% but less than or equal to 25%
- More than 25% but less than or equal to 30%
- More than 30% but less than or equal to 35%
- More than 35% but less than or equal to 40%
- More than 40% but less than or equal to 45%
- More than 45% but less than or equal to 50%
- More than 50% but less than or equal to 55%
- More than 55% but less than or equal to 60%
- More than 60% but less than or equal to 65%
- More than 65% but less than or equal to 70%
- More than 70% but less than or equal to 75%
- More than 75% but less than or equal to 80%
- More than 80% but less than or equal to 85%
- More than 85% but less than or equal to 90%
- More than 90% but less than or equal to 95%
- More than 95% but less than or equal to 100%
- Don't know

Requested content

General

- Ensure that the boundary used for calculating your operational spend is the same as that for your energy spend (i.e. it includes the same facilities, geographies, etc.).
- "Operational spend" should exclude extraordinary expenses such as gains or losses on the sale of assets. The calculation should also exclude the cost of interest or taxes on profits.

Explanation of terms

- **Operational spend:** Operational spend should be the sum of the costs for the following two types of costs to the business:

Cost of goods sold (also known as 'direct costs'): This generally refers to the raw material, energy and labor costs directly identified in the cost of the end product. These costs fluctuate and vary depending on the number or volume of goods sold.

Operating costs (also known as 'indirect costs' 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 job or the provision of a particular service - they are standard costs that apply regardless of the volume of goods produced.

Energy-related activities

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

Question Dependencies

The energy-related activities that you select in response to C8.2 determine which energy breakdowns you will be prompted to respond to in the proceeding questions. Please note, if your response to C8.2 is amended, data in dependent questions may be erased.

Change from 2018

No change

Rationale

This question provides data users with information on the organization's consumption of energy forms relating to Scope 1 and Scope 2 emissions, and transparency on the generation of energy.

Response options

Please complete the following table:

Activity	Indicate whether your organization undertakes this energy-related activity
Consumption of fuel (excluding feedstocks)	Select from: Yes No
Consumption of purchased or acquired electricity	
Consumption of purchased or acquired heat	
Consumption of purchased or acquired steam	
Consumption of purchased or acquired cooling	
Generation of electricity, heat, steam, or cooling	

Requested content

Consumption of fuel (excluding feedstocks) (Row 1)

- You should select 'Yes' in row 1 'Consumption of fuel (excluding feedstocks)' if fuel was consumed inside your organizational boundary in the reporting year. All fuels accounted for in the calculation of Scope 1 emissions (C6.1) and fuels accounted for in the calculation of emissions from biologically sequestered carbon (C6.7a) are included. Consumption of nuclear fuel is not included.

Consumption of purchased or acquired electricity, heat, steam and/or cooling (Rows 2-5)

- You should select 'Yes' in rows 2-5 according to whether your organization has consumed electricity, heat, steam, and/or cooling that was purchased or acquired, i.e. brought into the organizational boundary. This excludes consumption of electricity, heat, steam or cooling that was produced by the organization, i.e. from inside the organizational boundary. It also excludes purchased or acquired electricity, heat, steam or cooling that is not consumed inside the organizational boundary.
- Purchased or acquired electricity, heat, steam or cooling that is wasted should still be counted as consumption.
- The activities of rows 2-5 are aligned with the boundary for Scope 2 emissions.

Generation of electricity, heat, steam, or cooling (Row 6)

- You should select 'Yes' in row 6 if your organization generated electricity, heat, steam, or cooling in the reporting year, regardless of whether this generation was consumed, exported, or wasted.

Note for RE100 members

- RE100 members have the option of uploading their completed RE100 Reporting Spreadsheet in the Further Information section of this questionnaire, which is presented prior to signing off in Module 14.

Explanation of terms

● **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 that are derived from fuel feedstocks, e.g. blast furnace gas, should be counted. Companies that consume fuel as feedstocks will have the opportunity to disclose these fuels in sector specific questions.

● **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/sector 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 an industrial process, should still be accounted for if it is consumed.

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

Question dependencies

This question only appears if you select "Yes" to any of the activities listed in C8.2. A row will appear in this table for each energy-related activity selected in C8.2. The "Total energy consumption" row will always appear.

Change from 2018

No change

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 MWh
Consumption of fuel (excluding feedstock)	Select from: ● 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 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). 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 \(Annex A\)](#).
- 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.

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 sources of energy can be naturally replenished on a human timescale, such as wind, solar, hydro, geothermal, biomass, etc. This definition excludes all fossil fuels (coal, oil, natural gas) and nuclear fuels.

- 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.

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 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.

Consumption of fuel (excluding feedstock) – if applicable

- 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 biofuels (biomass, biogas, bioliquids), biofuel derived wastes and renewably derived hydrogen because they are combusted as a fuel.
- If you do not have exact consumption data, you may alternatively estimate your company's consumption by reviewing fuel and energy purchasing orders.
- 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 example, 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.
- 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](#).

Consumption of purchased or acquired electricity, heat, steam, cooling – if applicable

- The most common units for electricity are Watt-hours. 1 MWh is equal to 1,000,000 Watt-hours, which is equal to 1,000 kWh (kilo-Watt-hours).
- If your raw data is in energy units other than MWh, e.g. Giga-Joules (GJ) or British Thermal Units (Btu), then you should convert to MWh. For example, 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. Further guidance on unit conversion is available in the following Technical Note: [Conversion of fuel data to MWh](#).
- 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 applicable

- If your organization produces renewable energy that is not fuel, then any consumption of this energy should be entered here.
- Consumption of renewable fuels are excluded for this row is because these should be accounted for as consumption of fuel (excluding feedstock).
- Non-fuel renewable energy includes forms such as solar, solar thermal, wind, hydro, geothermal, ocean, or any other form that is not combusted as a fuel. Biofuels (biomass, biogas, bioliquids), biofuel derived wastes and renewably derived hydrogen are not included here because they are combusted as a fuel.

- Non-fuel renewable energy may be consumed in the form of electricity, heat, steam, or cooling. This energy is entered here because it is also produced by your organization.

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.

Explanation of terms

- **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, 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.

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

Question Dependencies

This question only appears if you select "Yes" to "Consumption of fuel" in response to C8.2. Each option that you select in this table will appear as an additional column in C8.2c.

Change from 2018

Minor change

Rationale

Scope 1 greenhouse gas emissions are directly associated with the consumption of fuel. This question provides data users with more transparency regarding the application of an organization's fuel consumption for the generation of secondary energy carriers.

Response options

Please complete the following table:

Fuel application	Indicate whether your organization undertakes this fuel application
Consumption of fuel for the generation of electricity	Select from: Yes No
Consumption of fuel for the generation of heat	
Consumption of fuel for the generation of steam	
Consumption of fuel for the generation of cooling	
Consumption of fuel for co-generation or tri-generation	

Requested content

General

- Information you provide should be for the reporting year only (as defined by your answer to C0.2).
- This question drives the columns presented in question C8.2c.
- Select the fuel applications for which your organization consumes fuel by selecting "Yes" in the relevant fields.
- If your organization does not undertake a particular fuel application, select "No" in that row. If no fuel application is selected in C8.2b then only the "Total MWh consumed by the organization" column will appear in C8.2c which is where you will state your total fuel consumption for each applicable fuel.
- Companies who consume fuel for other applications such as transportation, industrial process plant and equipment etc. should select 'Consumption of fuel for the generation of heat'.
- It does not matter whether your organization consumes or exports the electricity, steam, or cooling generated; if your organization generates any electricity, steam, or cooling from fuel combustion (thermal generation), then you should select 'Yes' in the relevant field.
- Co-generation is also known as combined heat and power (CHP). Tri-generation is also known as combined cooling, heat and power (CCHP). Combined cooling and power (CCP) is another system in which energy carriers are generated together. If your organization generates from any single configuration of plant in which electricity, steam, heat, or cooling are generated as simultaneous useful outputs, then you should select 'Yes' for the consumption of fuel for co-generation or tri-generation.

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

Question dependencies

This question only appears if you select "Consumption of fuel" in C8.2. For each fuel application selected in C8.2b a column appears in the table in addition to the "MWh fuel consumed for self-generation of heat" and "Total MWh consumed by the organization" columns. If no fuel application is selected in C8.2b then only the "Total MWh consumed by the organization" column will appear.

Change from 2018

Minor change

Rationale

Scope 1 greenhouse gas emissions are directly associated with the consumption of fuel for energy purposes. This question provides data users with more transparency regarding the type of fuel an organization has consumed. Total consumption of fuels and their consumption for different energy applications also provides insight on the way in which fuels are used by the organization, which can allow for a fairer and more consistent understanding of corporate energy and emissions from data users.

Connection to other frameworks

SDG

Goal 7: Affordable and clean energy

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.

Fuels	Heating value	Total MWh consumed by the organization	MWh consumed for self-generation of electricity	
Select from: Acetylene; Agricultural Waste; Alternative Kiln Fuel (Wastes); Animal Fat; Animal/Bone Meal; Anthracite Coal; Asphalt; Aviation Gasoline; Bagasse; Bamboo; Basic Oxygen Furnace Gas (LD Gas); Biodiesel; Biodiesel Tallow; Biodiesel Waste Cooking Oil; Bioethanol; Biogas; Biogasoline; Biomass Municipal Waste; Biomethane; Bitumen; Bituminous Coal; Black Liquor; Blast Furnace Gas; Brown Coal Briquettes (BKB); Burning Oil; Butane; Butylene; Charcoal; Coal; Coal Tar; Coke; Coke Oven Gas; Coking Coal; Compressed Natural Gas (CNG); Condensate; Crude Oil; Crude Oil Extra Heavy; Crude Oil Heavy; Crude Oil Light; Diesel; Distillate Oil; Dried Sewage Sludge; Ethane; Ethylene; Fuel Gas; Fuel Oil Number 1; Fuel Oil Number 2; Fuel Oil Number 4; Fuel Oil Number 5; Fuel Oil Number 6; Gas Coke; Gas Oil; Gas Works Gas; GCI Coal; General Municipal Waste; Grass; Hardwood; Heavy Gas Oil; Hydrogen; Industrial Wastes; Isobutane; Isobutylene; Jet Gasoline; Jet Kerosene; Kerosene; Landfill Gas; Light Distillate; Lignite Coal; Liquefied Natural Gas (LNG); Liquefied Petroleum Gas (LPG); Liquid Biofuel; Lubricants; Marine Fuel Oil; Marine Gas Oil; Metallurgical Coal; Methane; Motor Gasoline; Naphtha; Natural Gas; Natural Gas Liquids (NGL); Natural Gasoline; Non-Biomass Municipal Waste; Non-Biomass Waste; Oil Sands; Oil Shale; Orimulsion; Other Petroleum Gas; Paraffin Waxes; Patent Fuel; PCI Coal; Peat; Pentanes Plus; Petrochemical Feedstocks; Petrol; Petroleum Coke; Petroleum Products; Pitch; Plastics; Primary Solid Biomass; Propane Gas; Propane Liquid; Propylene; Refinery Feedstocks; Refinery Gas; Refinery Oil; Residual Fuel Oil; Road Oil; SBP; Shale Oil; Sludge Gas; Softwood; Solid Biomass Waste; Special Naphtha; Still Gas; Straw; Subbituminous Coal; Sulphite Lyes; Tar; Tar Sands; Thermal Coal; Thermal Coal Commercial; Thermal Coal Domestic; Thermal Coal Industrial; Tires; Town Gas; Unfinished Oils; Vegetable Oil; Waste Oils; Waste Paper and Card; Waste Plastics; Waste Tires; White Spirit; Wood; Wood Chips; Wood Logs; Wood Pellets; Wood Waste; Other, please specify	Select from: <ul style="list-style-type: none">● LHV● HHV● 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]	
MWh consumed for self-generation of heat	MWh consumed for self-generation of steam	MWh consumed for self-generation of cooling	MWh consumed self-cogeneration or self-trigeneration	Comment
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]	Numerical field [enter a number from 0 to 9,999,999,999 using up to 2 decimal places and no commas]	Text field [maximum 2,400 characters]

[Add Row]

Requested content*General*

- Figures you provide should be for the reporting year only (as defined by your answer to C0.2).
- You should enter all fuels (excluding feedstocks) consumed by your organization in the reporting year. Therefore, the sum of fuels entered in column 3 (total MWh consumed by the organization) should equal the total consumption of fuel (excluding feedstock) in MWh (from renewable and non-renewable sources) as reported in question C8.2a.
- Fuels consumed for generation are fuels consumed for 'self-generation'. Self-generation means generation from inside the organizational boundary. This includes all generation plant owned or controlled by the organization. Do **not** enter fuel consumed by another organization for the generation of electricity, steam, heat, and cooling that your organization has purchased or acquired.
- This table is for gross fuel consumption data only. You should not provide net consumption nor deduct for energy produced and exported from the organizational boundary. Because feedstock fuels are excluded from this question, this approach should not lead to double counting.
- All fuel consumed 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, e.g. consumed for energy purposes and not as a feedstock, then it should be included (see 'Explanation of terms' for more detail).

- Companies who consume fuel for electricity, steam, and/or cooling applications and who consume fuel for other applications (i.e. transportation, industrial process plant and equipment etc.) should report the MWh of fuel consumed for these other applications in column 5 'MWh fuel consumed for self-generation of heat'.
- If you consume a fuel that is not available in the selection list, please select a fuel from the list that most closely matches the fuel your organization does consume. However, if no option is applicable then please select 'Other, please specify' and specify the name of the fuel before entering your organization's consumption of that fuel. Please note that if you report more than one 'Other, please specify' in this question only one fuel reported as 'Other, please specify' will be presented in column 1 'Fuel' of C8.2d in the ORS. Please see the guidance in C8.2d for Fuel (column 1) if this applies to your organization.
- If you do not have exact consumption data, you may alternatively estimate your company's consumption by reviewing fuel and energy purchasing orders.
- 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 example, 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 should multiply your data by 0.29307.
- 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 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](#) and a glossary of definitions on some fuels is provided in Technical Notes: [Fuel Definitions](#).
- If you want to provide additional information on the methods or assumptions used to determine the breakdown of fuel consumed for the self-generation of electricity/heat/steam/cooling/self-cogeneration or self-trigeneration then please do so in the Comment column.

Heating value (column 2)

- All fuels should be reported consistently in either LHV or HHV.
- Your choice of HHV or LHV should be consistent with your choice in question C8.2a.
- 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.

Total MWh fuel consumed by the organization (column 3)

- Enter the total fuel in MWh consumed by your organization in the reporting year. It should be equal to the sum of fuel consumed for the self-generation of electricity, heat, cooling, steam and/or cogeneration or trigeneration.

MWh fuel consumed for self-generation of electricity (column 4)

- Enter the total consumption of the selected fuel for the self-generation of electricity in MWh.
- Make sure that you do not enter data for the actual electricity generated from these fuels. This table is for the consumption of the fuels themselves and aims to capture the energy content of the initial fuel used, not the energy content of the electricity generated from these fuels.

MWh fuel consumed for self-generation of heat (column 5)

- Enter the total consumption of the selected fuel for the self-generation of heat in MWh.
- Fuel consumed for heat is fuel that is combusted for the direct use of the heat/thermal energy its combustion releases.
- This heat is used in applications such as direct heating for industrial process plant and equipment, engines, turbines, furnaces, heaters, stoves, incinerators, kilns, dryers, thermal oxidizers, space heating, open burning, flaring, or any other combustion that is not for the generation of secondary energy carriers (electricity, steam, and/or cooling).
- Do not enter the heat delivered for the application. This question asks for fuel energy, which is the total heat of fuel combustion and is equal to the heating value (or calorific value) of the fuel itself.

MWh fuel consumed for self-generation of steam (column 6)

- Enter the total consumption of the selected fuel for the self-generation of steam in MWh. This excludes fuel consumed for steam generated in cogeneration or trigeneration plant.

MWh fuel consumed for self-generation of cooling (column 7)

- Enter the total consumption of the selected fuel for the self-generation of cooling in MWh. This excludes fuel consumed for cooling generated in cogeneration or trigeneration plant.

MWh fuel consumed for self-cogeneration or self-trigeneration (column 8)

- Enter the total consumption of the selected fuel for self-cogeneration or self-trigeneration in MWh.

Explanation of terms

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, 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.

(C8.2d) List the average emission factors of the fuels reported in C8.2c.

Question dependencies

This question only appears if you input data into C8.2c. A corresponding row will appear for each fuel that you reported in C8.2c.

Change from 2018

Minor change, Modified guidance

Rationale

The most common approach for calculating GHG emissions is through the application of documented emissions factors. CDP asks this question to facilitate analysis of emissions across reporting companies, and to help ensure accurate reporting.

Connection to other frameworks

SDG

Goal 7: Affordable and clean energy

Response options

Please complete the following table:

Fuel	Emission factor	Unit	Emission factor source	Comment
Select from: (Options for this column driven by fuel's selected in C8.2c)	Numerical field [enter a number from 0 to 999,999 using up to 5 decimal places and no commas]	Select from: <ul style="list-style-type: none">metric tons CO2e per m³metric tons CO₂ per m³metric tons CO2e per litermetric tons CO₂ per litermetric tons CO2e per barrelmetric tons CO₂ per barrelmetric tons CO2e per Mg	Text field [maximum 2,400 characters]	Text field [maximum 2,400 characters]

- metric tons CO2 per Mg
- metric tons CO2e per metric ton
- metric tons CO2 per metric ton
- metric tons CO2e per short ton
- metric tons CO2 per short ton
- metric tons CO2e per kWh
- metric tons CO2 per kWh
- metric tons CO2e per MWh
- metric tons CO2 per MWh
- metric tons CO2e per GJ
- metric tons CO2 per GJ
- metric tons CO2e per million Btu
- metric tons CO2 per million Btu
- metric tons CO2e per boe
- metric tons CO2 per boe
- metric tons CO2e per toe
- metric tons CO2 per toe
- metric tons CO2e per tce
- metric tons CO2 per tce
- metric tons CO2e per Gcal
- metric tons CO2 per Gcal
- kg CO2e per m3
- kg CO2 per m3
- kg CO2e per liter
- kg CO2 per liter
- kg CO2e per barrel
- kg CO2 per barrel
- kg CO2e per gallon
- kg CO2 per gallon
- kg CO2e per Mg
- kg CO2 per Mg
- kg CO2e per metric ton
- kg CO2 per metric ton
- kg CO2e per short ton
- kg CO2 per short ton
- kg CO2e per MWh
- kg CO2 per MWh
- kg CO2e per GJ
- kg CO2 per GJ
- kg CO2e per million Btu
- kg CO2 per million Btu
- kg CO2e per boe
- kg CO2 per boe
- kg CO2e per toe
- kg CO2 per toe
- kg CO2e per tce
- kg CO2 per tce
- kg CO2e per Gcal
- kg CO2 per Gcal
- lb CO2e per 1000 cubic ft3

- | | | |
|--|--|--|
| | <ul style="list-style-type: none"> ● lb CO₂ per 1000 cubic ft3 ● lb CO_{2e} per gallon ● lb CO₂ per gallon ● lb CO_{2e} per barrel ● lb CO₂ per barrel ● lb CO_{2e} per short ton ● lb CO₂ per short ton ● lb CO_{2e} per MWh ● lb CO₂ per MWh ● lb CO_{2e} per GJ ● lb CO₂ per GJ ● lb CO_{2e} per million Btu ● lb CO₂ per million Btu ● lb CO_{2e} per boe ● lb CO₂ per boe ● lb CO_{2e} per toe ● lb CO₂ per toe ● lb CO_{2e} per tce ● lb CO₂ per tce ● lb CO_{2e} per Gcal ● lb CO₂ per Gcal | |
|--|--|--|

Requested content

General

- Emission factors for all fuels reported in question C8.2c should be provided.
- Figures you provide should be for the reporting year only (as defined by your answer to C0.2).
- Identifying the most appropriate and accurate emission factors to use is one of the most challenging issues in GHG accounting. Therefore, it is beyond the scope of CDP's work to provide advice on specific factors and how they should be applied.
- Emission factors vary with the precise nature of the material involved. For example, an emission factor will vary with the type of coal combusted and the type of technology used to burn the coal.
- The GHG Protocol Corporate Standard encourages you to calculate your own emission factors based on specific materials used and processes adopted. When this is not possible, you should refer to emissions factors published by governmental and other bodies such as the [EPA](#) in the US, the [BEIS](#) Department in the UK, and the [IPCC](#) (e.g. Volume 2, Chapter 2, p2.16-2.23) or IEA for international coverage. National inventory reports submitted to the [UNFCCC](#) also contain emission factors.
- Fuels are typically consumed at nearly 100% combustion efficiency, or full oxidization. Unless better data is available, the IPCC guidelines recommend applying this simplifying assumption (oxidation factor = 1).
- The IPCC provides guidance on emissions accounting, including the application of emission factors, across multiple sectors.

Fuel (column 1)

- This column is driven by the responses selected in question 8.2c.
- Please note that If you have reported more than one fuel as 'Other, please specify' in question C8.2c only one 'Other' option will be presented in this question in the ORS. If this is applicable to you then please provide the requested information in this question for the fuel reported as 'Other, please specify' in C8.2c for which you have the highest consumption of in MWh.

Emission factor (column 2)

- You are encouraged to enter emission factors linked to the fuels selected in question C8.2c such that these factors may be combined with the fuel consumption data you reported in C8.2c to calculate total fuel related

Scope 1 emissions from your organization.

- If you entered data in C8.2c for a fuel that is actually the sum of multiple fuels of the same description but having different emission factors, then you should provide the weighted average emission factor of the fuel data point. This average should be weighted according to the amount of each constituent fuel consumed. The weighted emissions factor can be calculated by dividing the aggregate emissions from the selected fuel (i.e. of its constituent fuels) by the aggregate consumption of that fuel (i.e. of its constituent fuels).
- You are not required to convert your emission factor units into tCO₂e per MWh. You select the relevant units in the dropdown.
- The selection of LHV or HHV in C8.2c should be consistent with the emission factor provided here. If the unit provided (column 3) is emissions per unit of energy (e.g. MWh, GJ, Btu, etc.), then you should check your source to ensure that the emission factor aligns with LHV or HHV selected for that fuel in C8.2c. Otherwise these emission factors will not calculate to your organization's emissions if combined with your fuel consumption data.
- Greenhouse gas emission factors for carbon dioxide equivalent (CO₂e) should be used. If only CO₂ factors are submitted, then the comment column is available for explanation.
- Emissions from fuel combustion are mostly of CO₂, but with smaller amounts of greenhouse gasses CH₄ (Methane) and N₂O (Nitrogen dioxide) also being emitted. You should include all three of these gasses in your emission factors in units of CO₂e.
- Methane, Nitrogen dioxide and other greenhouse gasses are converted to CO₂e using Global Warming Potential (GWP) values. These are updated periodically by the IPCC and are summarized for corporations in [GHG Protocol GWP guidance](#).
- When converting, you should use the latest GWP values available (e.g. 28 for CH₄). If you are not using the latest GWP values then the comment column is available for explanation.
- Energy that is received via direct line as "waste" from an industrial process should still be reported based on the underlying emission factor of the fuel from the original generation process. Some companies may wish to account for these as zero emissions because the steam/heat/cooling would have been vented instantaneously if not used. However, accurate emissions accounting requires the actual emissions associated with the production of this waste to be reported.
- If you have used emission factors purchased from IEA, then you may not have the permissions to share these publicly. In these instances, you should not provide the emission factor number and instead insert the number -99 (i.e. negative 99) as the emission factor in column 2. This is a specialized identifier and outlines to data users that you have used emission factors purchased from IEA. In column 4 "Emission factor source" please name IEA as the source if you have used this source.

Emission factor source (column 4)

- Enter the reference you have used for the emission factor into this text field.

Comment (column 5)

- Any further information about the data provided may be entered here. For example, if an oxidation factor of less than 1 is applied, state the oxidization factor used.

Additional information

- **Emission factors:** As noted on page 44 of the [GHG Protocol Corporate Standard](#), "direct measurement of GHG emissions by monitoring concentration and flow rate is not common." Normally, direct measurement takes place only in facilities with Continuous Emission Monitoring Systems (CEMS), such as power plants. Instead of direct measurement, many companies calculate GHG emissions by applying documented emission factors to activity data (e.g. tons of coal consumed or cubic meters of natural gas burnt).

- Emission factors are sometimes referred to as conversion factors. Activity data (e.g. cubic meters of natural gas) is multiplied by an emission factor to estimate the GHG emissions from the activity (e.g. combustion of natural gas). You may also find it useful to refer to emission factor databases compiled by organizations offering carbon calculation services. For additional advice on emissions factors, you may want to contact one of [CDP's partners](#). Emission factors may also be incorporated in the calculation tools that you use. Please note that emission factors should apply to the reporting year.

(C8.2e) Provide details on the electricity, heat, steam, and cooling your organization has generated and consumed in the reporting year.

Question Dependencies

This question only appears if you select "Generation of electricity, heat, steam, or cooling" in response to C8.2.

Change from 2018

No change

Rationale

Many organizations generate their own electricity, steam, heat, and/or cooling. Bringing the generation of these secondary energy carriers inside the organizational boundary has the effect of reducing an organization's

Scope 2 emissions while increasing Scope 1 emissions. Because the scale of self-generation can be highly variable, this can create additional uncertainty for data users when comparing Scope 1 and 2 emissions across company samples or portfolios. CDP aims to alleviate this distorting factor by bringing transparency on the extent of self-generation by organizations.

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:

Energy Carrier	Total Gross generation (MWh)	Generation that is consumed by the organization (MWh)	Gross generation from renewable sources (MWh)	Generation from renewable sources that is consumed by the organization (MWh)
Electricity	Numerical field [enter a number from 0 to 999,999,999 using up to 2 decimal places and no commas]	Numerical field [enter a number from 0 to 999,999,999 using up to 2 decimal places and no commas]	Numerical field [enter a number from 0 to 999,999,999 using up to 2 decimal places and no commas]	Numerical field [enter a number from 0 to 999,999,999 using up to 2 decimal places and no commas]
Heat				
Steam				
Cooling				

Requested content

General

- Figures you provide should be for the reporting year only (as defined by your answer to C0.2).
- If you do not have any activity then you should enter zero (0) in the relevant field.
- Enter all energy data in Mega-Watt-hours (MWh). 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 \(Annex A\)](#).
- Further guidance on unit conversion is available in the following Technical Note: [Conversion of fuel data to MWh](#).
- Nuclear power generation is not to be included for this question, as nuclear power is covered in more detail in questions for electric utilities.
- Fuel consumption data provided in C8.2c is split by their use in the generation of energy carriers that are also listed in this question, e.g. 'fuel consumed for the generation of electricity', with the exception of heat. The heat referred to in this question includes heat only where it can be measured in the form of transferrable mediums, e.g. hot water. In reality, the proportion of fuel combustion heat made available for use in applications (after losses) may be difficult to measure or would require detailed process monitoring equipment readings. You should only account for heat generated in transferable mediums, i.e. the forms of heat that may also be purchased or acquired from third parties (as listed in question C8.2a).

Total Gross generation (MWh) (column 2)

- Enter the total gross generation of electricity, heat, steam and/or cooling in MWh produced by facilities or installations inside your organizational boundary during the reporting year.
- Gross generation should be reported, where "Gross" covers the total output from all generating installations or facilities without deducting for electricity, steam, heat, or cooling used by the generating plant or facility for the purpose of the generation.
- Include electricity, heat, steam and/or cooling you produced from both renewable sources and non-renewables sources.

- Include electricity, heat, steam and/or cooling that you produced and did not consume, as well as the amount you did consume.

Generation that is consumed by the organization (MWh) (column 3)

- Enter the amount of your organization's generation of electricity, heat, steam, and/or cooling in MWh that your organization has consumed in the reporting year.
- This column is a subset of column 2; the amount entered cannot be higher than the amount entered in column 2. If the entered amount is equal to the amount in column 2, then your organization consumed (or wasted) all of the electricity, steam, heat, or cooling that your organization generated.

Gross generation from renewable sources (MWh) (column 4)

- Enter the total gross generation of electricity, heat, steam and/or cooling in MWh produced from renewable sources by facilities or installations inside your organizational boundary during the reporting year.
- Include electricity, heat, steam and/or cooling that you produced from renewable sources and did not consume, as well as the amount you did consume.

Generation from renewable sources that is consumed by the organization (MWh) (column 5)

- Enter the amount of your organization's generation of electricity, heat, steam, and/or cooling in MWh from renewable sources that your organization has consumed in the reporting year.
- This column is a subset of column 4; the amount entered cannot be higher than the amount entered in column 4. If the entered amount is equal to the amount in column 4, then your organization consumed all of the electricity, steam, heat, or cooling that your organization generated from renewable sources.

Explanation of terms

- Gross generation:** covers the total output from all generating installations or facilities without deducting for amount of generated electricity, steam, heat or cooling used by those installations or facilities for the purpose of generation. Deducting this self-consumption of output gives the net generation. To avoid double-counting, consumption of one energy carrier to produce another within the same installation should not be included. For example, the generation of steam which is consumed in a steam turbine for the generation of electricity should not be included.

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

Question Dependencies

This question only appears if you select "Consumption of purchased or acquired electricity", "Consumption of purchased or acquired heat", "Consumption of purchased or acquired steam" or "Consumption of purchased or acquired cooling" in response to C8.2.

Change from 2018

Modified question

Rationale

This question provides investors and data users with more transparency regarding organizations' accounting of market-based (Scope 2) renewable or low-carbon electricity practices.

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.

Basis for applying a low-carbon emission factor	Low-carbon technology type	Region of consumption of low-carbon electricity, heat, steam or cooling	MWh consumed associated with low-carbon electricity, heat, steam or cooling	Emission factor (in units of metric tons CO2e per MWh)	Comment
<p>Select from:</p> <ul style="list-style-type: none"> ● No purchases or generation of low-carbon electricity, heat, steam or cooling accounted with a low-carbon emission factor ● Off-grid energy consumption from an on-site installation or through a direct line to an off-site generator owned by another company ● Power Purchase Agreement (PPA) with energy attribute certificates ● Power Purchase Agreement (PPA) without energy attribute certificates ● Contract with suppliers or utilities (e.g. green tariff), supported by energy attribute certificates ● Contract with suppliers or utilities (e.g. green tariff), not supported by electricity attribute certificates ● Energy attribute certificates, Guarantees of Origin ● Energy attribute certificates, Renewable Energy Certificates (RECs) ● Energy attribute certificates, I-RECs ● Grid mix of renewable electricity ● Other, please specify 	<p>Select all that apply:</p> <ul style="list-style-type: none"> ● Solar PV ● Concentrated solar power (CSP) ● Wind ● Hydropower ● Nuclear ● Biomass (including biogas) ● Tidal ● Other low-carbon technology, please specify 	<p>Select from:</p> <ul style="list-style-type: none"> ● Asia Pacific ● Africa ● Europe ● Latin America ● Middle East ● North America ● Other, please specify 	<p>Numerical field [enter a number from 0 to 999,999,999,999 using up to 2 decimal places and no commas]</p>	<p>Numerical field [enter a number from 0-99,999 using up to 6 decimal places and no commas]</p>	Text field [maximum 2,400 characters]

[Add Row]

Requested content

General

- Low-carbon technologies are considered those that will have no direct emissions. Please note that natural gas and combined heat and power (CHP) are not considered low-carbon technologies and should not be included here. For more information on CDP's definition of low-carbon, please refer to the Explanation of terms.

Basis for applying a low-carbon emissions factor (column 1)

- These options capture the most common cases in real practice that lead companies to account electricity, heat, steam and cooling at a zero emissions rate. The meaning of each of the values is as follows:

- No purchases or generation of low-carbon electricity, heat, steam or cooling accounted with a low-carbon emissions factor Select this option if your company doesn't purchase low-carbon electricity (or heat, steam and cooling) and just sources them from the grid.

- Off-grid energy consumption from an on-site installation or through a direct line to an off-site generator owned by another company This is the direct transfer of power from a generation facility that is off-grid and where consumption of power by the company happens with no grid transfers. The emissions factor of the source (the off-grid power generator) is to be used for calculation.

- Power Purchase Agreement (PPA) with energy attribute certificates In a direct procurement, a contract is signed between the company consuming the energy and a power producer. The contract ensures the purchase of electricity generated by a specific project and is delivered through the local grid. In a physical PPA, the company retains or retires energy attribute certificates generated by the power producer that is the

other party in this contract.

- **Power Purchase Agreement (PPA) without energy attribute certificates** In direct procurement, a contract is signed between the company consuming the energy and a power producer. The contract ensures the purchase of electricity generated by a specific project and is delivered through the local grid. In this case, energy attribute certificates do not exist, or they are not created or sold, or they exist but are not applicable to the fuel/technology represented by the contracts (e.g. for fossil-fuel contracts in the U.S.). In this case, contracts that specify attributes can still be a valid contractual instrument. If the purchase is from on-site generation that is owned or operated by a 3rd party and certificates are not created or sold, then that still counts as a supply-specific factor.

- **Contract with suppliers or utilities (e.g. green tariff), supported by energy attribute certificates** In this case the power consumer signs a contract with power suppliers or utility companies to buy a specific power tariff or electricity product that blends electricity (or other forms of energy) with electricity from low-carbon sources. The customer can use the supplier specific emission factor even if it is not backed by instruments, in markets where attributes do not exist or are not required for a usage claim.

- **Contract with suppliers or utilities (e.g. green tariff), with a supplier-specific emission rate, not backed by electricity attribute certificates** In this case the power consumer signs a contract with power suppliers or utility companies to buy a specific power tariff or electricity product that blends electricity (or other forms of energy) with electricity from low-carbon sources. Supplier specific, including electricity tariffs or products, not backed by instruments: In the case the emission factor that has been provided by suppliers is not supported by attribute tracking certificates or other contractual instruments for attribute trading.

- **Energy attribute certificates, Guarantees of Origin** Energy attribute certificates, also known as electricity tracking instruments are purchased through a company's supplier or other intermediaries. They can be either bundled with the physical electricity or come as a separate stream from the electricity and exist only as the attributes of that electricity. The sources are not owned by the company and the instruments are generated in accordance with the European Guarantee of Origin system.

- **Energy attribute certificates, Renewable Energy Certificates (RECs)** Energy attribute certificates, also known as electricity tracking instruments are purchased through a company's supplier or other intermediaries. They can be either bundled with the physical electricity or come as a separate stream from the electricity and exist only as the attributes of that electricity. The sources are not owned by the company and the instruments are generated in accordance with the USA Renewable Energy Certificate (REC) system.

- **Energy attribute certificates, International REC Standard (I-REC)** A company buys I-RECs through its supplier or other intermediaries, as a separate stream from the electricity. The sources are not owned by the company and the instruments are generated and tracked in accordance with the International REC Standard (I-REC). I-REC is intended for countries without an existing or reliable energy attribute tracking certificates outside the US, EU/EEA, or Australia.

- **Grid mix of renewable electricity.** Companies can choose to claim the average mix of renewable electricity on the grid, though this is not considered best practice. Grid mix figures are published yearly by some governments or can be found on other sources or websites that publish grid mixes and they should be from the year closest to the reporting year. In Europe and North America, companies should always use the residual mix for this calculation.

- **Other, please specify.** Other instruments not mentioned above and that have been used by the user to account for electricity, heat, steam or cooling at a zero emission factor may be reported IF the instruments comply with the Scope 2 Quality Criteria of the GHG Protocol Scope 2 guidance. If you select "Other, please specify", provide a label for the Basis for applying a low-carbon emissions factor. CDP currently accepts the following options: Australian RECs, J-credits (Japan), Non-fossil value certificates (Japan), TIGRs (international), T-RECs (Taiwan).

Low-carbon technology type (column 2)

- Select from the list the low-carbon technology type that applies as the basis for applying a low-carbon emission factor.
- If the low-carbon technology type is not presented in the list or you do not know the low-carbon technology type then select 'Other low-carbon technology, please specify' and provide details.
- Please note, that natural gas and combined heat and power (CHP) are not considered low-carbon technologies and should not be included here. For more information on CDP's definition of low-carbon, please refer to the Explanation of terms.

Region of consumption of low-carbon electricity, heat, steam, or cooling (Column 3)

- Select from the list to specify in which region the energy with a low carbon electricity factor is being consumed.
- Select regional breakdown in accordance with CDP's [Technical Note "Country and regions"](#).
- If you would like to break down the geographical consumption into country-specific data you can select 'Other, please specify'.

MWh consumed associated with low-carbon electricity, heat, steam or cooling (column 4)

- Quantify how much electricity, heat, steam or cooling (in MWh) has been used that corresponds to the case selected in column 1.

Emissions factor (in units of metric tons CO₂e per MWh) (column 5)

- Provide the emissions factor associated with the answer provided in the first column, in units of metric tons CO₂e per MWh.
- In many cases the answer to this column will be zero (i.e. 0 metric tons CO₂e/MWh). However, if you are using an emissions factor that is lower than the grid average, but greater than zero, it can be reported here (i.e.

a company has a contract with a supplier where the blend of electricity may have a high proportion of renewables mixed with a small amount of fossil fuels. In this case, the supplier specific emissions factor would not be zero, but could still be possibly lower than the grid average factor.)

- If you have selected "Grid mix of renewable electricity" in column 1 because you are claiming the average mix of renewable electricity on the grid then the emission factor you enter here should be the residual mix emission factor or the grid average emission factor.

Comment (column 6)

- You may provide an accompanying narrative to your disclosure. For example, you can include here any other relevant information about the low-carbon electricity you have used in each of the cases, for instance the type of low-carbon electricity source (wind, solar, biomass, hydro, geothermal, etc.) or any information related to eligibility criteria for that source that might be particularly relevant for your company policy or your company.

Explanation of terms

- **Low-carbon energy:** There is no precise, generally accepted definition of what "low-carbon energy" is. No definition is found in either the GHG Protocol standards or ISO. Nevertheless, it can be reasonably established that "low-carbon energy" will be any type of energy that will have no direct emissions and which the indirect emissions can usually be considered as negligible considering the life cycle of the given technology. Power technologies such as wind, solar, tidal, geothermal and most hydro power are generally accepted as low-carbon. Nuclear power is also usually considered low-carbon, although other considerations make it a more contentious technology. Natural gas, combined cycle gas turbine and Combined Heat and Power (cogeneration), despite being less carbon intensive than other means of electricity production like coal, are not considered low-carbon.

Example response

A worked example of green power accounting

Question C8.2f provides further transparency to data reported in question C7.5. A worked example below shows how the two questions are linked and should be completed.

For the amounts of electricity, heat, steam and cooling identified in column 4 of C7.5 further details are provided in question C8.2f.

Example responses in question C7.5

Country/Region	Scope 2, location-based (metric tons CO ₂ e)	Scope 2 market-based (metric tons CO ₂ e)	Purchased and consumed electricity, heat, steam or cooling (MWh)	Purchased and consumed low-carbon electricity, heat, steam or cooling accounted in market-based approach (MWh)
United States of America	190000	0	350000	35000
Canada	10000	10000	80000	0
United Kingdom	30000	30000	70000	0
Turkey	500	0	10000	10000

Example responses in question C8.2f

Basis for applying a low-carbon emission factor	Low-carbon technology type	MWh consumed associate with low-carbon electricity, heat, steam or cooling	Emission factor (in units of metric tons CO2e per MWh)	Comment
Energy attribute certificates, I-RECs	Solar PV	10000	0	Our operations in Turkey have purchased I-REC's to cover their entire electricity consumption during the reporting year
Energy attribute certificates, Renewable Energy Certificates (RECs)	Wind	35000	0	Our operations in USA have purchased REC's to cover part of the electricity consumption during the period. All RECs are Green-e certified.

C9 Additional metrics

Module Overview

CDP data users seek to understand in which areas, beyond GHG emissions, companies are trying to reduce their environmental impacts. This new module requests reporting organizations to present relevant climate-related metrics that may indirectly or directly impact their emissions or energy use.

This module includes one general question on additional climate-related metrics and a number of sector-specific questions on metrics such as production outputs, low-carbon technology implementation, transfers & sequestration of CO₂ emissions and low-carbon investments.

Key changes

- Questions C-CE9.3a, C-CE9.3b and C-CE9.3c have been removed.
- A new column has been added to questions C-MM9.3a and C-MM9.3b to allow companies to label Scope 2 emissions according to the approach they used.

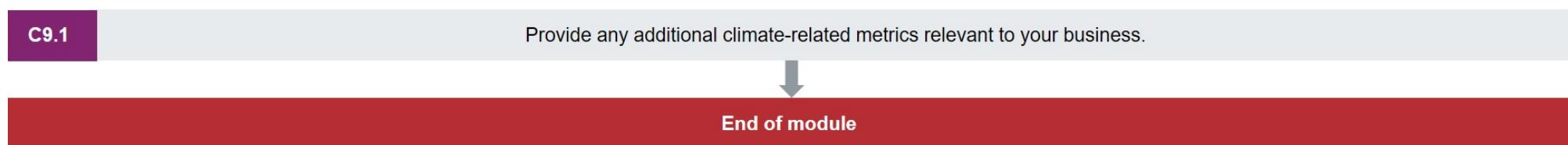
Sector-specific content

Additional questions on climate-related metrics for the following high-impact sectors:

- Coal
- Electric utilities
- Oil & gas
- Cement
- Chemicals
- Metals & mining
- Steel
- Transport original equipment manufacturers (OEMs)
- Transport services

Pathway diagram - questions

This diagram shows the general questions contained in module C9. To access question-level guidance, use the menu on the left to navigate to the question.



Other climate-related metrics

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

Change from 2018

No change

Rationale

CDP data users seek to understand in which areas, beyond GHG emissions, companies are trying to reduce their environmental impacts.

Connection to other frameworks

TCFD

Metrics & Targets recommended disclosure a) Disclose the metrics used by the organization to assess climate-related risks and opportunities in line with its strategy and risk management process.

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.

Description	Metric value	Metric numerator	Metric denominator (intensity metric only)	% change from previous year	Direction of change	Please explain
Select from: Waste; Energy usage; Land use; Other, please specify	Numerical field [enter a number from 0 to 99,999,999,999 using up to 2 decimal places]	Text field [maximum 50 characters]	Text field [maximum 50 characters]	Numerical field [enter a number from 0 to 999 using up to 2 decimal places]	Select from: <input type="radio"/> Increased <input type="radio"/> Decreased <input type="radio"/> No change	Text field [maximum 2,400 characters]

Requested content

General

- Complete the table to report any additional climate-related metrics your business tracks beyond emissions reductions and renewable energy-related activities.
- If you track more than one additional climate-related metric, describe them each in a separate row.

Description (column 1)

- Select the type of metric applicable to your business. If none of the listed drop-downs apply, select "Other, please specify" and provide a label for the "Description".

Metric value (column 2)

- Enter the quantity of the unit tracked and reported in column 3. E.g. if your company tracks kilograms of waste, enter the kilograms measured during the reporting year.
- When providing an intensity metric, provide the value of the intensity. E.g. if your company tracks kilograms of waste per FTE, enter the kilograms measured during the reporting year normalized to the number of FTE in the reporting year.

Metric numerator (column 3)

- Enter the unit of the metric that your company tracks. This unit corresponds to the value entered in column 2.

Metric denominator (column 4)

- This column is only applicable for companies tracking an intensity metric (e.g., kilograms of waste per FTE). If you do not track an intensity metric, leave this column blank.

% Change from previous year (column 5)

- If you have experienced no change, please enter 0 (zero) in this column.

- 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. It is understood that this metric has not been reported to CDP before and thus the reporting year for this metric may not directly overlap with other metrics reported to CDP.
- Leave the column blank if this is the first year you have tracked this metric.

Direction of change (column 6)

- Use this column to outline the direction of change from the previous year.
- A declining intensity ratio reflects a positive direction of change. E.g. your waste last reporting year was 10 metric tons/FTE and this year is 5 metric tons/FTE. This indicates a 50% decrease compared to the previous year.
- If the percentage change from last year is 0 (zero) then select "no change".

Please explain (column 7)

- Use this column to provide any additional context relevant to the metric you are reporting and to the direction of change. Additional information could include projects or initiatives implemented to achieve progress on this metric, or any timeframes included in these goals.

Note for agricultural sectors:

- You should report data associated with the business activity areas that are relevant to your organization, as indicated in C-AC0.6/C-FB0.6/C-PF0.6. Note that these metrics should be in addition to what you have reported in modules 6 (Emissions data) and 7 (Emissions breakdown). For example, if agricultural/forestry activities are relevant to your disclosure, you could report here the area of land use change associated with your own farm or production unit. Other examples of relevant metrics are: the volume of fertilizers used for production; the consumption of water per unit of product during production, processing and/or manufacturing; the waste volume associated with the production of raw materials or the manufacture of goods; and the volume of biofuels used in the fleet.

Explanation of terms

- **Land use:** Land use is based on the functional dimension of land for different human purposes or economic activities. Typical categories for land use are dwellings, industrial use, transport, recreational use or nature protection areas. Additional land use metrics can relate to the climate-related arrangements, activities, and inputs regarding these categories that organizations engage in, and can include land use change and land use management metrics.

C10 Verification

Module Overview

Verification and assurance is good practice in environmental reporting as it ensures the quality of data and processes disclosed.

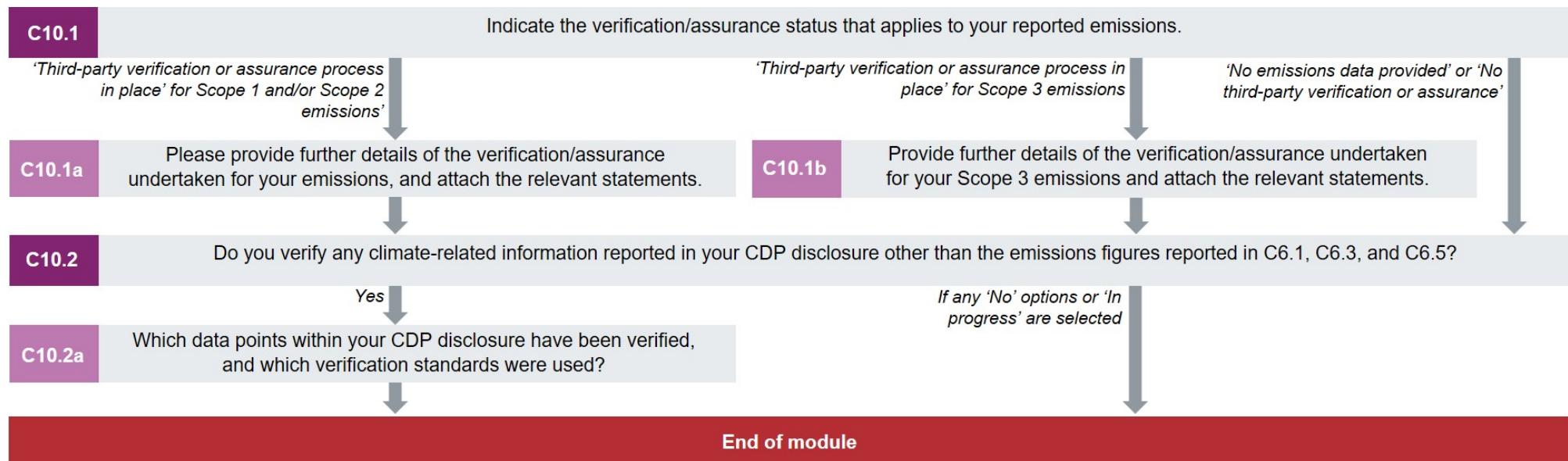
This module requests details on the verification status that applies to organizations' reported Scope 1, 2 and 3 emissions, as well as on the verification of other climate-related information reported in the CDP disclosure.

Key changes

None.

Pathway diagram - questions

This diagram shows the general questions contained in module C10. To access question-level guidance, use the menu on the left to navigate to the question.



Verification

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

Change from 2018

No change

Rationale

By verifying information beyond emissions figures, companies demonstrate their commitment to transparency. This question gives data users further confidence in the accuracy of the data reported.

Response options

Please complete the following table:

Scope	Verification/assurance status
Scope 1	Select from: <ul style="list-style-type: none">● No emissions data provided● No third-party verification or assurance● Third-party verification or assurance process in place
Scope 2 (location-based or market-based)	
Scope 3	

Requested content

General

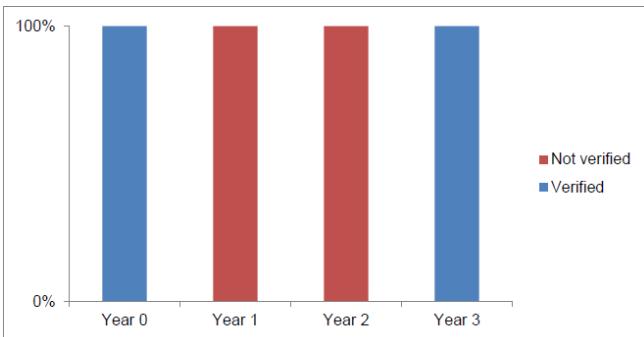
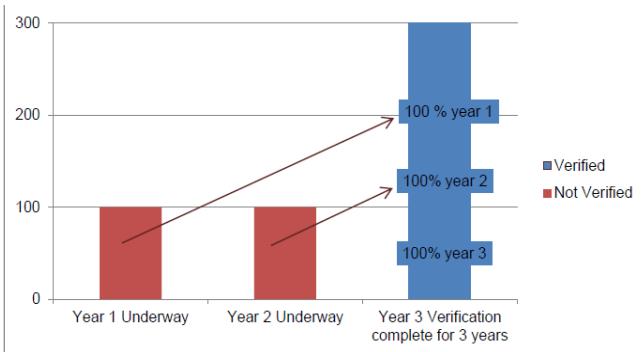
- Please provide the verification/assurance status that applies to your Scope 1, Scope 2, and Scope 3 emissions. If you have had a proportion of your Scope 1, 2, and/or 3 emissions verified, please select the option that applies to these emissions; you will be given an opportunity in question C10.1a to provide further details.
- If verification/assurance is underway, or part of a biennial or triennial process: It is recognized that for some companies, the verification/assurance schedule is out of synchronization with the CDP disclosure process and therefore it is difficult to complete the verification/assurance process before the CDP deadline. In addition, verification/assurance processes may occur every two years (biennial verification) or every three years (triennial verification). Where this is the case, you should select "Verification or assurance process in place" and provide further information on your situation in C10.1a.
- In C10.1a you will be asked to provide evidence of any third-party verification that you have reported in this question. Companies are advised to verify that their evidence can demonstrate all of the requirements set by CDP before answering this question to confirm that their activities comply (e.g. by consulting with their verifier/assurer). Full details are provided in the guidance for question C10.1a. If certain information requirements set by CDP are not available in the standard assurance statement provided by your verifier, CDP has produced a [template](#) that can be used in conjunction with the original assurance statement.

Scope 2

- If you operate in a region where you need to calculate both a location-based and a market-based figure to meet Scope 2 requirements, at this stage CDP only requires for you to verify one of these figures. However, in the interest of transparency, you are asked to disclose which of the two figures you have verified. If you are verifying your market-based Scope 2 emissions figure, and your verification engagements cover >70% of your Scope 2 activity (energy purchased or acquired and consumed by the reporting company (MWh)), but less than 70% of your Scope 2 emissions, this will be acceptable for full points provided you attach the relevant statement.

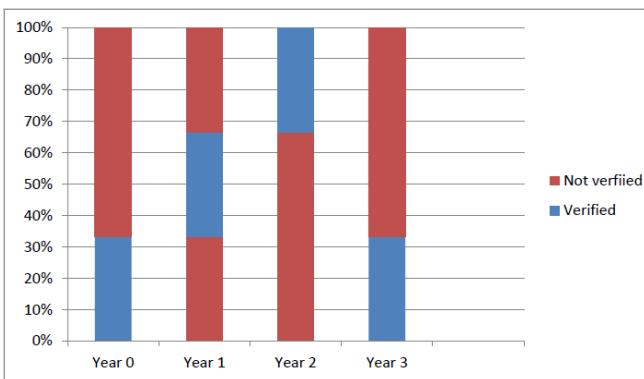
Additional information

Annual, biennial and triennial processes: If in the year the verification is completed (for example, Year 3), the data for all sources during the full cycle is verified (for example year 1, 2, and 3) the company can report 100% verification and should attach the verification statements that cover the emissions for all three years. This would be considered a triennial process where full points will be awarded if attachments in line with CDP criteria are provided. Graph of this situation provided for clarity below.

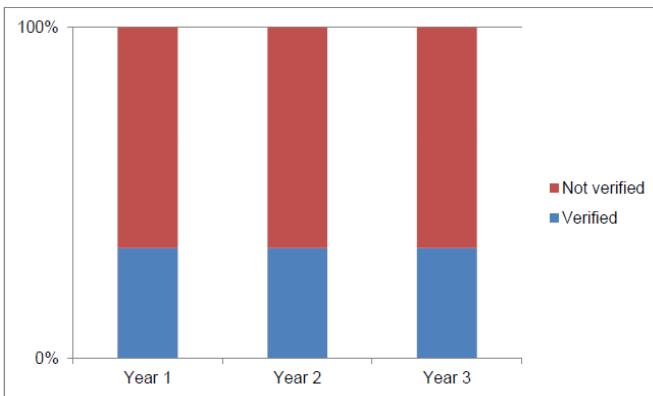


Annual processes: Not all processes taking place over three years will be considered a triennial process. The graphs below illustrate annual processes, which should not be confused with triennial.

If in the year the verification is completed (for example, Year 3) only the data for that year is verified (for example, only Year 3 is verified for 1/3 of the sources, the second third was verified in year 2 and the remaining third in year 1), then the company should report only 33% verified. This is a yearly process for which 1/3 of the sources are verified every year. Partial points will be awarded every year:



Likewise, where a company has 1/3 of that year's emissions verified every year this is an annual process and will be awarded partial points every year:



CDP regards **verification/assurance** as a process undertaken by an independent third party accredited to perform verification/assurance of the GHG emissions data. Please only state that you have had or are having verification/assurance carried out if it is by an independent third party accredited to perform verification/assurance of GHG data. CDP does not prescribe companies' choice of specific verification/assurance providers. However, companies searching for a provider may want to consult our list of accredited verification partners: [Learn more about CDP solution providers offering third party verification services here.](#)

(C10.1a) Provide further details of the verification/assurance undertaken for your Scope 1 and/or Scope 2 emissions and attach the relevant statements.

Question dependencies

This question only appears if you select "Third-party verification or assurance process in place" for Scope 1 and/or Scope 2 emissions in response to C10.1.

Change from 2018

No change

Rationale

By verifying information beyond emissions figures, companies demonstrate their commitment to transparency. This question gives data users further confidence in the accuracy of the data reported.

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.

Scope	Verification or assurance cycle in place	Status in the current reporting year	Type of verification or assurance	Attach the statement	Page/section reference	Relevant standard	Proportion of reported emissions verified (%)
Select from: ● Scope 1 ● Scope 2 location-based ● Scope 2 market-based	Select from: ● Annual process ● Biennial process ● Triennial process	Select from: ● No verification or assurance of current reporting year ● Underway but not complete for current reporting year – first year it has taken place ● Underway but not complete for reporting year – previous statement of process	Select from: ● Not applicable ● Limited assurance ● Moderate assurance ● Reasonable assurance ● High assurance ● Third party verification/assurance underway	Attach your document here.	Text field [maximum 500 characters]	Select from: ● AA1000AS ● Advanced technologies promotion Subsidy Scheme with Emission reduction Target (ASSET) ● Airport Carbon Accreditation (ACA) des Airports Council International Europe	Numerical field [enter a number from 0-100 using n decimals or commas]

attached
● Complete

- Alberta Specified Gas Emitters Regulation (SGER)
- ASAE3000
- Attestation standards established by AICPA (AT105)
- Australian National GHG emission regulation (NGER)
- California Mandatory GHG Reporting Regulations (CARB)
- Canadian Institute of Chartered Accountants (CICA) Handbook: Assurance Section 5025
- Certified emissions measurement and reduction scheme (CEMARS)
- Chicago Climate Exchange (CCX) verification standard
- Compagnie Nationale des Commissaires aux Comptes (CNCC)
- Corporate GHG verification guidelines from ERT
- DNV Verisustain Protocol/ Verification Protocol for Sustainability Reporting
- Earthcheck Certification
- ERM GHG Performance Data Assurance Methodology
- European Union Emissions Trading System (EU ETS)
- IDW PS 821: IDW Prüfungsstandard: Grundsätze ordnungsmäßiger Prüfung oder prüferischer Durchsicht von Berichten im Bereich der Nachhaltigkeit
- IDW AsS 821: IDW Assurance Standard: Generally Accepted Assurance Principles for the Audit or Review of Reports on Sustainability Issues
- ISAE3000
- ISAE 3410
- ISO14064-3
- Japan voluntary emissions

				<ul style="list-style-type: none"> trading scheme (JVETS) guideline for verification ● Korean GHG and energy target management system ● NMX-SAA-14064-3-IMNC: Instituto Mexicano de Normalización y Certificación A.C ● RevR6 procedure for assurance of sustainability report ● Saitama Prefecture Target-Setting Emissions Trading Program ● SGS Sustainability Report Assurance ● Spanish Institute of Registered Auditors (ICJCE) ● Standard 3810N Assurance engagements relating to sustainability reports of the Royal Netherlands Institute of Registered Accountants ● State of Israel Ministry of Environmental Protection, Verification of GHG and emissions reduction in Israel Guidance Document ● Swiss Climate CO2 Label for Businesses ● Thai Greenhouse Gas Management Organisation (TGO) Greenhouse Gas (GHG) Verification Protocol ● The Climate Registry's General Verification Protocol ● Tokyo cap-and-trade guideline for verification ● Verification as part of Carbon Trust standard certification ● Other, please specify
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[Add Row]

Requested content

General

- If you are reporting third party verification or assurance underway, your entries into the table should reflect the emissions that are being subject to verification/assurance for the current reporting year, with the exception of the attached statement, which will relate to a previous year.
- CDP understands that you may seek verification for reasons other than reporting to CDP and that confidential information may be included within your detailed verification statement. In this case, it is sufficient for your verifier/assurer to attest to the Scope and level of assurance/verification through correspondence such as an abbreviated statement as long as this covers the data points outlined below (see guidance for column 5 'Attach your statement here').

Scope (column 1)

- Select the Scope to which your verification/assurance statement applies.
- If you operate in a region where you need to calculate both a location-based and a market-based figure to meet Scope 2 requirements, at this stage CDP only requires for you to verify one of these figures.
- However, in the interest of transparency, you are asked to disclose which of the two figures you have verified.
- If you are verifying your market-based Scope 2 emissions figure and your verification engagements cover >70% of your Scope 2 activity, but less than 70% of your Scope 2 emissions, this will be acceptable for full points provided you attach the relevant statement.

Verification or assurance cycle in place (column 2)

- A biennial verification/assurance process is where emissions are verified once every two years and a triennial verification/assurance process is where emissions are verified once every three years.
- You may refer to the further information provided on Annual, biennial and triennial processes in C10.1 for further information on annual, biennial and triennial processes, and how these selections will be scored.

Status in the current reporting year (column 3)

- Please select the option that is most appropriate to your company.

Type of verification or assurance (column 4)

- This column relates to the type of verification or assurance that has been awarded.
- The option that is relevant will depend on the verification standard to which the verification process has been completed and the level of assurance agreed between the verifier and the company.
- Companies can select from the following options:
 - Not applicable - In very few cases, usually in program based compliance, the verification standard does not include a level of assurance; in this case select this option.
 - Limited assurance - This is one of the most common levels of assurance and, for example, is appropriate to verification undertaken in accordance with ISO14064-3, ISAE3000, ASAE3000 and The Climate Registry.
 - Moderate assurance - For example, this level of assurance is appropriate to verification undertaken in accordance with AA1000 and AT105.
 - Reasonable assurance - For example, this is appropriate to verification undertaken under ISO14064-3, ISAE3000, ASAE3000 and The Climate Registry; all verification undertaken for EU ETS compliance is to a level of "reasonable assurance" (according to the requirements of EA-6/03).
 - High assurance - For example, this is appropriate to verification undertaken in accordance with AA1000 and AT105.
 - Third party verification/assurance underway - Select this option if verification/assurance is underway and you do not yet know the level of assurance that you are intending to achieve.

Attach the statement (column 5)

- To attach your statement please click "File upload" button (paperclip icon) to drag and drop a file.
- Note the requirements for the statement detailed below and the option to use the CDP template.
- All companies should attach a verification statement here unless they have selected "No verification or assurance of current reporting year" or "Underway but not complete for current reporting year – first year it has taken place" in column 3 'Status in the current reporting year'. The statement should:

- Clearly state that GHG emissions have been verified or assured as part of the process. If the statement refers to other documents that have been verified (such as Sustainability Report, Financial Report, GRI etc.) where items verified are specified, please attach those to the question as well;
- Relate to the relevant Scope;
- Clearly state the opinion and type of verification/assurance that has been given and the verification standard used. Assurers/verifiers must define the finding in their opinion, simply stating "limited assurance" is not

sufficient to fulfill this criterion. These should match the selections made in columns 2 and 3; and

- Covers the current reporting year, or covers the 12-months prior for annual processes, 12-24 months prior for biennial processes, or 12-36 months prior for triennial processes if "Underway but not complete for reporting year – previous statement of process attached" is selected in "Status in the current reporting year" column.

Page/section reference (column 6)

- Please identify the page and the section that contains details of your verification/assurance of Scope 1 or Scope 2 location based/market-based emissions.

Relevant standard (column 7)

- This column captures the verification standard against which the verification process has been undertaken.
- It does not refer to the reporting or calculation standard. CDP has produced criteria for what constitutes an acceptable verification standard. All accepted verification standards, and exceptions to their use, are listed here. If you are using a verification standard that is not listed in the "accepted standards" nor the "non-verification standards," please email respond@cdp.net in order to have your verification standard reviewed. If you do not have your standard reviewed by contacting us and your response is submitted before the official CDP deadline, CDP will then review the standard used and add it to the website under "accepted" or "not accepted" depending on the outcome of the standard review. If the response is submitted after the official deadline, CDP cannot commit to review the standard used in time for scoring.
- Select from the accepted standards listed or use "Other, please specify" if the standard you are using is not included.
- If you select "Other, please specify", provide a label for the Relevant standard.
- The verification standard should be stated on the verification statement.

Proportion of reported emissions verified (%) (column 8)

- It may be the case that only a sub-section of your emissions has been verified/assured due to, for example, regulatory requirements.
- Please identify what proportion of your total reported emissions for the selected Scope(s) that have been subject to the verification/assurance process described.

Additional information

- **Verification processes:** If you have attained verification covering all your reported Scope 1 emissions (for example GHG emissions reported in your sustainability report) and also other verification covering smaller proportion of your business (for example only Californian operations or facilities under EU ETS regulation), you only should report the verification in place covering all reported Scope 1 emissions. If you have multiple verification practices covering different business divisions (for example Californian operations and facilities under EU ETS), you should report all of them by adding rows to the table, completing all columns, and attaching the appropriate documents for each verification practice.
- Note that this question refers to the proportion of your total reported gross global Scope 1 emissions over which you have sought verification, not the sampling regime that the verifier employed. For example, if you have only sought verification over your US operations then you should report the percentage of your total reported gross global Scope 1 emissions that these US facilities represent. Alternatively, if you have sought organization-wide verification, then you should enter 100%. If you have reported your full GHG inventory in your corporate communications material which has been verified, please enter 100%. If you are reporting third party verification or assurance underway, your answer should reflect the proportion of emissions that are being subject to verification/assurance for the current reporting year.

(C10.1b) Provide further details of the verification/assurance undertaken for your Scope 3 emissions and attach the relevant statements.

Question dependencies

This question only appears if you select "Third-party verification or assurance process in place" for Scope 3 emissions in response to C10.1.

Change from 2018

No change

Rationale

By verifying information beyond emissions figures, companies demonstrate their commitment to transparency. This question gives data users further confidence in the accuracy of the data reported.

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.

Scope	Verification or assurance cycle in place	Status in the current reporting year	Attach the statement	Page/ section reference	Relevant standard

Select from: ● Scope 3- all relevant categories ● Scope 3- at least one applicable category	Select from: ● Annual process ● Biennial process ● Triennial process	Select from: ● No verification or assurance of current reporting year ● Underway but not complete for current reporting year – first year it has taken place ● Underway but not complete for reporting year – previous statement of process attached ● Complete	Attach your document here.	Text field [maximum 500 characters]	Select from: ● AA1000AS ● Advanced technologies promotion Subsidy Scheme with Emission reduction Target (ASSET) ● Airport Carbon Accreditation (ACA) des Airports Council International Europe ● Alberta Specified Gas Emitters Regulation (SGER) ● ASAE3000 ● Attestation standards established by AICPA (AT105) ● Australian National GHG emission regulation (NGER) ● California Mandatory GHG Reporting Regulations (CARB) ● Canadian Institute of Chartered Accountants (CICA) Handbook: Assurance Section 5025 ● Certified emissions measurement and reduction scheme (CEMARS) ● Chicago Climate Exchange (CCX) verification standard ● Compagnie Nationale des Commissaires aux Comptes (CNCC) ● Corporate GHG verification guidelines from ERT ● DNV Verisustain Protocol/ Verification Protocol for Sustainability Reporting ● Earthcheck Certification ● ERM GHG Performance Data Assurance Methodology ● European Union Emissions Trading System (EU ETS) ● IDW PS 821: IDW Prüfungsstandard: Grundsätze ordnungsmäßiger Prüfung oder prüferischer Durchsicht von Berichten im Bereich der Nachhaltigkeit ● IDW Ass 821: IDW Assurance Standard: Generally Accepted Assurance Principles for the Audit or Review of Reports on Sustainability Issues ● ISAE3000 ● ISAE 3410 ● ISO14064-3 ● Japan voluntary emissions trading scheme (JVETS) guideline for verification ● Korean GHG and energy target management system ● NMX-SAA-14064-3-IMNC: Instituto Mexicano de Normalización y Certificación A.C ● RevR6 procedure for assurance of sustainability report ● Saitama Prefecture Target-Setting Emissions
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				Trading Program <ul style="list-style-type: none"> ● SGS Sustainability Report Assurance ● Spanish Institute of Registered Auditors (ICJCE) ● Standard 3810N Assurance engagements relating to sustainability reports of the Royal Netherlands Institute of Registered Accountants ● State of Israel Ministry of Environmental Protection, Verification of GHG and emissions reduction in Israel Guidance Document ● Swiss Climate CO2 Label for Businesses ● Thai Greenhouse Gas Management Organisation (TGO) Greenhouse Gas (GHG) Verification Protocol ● The Climate Registry's General Verification Protocol ● Tokyo cap-and-trade guideline for verification ● Verification as part of Carbon Trust standard certification ● Other, please specify
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[Add Row]

Requested content

General

- If you are reporting third party verification or assurance underway, your entries into the table should reflect the emissions that are being subject to verification/assurance for the current reporting year, with the exception of the attached statement, which will relate to a previous year.
- CDP understands that you may seek verification for reasons other than reporting to CDP and that confidential information may be included within your detailed verification statement. In this case, it is sufficient for your verifier/assurer to attest to the Scope and level of assurance/verification through correspondence such as an abbreviated statement as long as this covers the data points outlined below (see guidance for column 4 'Attach your statement here').

Scope (column 1)

- Select the Scope to which your verification/assurance statement applies. Organizations can report the verification/assurance of all relevant categories or at least one applicable category.
- The categories of Scope 3 emissions can be found in the [Greenhouse Gas Protocol's Corporate Value Chain \(Scope 3\) Accounting and Reporting Standard](#). Organizations should refer to the standard for information on each source category of Scope 3 emissions.

Verification or assurance cycle in place (column 2)

- A biennial verification/assurance process is where Scope 3 emissions are verified once every two years and triennial verification/assurance process where Scope 3 emissions are verified once every three years.
- You may refer to the further information in C10.1 on annual, biennial and triennial processes for further information on annual, biennial and triennial processes.

Status in the current reporting year (column 3)

- Please select the option most appropriate to your company.

Attach the statement (column 4)

- To attach your statement please click "File upload" button (paperclip icon) to drag and drop a file.
- Note the requirements for the statement detailed below and the option to use the CDP template.
- All companies should attach a verification statement here unless they have selected "No verification or assurance of current reporting year" or "Underway but not complete for current reporting year – first year it has taken place" in column 3 'Status in the current reporting year'. The statement should:

- Clearly state that GHG emissions have been verified or assured as part of the process. If the statement refers to other documents that have been verified (such as Sustainability Report, Financial Report, GRI etc.) where items verified are specified, please attach those to the question as well;
- Relate to the relevant Scope 3 category;
- Clearly state the opinion and type of verification/assurance that has been given and the verification standard used;
- Covers the current reporting year, or covers the 12-months prior if "Underway but not complete for reporting year – previous statement of process attached" is selected in "Status in the current reporting year" column.

Page/section reference (column 5)

- Please identify the page and the section that contains details of your verification/assurance of Scope 3 emissions.

Relevant standard (column 6)

- This column captures the verification standard against which the verification process has been undertaken. It does not refer to the reporting or calculation standard.
- CDP has produced criteria for what constitutes an acceptable verification standard. All accepted verification standards, and exceptions to their use, are listed here.
- The verification standard should be stated on the verification statement. If the response is submitted before the official CDP deadline, CDP will then review the standard used and add it to the website under "accepted" or "not accepted" depending on the outcome of the standard review.
- If the response is submitted after the official deadline, CDP cannot commit to review the standard used in time for scoring.
- Select from the accepted standards listed or use "Other, please specify" if the standard you are using is not included.
- If you select "Other, please specify", provide a label for the Relevant standard.

Other verified data

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

Change from 2018

No change

Rationale

This information gives data users further confidence in the information provided in your organization's response. Data users often ask about the credibility/ quality of the data and other information disclosed. CDP supports verification and assurance as good practice in environmental reporting as it ensures the quality of data and processes disclosed. This question allows leading companies to report their efforts on this, and to highlight trends that CDP data users might anticipate being good practice among companies in the future.

Response options

Select one of the following options:

- Yes
- In progress
- No, but we are actively considering verifying within the next two years
- No, we are waiting for more mature verification standards and/or processes
- No, we do not verify any other climate-related information reported in our CDP disclosure

(C10.2a) Which data points within your CDP disclosure have been verified, and which verification standards were used?

Question dependencies

This question only appears if you select "Yes" in response to C10.2.

Change from 2018

No change

Rationale

This information gives data users further confidence in the information provided in your organization's response. Data users often ask about the credibility/ quality of the data and other information disclosed. CDP supports verification and assurance as good practice in environmental reporting as it ensures the quality of data and processes disclosed. This question allows leading companies to report their efforts on this, and to highlight trends that CDP data users might anticipate being good practice among companies in the future.

Connection to other frameworks

SDG

Goal 7: Affordable and clean energy

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.

Disclosure module verification relates to	Data verified	Verification standard	Please explain
Select from: <ul style="list-style-type: none">● C0. Introduction● C1. Governance● C2. Risks and opportunities● C3. Business Strategy● C4. Targets and performance● C5. Emissions performance● C6. Emissions data● C7. Emissions breakdown● C8. Energy● C9. Additional metrics● C11. Carbon pricing● C12. Engagement● C13. Other land management● C14. Sign off● SC. Supply chain module	Select from: <ul style="list-style-type: none">● Year on year change in emissions (Scope 1)● Year on year change in emissions (Scope 2)● Year on year change in emissions (Scope 1 and 2)● Year on year change in emissions (Scope 3)● Year on year emissions intensity figure● Financial or other base year data points used to set a science-based target● Progress against emissions reduction target● Change in Scope 1 emissions against a base year (not target related)● Change in Scope 2 emissions against a base year (not target related)● Change in Scope 3 emissions against a base year (not target related)● Product footprint verification● Emissions reduction activities● Renewable energy products● Don't know● Other, please specify	Text field [maximum 1,500 characters]	Text field [maximum 1,500 characters]

[Add Row]

Requested content

Disclosure module verification relates to (column 1)

- Select the questionnaire module that the verification standard applies to.

Data verified (column 2)

- Select from the data points provided or use "Other, please specify" if the data you have verified is not included.
- If you select "Other, please specify", provide a label for the Data verified.

Verification standard (column 3)

- This column captures the verification standard against which the verification process has been undertaken. It does not refer to the reporting or calculation standard.
- Clearly state the type of verification/assurance that has been given and the name of the verification standard used.
- CDP has produced criteria for what constitutes an acceptable verification standard. All accepted verification standards, and exceptions to their use, are listed[here](#).

Please explain (column 4)

- Explain here why your company has chosen to verify the selected data points with each given standard.
- Where possible, reference specific question numbers.
- You can also describe here the frequency with which you complete this verification and the scope it encompasses.
- Outline if you have sought organization wide verification or if you have only sought verification over a certain proportion of your operations.
- If you want to attach a document relating to the verification please click "File upload" button (paperclip icon) to drag and drop a file.

C11 Carbon pricing

Module Overview

Carbon pricing has emerged as a key policy mechanism to drive greenhouse gas emissions reductions and mitigate the dangerous impacts of climate change. As the number of jurisdictions with carbon pricing policies has doubled over the last decade, CDP data users are interested in understanding how companies are affected by these schemes.

This module examines details on the operations or activities regulated by carbon pricing systems, carbon credits and internal prices on carbon.

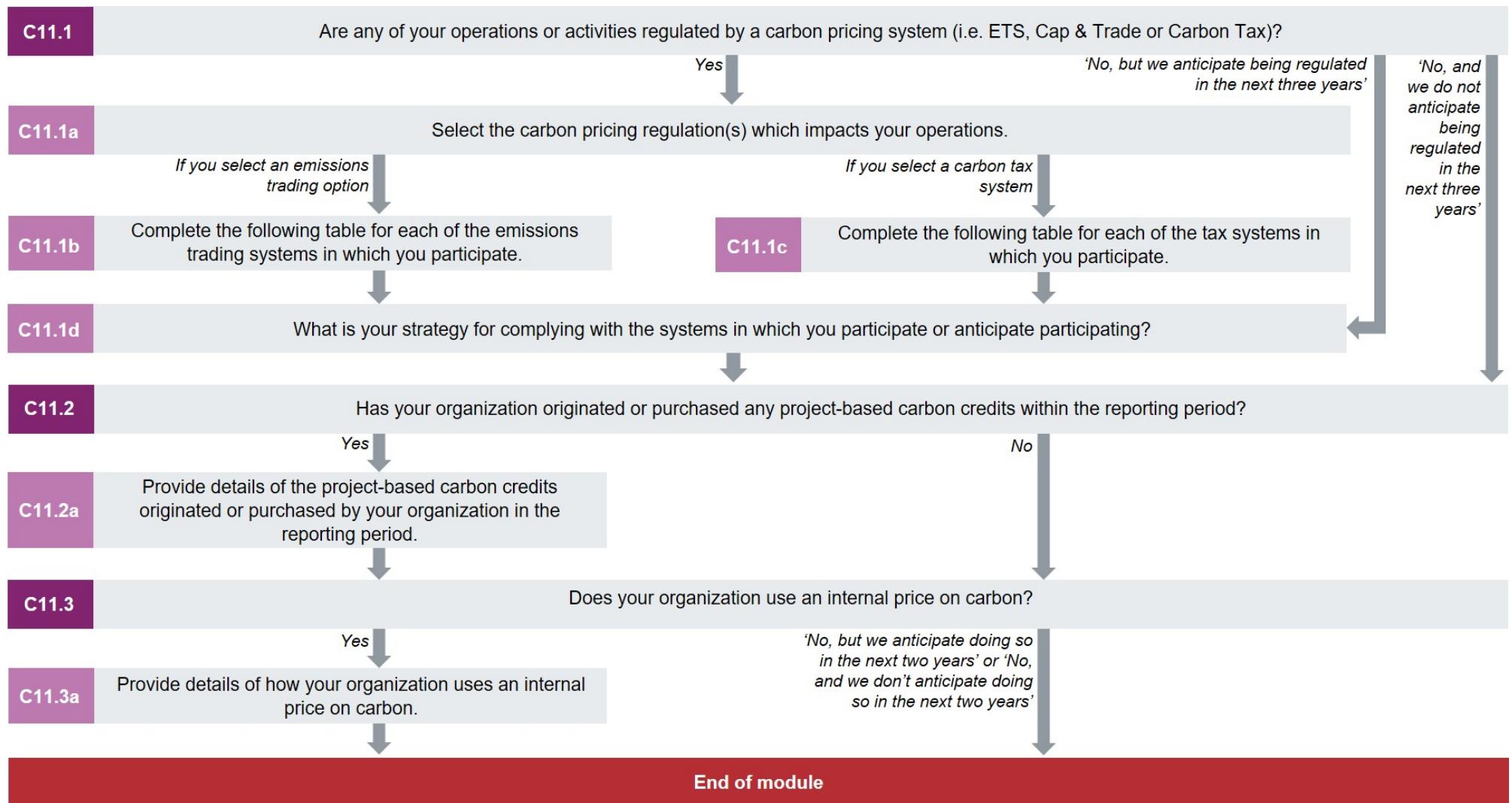
For further guidance on reporting to the questions in this module see CDP's Technical Note [Carbon Pricing: CDP Disclosure Best Practice](#).

Key changes

None.

Pathway diagram - questions

This diagram shows the general questions contained in module C11. To access question-level guidance, use the menu on the left to navigate to the question.



Carbon pricing systems

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

Change from 2018

No change

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 has emerged as 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.

- Carbon pricing in the form of emissions trading schemes and carbon taxes worldwide, covered US\$52 billion worth of pollution in 2017. Carbon pricing policies currently exist in 42 countries at the national level and 25 areas at the subnational level – numbers that have almost doubled since 2012. Considering this growing trend to combat climate change risks, additional countries and regions are also considering or already planning carbon pricing initiatives for the near future.

For more information, please see:

- [State and Trends of Carbon Pricing 2017](#). World Bank, 2017.
- [Carbon Pricing Dashboard](http://carbonpricingdashboard.worldbank.org/) (<http://carbonpricingdashboard.worldbank.org/>)
- [CDP's Carbon Pricing web page](#)
- CDP's Technical Note [Carbon Pricing: CDP Disclosure Best Practice](#)

(C11.1a) Select the carbon pricing regulation(s) which impacts your operations.

Question dependencies

This question only appears if you select "Yes" in response to C11.1.

Change from 2018

No change

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

Select all that apply from the following options:

- Alberta carbon tax
- Alberta SGER
- Australia ERF Safeguard Mechanism
- BC carbon tax
- BC GGIRCA
- Beijing pilot ETS
- California CaT
- Chile carbon tax
- China national ETS
- Chongqing pilot ETS
- Colombia carbon tax
- Denmark carbon tax
- Estonia carbon tax
- EU ETS
- Finland carbon tax
- France carbon tax
- Fujian pilot ETS
- Guangdong pilot ETS
- Hubei pilot ETS
- Iceland carbon tax
- Ireland carbon tax
- Japan carbon tax
- Kazakhstan ETS
- Korea ETS
- Latvia carbon tax
- Liechtenstein carbon tax
- Mexico carbon tax
- New Zealand ETS
- Norway carbon tax

- Ontario CaT
- Poland carbon tax
- Portugal carbon tax
- Québec CaT
- RGGI
- Saitama ETS
- Shanghai pilot ETS
- Shenzhen pilot ETS
- Slovenia carbon tax
- Sweden carbon tax
- Switzerland carbon tax
- Switzerland ETS
- Tianjin pilot ETS
- Tokyo CaT
- UK carbon price floor
- Ukraine carbon tax
- Washington CAR
- Other ETS, please specify
- Other carbon tax, please specify

Requested content

General

- Select from the carbon pricing regulation(s) which impacts your operations listed or use "Other, please specify" if the carbon pricing regulation(s) you are using is not included.
- If you select "Other carbon tax/ETS, please specify," provide a label for the carbon pricing regulation(s) which impacts your operations.

(C11.1b) Complete the following table for each of the emissions trading systems in which you participate.

Question dependencies

This question only appears if you select an emissions trading option in response to C11.1a.

Change from 2018

No change

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. 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.

System name	% of Scope 1 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]	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 emissions in metric tons CO2e	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]	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.
- You can make multiple entries to enter data for individual schemes and/or individual years.

Period start date and end date (columns 3 and 4)

- 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 is now in its third phase from 2013 to 2020, however the monitoring period of the annual compliance cycle runs 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 emissions in metric tons CO2e (column 7)

- Companies participating in systems with verification deadlines at a later date than the CDP disclosure period, such as the California Cap and Trade, 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.

Details of ownership (column 8)

- 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 9)

- 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)

- **European Union (EU) Emissions Trading System (2005):** The EU ETS is currently the largest and most comprehensive ETS in place. It covers medium and large emitters and is expanding to include other industries. Allowances are allocated to companies based on National Allocation Plans determined by individual countries. Since 2013 allowances have been centrally coordinated by the European Commission. Companies that emit more than their allocated allowances need to purchase allowances from other companies that wish to sell theirs or purchase offset credits from the Kyoto Protocol's flexible mechanisms.

- As directed above, companies should use question C11.1b to report the allowances that they have been allocated and those that they have needed to purchase in the reporting year.

- **Alberta Emissions Trading Scheme (2007):** Alberta's emissions trading scheme is slightly different than others such as the EU ETS as it is based on emissions intensity targets. Companies in the scheme are given a target for their emissions (based on emissions intensity) each year. If they do not reach this target, they have to purchase project-based credits, allowances from over-achieving participants, or pay into a fund.

- In the context of the CDP response, the target emissions must be converted into absolute emissions, and can then be reported as the "allowances allocated." The emissions that are accounted for through project-based credits, allowances from over-achievers or by paying into the fund must again be converted into absolute emissions and can then be reported as "allowances purchased."

Further resources on current and proposed emissions trading systems:

- [State and Trends of Carbon Pricing 2017](#), World Bank, 2017
- [Carbon Pricing Dashboard](#), World Bank, 2017

(C11.1c) Complete the following table for each of the tax systems in which you participate.

Question dependencies

This question only appears if you select a carbon tax system in response to C11.1a.

Change from 2018

No change

Rationale

This new question will allow investors to consistently track and analyze, in a detailed and consistent manner, the corporations participating in carbon tax systems as well as what costs they currently bear.

Connection to other frameworks

SDG

Goal 13: Climate action

Response options

Please complete the following table

Pricing system	Period start date	Period end date	% of emissions covered by tax	Total cost of tax paid	Comment
Fixed table rows are populated by selection in C11.1a	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.	Numerical field [enter a number from 0-100 using a maximum of 2 decimal places and no commas]	Numerical field [enter a number from 0-999,999,999,999 using a maximum of 2 decimal places and no commas]	Text field [maximum 2,400 characters]

Requested content

General

- Carbon taxes are intended to directly charge emitters for the cost of pollution. However, the policy application of this definition changes on a system-by-system basis and may affect sectors differently. For example, some policies may tax producers directly; others may attribute the cost to consumers of the processed fossil fuels (i.e. utilities); and others yet may tax users such as in the form of big businesses.

Period start date and end date (columns 2 and 3)

- Please note that the period reported should overlap with the reporting year.

- If you are using the Export/Import functionality, please check that the imported date is correct.

% of emissions covered by tax (column 4)

- This column requests the percentage of the total emissions in the reporting period that were taxed by this carbon tax.

Total cost of tax paid (column 5)

- The total cost of tax paid reported here should be total cost of this carbon tax paid in the reporting period.

Comment (column 6)

- If you select "Other carbon tax, please specify" in C11.1a then please provide the full name of the carbon tax in this column.

Additional information

- **Implementation of carbon tax:** Below are some examples of taxes attributed to various producing/consuming entities.

- **British Columbia Revenue-Neutral Carbon Tax (2008):** The British Columbia carbon tax is one of two regional carbon taxes in the world (the other being in Alberta, also in Canada). The policy applies to all sectors in aims of nudging business towards more energy efficient, and thus more cost efficient, operations. Tax revenue is recycled back to payers in the form of other reductions or returns. Fossil fuel producers and importers are liable for a monthly payment of the tax.

- **Japan's Tax for Climate Change Mitigation (2012):** Japan's carbon tax applies to all sectors and even with some exemptions, captures almost 70% of the country's GHG emissions. The tax aims to fairly distribute the cost of fossil fuel usage and incentivize the transition to a low-carbon economy. Costs are incurred by the fossil fuel producers, who are expected to pay the tax on a bimonthly basis.

- **United Kingdom Carbon Price Floor (2013):** The UK's CPF covers the power sector at a higher tax rate than the EU ETS market price. This policy considers power producers as the users of fossil fuels and thus attributes the quarterly tax for fossil fuels to them.

(C11.1d) What is your strategy for complying with the systems in which you participate or anticipate participating?

Question dependencies

This question only appears if you select "Yes" or "No, but we anticipate being regulated in the next three years" in response to C11.1

Change from 2018

No change

Rationale

This question provides data users with insight into an organization's long-term compliance and regulatory risk management strategy for the carbon pricing systems in which they participate or anticipate participating in.

Connection to other frameworks

SDG

Goal 13: Climate action

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

- Some of the options for compliance include emissions reductions strategies, efficiency upgrades, purchase of allowances and the purchase of carbon credits.

- Depending on how long your company has been regulated by a carbon pricing system, efficiency upgrades may not provide the amount of reductions necessary to comply with regulations. If that is the case for your company, then you are also encouraged to detail your company's long-term compliance and regulatory risk management strategy; including the specific metric(s) or mechanism(s) used – for example, a dedicated carbon risk management team or the use of an internal carbon price. If you use an internal carbon price, please make note of this here and provide specific details the subsequent question (C11.3a).

Project-based carbon credits

(C11.2) Has your organization originated or purchased any project-based carbon credits within the reporting period?

Change from 2018

No change

Rationale

Carbon credits are used by organisations for the purposes of compliance or as voluntary carbon offsets and can support the transition to a low carbon future. Data users are interested in learning about organizations who have utilized carbon credits either by originating or purchasing.

Connection to other frameworks

SDG

Goal 13: Climate action

Response options

Select one of the following options:

- Yes
- No

Requested content

General

- This question only applies to companies that have originated carbon credits or who have purchased them for the purposes of compliance or as voluntary carbon offsets.
- It is not intended to capture trading desk activity and therefore if your only reason for purchasing credits is to re-sell them, you should answer "No" to this question.

(C11.2a) Provide details of the project-based carbon credits originated or purchased by your organization in the reporting period.

Question dependencies

This question only appears if you select "Yes" in response to C11.2.

Change from 201

Minor change

Rationale

Carbon credits can be originated from a variety of projects and are verified to a number of standards, data users are interested in learning about the scope of project types that are contributing to credit origination and purchase. Data users are also requesting information on the objectives of organizations who have originated or purchased carbon credits and the extent to which they are used to achieve these objectives.

Connection to other frameworks

SDG

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.

Credit origination or credit purchase	Project type	Project identification	Verified to which standard
Select from: <input type="radio"/> Credit origination <input type="radio"/> Credit purchase	Select from: <input type="radio"/> Agriculture <input type="radio"/> Biomass energy <input type="radio"/> Cement <input type="radio"/> CO2 usage <input type="radio"/> Coal mine/bed CH4 <input type="radio"/> Energy distribution <input type="radio"/> Energy efficiency: households <input type="radio"/> Energy efficiency: industry <input type="radio"/> Energy efficiency: own generation <input type="radio"/> Energy efficiency: service <input type="radio"/> Energy efficiency: supply side <input type="radio"/> Forests <input type="radio"/> Fossil fuel switch <input type="radio"/> Fugitive <input type="radio"/> Geothermal <input type="radio"/> HFCs <input type="radio"/> Hydro <input type="radio"/> Landfill gas <input type="radio"/> Methane avoidance <input type="radio"/> N2O <input type="radio"/> PFCs and SF6 <input type="radio"/> Solar <input type="radio"/> Tidal <input type="radio"/> Transport <input type="radio"/> Wind <input type="radio"/> Other, please specify	Text field [maximum 2,400 characters]	Select from: <input type="radio"/> CDM (Clean Development Mechanism) <input type="radio"/> JI (Joint Implementation) <input type="radio"/> Gold Standard <input type="radio"/> VCS (Verified Carbon Standard) <input type="radio"/> VER+ (TÜV SÜD standard) <input type="radio"/> CAR (The Climate Action Reserve) <input type="radio"/> ACR (American Carbon Registry) <input type="radio"/> CCBS (developed by the Climate, Community and Biodiversity Alliance, CCBA) <input type="radio"/> Plan Vivo <input type="radio"/> Emissions Reduction Fund of the Australian Government <input type="radio"/> Not yet verified <input type="radio"/> Other, please specify

Number of credits (metric tons CO2e)	Number of credits (metric tons CO2e): Risk adjusted volume	Credits cancelled	Purpose, e.g. compliance
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: <input type="radio"/> Yes <input type="radio"/> No <input type="radio"/> Not relevant	Select from: <input type="radio"/> Compliance <input type="radio"/> Voluntary Offsetting <input type="radio"/> Not applicable <input type="radio"/> Other, please specify

[Add Row]

Requested content

General

- If you select "Other, please specify," provide a label for the Project type, Verified to which standard or Purpose, e.g. compliance.

Project-based carbon credit types

- Credits can be originated by a variety of projects and for several markets, which configures several project-based carbon credit types.
- Examples of project-based carbon credits include:

- Certified Emission Reductions (CERs) generated by activities under the Clean Development Mechanism (CDM);
- Emission Reduction Units (ERUs) generated by activities under the Joint Implementation mechanism; and
- Voluntary Emission Reductions (VERs) generated by activities that reduce emissions, but do not result in the creation of compliance-grade carbon units.

Credit origination or credit purchase (column 1)

- **Credit origination** - Select this option if you are the company to which the credits are originally issued (e.g. you are one of the participating entities of a Clean Development Mechanism (CDM) project and you are entitled to a share of the credits issued by the CDM registry).
- **Credit purchase** - Select this option if you bought the credits from another company.

Number of credits (metric tonnes CO₂e) (column 5)

- Enter the total number of annual credits that you have originated or purchased in metric tonnes CO₂e based on the figures supplied in the agreements.
- The number of credits reported should be the credits that were originated for the reporting period, irrespective of whether you have already sold them and of whether they have been canceled or not.

Number of credits (metric tonnes CO₂e): Risk-adjusted volume (column 6)

- Credits are sold at different stages in the life cycle of a project and therefore the volume of credits predicted will be adjusted according to different criteria, such as sector of project, stage of project, etc.
- Use this column to enter the number of annual credits that you are originating (in the pipeline), or, when you have purchased projects/credits that are still in the pipeline, provide a risk-adjusted figure (in metric tonnes CO₂e) according to the level of risk.
- For the most part, this column applies to CDM projects that are in the pipeline and are not yet approved. Often the actual GHG reductions from a project are lower than initially forecasted, largely due to the materialization of risks associated with the project. This uncertainty means that these credits can usually be purchased at a significantly lower price than credits pertaining to more advanced stages of a project. Credits that are not yet produced in the CDM register, or in other words those that pertain to a project that is in its initial stages, are adjusted according to the risk factors and measured in "risk-adjusted volume." If companies have no risks associated with their credit portfolio, then risk-adjusted volume can be equal to "number of credits."

Credits canceled (column 7)

- "Canceled" means that the certificate cannot be used again.
- For further information, please check the Technical Note "[Retirement vs. cancellation of instruments](#)."

Internal price on carbon

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

Change from 2018

No change

Rationale

Internal carbon pricing has emerged as a multifaceted tool that supports companies in assessing climate-related risks and opportunities. Investors want to know more about organizations who attribute a monetary value to these risks and translate them into a uniform metric.

Response options

Select one of the following options:

- Yes
- No, but we anticipate doing so in the next two years
- No, and we don't anticipate doing so in the next two years

Additional information

- **Internal carbon price:** Over the past few years, CDP has been tracking a steady increase in the number of companies embedding an internal carbon price into their business strategies. From 150 global companies in 2014, the number has steadily grown to nearly 1,400 companies in 2017 – including more than 100 Fortune Global 500 companies with collective annual revenues of about US\$7 trillion – disclosing that they are using an internal carbon price or are planning to do so within the next two years.
- This growth is steady across all sectors and regions; largely driven by the parallel development of regulations that directly or indirectly price carbon and the increasing pressure from shareholders and customers for companies to adequately manage their climate-related risks.

The three main reasons for internal carbon pricing are outlined below:

- **Managing risks:** Companies internalize the existing, expected or potential price of carbon – from an ETS, carbon tax, or implicit carbon pricing policy – to assess its risk exposure to regulations that affect the cost of emitting CO₂.
- **Identifying opportunities:** Companies also use an internal carbon price as a tool to reveal potential opportunities that may emerge in the transition to the low-carbon economy. As policy and legal, market, technological and reputational factors shift, they also present opportunities for companies to seize. When used as a generic proxy in this way, an internal carbon price can help guide strategic decisions, such as low-carbon R&D to create the products and services of the future.
- **Transitioning to low-carbon activities:** A smaller number of organizations deliberately use an internal carbon price to drive emissions reductions and incentivize low-carbon activities – such as energy efficiency investments, clean energy, development of green products/services – in order to facilitate a company-wide low-carbon transition. This includes companies who utilize voluntary carbon markets to offset their emissions, although increasingly the focus has been on driving down emissions within the company.

For more information, please read the following documents:

- [How-To Guide to Corporate Internal Carbon Pricing](#): Four dimensions to best practice approaches. Ecofys, The Generation Foundation and CDP, 2017.
- [Putting a price on carbon: Integrating climate risk into business planning](#). CDP, 2017.
- [CDP's Carbon Pricing web page](#)

(C11.3a) Provide details of how your organization uses an internal price on carbon.

Question dependencies

This question only appears if you select "Yes" in response to C11.3.

Change from 2018

No change

Rationale

Investors have requested data on why and how internal carbon pricing is used as a tool to assess and manage carbon-related risks and opportunities within a business' operations, supply chain, and investments. This information can help an investor gauge the efficacy of a company's application of the carbon price in terms of meeting its objectives.

Connection to other frameworks

2018 RobecoSAM Corporate Sustainability Assessment (DJSI)

Internal carbon pricing

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.

Objective for implementing an internal carbon price	GHG Scope	Application	Actual price(s) used (Currency /metric ton)	Variance of price(s) used	Type of internal carbon price	Impact & implication
Select all that apply: <ul style="list-style-type: none">● Navigate GHG regulations● Stakeholder expectations● Change internal behavior● Drive energy efficiency● Drive low-carbon investment● Stress test investments● Identify and seize low-carbon opportunities● Supplier engagement● Other, please specify	Select all that apply: <ul style="list-style-type: none">● Scope 1● Scope 2● Scope 3	Corporate structure that price is applied to (i.e. business units, corporate divisions, facilities) Text field [maximum 1,000 characters]	Numerical field [enter a number from 0-99,999,999,999 using a maximum of 2 decimal places and no commas]	Text field [maximum 2,400 characters]	Select all that apply: <ul style="list-style-type: none">● Shadow price● Internal fee● Internal trading● Implicit price● Offsets● Other, please specify	Text field [maximum 2,400 characters]

[Add Row]

Requested content

Objective for implementing an internal carbon price (column 1)

- Select your company's objective(s) for implementing an internal carbon price. In many cases, companies report multiple objectives – particularly as developments occur that require a readjustment of their pricing approach to maximize its effectiveness.
- The available options reflect the most common objectives that companies disclose to CDP; this list is not exhaustive and you can specify other objectives by selecting "Other, please specify."
- If you select "Other, please specify," provide a label for the Objective for implementing an internal carbon price.

GHG Scope (column 2)

- Identify the Scope(s) of emissions covered by the internal carbon pricing mechanism. An effective internal carbon price is one that incentivizes a company to reduce greenhouse gas emissions throughout their value chain and to integrate low-carbon activities into their operations.
- Ideally companies will consider their impact beyond just Scope 1 and 2 emissions to address risks and opportunities associated with their Scope 3 emissions as well, such as in sourcing and procurement decisions (upstream) and R&D decisions regarding innovation in the market (downstream).

Application (column 3)

- Disclose the part(s) of the business decision-making process that the internal carbon pricing mechanism applies to, and the degree of influence it has on business decisions (i.e. to what degree does a company enforce the use of the price?). The steps and depth at which an internal carbon price will be applied in the business decision-making process will vary by company.
- Commonly disclosed applications include decisions regarding capital expenditure, operations, procurement, product and R&D, and remuneration.

Actual price(s) used (Currency/metric ton) (column 4)

- Disclose the carbon price level(s).
- The currency used here should match the currency selected in C0.4.

Variance of price(s) used (column 5)

- For companies using internal carbon pricing in stress-testing or scenario analysis, it is particularly important to disclose assumptions made about how price(s) would develop over time; the geographic and economic scope of application; whether the price is applied across the entire company or to specific business units or decisions, and whether a uniform or differentiated price is used.
- Common approaches to pricing are outlined below:

- **Uniform pricing:** a single price that is applied throughout the company independent of geography, business unit, or type of decision
- **Differentiated pricing:** a price that varies by region, business unit or type of decision
- **Static pricing:** a price that is constant over time
- **Evolutionary pricing:** a price that develops over time

Type of internal carbon price (column 6)

- Identify the type(s) of internal carbon pricing mechanism your companies utilize. Common ‘types’ of internal carbon pricing approaches have emerged in recent years and are commonly referenced in corporate disclosure. Definitions are outlined below and with illustrative examples of application approaches.
- Most companies utilize a shadow price – attaching a hypothetical cost of carbon to each tonne of CO₂e – as a tool to reveal hidden risks and opportunities throughout its operations and supply chain and to support strategic decision-making related to future capital investments.
- Some companies with emissions reduction or renewable energy targets calculate their ‘implicit carbon price’ by dividing the cost of abatement/procurement by the tonnes of CO₂e. This calculation helps quantify the capital investments required to meet climate-related targets and is frequently used as a benchmark for implementing a more strategic internal carbon price.
- Internal fee mechanisms take this approach a step further by charging responsible business units for their carbon emissions. These programs frequently reinvest the collected revenue back into clean technologies and other activities that help transition the entire company towards lower-carbon operations and investments. Some companies establish an internal trading mechanism – allowing the business units to trade allocated carbon credits.
- Some companies utilize the voluntary carbon markets to offset their emissions – internalizing this cost per tonne of CO₂.
- If you select “Other, please specify,” provide a label for the Type of internal carbon price.

Impact & implication (column 7)

- Provide a company-specific description of how your organization uses internal price on carbon:

- Disclose how/if the internal carbon price has impacted your business (i.e. has it revealed material risk or impacted business decisions?) Upon implementing a carbon price, it is important for a company to review its impact against its original intentions to refine its approach to better meet future goals.
- For companies deliberately implementing an internal carbon price as a tool to achieve a climate-related goal: has there been a tangible impact? Has the tool shifted investments toward energy efficiency measures, low-carbon initiatives, energy purchases, or product offerings?
- If the internal carbon price has not impacted your business in any way, it is equally important to explain why – are there specific challenges associated with your current mechanism? Are carbon-related risks immaterial or already managed?

C12 Engagement

Module Overview

In order to truly reduce global emissions, companies must engage with their value chain on climate-related issues. Questions in this module examine how organizations are working with their suppliers, customers and other partners.

This module provides data users with insight into the different types of activities in which organizations engage to influence public policy on climate-related issues.

The module also investigates whether organizations integrate non-financial metrics and data into mainstream financial reports which is aligned with the TCFD's primary aim to have climate-related information disclosed in financial filings.

Sector-specific content

Additional questions on supplier engagement for the following high-impact sectors:

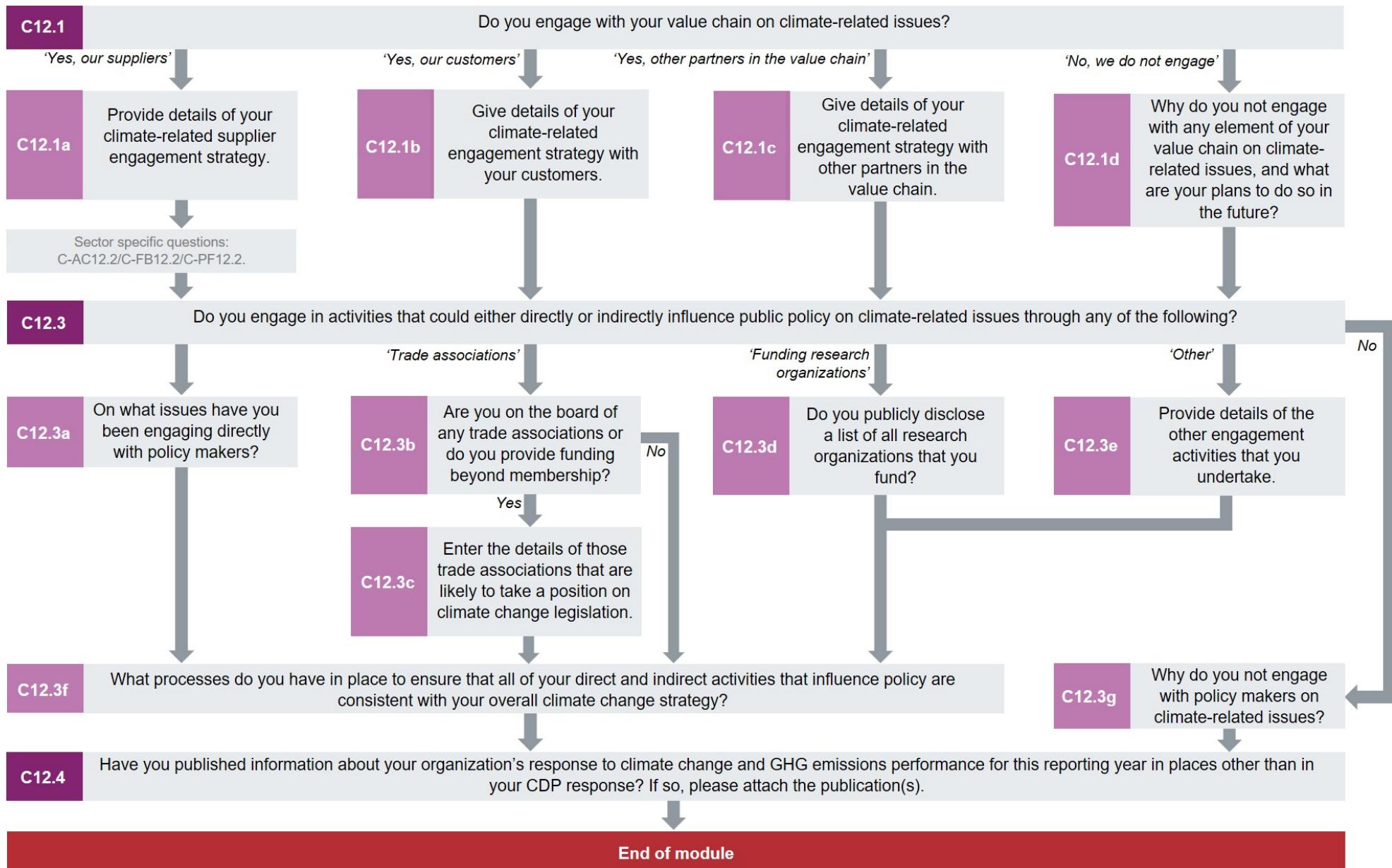
- Agricultural commodities
- Food, beverage & tobacco
- Paper & forestry

Key changes

- Additional guidance for financial services sector companies has been added for question C12.1.

Pathway diagram - questions

This diagram shows the general questions contained in module C12. To access question-level guidance, use the menu on the left to navigate to the question.



Value chain engagement

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

Change from 2018

No change

Rationale

The majority of most companies' emissions occur outside their direct operations. In order to truly reduce global emissions, companies must engage with their value chain on climate-related issues. This question seeks to ascertain which companies are engaging in the best practice of working with upstream and downstream partners to reduce negative environmental impacts.

Connection to other frameworks

SDG

Goal 12: Responsible consumption and production

Response options

Select all that apply from the following options:

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

Requested content

General

- Select all that apply for the reporting year, however if you select "No, we do not engage" do not select any of the other options.
- Select yes, only if you have engagements that cover GHG emissions and/or climate-related strategies (i.e. target setting, renewable energy procurement, etc.).
- Other partners in the value chain are any companies that you work with in your up- or downstream activities that are not your suppliers or customers. For example, you could select this option if you engage with your franchisees on GHG emissions and climate change strategies.

- Note that employees can be treated as value chain partners if they are making their own decisions on, for example, how they commute to work. However, if employees are under direction of their manager for business travel then they should not be treated as external to the organization; in this instance, the value chain partner is the provider of the business travel, not the employee.

Note for financial services sector companies:

- Consider your engagement activity with customers/clients and investee companies to encourage better disclosure and practices around climate-related risks
- Further details can be provided in subsequent questions C12.1b and C12.1c.

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

Question dependencies

This question only appears if you select "Yes, our suppliers" in response to C12.1.

Change from 2018

No change

Rationale

Answers to this question provide investors and data users with more transparency regarding companies' supplier engagement processes. As the majority of most companies' emissions occur outside their direct

operations, data users are interested in understanding how organizations are working with their suppliers to drive best practice and ameliorate climate-related issues.

Connection to other frameworks

SDG

Goal 12: Responsible consumption and production

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

Type of engagement	Details of engagement	% of suppliers by number	% total procurement spend (direct and indirect)	% Scope 3 emissions as reported in C6.5	Rationale for the coverage of your engagement	Impact of engagement, including measures of success	Comment
Select from: <ul style="list-style-type: none">● Compliance & onboarding● Information collection (understanding supplier behavior)● Engagement & incentivization (changing supplier behavior)● Innovation & collaboration (changing markets)● Other, please specify	<p>Select all that apply:</p> <p>Compliance & onboarding</p> <ul style="list-style-type: none">● Included climate change in supplier selection / management mechanism● Code of conduct featuring climate change KPIs● Climate change is integrated into supplier evaluation processes● Other, please specify <p>Information collection (understanding supplier behavior)</p> <ul style="list-style-type: none">● Collect climate change and carbon information at least annually from suppliers● Other, please specify <p>Engagement & incentivization (changing supplier behavior)</p> <ul style="list-style-type: none">● Run an engagement campaign to educate suppliers about climate change● Climate change performance is featured in supplier awards scheme● Offer financial incentives for suppliers who reduce your operational emissions (Scopes 1 &2)● Offer financial incentives	Percentage field [enter a percentage from 0-100 using a maximum of 2 decimal places]	Percentage field [enter a percentage from 0-100 using a maximum of 2 decimal places]	Percentage field [enter a percentage from 0-100 using a maximum of 2 decimal places]	Text field [maximum 2,400 characters]	Text field [maximum 2,400 characters]	Text field [maximum 2,400 characters]

<p>for suppliers who reduce your downstream emissions (Scopes 3)</p> <ul style="list-style-type: none"> ● Offer financial incentives for suppliers who reduce your upstream emissions (Scopes 3) ● Other, please specify <p>Innovation & collaboration (changing markets)</p> <ul style="list-style-type: none"> ● Run a campaign to encourage innovation to reduce climate impacts on products and services ● Other, please specify <p>Other</p> <ul style="list-style-type: none"> ● Other, please specify 				
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[Add Row]

Requested content

General

- If you select "Other, please specify," provide a label for the "Type of engagement" or "Details of engagement."

Type of engagement (column 1)

- Select the type of engagement activity your organization participates in from the drop-down.

Details of engagement (column 2)

- Expand on the engagement activity (selected in column 1) your organization participates in by selecting the relevant engagement method from the drop-down.

- Compliance & onboarding - Select this option if you require your suppliers to adhere to specific climate-related policies and you provide onboarding, either with or without training, for those suppliers to understand and meet your expectations. Compliance requirements can be either pre-requisites to establishing a customer/supplier relationship, or be specified as metrics to achieve once onboarding is completed. Select this option if adherence to certain climate change-related guidelines is included in supplier evaluations and/or contracts;
- Information collection (understanding supplier behavior) - Select this option if the purpose of your engagement with suppliers is to gather data outside of specific initiatives;
- Engagement & incentivization (changing supplier behavior) - Choose this option if you offer specific incentives for your suppliers to meet climate-related goals or strategies. Incentives can be recognition (i.e. award schemes or special acknowledgements) or financial;
- Innovation & collaboration (changing markets) - Select this option if you specifically encourage your suppliers to develop new ways to reduce climate change impacts of the products/services that they offer. This can include formal campaigns and calls for partnerships as well as informal collaboration opportunities.

% Of suppliers by number (column 3)

- Present as a percentage the number of suppliers within your value chain that you engage with on climate-related issues.

% Total procurement spend (column 4)

- Include the percentage of total procurement spend (for the reporting year) that the group of suppliers participating in the engagement activity detailed in this row represent. Note that total (direct and indirect) procurement spend includes all operational expenses on raw materials, goods, and services procured.
- Do not include new or potential suppliers for whom you do not have spend data.

% Scope 3 emissions as reported in C6.5 (column 5)

- Only include the percentage of Scope 3 emissions reported in C6.5 that are attributable to suppliers participating in the activity selected in this row.

Rationale for coverage of your engagement (column 6)

- Explain how and why this group of suppliers was chosen for the engagement selected in column 1 (e.g. proportion of spend, geographic location, etc.). The description should be company-specific and include details on what the engagement activity entails.

Impact of engagement, including measures of success (column 7)

- Use this column to discuss the impact of this engagement and how you measure its success.
- Please provide examples of positive outcomes achieved. For example, this could include supplier GHG emissions reductions and/or improved climate change strategies including target setting.

Comment (column 8)

- Use this column to provide any additional explanation that is relevant to capture the full complexity of the emissions changes, using no more than 2400 characters.

(C12.1b) Give details of your climate-related engagement strategy with your customers.

Question dependencies

This question only appears if you select "Yes, our customers" in response to C12.1.

Change from 2018

Minor change

Rationale

This question provides investors and data users with more transparency regarding companies' customer engagement processes. As the majority of most companies' emissions occur outside their direct operations, data users are interested in understanding how organizations are working with their customers to drive best practice and ameliorate climate-related issues.

Connection to other frameworks

SDG

Goal 12: Responsible consumption and production

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

Type of engagement	Details of engagement	% of customers by number	% Scope 3 emissions as reported in C6.5	Please explain the rationale for selecting this group of customers and scope of engagement	Impact of engagement, including measures of success
Select from: ● Education/information sharing ● Collaboration & innovation ● Other, please specify	Select from: Education/ information sharing ● Run an engagement campaign to educate customers about your climate change performance and strategy ● Run an engagement campaign to educate customers about the climate change impacts of (using) your products, goods, and/or services ● Share information about your products and relevant certification schemes (i.e. Energy STAR) Collaboration & Innovation ● Run a campaign to encourage innovation to reduce climate change impacts ● Other – please provide information in column 5	Percentage field [enter a percentage from 0-100 using a maximum of 2 decimal places]	Percentage field [enter a percentage from 0-100 using a maximum of 2 decimal places]	Text field [maximum 2,400 characters]	Text field [maximum 2,400 characters]

[Add Row]

Requested content

Type of engagement (column 1)

- Select the type of engagement activity your organization participates in from the drop-down.
- If you select "Other, please specify," provide a label for the "Type of engagement."

Details of engagement (column 2)

- Expand on the "Types of engagement" (selected in column 1) your organization participates in by selecting the relevant details of engagement from the drop-down.

- Education/information sharing - Select this option if the aim of engagement is to educate and inform customers about climate change and GHG emissions but not necessarily instigate any specific action;
- Collaboration & innovation - Select this option if you specifically encourage your customers to develop new ways to reduce the climate change impacts of the products/services that they procure from you. This can include formal campaigns and calls for partnerships as well as informal opportunities to reduce negative impacts.

Size of engagement (column 3)

- Present as a percentage the number of customers participating in this engagement activity.

% Scope 3 emissions as reported in C6.5 (column 4)

- Only include the percentage of Scope 3 emissions reported in C6.5 that are attributable to customers participating in the activity selected in this row.

Explain the rationale for selecting this group of customers and scope of engagement (column 5)

- Explain how and why this group of customers was chosen for the engagement selected in column 1 (e.g. proportion of revenue generated, geographic location, etc.).

Impact of engagement, including measures of success (column 6)

- Use this column to discuss the impact of this engagement and how you measure its success.
- Provide examples of positive outcomes achieved. For example, this could include customers reducing use-phase GHG emissions or increasing renewable energy procurement.

(C12.1c) Give details of your climate-related engagement strategy with other partners in the value chain.

Question dependencies

This question only appears if you select "Yes, other partners in the value chain" in response to C12.1.

Change from 2018

No change

Rationale

While engaging with suppliers is considered best practice, some companies may find it appropriate to work with other aspects of their value chain beyond customers and suppliers. This question provides investors and data users with more transparency into companies' engagement strategies beyond the standard or expected parties.

Connection to other frameworks

SDG

Goal 12: Responsible consumption and production

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

- Note that your answer to this question should only include information not captured in C12.1a or C12.1b, and therefore only be pertinent to elements of your value chain that are not suppliers or customers. Please ensure that you explicitly identify which value chain partners you are referring to in your response.
- Provide a company-specific description of your climate-related engagement strategy, including methods of engagement, how you prioritize engagements with other elements of your value chain, and how you measure the success of these engagements.
- Methods of engagement could include, but are not limited to:
 - one to one meetings or written correspondence
 - collaborative projects
 - holding training events
 - advertising, etc.
- Your strategy for prioritizing engagements should detail how you have chosen the parts of the value chain as well as the individual partners to focus your engagement on.
- Detail how you have, or propose to, measure success and any positive outcomes achieved in the reporting year.
- Provide an example or case study of your engagement with other partners in the value chain.

(C12.1d) Why do you not engage with any elements of your value chain on climate-related issues, and what are your plans to do so in the future?

Question dependencies

This question only appears if you select "No, we do not engage" in response to C12.1.

Change from 2018

No change

Rationale

As engaging with at least some part of the value chain is considered best practice, investors and data users need to know why companies are not yet working to affect positive environmental change beyond their direct operations.

Connection to other frameworks

SDG

Goal 12: Responsible consumption and production

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 a company-specific explanation of why you do not engage with any elements of your value chain on climate-related issues, and outline your plans to do so in the future. Please clearly separate the two elements of the question in your response.

Question C12.2 only applies to organizations with activities in the following sectors:

- Agricultural commodities
- Food, beverage & tobacco
- Paper & forestry

Public policy engagement

(C12.3) Do you engage in activities that could either directly or indirectly influence public policy on climate-related issues through any of the following?

Change from 2018

No change

Rationale

Participating in engagement activities that can directly or indirectly influence public policy on climate-related issues are of interest to CDP data users, as it is important to understand how companies' public policy activities on climate change relates to other stances taken. This question provides data users with insight into the different types of activities that organizations engage in.

Response options

Select all that apply from the following options:

- Direct engagement with policy makers
- Trade associations
- Funding research organizations
- Other

- No

Requested content

General

- If you engage in activities that could either directly or indirectly influence climate change policy, select at least one of the first four options (Direct engagement, Trade associations, Funding research organizations, or Other) by ticking the adjacent box. If more than one applies, select multiple options.
- This question is focused on external engagement with policy makers, government departments, or regulatory bodies on a regional, local, national, or international level. Responses should be relevant to the reporting year only, and only be reported if you have engaged in any of the aforementioned activities that could influence policy on climate change.
- If you have multiple activities that cannot be described as direct engagement, engagement through trade associations or engagement through funding research organizations, then please select "Other" – you will be given the opportunity to explain all the engagement activities that you have included under "Other" in a subsequent question.
- There will be a wide range of activities that could be considered as each of these options. In response to this question, please select all that apply regardless of your role and how significant those activities are for your company or a third party.
- For trade associations and funding research organizations, you should identify any relationships where the other party takes an active role in climate change, even if your own relationship with them is not climate change-focused. You will be given an opportunity to describe the engagement in subsequent questions.
- Only select "No" (by ticking the adjacent box) if you do not engage in any activities with policy makers, directly or indirectly. Do not select "No" as well as one of the other options, as this would be a non-logical response.
- Your selections for this question will determine which other questions will appear in this section.

Additional information

Examples of engagement activity

- **Direct engagement** - This includes all activity where companies (or their representatives such as law firms or public affairs agencies engaged directly by the company) engage with policy makers or regulators on the development of law or regulation. Examples of such activities include responding to a consultation, sitting on a working group or lobbying activities directed at individuals or groups that are part of the process of developing, reviewing or amending a law or regulation. Direct engagement can include any stage in the policy or regulation development process, from the selection of options to final consultation comments, but does not include compliance with a new or updated requirement once it has come into force.
- **Trade associations** - Trade associations (sometimes also referred to as industry associations) are an association of people or companies in a particular business or trade, organized to promote their common interests. Trade associations are relevant here as they present an "industry voice" to governments to influence their policy development. The majority of organizations are members of multiple trade associations, many of which take a position on climate change and actively engage with policy makers on the development of policy and legislation on behalf of their members. It is acknowledged that in many cases companies are passive members of the trade associations and therefore do not actively take part in their work on climate change. This will be investigated in subsequent questions and therefore if you are a member of a trade association that engages on climate change, regardless of your own involvement, you should tick "trade associations" at question C12.3.
- **Funding research organizations** - In this context, research organizations can include research institutions, think tanks, and other consultancies that operate in the climate change subject area on projects intended for public dissemination that aim to influence policy. Please note that for the purpose of this question, funding may take the form of membership fees offered to research organizations. The work that you commission them for or the support that you give them may or may not be climate change-related, however if they do engage in work on climate change then you should select this option.
- **Other** - Examples of "Other" activities include, but are not limited to: - Engaging directly with policy makers, regulators or other public servants on matters other than legislation or regulation relating to climate change.

E.g. green procurement strategies

- Taking part in climate change projects at the request of governments
 - Undertaking research or taking part in research projects with the objective to inform policy development or implementation
 - Engaging with policy makers or regulators through groups (local, national or international) other than trade associations (either directly or through funding)
 - Engaging with governments through special purpose, single issue groups, for example for or against a particular bill or development project
 - Sponsoring or taking part in events on climate change with a policy maker audience
 - Producing other media (e.g. video, blog, social media) that aims to influence policy makers on climate change
 - Seconding company staff to work within government or a regulator
- For more information please see the "[Guide for Responsible Corporate Engagement in Climate Policy](#)" produced in 2013 by CDP alongside UN Global Compact, Ceres, The Climate Group, WWF and the World Resources Institute.

(C12.3a) On what issues have you been engaging directly with policy makers?

Question dependencies

This question only appears if you select "Direct engagement with policy makers" in response to C12.3.

Change from 2018

No change

Rationale

Participating in engagement activities that can directly or indirectly influence public policy on climate-related issues are of interest to CDP data users, as it is important to understand how companies' public policy activities on climate change relates to other stances taken. This question provides increased transparency regarding the issues that relate to organizations' policy engagement efforts.

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

Focus of legislation	Corporate position	Details of engagement	Proposed legislative solution
Select from: <ul style="list-style-type: none">● Mandatory carbon reporting● Cap and trade● Carbon tax● Energy efficiency● Clean energy generation● Adaptation or resilience● Climate finance● Regulation of methane● Emissions● Other, please specify	Select from: <ul style="list-style-type: none">● Support● Support with minor exceptions● Support with major exceptions● Neutral● Oppose● Undecided	Text field [maximum 2,400 characters]	Text field [maximum 2,400 characters]

[Add Row]

Requested content

Focus of legislation (column 1)

- This column relates to the general area in which the legislation that you are engaging on falls.
- This column data allows investors and other data users to assess comparable legislative developments across multiple geographies.
- If none of the listed options apply, select "Other, please specify" and enter the focus of the legislation in the text box that appears. Note that you will have an opportunity to provide details of the legislation in subsequent columns.
- There is no need to provide details on all legislation types – only those on which you have been actively engaging in the reporting year.

Corporate position (column 2)

- This should reflect your overall position on this particular legislation type. For example:

- "Support" – select this option if you are engaging in full support of this legislation type across all the geographies in which you are engaging on it.
- "Support with minor exceptions" – select this option if you are engaging in support of this legislation type with either minor exceptions to the approach or with minor exceptions to geographies for whom it is proposed and where you are actively engaging. For example, if you support the principle of but oppose certain ways in which it is being applied, select this option. You will be given the chance to explain in the next column.
- "Support with major exceptions" – select this option if you are engaging in support of this legislation type with either major exceptions to the approach or with major exceptions to geographies for whom it is

proposed and where you are actively engaging.

- "Neutral" – select this option if you have taken part in engagement activities for this legislation type but have not put forward a view.
- "Oppose" – select this option if you have been engaging against this legislation type across all relevant geographies.
- "Undecided" – select this option if you have been engaging on this legislation at an early stage in the development process and have yet to give an opinion or attempt to influence the policy development process in any direction.

Details of engagement (column 3)

- This column gives an opportunity to provide more details on the particular legislation on which you are engaging.
- Use the text field to provide details of how you are engaging (e.g., responding to a consultation, meeting directly with policy makers, etc.) and the legislation on which you are engaging.
- Please give the name of the legislation and the geographies to which it applies.
- Please only give details of the legislation that you have engaged on in the reporting year.

Proposed legislative solution (column 4)

- This column gives an opportunity to provide more details on the actions you are advocating.
- If you support the legislation with no exceptions, you can state this.
- However, if you support it with exceptions, you should provide details of the exceptions and what you would propose in their place.
- If you oppose the legislation, please provide details of an alternative legislative approach that you feel would more effectively reduce carbon emissions in the corporate sector.

Note for oil & gas sector companies:

- You should discuss, as relevant, key policy engagement issues for your sector e.g. carbon pricing policies, in particular carbon tax and cap and trade, mandatory carbon reporting and regulation of methane emissions.

Example response

Focus of legislation	Corporate position	Details of engagement	Proposed legislative solution
Mandatory carbon reporting	Support	We engaged with the UK government around the BEIS consultation on Business Energy Efficiency, including options for improved energy and climate reporting requirements for companies.	We support the continuation of the UK's requirement for listed companies to report global GHG emissions in mainstream reports.
Carbon Tax	Support	Engaged with Australian Federal Government to communicate the commercial benefits and risks of a Carbon Tax at various levels, including the business certainty it provided.	We supported the carbon pricing in Australia as it provided stronger regulatory stability than the current environment.

(C12.3b) Are you on the board of any trade associations or do you provide funding beyond membership?

Question dependencies

This question only appears if you select "Trade associations" in response to C12.3.

Change from 2018

No change

Rationale

Trade associations are a crucial tool through which companies can shape policy and interact with legislators and industry peers. These trade associations can potentially play a significant role in the development and adoption of climate policy. As such, investors and data users expect companies to be transparent about their relationships and responsibilities with these groups.

Response options

Select one of the following options:

- Yes
- No

Requested content

General

- Note that this question is not asking about all the trade associations that you are a member of, only those that you have a more significant influence over due to Board membership or through providing funding beyond membership fees.

(C12.3c) Enter the details of those trade associations that are likely to take a position on climate change legislation.

Question dependencies

This question only appears if you select "Yes" in response to C12.3b.

Change from 2018

No change

Rationale

Trade associations are a crucial tool through which companies can shape policy and interact with legislators and industry peers. These trade associations can potentially play a significant role in the development and adoption of climate policy. As such, investors and data users expect companies to be transparent about their relationships and responsibilities with these groups, especially those likely to take a position on legislation related to climate change.

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

Trade association	Is your position on climate change consistent with theirs?	Please explain the trade association's position	How have you influenced, or are you attempting to influence their position?
Text field [maximum 1,000 characters]	Select from: <ul style="list-style-type: none">● Consistent● Inconsistent● Mixed● Unknown	Text field [maximum 2,400 characters]	Text field [maximum 2,400 characters]

[Add Row]

Requested content

Trade association (column 1)

- Enter the name of the trade association(s) that you are on the Board of or provide funding beyond membership, using no more than 1000 characters.

Is your position on climate change consistent with theirs? (column 2)

- Indicate, by selecting from drop-down options, how well your position on climate change aligns with the trade association listed in column 1.

Please explain the trade association's position (column 3)

- Give details of the trade association's position on climate change (and explain how this position differs from your own if it does).
- Where appropriate, give examples of activities the trade association has undertaken in the reporting year to influence climate change policy.

How have you, or are you attempting to, influence the position? (column 4)

- Describe how you have worked, or are in the process of working with the trade association to promote the current or an alternative position.

Additional information

Climate change position of trade associations

- To aid companies in sorting through the climate-related action of trade associations and determining where the groups in which they belong actually stand on climate change, the Center for Science and Democracy at the Union of Concerned Scientists has conducted [an analysis](#) focused on the positions that trade and business associations have taken in the public discourse on climate science and policy in recent years.
- The analysis looks at many of the largest and most influential trade and business associations in the United States and globally. Areas explored include how these groups understand the science of climate change, the positions they have on climate policy, and what actions they have taken with respect to specific climate-related policy proposals in recent years.

(C12.3d) Do you publicly disclose a list of all research organizations that you fund?

Question dependencies

This question only appears if you select "Funding research organizations" in response to C12.3.

Change from 2018

No change

Rationale

Research organizations can provide important insights into technology, trade, and other industry-relevant topics. Outputs from these organizations can be used to shape corporate strategy, products, and positions. Investors and data users want to understand the full spectrum of engagement activities that companies undertake, and thus are interested in the relationships companies have with research organizations.

Response options

Select one of the following options:

- Yes
- No

Requested content

General

- This question refers to all research organizations that you fund and not just those related to climate change.

(C12.3e) Provide details of the other engagement activities that you undertake.

Question dependencies

This question only appears if you select "Other" in response to C12.3.

Change from 2018

No change

Rationale

Research organizations can provide important insights into technology, trade, and other industry-relevant topics. Outputs from these organizations can be used to shape corporate strategy, products, and positions. Investors and data users want to understand the full spectrum of engagement activities that companies undertake, and thus are interested in the relationships companies have with research organizations.

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

- Use the text box provided to detail any other activities that you have engaged in the reporting year that could either directly or indirectly influence policy on climate change.
- For each activity, identify the method of engagement (individual or through a group), the topic of engagement (e.g., a piece of legislation or a tax), the nature of the engagement (i.e. what your activities were), and the actions that you are advocating as part of that engagement.

(C12.3f) What processes do you have in place to ensure that all of your direct and indirect activities that influence policy are consistent with your overall climate change strategy?

Question dependencies

This question only appears if you select "Direct engagement with policy makers", "Trade associations", "Funding research organizations" and/or "Other" in response to C12.3.

Change from 2018

No change

Rationale

It is important that companies maintain a consistent approach to issues. Engaging in some activities whose purpose is to discredit climate science, for instance, while also working with other groups to advance solutions and adaptations to climate change sends conflicting messages to investors and data users about that company's priorities and stance. This question enables companies to disclose the processes they use to make sure that their position on climate change is compatible with the activities in which they partake.

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

- The intention is to understand how you as an organization manage the multiple engagement activities around climate change across business divisions and geographies to ensure that you have a common approach that is also consistent with your strategy on climate change.
- Use the text box provided to explain the processes that you have in place, or if you do not have any in place, how you plan to address this potential for conflict in the future.

(C12.3g) Why do you not engage with policy makers on climate-related issues?

Question dependencies

This question only appears if you select "No" in response to C12.3.

Change from 2018

No change

Rationale

Not all companies choose to engage with policy makers regarding climate change. Investors and data users are interested in understanding why companies have made this choice, and whether there are any plans to change this stance in the future. Considering the impact that companies can have on policy, it is important for data users to know why those companies have deliberately chosen not to engage with policy makers in any way.

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, formatting is not retained.

Requested content

General

- Provide a company-specific explanation as to why you do not pursue activities that have the potential to influence climate change policy and any plans you have to change that in the future.

Communications

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

Change from 2018

Modified question

Rationale

Best practice in corporate environmental reporting is to integrate non-financial metrics and data into mainstream financial reports. Investors want to understand where and how companies communicate their climate change strategies and emissions figures, and whether these communications are in line with best practice.

Connection to other frameworks

Goal 12: Responsible consumption and production

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

Publication	Status	Attach the document	Page/Section reference	Content elements	Comment
Select from: <ul style="list-style-type: none"> ● In mainstream reports ● In mainstream reports, in line with the CDSB framework (as amended to incorporate the TCFD recommendations) ● In mainstream reports, incorporating the TCFD recommendations ● In other regulatory filings ● In voluntary communications ● In voluntary sustainability report ● No publications with information about our response to climate-related issues and GHG emissions performance ● Other, please specify 	Select from: <ul style="list-style-type: none"> ● Complete ● Underway – previous year attached ● Underway – this is our first year 	Attach your document here.	Text field [maximum 500 characters]	Select all that apply: <ul style="list-style-type: none"> ● Governance ● Strategy ● Risks & Opportunities ● Emissions figures ● Emission targets ● Other metrics ● Other, please specify 	Text field [maximum 2,400 characters]

[Add Row]

Requested content

General

- This question asks about communication of your position on climate change and carbon emissions outside of your CDP response.

- Even where the relevant information is web-based, you must produce a static document to attach, due to the need to maintain a fixed response over time that can be accessed in full at any time in the future; a URL is inherently dynamic and therefore cannot fulfill this requirement.

Publication (column 1)

- Select from the drop-down options the type of publication your organization has published in response to climate change and its GHG emissions performance for the reporting year in places other than its CDP response.
- CDP uses the CDSB Framework definition of mainstream reports, i.e. annual reporting packages in which organizations are required to deliver their audited financial results under the corporate, compliance or securities laws of the country in which they operate and are normally publicly available. It is acknowledged that, in some jurisdictions, multiple documents may meet this definition. Please attach only those which reference your organization's response to climate change and GHG emissions performance.
- Other regulatory filings are reports which are required through regional or national legislation, but which do not fall under the definition of mainstream reports stated above.
- Voluntary communications include optional sustainability/CSR reports or any other voluntary consumer facing publications, advertising, company websites, executive speeches and/or presentations.
- If you do not publish any content regarding your organization's response to climate change and GHG emissions performance, please select "No publications with information about our response to climate-related issues and GHG emissions performance".
- If you select "Other, please specify," provide a label for the publication.

Status (column 2)

- Select from the drop-down options the status of the publication type selected in column 1.
- The report should relate to the reporting year although it is acknowledged that it may not be published in the reporting year.
- Where reports are not ready for publication at the time of submission of your CDP response, select one of the options that indicate the report is underway.
- Where you can attach the previous year's report to demonstrate that the information is routinely published in this way, select "Underway – previous year attached" and complete the remaining two columns of the table with regard to this report.
- Where this is the first year that you will have published information in this way, select "Underway – this is our first year" and leave the other two columns in the table blank. Where the publication is already available, select "Complete."

Attach the document (column 3)

- To attach the document please click "File upload" button (paperclip icon) to drag and drop the file.

Page/Section reference (column 4)

- Identify the page(s) and section(s) of the report attached that refers to climate change and GHG emissions performance. If the whole document relates to climate change and GHG, please state this. If your document is only 1 page long, please still state this.

Content elements (column 5)

- Select all content elements that apply from the drop-down that relate to the publication type selected in column 1.

Explanation of terms

- **Mainstream reports:** in line with CDSB, this refers to the annual reporting packages in which organizations are required to deliver their audited financial results under the corporate, compliance or securities laws of the country in which they are incorporated or, if relevant, operate. Mainstream reports are traditionally publicly available. They provide information to existing and prospective investors about the financial position and financial performance of the organisation. The exact provisions under which companies are required to deliver mainstream financial reports differ internationally, but will generally contain financial statements and other financial reporting, including governance statements and management commentary.

Additional information

The Climate Disclosure Standards Board

About

- The Climate Disclosure Standards Board (CDSB) is a consortium of business and environmental organizations. CDSB is committed to advancing and aligning the global mainstream corporate reporting model to equate natural capital with financial capital.
- CDSB does this by offering companies a **framework for reporting climate change and natural capital information** with the same rigor as financial information. In turn this helps them to provide investors with decision-useful environmental information via the mainstream corporate report, enhancing the efficient allocation of capital. Regulators also benefit from compliance-ready materials.
- Recognising that information about natural capital and financial capital is equally essential for an understanding of corporate performance, CDSB's work builds trust and transparency needed to foster resilient capital markets. Collectively, CDSB aims to contribute to more sustainable economic, social and environmental systems.
- CDSB's Mission is to create the enabling conditions for material climate change and natural capital information to be integrated into mainstream reporting. In effect, this helps create the landscape for companies to translate their sustainability information into business impacts and long-term value.
- To fulfil its mission and vision, CDSB seeks to standardise environmental information reporting through collaborating, identifying and coalescing around the most widely shared and tested reporting approaches that are emerging around the world.
- CDSB advances its mission by:
 - Helping companies interpret and better understand their data: CDSB will drive the corporate uptake in current – and future – initiatives such as the TCFD recommendations by providing technical and educational support to corporates and regulators;
 - Creating a technical architecture: CDSB will develop and provide a common language and reporting frameworks and develop technical material supporting contentious issues or market needs, spearheaded by the CDSB Framework;
 - Making connections: CDSB will engage with corporate, regulators, investors, standard-setters and non-profits to develop industry-driven reporting tools, practices and regulations, and shape regulatory developments.
- In April 2018 CDSB released an updated version of its Framework, the [CDSB Framework for reporting environmental information, natural capital and associated business impacts](#), which is now aligned with the TCFD recommendations and other major reporting requirements. Further information on the CDSB Framework can be found on its [website](#).

Why does CDP support the CDSB Framework?

- CDP works to transform the way the world does business to prevent dangerous climate change and protect our natural resources, particularly by providing relevant environmental information to investors. Given that an essential way that investors utilize data is through mainstream financial reports, it is integral to CDP's mission that companies use the CDSB Framework to provide natural capital information to investors through their mainstream financial report.
- Therefore, the CDSB Framework provides an important tool for formalizing and advancing the significant progress CDP has made in developing climate change-related and natural capital reporting by bringing it into mainstream financial reporting.
- CDP acts as secretariat to CDSB, managing its work program on behalf of the Board members.

Integrated reporting

- The primary purpose of an integrated report is to explain to providers of financial capital how an organization creates value over the short, medium and long term. An integrated report aims to communicate a clear, concise, integrated story that explains how all of an organization's resources are creating value.
- The International <IR> Framework takes a principles-based approach. The intent is to strike an appropriate balance between flexibility and prescription that recognizes the wide variation in individual circumstances of different organizations while enabling a sufficient degree of comparability across organizations to meet relevant information needs. It does not prescribe specific key performance indicators, measurement methods, or the disclosure of individual matters, but it does include a small number of requirements that are to be applied before an integrated report can be said to be in accordance with the [<IR> Framework](#).

The Task Force on Climate-related Financial Disclosures (TCFD)

About:

- Launched in December 2015, the Financial Stability Board's (FSB) industry-led Task Force on Climate-related Financial Disclosure (TCFD) aims to develop voluntary and consistent climate-related financial risk disclosures for use by companies in providing information to investors, lenders, insurers, and other stakeholders.

The TCFD strives to:

- Promote more informed investment, credit (or lending), and insurance underwriting decisions;
- Enable stakeholders to better understand the concentrations of carbon-related assets in the financial sector and the financial system's exposures to climate-related risks;

- Foster an early assessment of these risks, and facilitate market discipline;
- Thus providing a source of data that can be analyzed at a systemic level to facilitate authorities' assessments of the materiality of any risks posed by climate change.

TCFD's mission

- The TCFD was tasked with developing a set of voluntary, financially relevant, climate disclosure recommendations that could promote informed investment, credit, and insurance underwriting decisions that could in turn enable stakeholders to better understand assets exposed to climate-related risks.
- Its aim is to enable stakeholders to allocate capital efficiently through the transition to a low-carbon economy without a potential dislocation of capital in the financial markets.
- The TCFD's final report presents a principle-based set of recommendations for voluntary disclosure that aims to balance the needs of data users with the challenges faced by preparers. The report provides the overarching core recommendations with supporting information on climate-related risks, opportunities, financial impacts, and scenario analysis.
- Further information on TCFD can be found in [CDP's technical note on the TCFD's recommendations](#)

C13 Other land management impacts

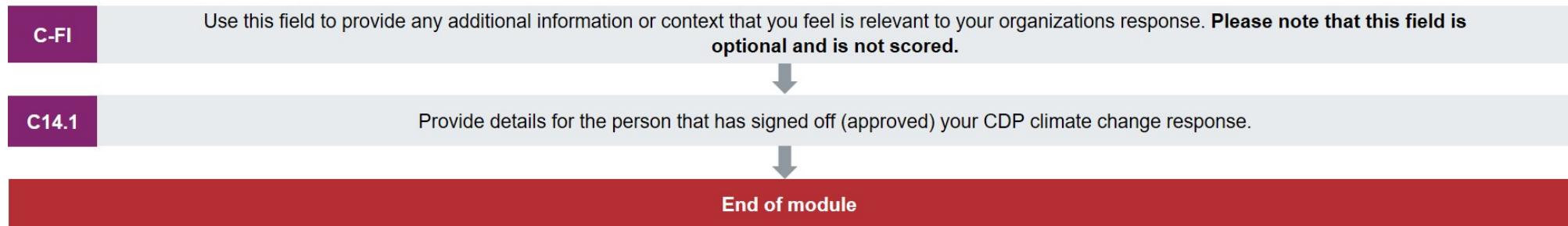
Module C13 only applies to organizations with activities in the following sectors:

- Agricultural commodities
- Food, beverage & tobacco
- Paper & forestry

C14 Signoff

Pathway diagram - questions

This diagram shows the general questions contained in module C14. To access question-level guidance, use the menu on the left to navigate to the question.



Further information

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

Change from 2018

No change

Response options

This is an open text question with a limit of 9,999 characters.

When copying from another document into the disclosure platform, formatting is not retained.

Note

- Click "File upload" button (paperclip icon) to drag and drop a file if you want to attach one.

Signoff

(C14.1) Provide details for the person that has signed off (approved) your CDP climate change response.

Change from 2018

No change

Rationale

CDP asks companies to identify the job title and corresponding job category of the person signing off (approving) the CDP response. This information signals to investors where in the corporate structure direct responsibility is being taken for the response and the information contained therein.

Response options

Please complete the following table:

Job title	Corresponding job category
Text field [maximum 200 characters]	Select from: <ul style="list-style-type: none">● Board chair● Board/Executive board● Director on board● Chief Executive Officer (CEO)● Chief Financial Officer (CFO)● Chief Operating Officer (COO)● Chief Procurement Officer (CPO)● Chief Risk Officer (CRO)● Chief Sustainability Officer (CSO)● Other C-Suite Officer● President● 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● Other, please specify

Requested content

General

- Enter the job title for the person who has approved this disclosure to CDP.
- If you select "Other, please specify", provide a label for the corresponding job category.
- Note that this question asks about the position and not about the name of the individual holding this position. Do not include the name of any individual or any other personal data in your response.

Explanation of terms

- **Board:** Or "Board of Directors" refers to a body of elected or appointed members who jointly oversee the activities of a company or organization. Some countries use a two-tiered system where "board" refers to the "supervisory board" while "key executives" refers to the "management board".

Glossary - Climate Change

- **Adaptation:** adjustment to climate change current or expected effects so the consequences to the business and environment are alleviated and beneficial opportunities are realized.
- **Agriculture/Forestry:** Agriculture is the cultivation and breeding of animals, plants, and fungi for food, fiber, biofuels, drugs or other purposes. While forestry is the creation and management of forests, including wood harvesting. These activities have a direct impact on land and thus are closely associated with deforestation and greenhouse gas emissions from land use.

- **Best available technique (BAT):** Best available technique (BAT) refers to the available techniques which are the best for preventing or minimizing emissions and impacts on the environment. BAT include both the technology used, and the way your installation is designed, built, maintained, operated and decommissioned.
- **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.
- **Biogenic carbon:** This refers to carbon which is contained in biomass (both above-ground and below-ground), dead organic matter, soil organic matter, and harvested products.
- **Board:** Or “Board of Directors” refers to a body of elected or appointed members who jointly oversee the activities of a company or organization. Some countries use a two-tiered system where “board” refers to the “supervisory board” while “key executives” refers to the “management board”.
- **Carbon capture and storage (CCS):** As defined by the IEA, a family of technologies and techniques that enable the capture of carbon dioxide (CO₂) from fuel combustion or industrial processes, the transport of CO₂ via ships or pipelines, and its storage underground, in depleted oil and gas fields and deep saline formations.
- **Carbon capture, utilization and storage (CCUS):** A family of technologies and techniques in which carbon dioxide (CO₂) is captured and utilized/used. Examples of direct utilization include CO₂ use in the food and drink industry and for enhanced oil recovery. CO₂ can also be converted into chemicals or fuels. If CO₂ is stored but not utilized, then the process should be classified as CCS.
- **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 detraction 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.

- **Combustion:** Combustion refers to combustion within the company's boundary giving rise to emissions of CO₂, N₂O, and CH₄. Sources may include boilers, heaters, furnaces, incinerators, internal combustion engines, and turbines. Scope 1 GHG emissions exclude emissions of CO₂ arising from the combustion and fermentation of biomass and biofuels; these emissions are reported as a separate category.
- **Company:** Throughout this information request, “your company” refers collectively to all the companies, businesses, organizations, other entities or groups that fall within your definition of the reporting boundary.
- **Consolidation approach:** The identification of companies, businesses, organizations etc. for inclusion within the reporting boundary of the responding organization is known as the “consolidation approach”. 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.
- **Consumption:** Consumption includes the use of goods, waste disposal and end of life treatment of products sold by the reporting organization.
- **Distribution (agriculture/forestry):** Distribution encompasses the entire network required to move products through the value chain from the farm/forest to the retail location. The total travel distance and the mode of transport will impact the amount of emissions produced: air transport has by far the highest GHG emissions, followed by road, then ocean freight and rail ([Source: Institute for Agriculture and Trade Policy, 2009](#)).

- **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.
- **Feedstocks:** Feedstocks are raw materials, ranging from fossil fuels to biomass-based resources. These materials are fed into a process, and converted into other commodities or resources, which are either used directly or further transformed . For example, in the steel industry, coking coal is converted to coke, which is used in the steel production. In the petrochemical industry, gaseous feedstocks (ethane, propane, or butane) are used to produce high value chemicals.
- **gCO₂/kWh:** Grams of carbon dioxide (gCO₂) per kilowatt hour (kWh) of electricity consumed.
- **gCO_{2e}/kWh:** Grams of carbon dioxide equivalents (CO_{2e}) emitted per kilowatt hour (kWh) of electricity consumed. CO₂-equivalents allow for other Greenhouse Gases (GHGs) to be expressed in relation to CO₂ based on their Global Warming Potentials (GWPs).
- **Global warming potential (GWP):** The Intergovernmental Panel on Climate Change (IPPC)'s Fifth Assessment Report (AR5) defines the Global Warming Potential (GWP) as "an index, based on radiative properties of greenhouse gases, measuring the radiative forcing following a pulse emission of a unit mass of a given greenhouse gas in the present day atmosphere integrated over a chosen time horizon, relative to that of carbon dioxide. The GWP represents the combined effect of the differing times these gases remain in the atmosphere and their relative effectiveness in causing radiative forcing. The Kyoto Protocol is based on GWPs from pulse emissions over a 100-year time frame." By using GWPs, GHG emissions from multiple gases can be standardized to a carbon dioxide equivalent (CO_{2e}). ([Source: Intergovernmental Panel on Climate Change](#))
- **Greenhouse gases:** In line with Kyoto Protocol to the United Nations Framework Convention on Climate Change (UNFCCC) and amendment issued by the Greenhouse Gas Protocol on May 2013 the basket of greenhouse gases (GHGs) consists of:

- Carbon dioxide (CO₂);
- Methane (CH₄);
- Nitrous oxide (N₂O);
- Hydrofluorocarbon family of gases (HFCs);
- Perfluorocarbon family of gases (PFCs);
- Sulfur hexafluoride (SF₆), and;
- Nitrogen trifluoride (NF₃).

Nitrogen trifluoride (NF₃) is now considered a potent contributor to climate change and is therefore mandated to be included in national inventories under the UNFCCC. NF₃ should also be included in GHG inventories under the GHG Protocol Corporate Standard, and the GHG Protocol Corporate Value Chain (Scope 3) Standard.

- **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.
- **Intensity metrics :** Intensity metrics describe an organization's CO_{2e} emissions in the context of another business metric. In this way, the emissions are normalized to account for growth. Intensity is calculated by dividing the CO_{2e} emissions figure (the numerator) by an alternative business metric (the denominator), such as the number of full-time equivalent employees, the revenue or tons of aggregate produced.
- **Land use management:** Movement of CO₂ from carbon stocks in soils, above and below-ground woody biomass, and dead organic matter (DOM) stocks, and the combustion of crop residues for non-energy purposes.
- **Low-carbon energy:** There is no precise, generally accepted definition of what "low-carbon energy" is. No definition is found in either the GHG Protocol standards or ISO. Nevertheless, it can be reasonably established that "low-carbon energy" will be any type of energy that will have no direct emissions and which the indirect emissions can usually be considered as negligible considering the life cycle of the given technology. Power technologies such as wind, solar, tidal, geothermal and most hydro power are generally accepted as low-carbon. Nuclear power is also usually considered low-carbon, although other considerations make it a more contentious technology. Natural gas, combined cycle gas turbine and Combined Heat and Power (cogeneration), despite being less carbon intensive than other means of electricity production like coal, are not considered low-carbon.

● **Low-carbon investment** Despite the increasing focus on low-carbon investments, there is no precise and generally accepted definition of what a low-carbon investment is. Instead, there has been a greater focus on the purpose of low-carbon investments, which is to contribute to the transition to a low carbon economy operating within the limits set out by leading climate scientists to ensure that global average temperature increase above preindustrial level stays below 2°C. There are existing industry definitions and frameworks which include the Climate Bonds Initiative (CBI) [Low Carbon Registry](#) (a taxonomy of eligible goods and services have been defined as meeting the requirements of low carbon) and the Global Investor Coalition on Climate Change's [Low Carbon Investment Registry](#).

● **Metric tons of CO₂ (tCO₂)**: a metric ton of carbon dioxide (CO₂) has a mass of 1000 kg, equivalent to 2204.62 lbs. The "long ton", a term generally used in Britain, is equivalent to 2,240lbs and the "short ton" is generally used in the USA and is equivalent to 2,000 lbs.

● **Metric tons of CO₂-equivalent (tCO_{2e})**: a metric that allows for other Greenhouse Gases (GHGs) to be expressed in relation to CO₂ based on their Global Warming Potentials (GWP). A metric ton is 1000 kg, equivalent to 2204.62 lbs.

● **Mitigation**: or "climate change mitigation" refers to efforts to reduce or prevent emission of greenhouse gases.

● **Operational spend**: Operational spend should be the sum of the costs for following two types of costs to the business:

Cost of goods sold: (also known as 'direct costs'): This generally refers to the raw material, energy and labor costs directly identified in the cost of the end product. These costs fluctuate and vary depending on the number or volume of goods sold.

Operating costs: (also known as 'indirect costs' 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 job or the provision of a particular service - they are standard costs that apply regardless of the volume of goods produced.

● **Organization**: This term is used interchangeably with "your company". CDP recognizes that some disclosing organizations may not consider themselves to be, or be formally classified, as "companies".

● **Process emissions**: Process emissions include CH₄ and CO₂ emissions from processes involving chemical or physical transformations other than fuel combustion. Sources include, among others, glycol dehydrators, acid gas treatment, hydrogen plants, catalyst regeneration, fluid cokers and flexi-cokers.

● **Processing/Manufacturing (agriculture/forestry)**: Includes all processes adopted, and all methods and techniques used, to transform raw agricultural or wood products inputs into final goods ready for human consumption. Direct and indirect emissions from processing result from the operation of machinery and equipment, as well as from heating, cooling, and refrigeration.

● **Purchased or acquired electricity, steam, heat, and/or 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/sector 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 an industrial process, should still be accounted for if it is consumed. ([Source: GHG Protocol Scope 2 Guidance, 2015](#)).

● **Renewable energy**: CDP follows the definition of renewable energy given in the GHG Protocol: "Energy taken from sources that are inexhaustible, e.g. wind, water, solar, geothermal energy and biofuels."

● **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.

● **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.
- **2°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". A 2°C scenario provides a reference point that is generally aligned with the objectives of the Paris Agreement. There are publicly available scenarios (such as IEA 2DS, IEA 450, Deep Decarbonization Pathways Project, and International Renewable Energy Agency) organizations can use, as a direct tool, or a reference point for tailored scenarios.
- **Publicly available 2°C scenarios:** Taken from TCFD recommendations, "Publicly available 2°C scenarios" refer to 2°C 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.

[\(Source: Recommendations of the Task Force on Climate-related Financial Disclosures\).](#)

- **Sequestration during land use change:** CO2 removals by soils and biomass following afforestation or reforestation.
- **Sequestration of CO2:** The fixation of atmospheric carbon dioxide in a carbon sink through biological or physical processes.
- **Transition plan:** The transition plan is an implementation plan for a company-specific low-carbon trajectory and goes beyond detailing emissions reductions. The plan defines how the business model, its associated products and production methods, growth strategy and capital investments need to develop over time to ensure implementation of a low-carbon strategy.
- **Value chain:** The entire sequence of activities or partners that provide value or receive value from an organization's products and services, either within, upstream or downstream of direct operations. For further details on reporting boundaries please consult the [GHG Protocol Corporate Value Chain \(Scope 3\) Accounting and Reporting Standard](#)

Important Information

Companies should not consider their CDP response a means of complying with any regulatory requirement to share financially sensitive non-public information with the market. You may wish to consult with your financial, legal, and/or compliance departments for advice on your company's general approach to the provision of forward-looking statements and information concerning risks.

CDP questionnaire copyright and licensed use

The copyright to CDP's annual questionnaire/s is owned by CDP Worldwide, a registered charity number 1122330 and a company limited by guarantee, registered in England number 05013650. Any use of any part of the questionnaire, including the questions, must be licensed by CDP. Any unauthorized use is prohibited and CDP reserves the right to protect its copyright by all legal means necessary.

Terms for responding to Investors (2019 Climate Change)

These terms apply if you are submitting a response to the CDP Climate Change Questionnaire 2019 to Investors. If you are also submitting a response to Supply Chain Members the Terms for responding to Supply Chain Members (2019 Climate Change), below, will also apply.

1.DEFINITIONS

Billing Company: means the organization determined in accordance with the table at the end of these terms.

CDP: means CDP Worldwide, a charitable company registered with the Charity Commission of England and Wales (registered charity no. 1122330 and a company number 05013650). References to "we", "our" and "us" in these terms are references to CDP and the Billing Company.

Deadline: means 31 July 2019.

Fee: means the fee set out in the table at the end of these terms, which is exclusive of any applicable taxes.

Full version: means the version of the Questionnaire which contains all questions that are applicable to you.

Minimum version: means the version of the Questionnaire which contains a subset of the questions included in the Full Version.

Personal Data: means data which relates to an individual who can be identified from the data, such as a person's name and job title.

Questionnaire: means the Full Version and the Minimum Version of the CDP Climate Change Questionnaire 2019.

Responding Company: means the company responding to the Questionnaire. References to "you" and "your" in these terms are references to the Responding Company.

2.PARTIES

The parties to these terms shall be CDP, the Billing Company (where the Billing Company is not CDP) and the Responding Company.

3.THESE TERMS

These are the terms that apply when you submit a response to our Questionnaire to Investors. If you do not agree to these terms, please contact us at respond@cdp.net to discuss them with us.

4.RESPONDING TO OUR QUESTIONNAIRE

General. When responding to our Questionnaire, you will be given a choice as to whether your response can be made public or whether your response is non-public. We strongly encourage you to make your response public.

Deadline for responding. You must submit your response to us using our online response system by the Deadline for your response to be eligible for scoring and inclusion in any reports.

Public responses. If you agree that your response can be made public, we may use and make it available for all purposes that we decide (whether for a fee or otherwise), including, for example, making your responses available on our website, to our investor signatories and other third parties and scoring your response.

Non-public responses. If your response is non-public, we may use it only as follows:

- (a) make it available as soon as it is received by CDP to our investor signatories (as listed on our website) either directly or through Bloomberg terminals, for any use within their organizations but not for publication unless any data from your response has been anonymized or aggregated in such manner that it has the effect of being anonymized;
- (b) make it available as soon as it is received by CDP to our group companies and affiliates (for example, CDP North America, Inc), our country partners, research partners, report writers and scoring partners:
 - (i) to score your response; and
 - (ii) for any other use within their organizations but not for publication unless any data from your response has been anonymized or aggregated in such manner that it has the effect of being anonymized.

Amending your response. You may amend a response that you have submitted at any time before the Deadline. After the Deadline has passed, certain amendments to your response can only be made by our staff and we may charge a fee for making them. Please note that any changes to your response after the Deadline may not be reflected in any score or in any report. Please email respond@cdp.net for more information about amending your response.

Scoring of responses to the Full Version (of the Questionnaire). If you submit your response to the Full Version in English using our online response system:

- (a) by the Deadline, your response will be scored;
- (b) after the Deadline but on or before 30 September 2019 you can request an 'On-Demand' score for a fee. Please email scorefeedback@cdp.net for more information on On-Demand scoring.

Please contact your local CDP office for information about scoring if you intend to submit your response in a language other than English.

Scoring of responses to the Minimum Version (of the Questionnaire). Responses to the Minimum Version will only be scored in certain circumstances. Please contact your local CDP office for further information.

Publication and use of scores. If you are responding to a CDP Climate Change Questionnaire for the first time or have received an On-Demand score, you may choose for your score to be "private" but in all other cases CDP may publish your score, and use and make it available for all purposes that we decide (whether for a fee or otherwise), regardless of whether your response is public or non-public. If you choose for your score to be "private", unless you achieve an A grade in which case we may make your score public, we may only make it available to our group companies and affiliates (for example, CDP North America, Inc), our country partners, research partners, report writers and scoring partners, in each case for any use within their organizations but not for publication. Note that if you also submit your response to Supply Chain Members it will also be available to any Supply Chain Member that has asked you to respond to the Questionnaire. For further details please see the **Terms for responding to Supply Chain Members (2019 Climate Change)**.

5.FEE

Fee. We are a not-for-profit organization and charge certain companies an annual administrative fee to enable us to maintain the disclosure system. Unless you are exempt from paying the Fee, as set out below, if you are listed, incorporated or headquartered in a country/region that is listed in the next paragraph, you are required to pay the Fee plus any applicable taxes. The Fee is payable once regardless of how many responses (climate change, forests and water security) you submit in 2019. Please note that we may charge an additional fee if you want to amend your response after the Deadline or if you submit your response after the Deadline and you

would like it to be scored.

Countries/regions where the Fee applies. A Responding Company will be required to pay the Fee if it is listed, incorporated or headquartered in any one of the following countries/regions:

Argentina, Australia, Austria, Bahamas, Belgium, Bermuda, Brazil, Canada, Cayman Islands, Channel Islands, Chile, Colombia, Denmark, Finland, France, Germany, Hong Kong, Iceland, India, Indonesia, Ireland, Italy, Japan, Luxembourg, Malaysia, Mexico, Netherlands, New Zealand, Norway, Peru, Philippines, Portugal, Singapore, South Africa, South Korea, Spain, Sweden, Switzerland, Taiwan, Thailand, Turkey, the UK or the USA.

Exemptions from the Fee. A Responding Company is exempt from paying the Fee if:

- (a) it falls within one of CDP's investor samples and it has not submitted a response to CDP in the last three years; or
- (b) it is responding only to CDP's supply chain request.

Please note we will decide in our absolute discretion as to whether the Fee is payable or not and we will notify you before you submit your response. A full list of companies in our investor samples is available on our website.

Payment of the Fee. You must pay the Fee by credit or debit card or request an invoice via CDP's online corporate dashboard, which must be paid within such time as set out in the invoice. Please note that you will not be able to submit your response unless you have paid the Fee, you have requested an invoice or you are exempt from paying the Fee.

6.RIGHTS IN THE RESPONSES

Ownership. All intellectual property rights in your response will be owned by you or your licensors.

License. You grant to us, or shall procure for us, a perpetual, irrevocable, non-exclusive, assignable, sub-licensable, royalty-free and global license to use your response and any copyright and data base rights in your response for the uses set out in these terms.

7.IMPORTANT REPRESENTATIONS

You confirm that:

- (a) the person submitting the response to us is authorized by you to submit the response;
- (b) you have obtained all necessary consents and permissions to submit the response to us; and
- (c) the response that you submit:

(i) does not infringe the rights of any third party (including privacy, publicity or intellectual property rights);

(ii) does not defame any third party; and

(iii) does not include any Personal Data.

8.LIABILITY

We do not exclude or limit in any way our liability to you where it would be unlawful to do so. This includes liability for death or personal injury caused by our negligence or the negligence of our employees, agents or subcontractors; for fraud or fraudulent misrepresentation.

We are not liable for business losses. Subject to these terms, CDP and the Billing Company have no liability to you in any circumstances for any loss of revenue, loss of profit, loss of business, business interruption, loss of business opportunity, loss of goodwill, loss of reputation, loss of, damage to or corruption of data or software or any indirect or consequential loss or damage.

Exclusion of liability. Subject to these terms, CDP and the Billing Company have no liability to you in any circumstances arising from the content or submission of your response to us, our use of your response and/or the use of your response by any third parties.

Limitation of liability. Subject to these terms, CDP and the Billing Company's total liability to you in all circumstances shall be limited to an amount equivalent to the Fee or to £625 if you are not required to pay the Fee.

9.GENERAL

We may transfer our rights to someone else. We may transfer our rights and obligations under these terms to another organization.

Nobody else has any rights under these terms. These terms are between you and us. No other person shall have any rights to enforce any of its terms.

Entire agreement. These terms constitute the entire agreement between you and us unless you also choose to share your response with supply chain members, in which case you will also be subject to our Terms for responding to Supply Chain Members (2019 Climate Change).

Variation. CDP (acting on its own behalf and the Billing Company's behalf, if applicable) reserves the right to change these terms at any time. Such changes shall be effective immediately or such other time as CDP elects. In the event of any materially adverse changes, you may request to withdraw your response within 30 days of us notifying you of the change.

If a court finds part of these terms illegal, the rest will continue in force. Each of the paragraphs of these terms operates separately. If any court or relevant authority decides that any of them are unlawful, the remaining paragraphs will remain in full force and effect.

Governing law and jurisdiction. These terms are governed by English law and you and us both agree to the exclusive jurisdiction of the English courts to resolve any dispute or claim arising out of or in connection with

these terms or their subject matter or formation.

Language. If these terms are translated into any language other than English, the English language version will prevail.

10. AMOUNT OF FEE

Location of Responding Company	Fee (exclusive of any applicable taxes)
Brazil	BRL 3,560
India	INR 67,000
Japan	JPY 97,500
UK	GBP 625
Europe (excluding UK)	EUR 925
Rest of the world	USD 975

11. BILLING COMPANY

Billing Company	Location of Responding Company
CDP Worldwide	Australia, Bahamas, Bermuda, Cayman Islands, Channel Islands, Hong Kong, Indonesia, Ireland, Malaysia, New Zealand, Philippines, Singapore, South Africa, South Korea, Taiwan, Thailand, Turkey, United Kingdom
CDP Worldwide (Europe) gGmbH	Austria, Belgium, Denmark, Finland, France, Germany, Iceland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland
CDP North America, Inc	Canada, USA
Carbon Disclosure Project (Latin America)	Argentina, Brazil, Chile, Colombia, Mexico, Peru
Carbon Disclosure Project India	India
一般社団法人 CDP Worldwide-Japan	Japan

If the Responding Company is located in a territory that is not listed in the table above, the Billing Company shall be CDP Worldwide.

Terms for responding to Supply Chain Members (2019 Climate Change)

These terms apply if you are submitting a response to the CDP Climate Change Questionnaire 2019 to Supply Chain Members. If you are also submitting a response to Investors the Terms for responding to Investors (2019 Climate Change), above, will also apply.

1.DEFINITIONS

CDP: means CDP Worldwide, a charitable company registered with the Charity Commission of England and Wales (registered charity no. 1122330 and a company number 05013650). References to "we", "our" and "us" in these terms are references to CDP.

Deadline: means 28 August 2019.

Full version: means the version of the Questionnaire which contains all questions that are applicable to you.

Minimum version: means the version of the Questionnaire which contains a subset of the questions included in the Full Version.

Personal Data: means data which relates to an individual who can be identified from the data, such as a person's name and job title.

Questionnaire: means the Full Version and the Minimum Version of the CDP Climate Change Questionnaire 2019.

Responding Company: means the company responding to the Questionnaire. References to "you" and "your" in these terms are references to the Responding Company.

Supply Chain Member: means an organization that is requesting data from its suppliers.

2.PARTIES

The parties to these terms shall be CDP and the Responding Company.

3.THESE TERMS

These are the terms that apply when you submit a response to our Questionnaire to Supply Chain Members. If you do not agree to these terms, please contact us at respond@cdp.net to discuss them with us.

4.RESPONDING TO OUR QUESTIONNAIRE

General. When responding to our Questionnaire, you will be given a choice as to whether your response can be made public or whether your response is non-public. We strongly encourage you to make your response public, but in either case, we will not divulge the relationship between you and any Supply Chain Member that has asked you to respond other than to our group companies and affiliates (for example, CDP North America, Inc), our country partners, research partners, report writers and scoring partners, all of which are obliged to keep such relationship confidential.

Deadline for responding. You must submit your response to us using our online response system by the Deadline for your response to be eligible for scoring and inclusion in any reports.

Public responses. If you agree that your response can be made public, we may use and make it available for all purposes that we decide (whether for a fee or otherwise), including, for example, making your responses available on our website, to our investor signatories and other third parties and scoring your response. Note that information you submit within the Supply Chain module (2019 Climate Change) will be treated as non-public (see below for details).

Non-public responses. If your response is non-public, we may use it only as follows:

- (a) make it available as soon as it is received by CDP to any Supply Chain Member that has asked you to respond to the Questionnaire for any use within their organization but not for publication unless any data from your response has been anonymized or aggregated in such manner that it has the effect of being anonymized;
- (b) make it available as soon as it is received by CDP to our group companies and affiliates, our country partners, research partners, report writers and scoring partners:
 - (i) to score your response; and
 - (ii) for any other use within their organizations but not for publication unless any data from your response has been anonymized or aggregated in such manner that it has the effect of being anonymized.

Supply Chain module (2019 Climate Change). Information you submit in response to the Supply Chain module (2019 Climate Change) (questions SC0, SC1, SC2, SC3 and SC4 of the Questionnaire) will be treated as non-public even if you choose to make your response public. Questions SC1.1, SC2.1, SC2.2a, SC3.1a and SC4.2e ask you to select a Supply Chain Member using a drop-down menu in our online response system, and only the Supply Chain Member you select for each row will have access to the information in it. For all other questions in the Supply Chain module (2019 Climate Change) the information you submit will be accessible to any Supply Chain Member that has asked you to respond to the Questionnaire. All information you submit in the Supply Chain module (2019 Climate Change) will be accessible to CDP and to our group companies and affiliates, our country partners, research partners, report writers and scoring partners, all of which are obliged to keep such information confidential.

Amending your response. You may amend a response that you have submitted at any time before the Deadline. After the Deadline has passed, certain amendments to your response can only be made by our staff and we may charge a fee for making them. Please note that any changes that you make to your response after the Deadline may not be reflected in any score or in any report. Please email respond@cdp.net for more information about amending your response.

Scoring of responses to the Full Version (of the Questionnaire). If you submit your response to the Full Version in English using our online response system:

- (a) by the Deadline, your response will be scored;
- (b) after the Deadline but on or before 30 September 2019 you can request an 'On-Demand' score for a fee. Please email scorefeedback@cdp.net for more information on On-Demand scoring.

Please contact your local CDP office for information about scoring if you intend to submit your response in a language other than English.

Scoring of responses to the Minimum Version (of the Questionnaire). Responses to the Minimum Version will only be scored in certain circumstances. Please contact your local CDP office for further information.

Publication of scores. Unless you achieve an A grade, in which case we may make your score public, we may only make your score available to any Supply Chain Member that has asked you to respond to the Questionnaire, our group companies and affiliates (for example, CDP North America, Inc), our country partners, research partners, report writers and scoring partners, in each case for any use within their organizations but not for publication.

5.RIGHTS IN THE RESPONSES

Ownership. All intellectual property rights in your response will be owned by you or your licensors.

License. You grant to us, or shall procure for us, a perpetual, irrevocable, non-exclusive, assignable, sub-licensable, royalty-free and global license to use your response and any copyright and data base rights in your response for the uses set out in these terms.

6.IMPORTANT REPRESENTATIONS

You confirm that:

- (a) the person submitting the response to us is authorized by you to submit the response;
- (b) you have obtained all necessary consents and permissions to submit the response to us; and
- (c) the response that you submit:
 - (i) does not infringe the rights of any third party (including privacy, publicity or intellectual property rights);
 - (ii) does not defame any third party; and
 - (iii) does not include any Personal Data.

7.LIABILITY

We do not exclude or limit in any way our liability to you where it would be unlawful to do so. This includes liability for death or personal injury caused by our negligence or the negligence of our employees, agents or subcontractors; for fraud or fraudulent misrepresentation.

We are not liable for business losses. Subject to these terms, CDP has no liability to you in any circumstances for any loss of revenue, loss of profit, loss of business, business interruption, loss of business opportunity, loss of goodwill, loss of reputation, loss of, damage to or corruption of data or software or any indirect or consequential loss or damage.

Exclusion of liability. Subject to these terms, CDP has no liability to you in any circumstances arising from the content or submission of your response to us, our use of your response and/or the use of your response by any third parties.

Limitation of liability. Subject to these terms, CDP's total liability to you in all circumstances shall be limited to £625.

8.GENERAL

We may transfer our rights to someone else. We may transfer our rights and obligations under these terms to another organization.

Nobody else has any rights under these terms. These terms are between you and us. No other person shall have any rights to enforce any of its terms.

Entire agreement. These terms constitute the entire agreement between you and us, unless you also choose to share your response with investors in which case you will also be subject to our Terms for responding to Investors (2019 Climate Change).

Variation. CDP reserves the right to change these terms at any time. Such changes shall be effective immediately or such other time as CDP elects. In the event of any materially adverse changes, you may request to withdraw your response within 30 days of us notifying you of the change.

If a court finds part of these terms illegal, the rest will continue in force. Each of the paragraphs of these terms operates separately. If any court or relevant authority decides that any of them are unlawful, the remaining paragraphs will remain in full force and effect.

Governing law and jurisdiction. These terms are governed by English law and you and us both agree to the exclusive jurisdiction of the English courts to resolve any dispute or claim arising out of or in connection with these terms or their subject matter or formation.

Language. If these terms are translated into any language other than English, the English language version will prevail.

About CDP

CDP is an international non-profit that drives companies and governments to reduce their greenhouse gas emissions, safeguard water resources and protect forests.

Voted number one climate research provider by investors and working with institutional investors with assets of US\$96 trillion, we leverage investor and buyer power to motivate companies to disclose and manage their environmental impacts.

Over 7,000 companies with some 50% of global market capitalization disclosed environmental data through CDP in 2018. This is in addition to the over 750 cities, states and regions who disclosed, making CDP's platform one of the richest sources of information globally on how companies and governments are driving environmental change. CDP, formerly Carbon Disclosure Project, is a founding member of the We Mean Business Coalition. Please visit www.cdp.net or follow us @CDP to find out more.

What is the legal status of CDP?

CDP Worldwide (CDP) is a UK Registered Charity no. 1122330 and a company limited by guarantee registered in England no. 05013650. The charity has wholly owned subsidiaries in Germany and China and companies in Australia, Brazil and India over which it exercises control through majority Board representation. In the US, CDP North America, Inc. is an independently incorporated affiliate which has United States IRS 501(c)(3) charitable status.

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