

Welcome to your CDP Climate Change Questionnaire 2023

C0. Introduction

C0.1

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

Celanese Corporation is a global technology leader in the production of differentiated chemistry solutions and specialty materials used in most major industries and consumer applications. Our two complementary business cores, Acetyl Chain and Materials Solutions, use the full breadth of Celanese's global chemistry, technology, and business expertise to create value for our customers and the corporation. As we partner with our customers to solve their most critical business needs, we strive to make a positive impact on our communities and the world through The Celanese Foundation. Based in Dallas, Celanese employs approximately 13,000 employees worldwide and had 2022 net sales of \$9.7 billion.

On November 1, 2022, Celanese acquired the majority of the Mobility and Materials (M&M) business from DuPont which includes a broad portfolio of engineered thermoplastics and elastomers, industry renowned brands, intellectual property, and global production assets. We plan to integrate M&M environmental performance metrics into our reporting in next year's CDP report. For more information about Celanese and our product offerings visit www.celanese.com.

C0.2

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

Reporting year

Start date

January 1, 2022

End date

December 31, 2022

Indicate if you are providing emissions data for past reporting years

No

C0.3

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

Belgium
Brazil
Canada
China
Germany
India
Italy
Mexico
Netherlands
Singapore
Sweden
Switzerland
United Kingdom of Great Britain and Northern Ireland
United States of America

C0.4

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

USD

C0.5

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

Operational control

C-CH0.7

(C-CH0.7) Which part of the chemicals value chain does your organization operate in?

Row 1

Bulk organic chemicals

Methanol
Polymers

Bulk inorganic chemicals

Other chemicals

Specialty organic chemicals

C0.8

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

Indicate whether you are able to provide a unique identifier for your organization	Provide your unique identifier
Yes, an ISIN code	1508701034

C1. Governance

C1.1

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

Yes

C1.1a

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

Position of individual or committee	Responsibilities for climate-related issues
Chief Executive Officer (CEO)	The Celanese CEO and Chairman of the full Board (CEO) established the Environmental, Social and Governance (ESG) Council, and the ESG Council's recommendations are reviewed and approved by the CEO, who is a member of the full Celanese Board. In 2020 and 2021 the CEO made it a priority to improve and analyze Celanese's greenhouse (GHG) emissions database, evaluate meaningful reduction targets, and develop a GHG abatement strategy. These efforts led to Celanese announcing GHG emissions reduction targets in early 2022. At least quarterly updates are provided to the board on ESG topics, including climate.
Director on board	The full Board has oversight responsibility for climate policy and strategy, and receives reports at least quarterly from the Environmental, Health, Safety, Quality and Public Policy Committee (the "EHS Committee").
Board-level committee	The Environmental, Health, Safety, Quality and Public Policy Committee (the EHS Committee) of the full Celanese Board oversees the development, implementation and monitoring of greenhouse gas reduction and energy targets in manufacturing and production processes. The EHS Committee meets and reports to the full Board at least quarterly.
Board-level committee	The Nominating and Corporate Governance Committee (NCG) of the Board oversees reporting on ESG metrics, that includes oversight on reporting

	frameworks such as SASB and TCFD and annual limited external assurance of environmental metrics.
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C1.1b

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

Frequency with which climate-related issues are a scheduled agenda item	Governance mechanisms into which climate-related issues are integrated	Please explain
Scheduled – some meetings	Reviewing and guiding annual budgets Overseeing major capital expenditures Overseeing acquisitions, mergers, and divestitures Reviewing innovation/R&D priorities Reviewing and guiding strategy	The full Celanese Board has oversight responsibility for climate policy and strategy. The EHS Committee reports to the board at least quarterly and oversees GHG reduction and sustainability targets in manufacturing. Also, the NCG Committee reports to the board at least quarterly, reviews our Board's and Committees' overall ESG oversight structure, and oversees strategy and process for reporting ESG metrics.

C1.1d

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

	Board member(s) have competence on climate-related issues	Criteria used to assess competence of board member(s) on climate-related issues
Row 1	Yes	Six Members of the Celanese Board have experience with complex environmental regulation and sustainability-focused strategy, including climate-related risk management. Two of the Members have specific climate-related risk management expertise in their professional experience and they have held positions with oversight responsibility for understanding climate risks and developing mitigation strategies.

C1.2

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

Position or committee

Chief Executive Officer (CEO)

Climate-related responsibilities of this position

Managing annual budgets for climate mitigation activities
Managing major capital and/or operational expenditures related to low-carbon products or services (including R&D)
Managing climate-related acquisitions, mergers, and divestitures
Providing climate-related employee incentives
Integrating climate-related issues into the strategy

Coverage of responsibilities

Reporting line

Reports to the board directly

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

Quarterly

Please explain

Risk management is considered a strategic activity within the Company. Annually, as part of the Company's Enterprise Risk Management process a sustainability risk workshop is held. The results from the sustainability and other functional workshops are presented to the CEO by the General Counsel, CCO, and VP of Internal Audit for the purpose of finalizing enterprise-level risks. Sustainability risk, inclusive of climate, is currently considered to be an enterprise risk, and is reviewed as part of our full Board of Director's oversight of climate and strategy.

C1.3

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

	Provide incentives for the management of climate-related issues	Comment
Row 1	Yes	Refer to C1.3a

C1.3a

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

Entitled to incentive

Chief Executive Officer (CEO)

Type of incentive

Monetary reward

Incentive(s)

Bonus - % of salary

Performance indicator(s)

Progress towards a climate-related target

Incentive plan(s) this incentive is linked to

Short-Term Incentive Plan

Further details of incentive(s)

A portion of the annual performance bonus of the CEO is linked to the company's stewardship/environment metrics. The company's progress toward meeting our GHG intensity reduction target is one of the criteria included in the stewardship/environment metrics.

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

The CEO along with our Executive Leadership Team (ELT) oversees our sustainability strategy including transition plans to achieve GHG and energy targets. This demonstrates leadership support of our GHG and energy targets and the company's overall strategy for managing climate risks.

Entitled to incentive

Chief Financial Officer (CFO)

Type of incentive

Monetary reward

Incentive(s)

Bonus - % of salary

Performance indicator(s)

Progress towards a climate-related target

Incentive plan(s) this incentive is linked to

Short-Term Incentive Plan

Further details of incentive(s)

A portion of the annual performance bonus of the CFO is linked to the company's stewardship/environment metrics that measure the number of serious and major chemical releases into environment, including climate change emissions such as methane, CO₂.

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

The CEO and CFO along with other members of the Executive Leadership Team (ELT) oversee our sustainability strategy including transition plans to achieve GHG and energy targets. These strategies include understanding year-over-year environmental reporting trends and ongoing process and capital projects to support improvements.

Entitled to incentive

Other C-Suite Officer

Type of incentive

Monetary reward

Incentive(s)

Bonus - % of salary

Performance indicator(s)

Progress towards a climate-related target

Incentive plan(s) this incentive is linked to

Short-Term Incentive Plan

Further details of incentive(s)

A portion of the annual performance bonus of the C- Suite Officers is linked to the company's stewardship/environment metrics that measure the number of serious and major chemical releases into environment, including climate change emissions such as methane, CO2.

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

The Celanese Executive Leadership Team (ELT) oversee our sustainability strategy including transition plans to achieve GHG and energy targets. These strategies include understanding year-over-year environmental reporting trends and ongoing process and capital projects to support improvements.

C2. Risks and opportunities

C2.1

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

Yes

C2.1a

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

	From (years)	To (years)	Comment
Short-term	0	3	
Medium-term	3	10	
Long-term	10	30	

C2.1b

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

We primarily consider “materiality” under relevant securities laws (meaning generally that the magnitude or nature of the item is such that it is probable that the judgment, buy/sell or voting decision of a reasonable investor would have been changed or influenced by the information). For reasonably financially quantifiable items, as a general guideline, but not a definitive threshold, we typically consider a risk to be material if it represents 5% or more of pre-tax income. However, this is a general guideline only, and not all information that exceeds this threshold will be material and some information that does not cross this threshold may be material due to qualitative or other factors.

In addition to this financial threshold, Celanese considers risks and opportunities through reputational, operational and regulatory criteria. Many of these risks which are not possible to quantify with precision or at all. Celanese uses various tools to identify these risks and opportunities, including a sustainability priority assessment, stakeholder engagement outreach, and our enterprise risk management process. This process evaluates potential exposure, likelihood and financial or reputational magnitude of risk exposure. Refer to our annual 10-K report, available at investors.celanese.com, for a discussion of these risk factors that are considered to be the most substantive.

C2.2

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

Value chain stage(s) covered

- Direct operations
- Upstream
- Downstream

Risk management process

Integrated into multi-disciplinary company-wide risk management process

Frequency of assessment

More than once a year

Time horizon(s) covered

- Short-term
- Medium-term
- Long-term

Description of process

Climate-related risks and opportunities which could have a substantive financial or strategic impact are integrated into our overall corporate enterprise risk management (ERM) processes. Led by Internal Audit, the Company holds annual risk workshops with the leadership teams of key functions to assess the current risk universe applicable to those functions. These workshops consider Celanese specific risks, external risks as well as macro trends in short-term, medium-term, and long-term; and are methodically evaluated based on exposure, likelihood and financial or reputational magnitude risk exposure. Prior to the annual risk review, the Celanese Climate Committee meets at least quarterly to address emerging issues and risks. Additionally, senior leaders participating on the ESG Council meet quarterly to review, discuss, and align on strategic imperatives along the ESG and climate space.

Since 2021, Celanese has established an ESG-specific workshop as part of our ERM processes. Our cross-functional ESG Council participated in the workshop, allowing for an in-depth discussion of ESG risks such as climate, energy, and their interdependencies. Mitigation activities for risks are identified and reviewed and monitored throughout the year. In 2022 we enhanced our risk definitions to include risks related to our recent DuPont M&M acquisition.

Major risks identified are assigned to risk owners who develop and execute remediation plans that account for risks in the short-term, medium-term and long-term. As with other types of risks, sustainability risks, including major climate risks, are monitored and mitigation progress reviewed with leadership and the full board at least annually. Risk and remediation status are tracked continually throughout the year with quarterly certifications by the executive leadership team for major enterprise level risks. We plan on continuing the ESG specific workshop to inform the ERM program for 2023.

C2.2a

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

	Relevance & inclusion	Please explain
Current regulation	Relevant, always included	Celanese, as part of our risk process, engages personnel in all regions where the company has a presence to be aware of regulatory and legislative requirements that may impact the company (e.g., ETS schemes in Asia, Carbon Border Adjustment Mechanism, U.S. Tax Credits via 45Q program). For example, if Celanese builds a new plant or makes changes at existing European plants, Celanese checks the ETS Directive and relevant transposition into national law to determine applicability so we can estimate future CO2e emissions and energy

		<p>consumption, estimated costs to compensate emissions by allowances and to schedule personnel to manage the administrative (e.g. preparation of annual CO2 emissions reports due to the ETS Directive or preparation of monitoring reports or applications for free allowances). In 2022 after the acquisition of the M&M business, Celanese began the process of restructuring the Celanese Climate Committee. In 2023, Celanese finalized this process by formalizing the committee which is co-chaired by our VP of governmental affairs and Manufacturing Sustainability leader. Advocacy and regulatory impacts and risk is now a formal topic in the committee. Examples of specific topics are ETS Directive Reform and European CBAM.</p>
Emerging regulation	Relevant, always included	<p>Celanese is highly engaged with regional trade group organizations such as the American Chemistry Council (ACC) and Cefic to understand impacts to our organization of climate-related risks. For example, Celanese’s CEO is an active member of the ACC Board Sustainability Committee, and the Senior Director of Sustainability represents Celanese on the ACC Sustainability Climate Subcommittee. The EU Environmental Leader also participates in trade group meetings such as VCI, in addition to Cefic, for information and a better understanding of upcoming legislative and regulatory requirements. In addition, to better engage in the EU, Celanese utilizes the EU Issue Tracker which is a European regulatory awareness tool. The EU issue tracker informs Celanese’s European Environmental Leader of Celanese of any new climate-related regulatory requirements. The EU Environmental Leader reviews the information for relevance followed by an impact assessment for impacted sites and business lines. For example, a detailed impact assessment was done for the different reduction options of the benchmarks for heat, fuel and process emissions if Celanese would need to purchase allowances at the stock market. See “Current Regulation” section above for our 2022 and 2023 advancement of the Celanese Climate Committee. Additionally, Celanese modified its EU ETS model to understand the impact of the acquisition on our captured allowances.</p>
Technology	Relevant, always included	<p>The main risks associated with technological improvements that support the transition to a lower-carbon, energy-efficient system is the availability and reliability of renewable energy supplies and the timeframe in which operators must retrofit facilities to renewable energies. Another risk is the technical feasibility of renewable energies for large-scale facilities – very often new technologies only work on the laboratory scale and need more time to be developed for large-scale. To these points, Celanese brought online a cogeneration facility at our Lanaken Belgium plant in 2020. Additionally, we evaluated the use of solar power at our Clear Lake Plant, executed a contract, and began procurement and utilization of renewable power to run an estimated one-third of the facility beginning in December 2021 and continuing in</p>

		<p>2022 for the full year at the same estimated level for the site & site partners. Furthermore, in 2022 we also procured 1 million kilowatt hours of renewable power at our Nanjing facility in China. Through active engagement with our procurement group, we are refreshing our renewable energy approach for our energy and climate roadmap.</p>
Legal	Relevant, always included	<p>Celanese recognizes the importance of legal risks associated with climate change. As such, Celanese's Senior Vice President and General Counsel, leads the Environmental, Social, and Governance (ESG) Council. Climate-related litigation claims are considered a potential risk as Celanese has the experience that authorities may try to revoke free allowances that they granted in previous years. Applications for free allowances are certified by an independent third party and the DEHSt (German competent authority) makes the decision for the preliminary number of allowances before they send the national allocation plan to the EU for a final decision. Celanese has engaged both internal and external legal resources in our ETS program to protect against the potential revocation of allowances. Additionally, beginning in 2022, Celanese formally placed the EHS Assistant General Counsel on the ESG Council, and formalized her participation in external limited assurance reviews, formal sustainability disclosures, and contract discussions for Solar contracts.</p>
Market	Relevant, always included	<p>At Celanese we assess transitional risks associated with shifts in market dynamics due to the transition to a low-carbon economy, such as changing consumer preferences or regulatory requirements. We are closely monitoring regulatory developments through industry trade associations (i.e. Plastics Europe) and actively discussing climate topics with our customers to understand their climate driven innovation needs. As a result, we observed changing customer demand for specific products and services, i.e. increased preference for bio-based products compared to previous times with an overall greater emphasis on low product carbon footprint to minimize scope 3 impact. At Celanese we embed sustainability in innovation and market strategies and identify opportunities to de-risk and solidify business growth. For example, Celanese currently leverages bio-based Methanol as an important raw material to produce bio-based Polyoxymethylene (POM), which is important to certain customers in the industrial, consumer and medical sectors. We also continuously assess our portfolio's sustainability performance and respond to the changing market needs by delivering value-adding sustainable products backed by data (LCA) and credible claims & measure progress. We routinely assess the Life Cycle Impact including the carbon footprint of our key products to understand potential risk and opportunities as customers continue to pay greater attention to product LCAs.</p>

Reputation	Relevant, always included	Celanese is committed to strong ESG performance and reflecting good stewardship in our decisions and actions. Our public ESG reporting, and disclosures are an important way in which we communicate with stakeholders regarding our commitment. For instance, our ESG Council strategy to align to the SASB Chemical Standard and TCFD was implemented and disclosed in our 2021 and 2022 ESG reports. We believe that these efforts to enhance corporate brand and reputation help improve our perception with investors, communities, customers, employees and potential employees. We believe that these efforts to enhance corporate brand and reputation help improve our perception with investors, communities, customers, employees and potential employees.
Acute physical	Relevant, always included	Celanese experienced acute physical risks globally through droughts in Europe, (e.g., Europe in 2018 where the low water level in the River Main affected transport at our Frankfurt site), extreme temperatures (e.g., record temperatures at many sites and record lows in Gulf Coast region in the U.S. in December of 2022), and a number of hurricanes and large rain events impacting U.S. mainland and abroad (e.g., Italy floods in May 2023). These events have had a direct impact on our production and our people.
Chronic physical	Relevant, always included	In Europe, Celanese expects higher temperatures than in the past with the consequence that water levels in the rivers may decrease during summer months (e.g., the River Main mentioned in “Acute physical” response above). As higher temperatures may be an issue in the future, Celanese may consider moving from ship transport to other types of transport or to move production to other sites where the transport of raw materials will not be an issue during summer months.

C2.3

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

Yes

C2.3a

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

Identifier

Risk 1

Where in the value chain does the risk driver occur?

Direct operations

Risk type & Primary climate-related risk driver

Current regulation
Carbon pricing mechanisms

Primary potential financial impact

Increased indirect (operating) costs

Company-specific description

EU ETS- There is a risk of the EU ETS expanding the scope of manufacturing activities subject to cap-and-trade regulations, which could result in increased costs to purchase additional allowances or permit applications. For example, in 2018 a Celanese facility was added to ETS due to the German transposition of the 2017 EU ETS Directive including polymerization units. A future risk is that production units or sources with less activity may become subject to ETS. These regulation changes would require Celanese to purchase allowances.

The EU Parliament approved on 18 April 2023 the reform of the Emissions Trading System (ETS), with GHG emissions in the ETS sectors to be cut by 62% (an increase from 43%) by 2030 compared to 2005-levels. The reform totally phases out free allowances to companies from 2024 until 2034. This extends our short-term risk review to a medium-term outlook over the next 10-years.

Time horizon

Short-term

Likelihood

Likely

Magnitude of impact

Medium-low

Are you able to provide a potential financial impact figure?

Yes, an estimated range

Potential financial impact figure (currency)

Potential financial impact figure – minimum (currency)

10,000,000

Potential financial impact figure – maximum (currency)

12,000,000

Explanation of financial impact figure

The European Commission will eliminate free allowances and we already have a reduction in the number of free allowances during the first half (2021-2025) of the 4th period. Financial impact based on average ETS carbon price for calendar year 2022 of 85 € (\$93.50) and highest cost in 2023 of 101 € (\$111), (a conversion rate of 1.10) multiplied by 107,964 tons CO₂e (2022 emissions covered by ETS), therefore we

estimate the cost impact to be between \$10,000,000 and \$12,000,000/year.

The financial impact will increase due to the fact that the EU Commission eliminates free allowances. The time horizon of this elimination risk of free allowances is medium-term versus the short-term risk of current regulation.

Financial considerations for China have not been incorporated into this estimate given the China ETS program for the Chemical Sector has not been implemented to date (see comment section).

Cost of response to risk

50,000

Description of response and explanation of cost calculation

SITUATION: Emerging regulatory impacts in the EU would result in a potential shortage or elimination of free allowances, as described above. Celanese currently receives more free allowances from steam production (heat recovery) than needed for their emissions. Since this situation is likely to change in the 4th ETS period because there will be limited free allowances due to benchmark updates, the difference will lead to the need to purchase allowances, which will likely result in a CO₂ allowance price increase as well. Due to the EU ETS Directive, the Market Stability Reserve (MSR) will also initiate higher allowance prices.

Based on these findings, free allowances will be more adapted to production (referred to as dynamic allocation going forward). In the 4th ETS period, the number of free allowances will already be reduced when the activity rate decreases by 15% and likely include emissions from marine and ocean-going vessels (Shipping Monitoring Reporting and Verification called MRV). While the direct impact has not yet been finalized, many of our products and raw materials are shipped from countries outside the EU and in and around the EU on marine vessels and ships.

TASK: Celanese global environmental, climate committee, global government affairs, and finance routinely evaluate these changes to existing and upcoming new regulations for impact evaluation and engagement in trade groups for decisions and feedback to internal stakeholders. These efforts help us identify cost-effective emission reduction strategies and other solutions. These committees meet at least once per quarter and as needed to address issues and ensures consistent processes and personnel to participate.

ACTION: We utilized the internal global energy, environmental and site team to conduct the dynamic allocation evaluation which incorporates the newly acquired M&M business to ensure proper evaluations, planning, and project reviews are conducted. The analysis is incorporated into the planning for the 2030 global CO₂ targets which also included initiation of energy reduction teams, and evaluation and implementation of renewable energy and other strategic projects to be pursued over the next 10 years (medium-term). The cost of response to risk is approximately \$50,000 based on the manhours spent in this evaluation.

RESULT: We are continuing to identify, evaluate, and implement strategic projects that reduce carbon emissions.

Comment

In addition, the National ETS for China, initially covering only the power sector, began online trading on July 16, 2021, at a cost of approximately \$8 per tonne of CO₂. The power sector covers 2,225 companies and approximately 12% of total global CO₂ emissions. While the initial phase of the China National ETS does not cover the chemical industry, seven major carbon emitting industries are expected to gradually be rolled into the ETS program. There is currently no direct impact to Celanese with Phase 1 of the China ETS, however, the Chemical Sector ETS is estimated to be implemented between 2023 and 2025 with minimal quota and cost impacts when it begins.

Identifier

Risk 2

Where in the value chain does the risk driver occur?

Direct operations

Risk type & Primary climate-related risk driver

Emerging regulation
Carbon pricing mechanisms

Primary potential financial impact

Increased indirect (operating) costs

Company-specific description

Another emerging issue is the EU carbon border adjustment mechanism (CBAM) which targets product imports in carbon-intensive industries and is designed to function in parallel with the EU's Emissions Trading System (EU ETS), to mirror and complement its actions on imported goods. EU CBAM will be gradually implemented, and the initial scope covers imports of electricity, iron and steel, cement, aluminium, fertilizers, and hydrogen in which Celanese is exempt. It will begin operating on October 1, 2023, with a transitional phase until December 2025, during which affected organizations/importers will only be required to fulfil reporting obligations.

In 2026, financial obligations will take effect and importers will have to start purchasing CBAM certificates based on direct emissions in imported products. These will be phased in gradually with a phasing out of EU ETS free allowances. Before the transitional period ends, CBAM will be reviewed to assess whether to extend the scope to other goods such as organic chemicals and polymers, with the intent that all goods covered by EU ETS will fall under CBAM by 2030. The review will also include an assessment of the methodology for indirect emissions and the possibility to include more downstream products as well as leveraging the ETS price on carbon as the instrument with which to quantify financial impact and risk.

CBAM might generate implementation issues and could trigger / intensify trade conflicts.

Such compensation at the border will be complicated, it will reduce export opportunities, especially for downstream users. The compensation may require extensive knowledge about product carbon footprints for our products. Celanese will have to weigh import competition conditions versus international supply relationships and export interests. Celanese has engaged Cefic and is monitoring global CBAM proposals from European Commission and others, like the United States including the following:

- a. How would potential rising CO2 prices because of CBAM affect competitiveness of locally produced products in the EU if they are no longer cost-advantaged comparing with imported products from US or China?
- b. Where is our position in the chemical value chain? How do rising prices of our suppliers (at home and abroad) affect Celanese?
- c. Where is Celanese's part of international value chains? How would CBAM impact our international supplier relationship?
- d. How would CBAM cost increases affect our exports?

Time horizon

Medium-term

Likelihood

More likely than not

Magnitude of impact

High

Are you able to provide a potential financial impact figure?

Yes, an estimated range

Potential financial impact figure (currency)

Potential financial impact figure – minimum (currency)

97,000,000

Potential financial impact figure – maximum (currency)

115,000,000

Explanation of financial impact figure

The CBAM does not directly impact Celanese at this moment. However, an estimation of the financial impact, we have assumed 1/3 of our gross scope 1 and scope 2 emissions outside of Europe are contained in products exported to Europe. Using a range of the average ETS carbon price for calendar year 2022 of 85 € (\$93.50) and highest cost in 2023 of 101 € (\$111), a conversion rate of 1.10, and approximately 1,040,000 MT GHG (1/3 of scope 1 and scope 2 emissions outside Europe), the financial impact would be roughly \$97-\$115 million USD.

Cost of response to risk

0

Description of response and explanation of cost calculation

The CBAM is not in place at the moment and thus the only activity has been global engagement with trade group organization to ensure global alignment on the CBAM implementation. In general, our efforts to develop LCAs, understand the embedded carbon in our products, and seek ways to reduce all scopes of carbon are expected to improve Celanese's position with respect to future carbon pricing impacts. However, those efforts are ongoing for a variety of reasons, not specifically (or largely) in response to the potential risk posed by CBAM.

Comment

Identifier

Risk 3

Where in the value chain does the risk driver occur?

Direct operations

Risk type & Primary climate-related risk driver

Emerging regulation
Enhanced emissions-reporting obligations

Primary potential financial impact

Increased indirect (operating) costs

Company-specific description

General environmental regulations
United States EPA: Currently large US facilities that are considered major sources with a potential to emit of greater than 100,000 tons per year of CO₂e must evaluate each project for emission increases. If a project increases CO₂e emissions greater than 75,000 tons per, the project triggers a Prevention of Significant Deterioration (PSD) review. During the review sites are required to assess the Best Available Control Technology (BACT) and install if technologically feasible and economically reasonable. Risks are: (1) thresholds subject to change either through legal challenges or regulatory tightening, (2) modifications, expansions, and construction of new grass-root facilities could potentially trigger PSD requiring extensive permit review, project delays, and additional significant capital that could potentially cancel potential projects, (3) require significant time to review every project to ensure PSD is not triggered. Currently Celanese US is subject to these rules. Also, in 2023, the EPA proposed a new Section 111 Standard which would establish new carbon emission standards for U.S. coal and natural gas-fired power plants. The proposed rule leans on hydrogen as a low-carbon fuel that could be used as a strategy to meet carbon reduction goals and would potentially establish carbon capture sequestration as the best system of emission reduction (BSER) that takes into account costs, energy requirements, and other factors that could make CCUS best available control technology (BACT) for air permitting. While the EPA states this rule will have negligible impact on electricity prices, industry has not commented

United States SEC: In 2022, the Securities and Exchange Commission proposed regulations for U.S. companies on climate related financial disclosures which would increase costs to quantify scope 1, 2 and 3. Also, the SEC would require annual filing outlining materiality and risks. These rules are expected to be finalized in summer 2023.

European Commission: in 2022, the European Council and European Parliament reached the final agreement on the Corporate Sustainability Reporting Directive (CSRD) which establishes mandatory reporting standards aligned with existing sustainability frameworks, harmonizes terminology and structure of reporting, reduces disclosure requirements, and clarifies materiality concepts for many industries in the EU. The CSRD is expected to become law in 2023.

Time horizon

Medium-term

Likelihood

More likely than not

Magnitude of impact

High

Are you able to provide a potential financial impact figure?

Yes, an estimated range

Potential financial impact figure (currency)

Potential financial impact figure – minimum (currency)

55,000,000

Potential financial impact figure – maximum (currency)

82,000,000

Explanation of financial impact figure

Based on anticipated range of global scope 1 GHG emissions are potentially impacted by future capital projects at the Clear Lake site by abating through capture and storage (CCS). The estimate was calculated by using an estimated scope 1 Clear Lake Plant CO₂e emission rate of approximately 800,000 MT and multiplying that by \$69 to \$103 tonne of carbon dioxide abated using CCS (estimate from Carbon Capture & Storage Association) (for partial to full abatement). There would also be additional costs for personnel required to manage the regulatory agency requirements (i.e. preparing applications, annual monitoring reports, consultant fees, etc.). The values stated do not include a potential Internal Revenue Service (IRS) 45Q tax credit of \$85/MT established in the Inflation Reduction Act (IRA) passed in 2022. Based on the IRA, Celanese could receive approximately \$68 million in tax credit incentives annually for several years if all 800,000 metric tonnes were permanently sequestered.

For future regulations, compliance with changes in laws, regulations and obligations could increase costs and permitting obligations, however, changes may also increase demand or open new markets to products currently produced by Celanese.

Cost of response to risk

0

Description of response and explanation of cost calculation

Depending on the availability of internal resources, agency regulatory requirements will be managed by internal resources as much as possible. Additionally, Celanese has already implemented an enhanced ESG reporting process that aides in the evaluation of impacts.

Comment

Celanese expects to control costs for additional regulatory agency requirements i.e. compliance, permitting and reporting by utilizing internal resources.

C2.4

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

Yes

C2.4a

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

Identifier

Opp1

Where in the value chain does the opportunity occur?

Direct operations

Opportunity type

Energy source

Primary climate-related opportunity driver

Use of lower-emission sources of energy

Primary potential financial impact

Reduced indirect (operating) costs

Company-specific description

Since 2019, we have developed our energy transition plan as part of our corporate ESG strategy. And we have started to build our foundational framework for Product Carbon Footprint (PCF) and Life Cycle Assessment (LCA) modelling for Celanese's key, top-tier products. As we continue the development of our LCA framework, the results of the studies provided valuable insights into the main contribution factors and the ability to run scenarios including the impact of applying alternate energy sources. These insights supported the prioritization and establishment of the decarbonization plan while making evident raw material and energy supply play a critical role.

Using foundational LCA data as basis, in 2021 an assessment was started to incorporate sustainable sourcing of raw materials and low to lower emitting sources of energy into our ESG strategy. One of the possibilities is through a supplier risk management process and Celanese decided to implement this option. We also established a dedicated staff to support both business cores for fossil and renewable energy procurement (all energy sources). It is their task to evaluate and procure lower carbon energy sources, such as renewable power, to support the business and our targeted goals.

As we evaluated our decarbonization roadmap in 2021, and finalized it in 2022, we found that roughly 16% of our global scope 1 and scope 2 greenhouse gas emissions were from grid electricity with roughly 2/3 of these emissions or 10% of global emissions occurring in deregulated markets in the United States. Given our flagship plant is located in one of these deregulated markets, we immediately identified an opportunity to research, contract, and procure renewable electricity to run an estimated one-third of the facility beginning in December 2021 and continuing in 2022 for the full year at the same estimated level for the site & site partners. We are now investigating and researching the acquisition of an additional 115,000 MWH renewable electricity in these deregulated markets leading to over an estimated, combined annual operating cost savings of \$4 million US dollars. As a result of these opportunities, if implemented, we project that the percentage of our global and U.S. renewable electricity consumption will increase to roughly 14% and 28% respectively. This translates into a global electricity scope 2 reduction of approximately 10% and a electricity scope 2 reduction of approximately 25% in the U.S.

Time horizon

Medium-term

Likelihood

Very likely

Magnitude of impact

Medium

Are you able to provide a potential financial impact figure?

Yes, an estimated range

Potential financial impact figure (currency)

Potential financial impact figure – minimum (currency)

1,300,000

Potential financial impact figure – maximum (currency)

4,300,000

Explanation of financial impact figure

Celanese is still building out our supplier risk management as part of our global strategy GHG reductions of Celanese emissions and our key raw materials have potentially widely different opportunity values. This financial impact figure is based on the total projected annual operating savings in deregulated markets through the procurement of renewable electricity via power purchase agreements (PPA) that contain renewable emission credits. The range of the value takes into account PPAs already executed (minimum) up to a range of projected savings from projects actively being pursued. Other financial benefits, not yet quantifiable, are impacts and sales associated with acquiring more sustainable raw materials and production of lower carbon emitting products through the use of renewable electricity to drive significant advancements in product carbon footprint. Lower CO2 products will drive further value along the value chain as products with lower CO2 footprints will be in higher demand thus driving potentially high margins.

Cost to realize opportunity

250,000

Strategy to realize opportunity and explanation of cost calculation

Situation: Establishing LCAs while integrating an energy transition plan to develop decarbonization roadmap; Celanese has identified an opportunity to reduce our Scope 2 emissions for supplier carbon footprint and renewed energy contracts. Specifically , we use our LCA framework for Celanese products to assess the best options to reduce our Scope 2 emissions.

Task: Since 2019, we developed our energy transition plan as part of our corporate ESG strategy and have started to build our framework for Product Carbon Footprint (PCF) and Life Cycle Assessment (LCA) modelling for Celanese's key products.

Action: Using LCA -data in 2021 we assessed how to incorporate sustainable sourcing of raw materials and lower energy emitting sources into our ESG strategy. One option we implemented is a supplier risk management process with dedicated staff to support both fossil and renewable energy procurement and evaluate/procure lower carbon energy sources, such as renewable power.

Result: Since our flagship plant is in a deregulated market, we identified an opportunity to contract and procure renewable electricity to run an estimated one-third of the facility beginning in December 2021 and continuing in 2022 for the full year at the same estimated level for the site & site partners. We are now researching acquisition of an additional 115,000 MWH renewable electricity in deregulated markets leading to an estimated annual operating cost savings of \$4 million US dollars. If implemented, our global and renewable electricity consumption will increase to approx. 14% and 28%

respectively by 2030. This translates into a global electricity scope 2 reduction of approximately 10% and a US electricity scope 2 reduction of approximately 25% by 2030.

Our 2030 GHG reduction strategy identified an abatement strategy to be renewable energy (e.g., electricity and fuels). Therefore, we are evaluating sources of renewable and bio-based energy and are working with suppliers to reduce the impact of raw materials on our products. Over this decade, the renewable electricity we are targeting is 500 GWh or approx. 230 KT of CO₂e reduction per annum.

The opportunity cost is the expense to procure renewable power with RECs versus grid electricity for US sites. These costs are associated with one full-time equivalent to track the market and negotiate service contracts with energy providers. Costs do include costs of developing contracts or securing RECS for the purchased renewal electricity.

Comment

Identifier

Opp2

Where in the value chain does the opportunity occur?

Direct operations

Opportunity type

Resource efficiency

Primary climate-related opportunity driver

Other, please specify

Use of more efficient production and distribution processes; use of recycling

Primary potential financial impact

Other, please specify

Increased revenues resulting from increased production capacity for products and services; Increased revenues resulting from increased demand for products and services; Returns on investment for low emission technology

Company-specific description

Part of our manufacturing ESG strategy is to enable sustainable integration between our production units by lowering our Scope 1 Scope 2 emissions along with our strategy given supplier carbon footprint options and economic considerations. This enables lower energy utilization and GHG emissions while providing opportunities to recycle. There are several examples at Celanese including adding cogeneration at our Lanaken Belgium plant and the announced methanol expansion at Clear Lake Plant, Texas. The cogeneration facility replaces the need for purchased electricity while producing steam for plant activities. This project, which started operation in 2020, reduces GHG emissions by approximately 3100 metric tonnes annually. The Methanol Expansion will utilize by-product CO₂ from Celanese owned and operated facilities as well as by-product CO₂ from other external stakeholders to produce additional methanol

production by the end of 2023. Celanese permitted this project in 2019, began construction in 2020, and plans to commission at the end of 2023. The reduced GHG emissions from the Methanol Expansion are estimated at 180,000 metric tonnes per year, equivalent to emissions from approx. 39,000 cars. We will continuously evaluate opportunities to integrate circular economy principles into our manufacturing philosophy. Sustainability is now a key review criterion for all significant capital expenditures as part of the leadership review for capital projects which we expect will drive several aspects, including visibility and evaluation of alternative abatement solutions to advance sustainability further into the organization. The Global Sustainability Leader is refreshing our carbon transition plan and road map, evaluating sustainability impacts associated with major and routine capital projects, mergers and acquisitions, divestitures, global network optimization, and other strategic and continuous improvement projects. This work commenced in 2023 and will be an evergreen process in the future.

Additionally, given recent escalation of energy costs globally our Celanese Energy Council will identify, prioritize, and initiate new energy reduction projects by end of 2022. This cross-functional energy team began evaluation at major sites in 2021 and into 2022 with the aim of identifying projects to achieve a 30% reduction. The team has completed reviews at several major sites with results pending review for prioritization and implementation.

Time horizon

Short-term

Likelihood

Very likely

Magnitude of impact

Medium-high

Are you able to provide a potential financial impact figure?

Yes, an estimated range

Potential financial impact figure (currency)

Potential financial impact figure – minimum (currency)

100,000,000

Potential financial impact figure – maximum (currency)

200,000,000

Explanation of financial impact figure

The range of the value provided above assumes a value of 15% to 30% of annual forecasted energy spending globally.

Cost to realize opportunity

250,000

Strategy to realize opportunity and explanation of cost calculation

The capital cost to implement global energy reduction projects today is unknown given we are evaluating existing and future abatement technologies to reduce energy consumption at our global manufacturing sites. Therefore, the cost to realize this opportunity is approximately the salary of a full-time employee for driving manufacturing evaluations globally.

Comment

Identifier

Opp3

Where in the value chain does the opportunity occur?

Downstream

Opportunity type

Products and services

Primary climate-related opportunity driver

Other, please specify

Development and/or expansion of low emission goods and services; Development of new products or services through R&D and innovation; Shift in consumer preferences

Primary potential financial impact

Other, please specify

Increased revenues resulting from increased demand for products and services;
Increased revenues through access to new and emerging markets

Company-specific description

Through our supply chain, Celanese is situated to provide sustainable solutions to help our customers achieve their sustainability objectives. For example, in 2021 we partnered with a major customer to produce a lower CO₂ footprint POM (POM ECO-B) product made from bio-mass balanced raw material.

Additionally, we produce critical polymers for the automotive industry that provide structural strength replacing steel and metal components to decrease vehicle weight and increase fuel efficiency as well as polymers that provide the essential componentry for electric vehicle batteries and solar panels while understanding product specifications, costs and impacts. Light weighting solutions improve fuel economy by offering up to 30% mass savings versus traditional part materials.

Celanese recently joined Operation Clean Sweep (OCS), a global organization, formed to help industry prevent plastics from entering the environment through streams, waterways or oceans.

Celanese produces redispersible powders (RDP) which provides Celanese an enhanced building and construction portfolio further enabling integration into solutions

such as tile grouts, insulation and solar membranes, and cement enhancements. We are working to understand the environmental impacts of our products through our LCA process, and we are confident we can continue to expand our product offerings to meet the demands of today and the future. We have begun scale-up activities, capital procurement, and procurement of circular raw materials, inclusive of carbon capture technology and/or bio-circular raw materials, to manufacture the sustainable POM product lines. A key result is sustainable POM product line began production in 2021 and Celanese recently announced availability of more sustainable versions of multiple Acetyl Chain materials with mass balance bio-content. These offerings will be designated as ECO-B, consistent with innovative bio-based offerings introduced for Engineered Materials customers in previous years. Planned offerings are ECO-B Emulsion Polymers, Elotex Redispersible Powders and Ateva EVA Polymers and ECO-B versions of other acetyl chain intermediate chemicals including acetic acid, vinyl acetate monomer, amines, acetate esters and anhydrides. Acetyl chain ECO-B product offerings are now available for commercial orders.

Time horizon

Short-term

Likelihood

Very likely

Magnitude of impact

Medium-high

Are you able to provide a potential financial impact figure?

Yes, an estimated range

Potential financial impact figure (currency)

Potential financial impact figure – minimum (currency)

30,000,000

Potential financial impact figure – maximum (currency)

150,000,000

Explanation of financial impact figure

The range of \$30 million to \$150 million is for the manufactured sustainable POM product line based on realized sales plus anticipated consumer trends while also taking into consideration specific targeted markets.

Cost to realize opportunity

50,000,000

Strategy to realize opportunity and explanation of cost calculation

Estimated costs and strategy to realize the opportunity consists of leveraging a combination of scale-up, capital, and procurement of circular raw materials, inclusive of

carbon capture technology and/or bio-circular raw materials, to manufacture the sustainable POM product lines.

Comment

C3. Business Strategy

C3.1

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

Row 1

Climate transition plan

No, our strategy has been influenced by climate-related risks and opportunities, but we do not plan to develop a climate transition plan within two years

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

Celanese recognizes that Scope 3 emissions are a prerequisite to develop a transition plan. As stated in last year’s ESG report, Celanese has advanced to engage a 3rd party in 2022 and 2023 to assess and quantify our scope 3 emissions which will enable us to take further steps. Additionally, in 2022, we finalized and communicated our targets for Scope 1 and Scope 2 emissions intensity, and our Board of Directors, which has oversight responsibility for climate, approved the 2030 reduction target and plan in 2022. The 2030 reduction target and plan are discussed as part of our ongoing outreach with key external stakeholders.

C3.2

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

	Use of climate-related scenario analysis to inform strategy
Row 1	Yes, qualitative and quantitative

C3.2a

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

Climate-related scenario	Scenario analysis coverage	Temperature alignment of scenario	Parameters, assumptions, analytical choices
	Company-wide		Climate change is one of the most challenging and significant issues facing the world today, and at Celanese,

		<p>we are committed to doing our part to make sustainable progress toward addressing the problem. We support multilateral approaches, such as the Paris Agreement, that promote ambitious efforts to address climate change holistically. https://www.celanese.com/-/media/cewebjssapp/project/documents/Climate-Policy.pdf</p> <p>Our 2023 Methanol Expansion is a great example of applying physical scenario planning for current and future needs. In this case, we needed additional methanol production, where options included increasing natural gas usage for heat and raw material, procuring methanol requirements, or implementing a CO2 reduction project to produce methanol. In this scenario, we analysed the impact of 45Q US Federal Tax Credits as well as natural gas pricing on overall project economics. We layered this into the 5-year capital plans and the expected life expectancy of the project. We ultimately concluded that capturing and utilizing CO2 was the preferred option to produce the incremental methanol requirement. Importantly, this was a cross-functional effort that included operations, finance, procurement, business, technology, stewardship, ESG Council, and external stakeholders. Furthermore in 2022, we started an evaluation of steam requirements for the next twenty years at our Bishop, Texas facility. Part of the project evaluation included the respective CO2 footprint (both production: tons CO2/h and intensity: tons CO2/ million BTUs) between the boiler and co-gen options which will factor into the final investment decision in 2023.</p>
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C3.2b

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

Row 1

Focal questions

This are examples of questions we use in the capital expenditure process. Review and analysis of the results will be summarized in next year's report. Examples of focal questions include:

- What is the sustainability impact of your capital project on energy, GHG emissions, waste, and water?
- Has the project considered additional abatement technologies not included in the scope of your project? What are the impacts and costs associated with these approaches?

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

We leveraged the questions above in the evaluation of a natural gas fired boiler and cogeneration facility based on steam requirements for the next twenty years at our Bishop, Texas facility. Part of the project evaluation included the respective CO2 footprint (both production: tons CO2/h and intensity: tons CO2/ million BTUs) between the boiler and co-gen options which will factor into the final investment decision in 2023.

C3.3

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

	Have climate-related risks and opportunities influenced your strategy in this area?	Description of influence
Products and services	Yes	Investment in low carbon product offerings such as POM ECO B (using bio-based content) and ECO-R (using recycled content) to broaden portfolio to meet customer requirements.
Supply chain and/or value chain	Yes	Celanese routinely evaluates opportunities to procure renewable energy, other forms of bio-based raw materials to lower our carbon footprint, and strategic supplier engagement to evaluate and acquire alternate product offerings to lessen impacts to the environment.
Investment in R&D	Yes	Celanese is developing products aligned with sustainability objectives of our customers and society including products that have increased recycled content or are bio-based. Specific products include bio-polymer solutions such as Clarifoil® Cellulosic Film which is certified compostable and Biodegradable to internationally recognized standards and made from certified sustainably sourced wood pulp for food compliant paper flexible packaging to replace single use plastics. Additionally, Clarifoil Cellulosic Anti-Fog Film can reduce and even eliminate glass heat in grocery store freezers. Traditionally, grocery stores heat the glass of their freezers to prevent fog from forming and obscuring the visibility of the products inside, consuming large amounts of energy in the process. Our film addresses, and in some cases solves this issue, allowing the products to be seen and energy to be saved. In 2022, more than 162,000 freezer doors used our Anti-Fog Film, facilitating an electrical energy reduction of approximately 85MM kWh per

		<p>annum, cost savings of approximately \$11MM/year, and an estimated overall reduction of 133MM lbs of CO2 equivalent Greenhouse Gas emissions. We are also providing customers with the ability to purchase certain POM grades such as POM ECO-B which through a mass-balance approach reduces the product carbon footprint by approximately 50%. We also enable sustainability through producing lighter-weight thermoplastics for the auto industry for improved fuel efficiency, safety, and reliability, and have invested in an additional GUR® production line to support the growing lithium-ion battery separator demand for electric vehicles. Additionally, we are focused on supporting the United Nations’ Sustainable Development Goal of “Good Health and Well-Being” through our support of our customer’s innovations in long-acting dosage forms, drug delivery devices, and orthopedic components.</p>
Operations	Yes	<p>Our manufacturing plants continuously evaluate opportunities to lower energy consumption for cost and emissions impact. There are several such examples across our enterprise including running our Clear Lake, Texas facility on an estimated one-third solar electricity in 2022 (45MW at peak solar) and the announced methanol expansion at the Clear Lake, Texas facility.</p> <p>As part of our Fairway Joint Venture also at the Clear Lake site, a carbon capture and utilization project will use approximately 80% of CO2 by-product emissions from 3rd parties to produce lower carbon methanol by the end of 2023. The reduced GHG emissions from this project are estimated at 180,000 metric tons per year to produce ~130,000 metric tons per year of methanol which can be converted into many downstream products in our Acetyls Chain.</p>

C3.4

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

	Financial planning elements that have been influenced	Description of influence
Row 1	<ul style="list-style-type: none"> Direct costs Indirect costs Capital expenditures Capital allocation 	<ul style="list-style-type: none"> • Direct and Indirect Costs: Direct and indirect costs are a factor of helping us target key sustainability projects to drive lower energy use and emissions. One example is energy. Given the recent escalation of energy costs globally, we are further leveraging our Celanese Energy Council to identify, prioritize, and initiate new energy reduction projects

		<p>by the end of 2022. This cross-functional energy team has begun evaluation at our major sites to identify projects to achieve up to a 30% reduction and associated GHG emissions. Additionally, other direct costs, for example, our raw materials, are of concern. We routinely evaluate opportunities to increase our raw material efficiencies. These examples help drive capital projects and allocations and cost reductions but also help set mindset change within our manufacturing teams that help us drive toward our goals. These energy reduction projects will be incorporated into our 2030 roadmap.</p> <ul style="list-style-type: none"> • Capital expenditures and allocation: Capital expenditures and capital allocations have been impacted through our capital review process. We establish a 5-year rolling capital budget and update it every year based on upcoming regulations, risk, maintenance requirements, and other growth projects. The annual budget is set with the Board of Directors. Additionally, we are utilizing the major expenditure request (MER) process, whereby all expenditures above a threshold value must be approved by MER review panel, which includes members of our senior leadership team. Importantly, sustainability is now a key review criterion for significant capital expenditures as part of the standard leadership review for capital projects which we expect will drive several aspects, including visibility and evaluation of alternative abatement solutions to advance sustainability further into the organization. These CAPEX projects and sustainability impacts will be incorporated into our 2030 roadmap.
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C3.5

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

Identification of spending/revenue that is aligned with your organization’s climate transition	
Row 1	No, and we do not plan to in the next two years

C4. Targets and performance

C4.1

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

Intensity target

C4.1b

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

Target reference number

Int 1

Is this a science-based target?

No, and we do not anticipate setting one in the next two years

Target ambition

Year target was set

2022

Target coverage

Company-wide

Scope(s)

Scope 1

Scope 2

Scope 2 accounting method

Market-based

Scope 3 category(ies)

Intensity metric

Metric tons CO₂e per metric ton of product

Base year

2021

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

0.2436

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

0.1585

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

0.406

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

100

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

100

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

100

Target year

2030

Targeted reduction from base year (%)

30

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

0.2842

% change anticipated in absolute Scope 1+2 emissions

13

% change anticipated in absolute Scope 3 emissions

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

0.265268

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

0.14715

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

0.4124

Does this target cover any land-related emissions?

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

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

-5.2545155993

Target status in reporting year

Underway

Please explain target coverage and identify any exclusions

Global Scope 1 & 2 GHG emissions are those calculated from Celanese wholly owned and under Celanese operational control within Celanese manufacturing facilities. Also included are joint ventures where Celanese has operational control.

Global Market-based Scope 2 GHG emissions reported are from purchased utilities (e.g., electricity, steam, other utilities) using site-specific and published emission factors. This value excludes Scope 2 GHG emissions from the use of temporary power to operate equipment, remediation activities at offsite activities, and other maintenance activities occurring offsite (e.g., pipeline activities).

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

We have developed a low-carbon transition plan. In the short term, Celanese plans to enhance energy efficiency and increase renewable electricity consumption to reduce our Scope 1 and 2 emissions through capital investment projects such as carbon capture and utilization. Looking forward, we aim to explore the application of power-to-steam technology, renewable fuels, and breakthrough technologies like hydrogen. Until new technologies become commercially scalable, our focus is to continue to leverage energy efficiency initiatives and consider limited carbon offsets through high-quality compensation measures as a carbon-footprint reduction tool as well

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

C4.2

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

Other climate-related target(s)

C4.2b

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

Target reference number

Oth 1

Year target was set

2021

Target coverage

Company-wide

Target type: absolute or intensity

Intensity

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

Energy consumption or efficiency

Other, please specify

Thousand BTU

Target denominator (intensity targets only)

Other, please specify

lb

Base year

2021

Figure or percentage in base year

2.51

Target year

2030

Figure or percentage in target year

2.26

Figure or percentage in reporting year

2.61

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

-40

Target status in reporting year

Underway

Is this target part of an emissions target?

No. This Energy Target is separate from the GHG target.

Is this target part of an overarching initiative?

No, it's not part of an overarching initiative

Please explain target coverage and identify any exclusions

Any site or process unit wholly owned and under Celanese operational control; any joint venture where Celanese has operational control .

New sites acquired under recent merger and acquisition will be incorporated into the target and baseline when data integration has been completed.

This value currently excludes energy from administrative locations, the use of temporary power to operate equipment, remediation activities at offsite activities, and other maintenance activities occurring offsite (e.g., pipeline activities)

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

Conducted workshops at priority energy sites to develop energy efficiency project pipeline.

Will continue to conduct bi-monthly energy reviews with priority energy sites to review metrics, projects, engagement of employees and share best practices.

Tracked approximately 130 energy projects being worked on at sites.

List the actions which contributed most to achieving this target

C4.3

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

Yes

C4.3a

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

	Number of initiatives	Total estimated annual CO2e savings in metric tonnes CO2e (only for rows marked *)
Under investigation	3	0
To be implemented*	9	1,896
Implementation commenced*	73	3,332
Implemented*	59	0
Not to be implemented	0	0

C4.3b

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

Initiative category & Initiative type

Energy efficiency in production processes
Process optimization

Estimated annual CO2e savings (metric tonnes CO2e)

3,113

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

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

Voluntary/Mandatory

Voluntary

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

5,870,000

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

0

Payback period

1-3 years

Estimated lifetime of the initiative

21-30 years

Comment

Other information not available

Initiative category & Initiative type

Energy efficiency in buildings
Lighting

Estimated annual CO2e savings (metric tonnes CO2e)

20.72

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

Scope 2 (market-based)

Voluntary/Mandatory

Voluntary

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

7,690

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

0

Payback period

1-3 years

Estimated lifetime of the initiative

11-15 years

Comment

Initiative category & Initiative type

Energy efficiency in production processes
Cooling technology

Estimated annual CO2e savings (metric tonnes CO2e)

198

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

Scope 2 (market-based)

Voluntary/Mandatory

Voluntary

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

315,000

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

0

Payback period

1-3 years

Estimated lifetime of the initiative

21-30 years

Comment

C4.3c

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

Method	Comment
Compliance with regulatory requirements/standards	Celanese builds its plants to meet and, in many cases exceed, emission regulations.
Dedicated budget for energy efficiency	Payback period for energy reduction projects and energy management systems
Dedicated budget for other emissions reduction activities	Funds are committed to reduce emissions as needed per regulations
Employee engagement	Celanese involves employees at all levels to reduce emissions

C4.5

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

Yes

C4.5a

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

Level of aggregation

Group of products or services

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

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

Type of product(s) or service(s)

Chemicals and plastics

Other, please specify

Biomass balanced polymers

Description of product(s) or service(s)

ECO-R: products derived from post-industrial or post-consumer waste and ECO-B: products made from non-fossil fuel plant or organic feedstock

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

Yes

Methodology used to calculate avoided emissions

Other, please specify

LCA

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

Cradle-to-gate

Functional unit used

1 kg

Reference product/service or baseline scenario used

POM Fossil based product

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

Cradle-to-gate

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

Explain your calculation of avoided emissions, including any assumptions

Estimated avoided emissions (metric tons CO₂e per functional unit) is up to 50%. By using bio-feedstock to produce POM monomer bio-methanol, we can avoid the traditional production of fossil-methanol and its related fossil resource extraction.

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

Level of aggregation

Group of products or services

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

Other, please specify

post-industrial recycled polyamide

Type of product(s) or service(s)

Chemicals and plastics

Other, please specify

post-industrial recycled polyamide

Description of product(s) or service(s)

Ecomid PA products

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

Yes

Methodology used to calculate avoided emissions

Other, please specify
LCA

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

Cradle-to-gate

Functional unit used

1 kg

Reference product/service or baseline scenario used

fossil based prime polyamide

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

Cradle-to-gate

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

Explain your calculation of avoided emissions, including any assumptions

By using recycled polyamide, we can reduce the consumption of prime polyamide resin and related fossil natural resource extraction.

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

C5. Emissions methodology

C5.1

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

No

C5.1a

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

Row 1

Has there been a structural change?

No

C5.1b

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

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

C5.2

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

Scope 1

Base year start

January 1, 2021

Base year end

December 31, 2021

Base year emissions (metric tons CO2e)

2,375,026

Comment

2021 is the baseline year.

Scope 2 (location-based)

Base year start

January 1, 2021

Base year end

December 31, 2021

Base year emissions (metric tons CO2e)

1,331,805

Comment

2021 is the baseline year.

Scope 2 (market-based)

Base year start

January 1, 2021

Base year end

December 31, 2021

Base year emissions (metric tons CO₂e)

1,417,089

Comment

Some of our operations have electricity supplier emission factors or residual emissions factors which gives us our Market-based emissions

Scope 3 category 1: Purchased goods and services

Base year start

Base year end

Base year emissions (metric tons CO₂e)

Comment

We have calculated heritage Celanese Scope 3 emissions but have chosen not to disclose until a combined Scope 3 inventory, including the recently acquired Dupont Mobility & Materials business, is completed.

Scope 3 category 2: Capital goods

Base year start

Base year end

Base year emissions (metric tons CO₂e)

Comment

We have calculated heritage Celanese Scope 3 emissions but have chosen not to disclose until a combined Scope 3 inventory, including the recently acquired Dupont Mobility & Materials business, is completed.

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

Base year start

Base year end

Base year emissions (metric tons CO₂e)

Comment

We have calculated heritage Celanese Scope 3 emissions but have chosen not to disclose until a combined Scope 3 inventory, including the recently acquired Dupont Mobility & Materials business, is completed.

Scope 3 category 4: Upstream transportation and distribution

Base year start

Base year end

Base year emissions (metric tons CO₂e)

Comment

We have calculated heritage Celanese Scope 3 emissions but have chosen not to disclose until a combined Scope 3 inventory, including the recently acquired Dupont Mobility & Materials business, is completed.

Scope 3 category 5: Waste generated in operations

Base year start

Base year end

Base year emissions (metric tons CO₂e)

Comment

We have calculated heritage Celanese Scope 3 emissions but have chosen not to disclose until a combined Scope 3 inventory, including the recently acquired Dupont Mobility & Materials business, is completed.

Scope 3 category 6: Business travel

Base year start

Base year end

Base year emissions (metric tons CO₂e)

Comment

We have calculated heritage Celanese Scope 3 emissions but have chosen not to disclose until a combined Scope 3 inventory, including the recently acquired Dupont Mobility & Materials business, is completed.

Scope 3 category 7: Employee commuting

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment

We have calculated heritage Celanese Scope 3 emissions but have chosen not to disclose until a combined Scope 3 inventory, including the recently acquired Dupont Mobility & Materials business, is completed.

Scope 3 category 8: Upstream leased assets

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment

We have calculated heritage Celanese Scope 3 emissions but have chosen not to disclose until a combined Scope 3 inventory, including the recently acquired Dupont Mobility & Materials business, is completed.

Scope 3 category 9: Downstream transportation and distribution

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment

We have calculated heritage Celanese Scope 3 emissions but have chosen not to disclose until a combined Scope 3 inventory, including the recently acquired Dupont Mobility & Materials business, is completed.

Scope 3 category 10: Processing of sold products

Base year start

Base year end

Base year emissions (metric tons CO₂e)

Comment

Celanese is working with a third-party to identify and quantify Scope 3 emissions.

Scope 3 category 11: Use of sold products

Base year start

Base year end

Base year emissions (metric tons CO₂e)

Comment

We have calculated heritage Celanese Scope 3 emissions but have chosen not to disclose until a combined Scope 3 inventory, including the recently acquired Dupont Mobility & Materials business, is completed.

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

Base year start

Base year end

Base year emissions (metric tons CO₂e)

Comment

We have calculated heritage Celanese Scope 3 emissions but have chosen not to disclose until a combined Scope 3 inventory, including the recently acquired Dupont Mobility & Materials business, is completed.

Scope 3 category 13: Downstream leased assets

Base year start

Base year end

Base year emissions (metric tons CO₂e)

Comment

Celanese is working with a third-party to identify and quantify Scope 3 emissions.

Scope 3 category 14: Franchises

Base year start

Base year end

Base year emissions (metric tons CO₂e)

Comment

Celanese is working with a third-party to identify and quantify Scope 3 emissions.

Scope 3 category 15: Investments

Base year start

Base year end

Base year emissions (metric tons CO₂e)

Comment

We have calculated heritage Celanese Scope 3 emissions but have chosen not to disclose until a combined Scope 3 inventory, including the recently acquired Dupont Mobility & Materials business, is completed.

Scope 3: Other (upstream)

Base year start

Base year end

Base year emissions (metric tons CO₂e)

Comment

Celanese is working with a third-party to identify and quantify Scope 3 emissions.

Scope 3: Other (downstream)

Base year start

Base year end

Base year emissions (metric tons CO₂e)

Comment

Celanese is working with a third-party to identify and quantify Scope 3 emissions.

C5.3

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

European Union Emission Trading System (EU ETS): The Monitoring and Reporting Regulation (MMR) – General guidance for installations

IPCC Guidelines for National Greenhouse Gas Inventories, 2006

The Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard (Revised Edition)

The Greenhouse Gas Protocol: Scope 2 Guidance

US EPA Emissions & Generation Resource Integrated Database (eGRID)

Other, please specify

US EPA Emissions & Generation Resource Integrated Database (eGRID 2018))

C6. Emissions data

C6.1

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

Reporting year

Gross global Scope 1 emissions (metric tons CO₂e)

2,311,480

Comment

C6.2

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

Row 1

Scope 2, location-based

We are reporting a Scope 2, location-based figure

Scope 2, market-based

We are reporting a Scope 2, market-based figure

Comment

Some of our sites (mainly European sites) have market-based emissions and can obtain emission factors from electricity and steam suppliers.

C6.3

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

Reporting year

Scope 2, location-based

1,320,684

Scope 2, market-based (if applicable)

1,282,231

Comment

C6.4

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

Yes

C6.4a

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

Source of excluded emissions

Only legacy Celanese operated and owned manufacturing facilities are included. The recently acquired DuPont M&M business that was acquired in November 2022 is currently excluded from calculations.

Scope(s) or Scope 3 category(ies)

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

Relevance of Scope 1 emissions from this source

Emissions excluded due to a recent acquisition or merger

Relevance of location-based Scope 2 emissions from this source

Emissions excluded due to a recent acquisition or merger

Relevance of market-based Scope 2 emissions from this source

Emissions excluded due to a recent acquisition or merger

Relevance of Scope 3 emissions from this source

Date of completion of acquisition or merger

November 1, 2022

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

Estimated percentage of total Scope 3 emissions this excluded source represents

Explain why this source is excluded

Only legacy Celanese operated and owned manufacturing facilities are included. The recently acquired DuPont M&M business that was acquired in November 2022 is currently excluded from calculations.

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

C6.5

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

Purchased goods and services

Evaluation status

Relevant, not yet calculated

Please explain

We have calculated heritage Celanese Scope 3 emissions but have chosen not to disclose until a combined Scope 3 inventory, including the recently acquired Dupont Mobility & Materials business, is completed.

Capital goods

Evaluation status

Relevant, not yet calculated

Please explain

We have calculated heritage Celanese Scope 3 emissions but have chosen not to disclose until a combined Scope 3 inventory, including the recently acquired Dupont Mobility & Materials business, is completed.

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

Evaluation status

Relevant, not yet calculated

Please explain

We have calculated heritage Celanese Scope 3 emissions but have chosen not to disclose until a combined Scope 3 inventory, including the recently acquired Dupont Mobility & Materials business, is completed.

Upstream transportation and distribution

Evaluation status

Relevant, not yet calculated

Please explain

We have calculated heritage Celanese Scope 3 emissions but have chosen not to disclose until a combined Scope 3 inventory, including the recently acquired Dupont Mobility & Materials business, is completed.

Waste generated in operations

Evaluation status

Relevant, not yet calculated

Please explain

We have calculated heritage Celanese Scope 3 emissions but have chosen not to disclose until a combined Scope 3 inventory, including the recently acquired Dupont Mobility & Materials business, is completed.

Business travel

Evaluation status

Relevant, not yet calculated

Please explain

We have calculated heritage Celanese Scope 3 emissions but have chosen not to disclose until a combined Scope 3 inventory, including the recently acquired Dupont Mobility & Materials business, is completed.

Employee commuting

Evaluation status

Relevant, not yet calculated

Please explain

We have calculated heritage Celanese Scope 3 emissions but have chosen not to disclose until a combined Scope 3 inventory, including the recently acquired Dupont Mobility & Materials business, is completed.

Upstream leased assets

Evaluation status

Relevant, not yet calculated

Please explain

We have calculated heritage Celanese Scope 3 emissions but have chosen not to disclose until a combined Scope 3 inventory, including the recently acquired Dupont Mobility & Materials business, is completed.

Downstream transportation and distribution

Evaluation status

Relevant, not yet calculated

Please explain

We have calculated heritage Celanese Scope 3 emissions but have chosen not to disclose until a combined Scope 3 inventory, including the recently acquired Dupont Mobility & Materials business, is completed.

Processing of sold products

Evaluation status

Not relevant, explanation provided

Please explain

Celanese is working with a third-party to develop to identify and quantify Scope 3 emissions.

Use of sold products

Evaluation status

Relevant, not yet calculated

Please explain

We have calculated heritage Celanese Scope 3 emissions but have chosen not to disclose until a combined Scope 3 inventory, including the recently acquired Dupont Mobility & Materials business, is completed.

End of life treatment of sold products

Evaluation status

Relevant, not yet calculated

Please explain

We have calculated heritage Celanese Scope 3 emissions but have chosen not to disclose until a combined Scope 3 inventory, including the recently acquired Dupont Mobility & Materials business, is completed.

Downstream leased assets

Evaluation status

Not relevant, explanation provided

Please explain

Celanese does not have downstream leased assets

Franchises

Evaluation status

Not relevant, explanation provided

Please explain

Celanese does not have any franchises.

Investments

Evaluation status

Relevant, not yet calculated

Please explain

We have calculated heritage Celanese Scope 3 emissions but have chosen not to disclose until a combined Scope 3 inventory, including the recently acquired Dupont Mobility & Materials business, is completed.

Other (upstream)

Evaluation status

Not relevant, explanation provided

Please explain

Not applicable

Other (downstream)

Evaluation status

Not relevant, explanation provided

Please explain

Not applicable

C6.7

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

No

C6.10

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

Intensity figure

0.0003715

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

3,593,711

Metric denominator

unit total revenue

Metric denominator: Unit total

9,673,000,000

Scope 2 figure used

Market-based

% change from previous year

16.7

Direction of change

Decreased

Reason(s) for change

Other emissions reduction activities

Change in revenue

Please explain

Increase in Total revenue in 2022 (the reporting year) compared to 2021

C7. Emissions breakdowns

C7.1

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

Yes

C7.1a

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

Greenhouse gas	Scope 1 emissions (metric tons of CO2e)	GWP Reference
CO2	1,869,999	IPCC Fifth Assessment Report (AR5 – 100 year)
CH4	36,597	IPCC Fifth Assessment Report (AR5 – 100 year)
N2O	1,086.7	IPCC Fifth Assessment Report (AR5 – 100 year)
HFCs	21,168	IPCC Fifth Assessment Report (AR5 – 100 year)

C7.2

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

Country/area/region	Scope 1 emissions (metric tons CO2e)
Belgium	56,014
Brazil	86
Canada	26,985
China	97,980
United Kingdom of Great Britain and Northern Ireland	3,754
Germany	31,454
India	21
Italy	257
Mexico	203,386
Netherlands	6,193
Singapore	1,549
Sweden	1,498

Switzerland	3,592
United States of America	1,878,669
United Kingdom of Great Britain and Northern Ireland D ₁	43

D₁just Wales

C7.3

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

By business division

C7.3a

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

Business division	Scope 1 emissions (metric ton CO ₂ e)
Acetate Tow (AT)	593,533
Emulsion Polymers (EP)	24,368
Engineered Materials (EM)	371,023
Food Ingredients (FI)	0
Intermediate Chemistry (IC)	1,309,888
Redispersible Polymer Powders – RDP	12,668

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

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

	Gross Scope 1 emissions, metric tons CO ₂ e	Comment
Chemicals production activities	2,311,480	

C7.5

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

Country/area/region	Scope 2, location-based (metric tons CO ₂ e)	Scope 2, market-based (metric tons CO ₂ e)
Belgium	1,141	967
Brazil	2,497	2,497
Canada	68,086	68,086

China	296,943	296,943
United Kingdom of Great Britain and Northern Ireland	2,066	1,308
Germany	343,901	313,155
India	825	825
Italy	9,934	18,660
Mexico	57,577	26,533
Netherlands	10,927	10,899
Singapore	112,387	132,817
Sweden	81	1,644
Switzerland	0	0
United States of America	396,806	396,806
United Kingdom of Great Britain and Northern Ireland	17,514	11,090

C7.6

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

By business division

C7.6a

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

Business division	Scope 2, location-based (metric tons CO ₂ e)	Scope 2, market-based (metric tons CO ₂ e)
Acetate Tow (AT)	31,192	30,260
Emulsions Polymers (EP)	45,123	49,001
Engineered Materials (EM)	438,301	419,083
Food Ingredients (FI)	30,309	27,124
Intermediate Chemistry (IC)	762,929	744,504
Redispersible Polymer Powders – RDP	12,830	12,258

C7.7

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

No

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

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

	Scope 2, location-based, metric tons CO ₂ e	Scope 2, market-based (if applicable), metric tons CO ₂ e	Comment
Chemicals production activities	1,320,684	1,282,231	

C-CH7.8

(C-CH7.8) Disclose the percentage of your organization’s Scope 3, Category 1 emissions by purchased chemical feedstock.

Purchased feedstock	Percentage of Scope 3, Category 1 tCO ₂ e from purchased feedstock	Explain calculation methodology

C-CH7.8a

(C-CH7.8a) Disclose sales of products that are greenhouse gases.

	Sales, metric tons	Comment
Carbon dioxide (CO ₂)	23,237	Singapore sold 12,469 MT CO ₂ in 2022. Frankfurt sold 10,768 MT CO ₂ in 2022.
Methane (CH ₄)	0	
Nitrous oxide (N ₂ O)	0	
Hydrofluorocarbons (HFC)	0	
Perfluorocarbons (PFC)	0	
Sulphur hexafluoride (SF ₆)	0	
Nitrogen trifluoride (NF ₃)	0	

C7.9

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

Decreased

C7.9a

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

	Change in emissions (metric tons CO2e)	Direction of change in emissions	Emissions value (percentage)	Please explain calculation
Change in renewable energy consumption	32,782	Decreased	10	Increase in renewable electricity purchased in 2022 over 2021 so decrease in emissions
Other emissions reduction activities	3,332	Decreased	1.02	Energy Efficiency Projects
Divestment	1,937	Decreased	0.59	Italy site divested in 2022
Acquisitions	0	No change	0	Dupont acquisition in 2022, but data will be included in 2023 report.
Mergers	0	No change	0	No Merger in 2022
Change in output	289,777	Decreased	89.4	Production & absolute total GHG decreased in 2022
Change in methodology	0	No change	0	
Change in boundary	0	No change	0	
Change in physical operating conditions	0	No change	0	
Unidentified	0	No change	0	
Other	0		0	

C7.9b

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

Market-based

C8. Energy

C8.1

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

More than 5% but less than or equal to 10%

C8.2

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

	Indicate whether your organization undertook this energy-related activity in the reporting year
Consumption of fuel (excluding feedstocks)	Yes
Consumption of purchased or acquired electricity	Yes
Consumption of purchased or acquired heat	Yes
Consumption of purchased or acquired steam	Yes
Consumption of purchased or acquired cooling	Yes
Generation of electricity, heat, steam, or cooling	Yes

C8.2a

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

	Heating value	MWh from renewable sources	MWh from non-renewable sources	Total (renewable and non-renewable) MWh
Consumption of fuel (excluding feedstock)	HHV (higher heating value)	0	10,313,577.2	10,313,577.2
Consumption of purchased or acquired electricity		78,180.6	1,301,081.4	1,379,262

Consumption of purchased or acquired heat		0	4,220.2	4,220.2
Consumption of purchased or acquired steam		0	2,892,251.8	2,892,251.8
Consumption of purchased or acquired cooling		0	112,407.9	112,407.9
Consumption of self-generated non-fuel renewable energy		155.5		155.5
Total energy consumption		78,336.2	14,623,538.5	14,701,874.7

C-CH8.2a

(C-CH8.2a) Report your organization’s energy consumption totals (excluding feedstocks) for chemical production activities in MWh.

Consumption of fuel (excluding feedstocks)

Heating value

HHV (higher heating value)

MWh consumed from renewable sources inside chemical sector boundary

0

MWh consumed from non-renewable sources inside chemical sector boundary (excluding recovered waste heat/gases)

10,313,577.2

MWh consumed from waste heat/gases recovered from processes using fuel feedstocks inside chemical sector boundary

0

Total MWh (renewable + non-renewable + MWh from recovered waste heat/gases) consumed inside chemical sector boundary

10,313,577.2

Consumption of purchased or acquired electricity

MWh consumed from renewable sources inside chemical sector boundary

78,180.6

MWh consumed from non-renewable sources inside chemical sector boundary (excluding recovered waste heat/gases)

1,301,081.4

MWh consumed from waste heat/gases recovered from processes using fuel feedstocks inside chemical sector boundary

0

Total MWh (renewable + non-renewable + MWh from recovered waste heat/gases) consumed inside chemical sector boundary

1,379,262

Consumption of purchased or acquired heat

MWh consumed from renewable sources inside chemical sector boundary

0

MWh consumed from non-renewable sources inside chemical sector boundary (excluding recovered waste heat/gases)

4,220.2

MWh consumed from waste heat/gases recovered from processes using fuel feedstocks inside chemical sector boundary

0

Total MWh (renewable + non-renewable + MWh from recovered waste heat/gases) consumed inside chemical sector boundary

4,220.2

Consumption of purchased or acquired steam

MWh consumed from renewable sources inside chemical sector boundary

0

MWh consumed from non-renewable sources inside chemical sector boundary (excluding recovered waste heat/gases)

2,892,251.8

MWh consumed from waste heat/gases recovered from processes using fuel feedstocks inside chemical sector boundary

0

Total MWh (renewable + non-renewable + MWh from recovered waste heat/gases) consumed inside chemical sector boundary

2,892,251.8

Consumption of purchased or acquired cooling

MWh consumed from renewable sources inside chemical sector boundary

0

MWh consumed from non-renewable sources inside chemical sector boundary (excluding recovered waste heat/gases)

112,407.9

MWh consumed from waste heat/gases recovered from processes using fuel feedstocks inside chemical sector boundary

0

Total MWh (renewable + non-renewable + MWh from recovered waste heat/gases) consumed inside chemical sector boundary

112,407.9

Consumption of self-generated non-fuel renewable energy

MWh consumed from renewable sources inside chemical sector boundary

155.5

MWh consumed from non-renewable sources inside chemical sector boundary (excluding recovered waste heat/gases)

0

MWh consumed from waste heat/gases recovered from processes using fuel feedstocks inside chemical sector boundary

0

Total MWh (renewable + non-renewable + MWh from recovered waste heat/gases) consumed inside chemical sector boundary

155.5

Total energy consumption

MWh consumed from renewable sources inside chemical sector boundary

78,336.2

MWh consumed from non-renewable sources inside chemical sector boundary (excluding recovered waste heat/gases)

14,623,538.5

MWh consumed from waste heat/gases recovered from processes using fuel feedstocks inside chemical sector boundary

0

Total MWh (renewable + non-renewable + MWh from recovered waste heat/gases) consumed inside chemical sector boundary

14,701,874.7

C8.2b

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

	Indicate whether your organization undertakes this fuel application
Consumption of fuel for the generation of electricity	No
Consumption of fuel for the generation of heat	Yes
Consumption of fuel for the generation of steam	Yes
Consumption of fuel for the generation of cooling	No
Consumption of fuel for co-generation or tri-generation	Yes

C8.2c

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

Sustainable biomass

Heating value

HHV

Total fuel MWh consumed by the organization

0

MWh fuel consumed for self-generation of heat

0

MWh fuel consumed for self-generation of steam

0

MWh fuel consumed for self- cogeneration or self-trigeneration

0

Comment

Other biomass

Heating value

HHV

Total fuel MWh consumed by the organization

0

MWh fuel consumed for self-generation of heat

0

MWh fuel consumed for self-generation of steam

0

MWh fuel consumed for self- cogeneration or self-trigeneration

0

Comment

Other renewable fuels (e.g. renewable hydrogen)

Heating value

HHV

Total fuel MWh consumed by the organization

0

MWh fuel consumed for self-generation of heat

0

MWh fuel consumed for self-generation of steam

0

MWh fuel consumed for self- cogeneration or self-trigeneration

0

Comment

Coal

Heating value

HHV

Total fuel MWh consumed by the organization

0

MWh fuel consumed for self-generation of heat

0

MWh fuel consumed for self-generation of steam

0

MWh fuel consumed for self- cogeneration or self-trigeneration

0

Comment

Oil

Heating value

HHV

Total fuel MWh consumed by the organization

36,557.5

MWh fuel consumed for self-generation of heat

36,557.5

MWh fuel consumed for self-generation of steam

0

MWh fuel consumed for self- cogeneration or self-trigeneration

0

Comment

Residual Fuel Oil No. 6, Diesel/Distillate Fuel Oil No. 2

Gas

Heating value

HHV

Total fuel MWh consumed by the organization

10,266,666

MWh fuel consumed for self-generation of heat

849,674.4

MWh fuel consumed for self-generation of steam

8,267,273.2

MWh fuel consumed for self- cogeneration or self-trigeneration

1,149,718.4

Comment

Natural Gas

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

Heating value

HHV

Total fuel MWh consumed by the organization

10,353.8

MWh fuel consumed for self-generation of heat

8,264.1

MWh fuel consumed for self-generation of steam

2,089.7

MWh fuel consumed for self- cogeneration or self-trigeneration

0

Comment

Hydrogen, propane, gasoline

For breakdown - Hydrogen used for steam - other fuels for heat

Total fuel

Heating value

HHV

Total fuel MWh consumed by the organization

10,313,577.2

MWh fuel consumed for self-generation of heat

894,495.9

MWh fuel consumed for self-generation of steam

8,269,362.9

MWh fuel consumed for self- cogeneration or self-trigeneration

1,149,718.4

Comment

C8.2d

(C8.2d) Provide details on the electricity, heat, steam, and cooling your organization has generated and consumed in the reporting year.

	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	446,149	186,155	155.5	155.5
Heat	0	0	0	0
Steam	8,249,941	7,608,143	0	0
Cooling	0	0	0	0

C-CH8.2d

(C-CH8.2d) Provide details on electricity, heat, steam, and cooling your organization has generated and consumed for chemical production activities.

Electricity

Total gross generation inside chemicals sector boundary (MWh)

446,149

Generation that is consumed inside chemicals sector boundary (MWh)

186,155

Generation from renewable sources inside chemical sector boundary (MWh)

155.5

Generation from waste heat/gases recovered from processes using fuel feedstocks inside chemical sector boundary (MWh)

155.5

Heat

Total gross generation inside chemicals sector boundary (MWh)

0

Generation that is consumed inside chemicals sector boundary (MWh)

0

Generation from renewable sources inside chemical sector boundary (MWh)

0

Generation from waste heat/gases recovered from processes using fuel feedstocks inside chemical sector boundary (MWh)

0

Steam

Total gross generation inside chemicals sector boundary (MWh)

8,249,941

Generation that is consumed inside chemicals sector boundary (MWh)

7,608,143

Generation from renewable sources inside chemical sector boundary (MWh)

0

Generation from waste heat/gases recovered from processes using fuel feedstocks inside chemical sector boundary (MWh)

0

Cooling

Total gross generation inside chemicals sector boundary (MWh)

0

Generation that is consumed inside chemicals sector boundary (MWh)

0

Generation from renewable sources inside chemical sector boundary (MWh)

0

Generation from waste heat/gases recovered from processes using fuel feedstocks inside chemical sector boundary (MWh)

0

C8.2e

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

Country/area of low-carbon energy consumption

United States of America

Sourcing method

Physical power purchase agreement (physical PPA) with a grid-connected generator

Energy carrier

Electricity

Low-carbon technology type

Solar

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

65,650

Tracking instrument used

US-REC

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

United States of America

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

Yes

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

2020

Comment

Country/area of low-carbon energy consumption

Switzerland

Sourcing method

Default delivered electricity from the grid (e.g. standard product offering by an energy supplier), supported by energy attribute certificates

Energy carrier

Electricity

Low-carbon technology type

Renewable energy mix, please specify
Hydro and Wind

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

4,431

Tracking instrument used

GO

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

Switzerland

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

No

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

Comment

Country/area of low-carbon energy consumption

China

Sourcing method

Default delivered electricity from the grid (e.g. standard product offering by an energy supplier), supported by energy attribute certificates

Energy carrier

Electricity

Low-carbon technology type

Renewable energy mix, please specify

Hydro and Wind

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

1,000

Tracking instrument used

GO

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

China

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

No

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

Comment

Country/area of low-carbon energy consumption

India

Sourcing method

Default delivered electricity from the grid (e.g. standard product offering by an energy supplier), supported by energy attribute certificates

Energy carrier

Electricity

Low-carbon technology type

Renewable energy mix, please specify
Hydro and Wind

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

7,100

Tracking instrument used

Indian REC

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

India

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

No

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

Comment

C8.2g

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

Country/area

United States of America

Consumption of purchased electricity (MWh)

646,345

Consumption of self-generated electricity (MWh)

0

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

824,123

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

0

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

1,470,468

Country/area

Belgium

Consumption of purchased electricity (MWh)

6,479

Consumption of self-generated electricity (MWh)

0

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

0

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

0

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

6,479

Country/area

Brazil

Consumption of purchased electricity (MWh)

6,897

Consumption of self-generated electricity (MWh)

0

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

0

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

0

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

6,897

Country/area

Canada

Consumption of purchased electricity (MWh)

119,628

Consumption of self-generated electricity (MWh)

0

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

0

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

0

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

119,628

Country/area

China

Consumption of purchased electricity (MWh)

140,659

Consumption of self-generated electricity (MWh)

0

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

486,510

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

0

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

627,169

Country/area

Germany

Consumption of purchased electricity (MWh)

263,760

Consumption of self-generated electricity (MWh)

0

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

1,205,975

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

0

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

1,469,735

Country/area

India

Consumption of purchased electricity (MWh)

7,968.5

Consumption of self-generated electricity (MWh)

155.5

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

0

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

0

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

8,124

Country/area

Italy

Consumption of purchased electricity (MWh)

38,385

Consumption of self-generated electricity (MWh)

0

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

2,539

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

0

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

40,924

Country/area

Mexico

Consumption of purchased electricity (MWh)

62,725

Consumption of self-generated electricity (MWh)

0

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

0

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

0

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

62,725

Country/area

Netherlands

Consumption of purchased electricity (MWh)

14,421

Consumption of self-generated electricity (MWh)

0

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

20,633

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

0

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

35,054

Country/area

Singapore

Consumption of purchased electricity (MWh)

24,921

Consumption of self-generated electricity (MWh)

0

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

463,441

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

0

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

488,362

Country/area

Sweden

Consumption of purchased electricity (MWh)

8,689

Consumption of self-generated electricity (MWh)

0

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

5,659

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

0

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

14,348

Country/area

Switzerland

Consumption of purchased electricity (MWh)

4,431

Consumption of self-generated electricity (MWh)

0

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

0

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

0

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

4,431

Country/area

United Kingdom of Great Britain and Northern Ireland

Consumption of purchased electricity (MWh)

33,954

Consumption of self-generated electricity (MWh)

0

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

0

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

0

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

33,954

C-CH8.3

(C-CH8.3) Does your organization consume fuels as feedstocks for chemical production activities?

Yes

C-CH8.3a

(C-CH8.3a) Disclose details on your organization’s consumption of fuels as feedstocks for chemical production activities.

Fuels used as feedstocks

Natural gas

Total consumption

0

Total consumption unit

thousand cubic feet

Inherent carbon dioxide emission factor of feedstock, metric tons CO2 per consumption unit

0.05

Heating value of feedstock, MWh per consumption unit

0.29

Heating value

HHV

Comment

Total consumption of feed stock is proprietary

C-CH8.3b

(C-CH8.3b) State the percentage, by mass, of primary resource from which your chemical feedstocks derive.

	Percentage of total chemical feedstock (%)
Oil	0
Natural Gas	100
Coal	0

Biomass	0
Waste (non-biomass)	0
Fossil fuel (where coal, gas, oil cannot be distinguished)	0
Unknown source or unable to disaggregate	0

C9. Additional metrics

C9.1

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

Description

Energy usage

Metric value

2.61

Metric numerator

Gross Energy used (MBTU)

Metric denominator (intensity metric only)

Production volume by weight (lbs)

% change from previous year

3.98

Direction of change

Increased

Please explain

Decrease in production

C-CH9.3a

(C-CH9.3a) Provide details on your organization's chemical products.

Output product

Other, please specify

Polyoxymethylene ("POM"), Ultra-high weight polyethylene, Acetate flake, Tow, Acetic acid, Vinyl Acetate Monomer, Vinyl acetate ethylene ("VAE") emulsions, Redispersible Powders, Methanol, Acetaldehyde, Esters, other organic & polymers)

Production (metric tons)

Capacity (metric tons)

Direct emissions intensity (metric tons CO2e per metric ton of product)

Electricity intensity (MWh per metric ton of product)

Steam intensity (MWh per metric ton of product)

Steam/ heat recovered (MWh per metric ton of product)

Comment

The requested details for each of these products are considered company confidential information. We are a global chemical and specialty materials company and are a leading global producer of high-performance engineered polymers that are used in a variety of high-value applications, as well as one of the world's largest producers of acetyl products, which are intermediate chemicals, for nearly all major industries. As a recognized innovator in the chemicals industry, we engineer and manufacture a wide variety of products essential to everyday living. Our broad product portfolio serves a diverse set of end-use applications including automotive, chemical additives, construction, consumer and industrial adhesives, consumer and medical, energy storage, filtration, food and beverage, paints and coatings, paper and packaging, performance industrial and textiles. Our products enjoy leading global positions due to our differentiated business models, large global production capacity, operating efficiencies, proprietary technology and competitive cost structures. A listing of some of our products can be found on our external facing website at www.celanese.com.

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

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

	Investment in low-carbon R&D	Comment
Row 1	Yes	Celanese is developing products aligned with sustainability objectives of our customers and society including products which have increased recycled content or are bio-based. Specific products include bio-polymer solutions such as Clarifoil® biopolymer Cellulosic Films for food compliant flexible

		<p>packaging to replace single use plastics and for Anti-Fog Film for freezer doors which reduce and may eliminate the need to us glass heat in grocery store freezers. In 2022, more than 162,000 freezer doors used our Anti-Fog Film, facilitating an electrical energy reduction of approximately 85MM kWh per annum, cost savings of approximately \$11MM/year, and an estimated overall reduction of 133MM lbs of CO2 equivalent Greenhouse Gas emissions.</p> <p>We are also providing customers with the ability to purchase certain POM grades such as POM ECO-B which through a mass-balance approach which reduces the product carbon footprint by approximately 50%. We also enable sustainability through producing lighter-weight thermoplastics for the auto industry for improved fuel efficiency, safety, and reliability and have invested in an additional GUR® production line to support the growing lithium-ion battery separator demand for electric vehicles. Additionally, we are focused on supporting the United Nations’ Sustainable Development Goal of “Good Health and Well-Being” through our support of our customer’s innovations in long-acting dosage forms, drug delivery devices, and orthopedic components.</p>
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C-CH9.6a

(C-CH9.6a) Provide details of your organization’s investments in low-carbon R&D for chemical production activities over the last three years.

Technology area

Process step integration

Stage of development in the reporting year

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

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

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

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

C10. Verification

C10.1

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

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

C10.1a

(C10.1a) Provide further details of the verification/assurance undertaken for your Scope 1 emissions, and attach the relevant statements.

Verification or assurance cycle in place

Annual process

Status in the current reporting year

Complete

Type of verification or assurance

Limited assurance

Attach the statement

 Celanese CDP '23 Climate Statement (1).pdf

Page/ section reference

Relevant standard

ISAE3000

Proportion of reported emissions verified (%)

100

C10.1b

(C10.1b) Provide further details of the verification/assurance undertaken for your Scope 2 emissions and attach the relevant statements.

Scope 2 approach

Scope 2 market-based

Verification or assurance cycle in place

Annual process

Status in the current reporting year

Complete

Type of verification or assurance

Limited assurance

Attach the statement

 Celanese CDP '23 Climate Statement (1).pdf

Page/ section reference

Relevant standard

ISAE3000

Proportion of reported emissions verified (%)

100

C10.2

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

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

C11. Carbon pricing

C11.1

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

Yes

C11.1a

(C11.1a) Select the carbon pricing regulation(s) which impacts your operations.

EU ETS

C11.1b

(C11.1b) Complete the following table for each of the emissions trading schemes you are regulated by.

EU ETS

% of Scope 1 emissions covered by the ETS

5.91

% of Scope 2 emissions covered by the ETS

0

Period start date

January 1, 2022

Period end date

December 31, 2022

Allowances allocated

133.72

Allowances purchased

0

Verified Scope 1 emissions in metric tons CO₂e

107,964

Verified Scope 2 emissions in metric tons CO₂e

0

Details of ownership

Facilities we own and operate

Comment

C11.1d

(C11.1d) What is your strategy for complying with the systems you are regulated by or anticipate being regulated by?

The strategy is to reduce emissions and implement energy saving projects such as heat recovery projects. Celanese is developing a transition plan from fossil fuel use to lower carbon alternative fuel sources (e.g., hydrogen). Celanese will continue to manage an internal banking and allowance transfer strategy to minimize the demand to purchase allowances in the long-term. Obtaining free allowances is less possible with the EU ETS system reformation (adopted by European Commission on 04/25/2023).

C11.2

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

No

C11.3

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

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

C12. Engagement

C12.1

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

Yes, our suppliers

Yes, our customers/clients

Yes, other partners in the value chain

C12.1a

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

Type of engagement

Information collection (understanding supplier behavior)

Details of engagement

Collect GHG emissions data at least annually from suppliers

% of suppliers by number

1

% total procurement spend (direct and indirect)

25

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

0

Rationale for the coverage of your engagement

As we develop our strategy in the ESG space, we have been working to understand our carbon footprint or life cycle analysis (LCA) for key Celanese products. As we complete these LCAs, it's apparent that raw materials and energy supply play a critical role. Therefore, we are evaluating how to incorporate sustainable sourcing of raw materials and energy into our ESG strategy. One way is through the supplier risk management

process. Through this process we are evaluating and procuring lower carbon energy sources (e.g., renewable power) which has an impact not only on our manufacturing footprint but along the value chain.

Impact of engagement, including measures of success

We have recently filled several roles in the procurement organization to help us identify and implement energy and raw material opportunities. One such example is the execution of a solar energy contract for our flagship site in Clear Lake Texas where we are procuring approximately 33% of our total electricity demand from solar power. This translates into an approximate scope 2 greenhouse gas reduction of over 66,000 MT, the equivalent of 14,500 cars annually. As part of our strategy, we will be evaluating additional sources of renewable and bio-based energy sources and working with key suppliers to lessen the impact of raw materials on our products. As we develop a formal Scope 3 inventory, we will be able to establish measures of success across our upstream supply chain.

Comment

C12.1b

(C12.1b) Give details of your climate-related engagement strategy with your customers.

Type of engagement & Details of engagement

Education/information sharing

Share information about your products and relevant certification schemes (i.e. Energy STAR)

% of customers by number

50

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

0

Please explain the rationale for selecting this group of customers and scope of engagement

Celanese seeks opportunities to engage with all customers to communicate our goals and commitments on climate metrics, to share achievements and progress against these metrics, and to gauge interest in Celanese's reduced emissions product categories. We also engage with customers to learn about their goals, and how our actions contribute toward transparency on climate-related objectives. There are no boundaries with whom we engage, and we strive to get representative engagement from regional and size-based standpoints - gaining broad-ranging perspectives. Through various communications channels, we reach more than 50% of our customers. Channels for engagement vary from in-depth climate-related discussions to information

sharing based on our sustainability messaging which is communicated publicly on our web-site, as well as through direct interactions, for example at trade-shows, and during regular customer visits. Engagement includes sharing product line-specific emission intensities, sharing product-specific LCA results where applicable, and/or sharing potential opportunities for “advantaged sustainability options” across our product portfolio (our ECO-B product categories). Time-wise progress toward reducing our emissions would also be a point of discussion. Examples of climate-related certifications on which we engage with our customers are our ENERGY STAR® and ISCC PLUS certifications.

Impact of engagement, including measures of success

Engagement with customers allows Celanese to demonstrate and reinforce our commitment to climate-related goals and metrics. We expect our broad-ranging channels of engagement to lead to more in-depth discussions, so we measure our success by tracking these in-depth engagements: their number and frequency, new customer engagements, and opportunities for development of reduced emissions products. Thresholds for success are to demonstrate higher year-to-year engagements (total number vs. prior year), new customer engagements, and the identification of new opportunities for reduced emissions products. An example of success in new customer engagements during 2022 was a new interaction with a large consumer products company where we discussed product-specific emissions intensities, our progress toward continual improvement of emissions intensities, and our on-going efforts at fully developing estimates of our scope 3 emissions.

C12.1d

(C12.1d) Give details of your climate-related engagement strategy with other partners in the value chain.

Celanese is actively engaged in our trade associations on climate related issues. Celanese CEO is an active participant on ACC’s Board Sustainability Committee which has oversight over the association’s climate positions and policies. In addition, Celanese’s Senior Director of Sustainability represents Celanese on the ACC Sustainability Climate Subcommittee. In the EU, Celanese is actively engaged in supporting Cefic in their joint work with the EU Commission on a “Transition Pathway for the Chemical Industry” related to the EU Green Deal. Our global energy coordinator routinely attends and speaks at trade group/agency sponsored events, webinars and conferences including DOE Better Plants, ENERGY STAR, Association of Energy Engineers and Smart Energy Decisions, where we communicate our highly successful approach and activities. This stakeholder outreach enables us to engage and directly impact best practices related to energy and climate change when and where appropriate.

In addition to the global energy coordinator, our global environmental team at all levels is actively involved in stakeholder outreach with member trade associations on their energy, climate and/or policy committees (e.g., ACC, TCC, CEFIC, VCI). Through these activities, we work directly with regulatory agencies and lawmakers to develop achievable, cost-effective, and sustainable regulatory requirements for the regulated entities.

C12.2

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

Yes, suppliers have to meet climate-related requirements, but they are not included in our supplier contracts

C12.2a

(C12.2a) Provide details of the climate-related requirements that suppliers have to meet as part of your organization's purchasing process and the compliance mechanisms in place.

Climate-related requirement

Complying with regulatory requirements

Description of this climate related requirement

Celanese requires its suppliers to comply with regulatory requirements like ISO14001, ISO 9001, Responsible Care, REACH and Energy Star.

% suppliers by procurement spend that have to comply with this climate-related requirement

100

% suppliers by procurement spend in compliance with this climate-related requirement

75

Mechanisms for monitoring compliance with this climate-related requirement

Certification
Supplier self-assessment
Off-site third-party verification
On-site third-party verification

Response to supplier non-compliance with this climate-related requirement

Retain and engage

C12.3

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

Row 1

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

Yes, we engage directly with policy makers

Yes, our membership of/engagement with trade associations could influence policy, law, or regulation that may impact the climate

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

Yes

Attach commitment or position statement(s)

Yes, all advocacy is consistent with the Celanese climate policy statement.

<https://www.celanese.com/-/media/cewebjssapp/project/documents/Climate-Policy.pdf>

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

At Celanese we take a multi-prong approach to ensuring that our engagement activities are consistent with our climate policy throughout the organization. The Vice President of Global Government Affairs and the EU Director of Government affairs are active members of the ESG Council and trade association positions are vetted through the ESG Council to ensure they are consistent with Celanese policy. This includes trade association positions related to climate policy and carbon border adjustment, energy efficiency targets, permit and tax incentives for renewable energy, and government support of electric vehicles. Our global energy coordinator routinely attends and speaks at trade group/agency sponsored events and conferences where we communicate our highly successful approach and activities. This stakeholder outreach enables us to engage and directly impact best practices related to energy and climate change when and where appropriate. In addition to the global energy coordinator, our global environmental team is actively involved in stakeholder outreach with member trade associations (e.g., ACC, TCC, CEFIC, Plastics Europe, and VCI). Through these activities, we work with regulatory agencies to develop achievable, cost-effective, and sustainable regulatory requirements for the regulated entities. We ensure through our process safety steering committee that all site and corporate actions and activities are well thought-out and consider emerging regulatory requirements.

C12.3a

(C12.3a) On what policy, law, or regulation that may impact the climate has your organization been engaging directly with policy makers in the reporting year?

Specify the policy, law, or regulation on which your organization is engaging with policy makers

Celanese actively supported the passage of the Inflation Reduction Act of 2022 because it included provisions and funding to promote clean energy by strengthening the battery supply chain, modernizing the electric power grid, and providing incentives to support

the development of electric vehicles and an extensive charging network, renewable energy projects (wind and solar credits), energy efficiency programs in homes and business, and widespread use of carbon capture, utilization and sequestration projects through Department of Energy involvement . The Biden Administration proposed this legislation to align with the goals of the Paris Agreement and to promote the country's progress toward our national commitments under the Agreement.

Category of policy, law, or regulation that may impact the climate

Climate change mitigation

Focus area of policy, law, or regulation that may impact the climate

Emissions – CO2

Emissions – methane

Policy, law, or regulation geographic coverage

National

Country/area/region the policy, law, or regulation applies to

United States of America

Your organization's position on the policy, law, or regulation

Support with minor exceptions

Description of engagement with policy makers

We formally engaged with Members of Congress and our main trade association encouraging passage of the legislation.

Details of exceptions (if applicable) and your organization's proposed alternative approach to the policy, law or regulation

We encouraged Members of Congress to include a streamlined permitting program to ensure that the manufacturing materials that are needed to produce the environmental materials necessary to realize the carbon reduction goals can be produced in the U.S.

Have you evaluated whether your organization's engagement on this policy, law, or regulation is aligned with the goals of the Paris Agreement?

Yes, we have evaluated, and it is aligned

C12.3b

(C12.3b) Provide details of the trade associations your organization is a member of, or engages with, which are likely to take a position on any policy, law or regulation that may impact the climate.

Trade association

American Chemistry Council

Is your organization's position on climate change policy consistent with theirs?

Consistent

Has your organization attempted to influence their position in the reporting year?

Yes, we publicly promoted their current position

Describe how your organization's position is consistent with or differs from the trade association's position, and any actions taken to influence their position

Celanese actively participated at all levels of the company in the development of ACC's climate policy and complimentary policy positions to reduce emissions from the chemical sector while ensuring U.S. manufacturers continue to provide the advanced materials needed for a low carbon future. Celanese and ACC recognize that we will need technological breakthroughs, significant investments, and sustained commitment with consistent nationwide policies to achieve the goal. It is going to take the public and private sectors working together to meet the challenge to increase the use of existing technologies such as increased use of combined heat and power and nuclear power, and encourage further development of newer technology such as carbon capture, utilization and storage (CCUS). In addition, biobased and recycled feedstocks are going to be an important part reducing carbon emissions in the future, and Celanese actively supported inclusion in the development of the policy priorities.

Celanese and ACC's climate positions are fully aligned. ACC believes that climate change is a global challenge that needs long-term commitment and action by every segment of society, including the chemistry sector. To that end, ACC, working with member companies like Celanese, developed and advocates for concrete policy recommendations.

Funding figure your organization provided to this trade association in the reporting year (currency as selected in C0.4)

Describe the aim of your organization's funding

Have you evaluated whether your organization's engagement with this trade association is aligned with the goals of the Paris Agreement?

No, we have not evaluated

Trade association

European Chemical Industry Council (CEFIC)

Is your organization's position on climate change policy consistent with theirs?

Consistent

Has your organization attempted to influence their position in the reporting year?

Yes, we publicly promoted their current position

Describe how your organization's position is consistent with or differs from the trade association's position, and any actions taken to influence their position

Cefic is supporting the overall goals of the EU Green Deal with the objective to reach climate neutrality in the EU by 2050. Cefic is stating that the EU Chemical industry has the ambition to become climate neutral by 2050 – provided that certain enabling conditions are met for the successful transition of the sector.

<https://cefic.org/policy-matters/climate-change-and-energy/towards-implementing-the-climate-law/>

Funding figure your organization provided to this trade association in the reporting year (currency as selected in C0.4)

Describe the aim of your organization's funding

Have you evaluated whether your organization's engagement with this trade association is aligned with the goals of the Paris Agreement?

Yes, we have evaluated, and it is aligned

Trade association

German Chemical Industry Association (VCI)

Is your organization's position on climate change policy consistent with theirs?

Consistent

Has your organization attempted to influence their position in the reporting year?

Yes, we publicly promoted their current position

Describe how your organization's position is consistent with or differs from the trade association's position, and any actions taken to influence their position

VCI is a member of Cefic and therefore supports the Cefic climate position (see above)

Funding figure your organization provided to this trade association in the reporting year (currency as selected in C0.4)

Describe the aim of your organization's funding

Have you evaluated whether your organization's engagement with this trade association is aligned with the goals of the Paris Agreement?

Yes, we have evaluated, and it is aligned

Trade association

Other, please specify
ACC Plastics

Is your organization's position on climate change policy consistent with theirs?

Consistent

Has your organization attempted to influence their position in the reporting year?

Yes, we publicly promoted their current position

Describe how your organization's position is consistent with or differs from the trade association's position, and any actions taken to influence their position

Yes, ACC Plastics policy position is the same as ACC, and it is where policy is developed for automotive design that will allow for increased use and accessibility of low emissions transportation. Engineered materials contribute to innovations in safety, performance and fuel efficiency. Today's polymers make up around 50 percent of the volume of new cars, but typically only 10 percent of the weight, helping to make cars lighter and more fuel-efficient. An important area where research and advancement are being made is automotive circularity to reduce the use of new material while not compromising safety.

Another area where Celanese is actively working with ACC is the acceptance of home compostable plastics

Funding figure your organization provided to this trade association in the reporting year (currency as selected in C0.4)

Describe the aim of your organization's funding

Have you evaluated whether your organization's engagement with this trade association is aligned with the goals of the Paris Agreement?

No, we have not evaluated

Trade association

Other, please specify
Plastics Europe

Is your organization's position on climate change policy consistent with theirs?

Consistent

Has your organization attempted to influence their position in the reporting year?

Yes, we publicly promoted their current position

Describe how your organization's position is consistent with or differs from the trade association's position, and any actions taken to influence their position

Plastics Europe is supporting the overall goals of the EU Green Deal with the objective to reach climate neutrality in the EU by 2050. It states that many of its member companies have already committed to climate targets on their journeys to net zero, further demonstrating the industry's commitment to addressing the impacts of climate change.

<https://plasticseurope.org/sustainability/climate/>

Funding figure your organization provided to this trade association in the reporting year (currency as selected in C0.4)

Describe the aim of your organization's funding

Have you evaluated whether your organization's engagement with this trade association is aligned with the goals of the Paris Agreement?

Yes, we have evaluated, and it is aligned

C12.4

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

Publication

In mainstream reports

Status

Complete

Attach the document

 2022 Proxy.pdf

Page/Section reference

Proxy: Pages 7 and Pages 31-32, 35

Content elements

Governance
Strategy
Risks & opportunities
Emissions figures
Emission targets
Other metrics

Comment


Publication

In voluntary sustainability report

Status

Complete

Attach the document

 Celanese_2021-2022 Sustainability Report.pdf

Page/Section reference

Sustainability Report: Pages 13 – 16

Content elements

Governance
Strategy
Risks & opportunities
Emissions figures
Emission targets
Other metrics

Comment

Publication

In voluntary sustainability report

Status

Complete

Attach the document

 2021-2022 Sustainability Index.pdf

Page/Section reference

Sustainability Index: Page 6 (SASB Index), Pages 10 –12 TCFD Index, Pages 18 – 24 link to 2021 – 2022 Sustainability Index at <https://sustainability.celanese.com/api/sitecore/AzureBlob/GetMediaFileContent?itemId={B1569B66-8DC0-449A-BB02-8D11012FF7E5}>

Content elements

- Governance
- Strategy
- Risks & opportunities
- Emissions figures
- Emission targets
- Other metrics

Comment

C12.5

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

	Environmental collaborative framework, initiative and/or commitment	Describe your organization’s role within each framework, initiative and/or commitment
Row 1	Task Force on Climate-related Financial Disclosures (TCFD) Other, please specify Operation Clean Sweep; US EPA Energy STAR Program	We annually report against TCFD requirements in our Sustainability Report Index. We are a member of Operation Clean Sweep, an international coalition with a goal of zero plastic resin loss, and a member of the ENERGY STAR Program administered by the U.S. EPA to promote energy efficiency across businesses and homes.

C15. Biodiversity

C15.1

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

	Board-level oversight and/or executive management-level responsibility for biodiversity-related issues
Row 1	No, and we do not plan to have both within the next two years

C15.2

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

	Indicate whether your organization made a public commitment or endorsed any initiatives related to biodiversity
Row 1	No, and we do not plan to do so within the next 2 years

C15.3

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

Impacts on biodiversity

Indicate whether your organization undertakes this type of assessment

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

Dependencies on biodiversity

Indicate whether your organization undertakes this type of assessment

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

C15.4

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

Not assessed

C15.5

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

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

C15.6

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

	Does your organization use indicators to monitor biodiversity performance?	Indicators used to monitor biodiversity performance
Row 1	No	

C15.7

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

Report type	Content elements	Attach the document and indicate where in the document the relevant biodiversity information is located
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C16. Signoff

C-FI

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

no additional information

C16.1

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

	Job title	Corresponding job category
Row 1	Senior Vice President and General Counsel	Chief Sustainability Officer (CSO)

SC. Supply chain module

SC0.0

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

Celanese attempts to provide allocations of our Scope 1 and Scope 2 emissions to customers who request our participation in the CDP Climate questionnaire. We are not yet at a point where we can estimate, report and allocate our Scope 3 emissions at the customer level. We intend to improve our capabilities on Scope 3 allocations in the future. In addition, in some cases and for some customers we are not able to calculate a reasonable emission allocation estimate. This may be the result of one or more factors, including, for example, granularity of data, multi-regional/multi-sourced products, complexity of operations, acquisitions or divestitures in the reporting year, etc. In these cases, you may not receive an allocation of emissions in this reporting cycle.

SC0.1

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

	Annual Revenue
Row 1	9,673,000,000

SC1.1

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

Requesting member

Altria Group, Inc.

Scope of emissions

Scope 1

Scope 2 accounting method

Scope 3 category(ies)

Allocation level

Facility

Allocation level detail

Allocation is based on purchases of cellulose acetate tow. Of the acetate tow provided by Celanese, 100% was supplied from Celanese's Narrows facility. Allocation is based on the site-specific Scope 1 emissions intensity estimates.

Emissions in metric tonnes of CO₂e

36,219

Uncertainty (±%)

10

Major sources of emissions

Natural gas for steam and power generation; Waste gas incineration

Verified

No

Allocation method

Allocation based on mass of products purchased

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

6,071

Unit for market value or quantity of goods/services supplied

Metric tons

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

The amount of natural gas used for steam and power production is measured directly. The allocation of emissions to Altria is based on 2022 sales volume of 6071 MT, and specific Scope 1 emissions (tons CO₂ per ton of tow produced) for the Narrows, VA USA facility, over multiple production steps.

Requesting member

Altria Group, Inc.

Scope of emissions

Scope 2

Scope 2 accounting method

Location-based

Scope 3 category(ies)

Allocation level

Facility

Allocation level detail

Allocation is based on purchases of cellulose acetate tow. Of the acetate tow provided by Celanese, 100% was supplied from Celanese's Narrows facility. Allocation is based on the site-specific Scope 2 emissions intensity estimates.

Emissions in metric tonnes of CO₂e

1,971

Uncertainty (±%)

10

Major sources of emissions

Purchased power.

Verified

No

Allocation method

Allocation based on mass of products purchased

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

6,071

Unit for market value or quantity of goods/services supplied

Metric tons

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

Energy consumption is measured directly. The allocation of emissions to Altria is based on 2022 sales volume of 6071 MT of tow purchased by Altria and specific Scope 2 emissions (tons CO₂ per ton of tow produced) for the Narrows, VA USA facility, over multiple production steps.

Requesting member

British American Tobacco

Scope of emissions

Scope 1

Scope 2 accounting method

Scope 3 category(ies)

Allocation level

Facility

Allocation level detail

Allocation is based on purchases of cellulose acetate tow. Of the acetate tow provided by Celanese, 100% was supplied from Celanese's Narrows facility. Allocation is based on the site-specific Scope 1 emissions intensity estimates.

Emissions in metric tonnes of CO₂e

6,002

Uncertainty (±%)

10

Major sources of emissions

Natural gas for steam and power generation; Waste gas incineration

Verified

No

Allocation method

Allocation based on mass of products purchased

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

1,006

Unit for market value or quantity of goods/services supplied

Metric tons

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

The amount of natural gas used for steam and power production is measured directly. The allocation of emissions to BAT is based on 2022 sales volume of 1006 MT, and specific Scope 1 emissions (tons CO₂ per ton of tow produced) for the Narrows, VA USA facility, over multiple production steps.

Requesting member

British American Tobacco

Scope of emissions

Scope 2

Scope 2 accounting method

Location-based

Scope 3 category(ies)

Allocation level

Facility

Allocation level detail

Allocation is based on purchases of cellulose acetate tow. Of the acetate tow provided by Celanese, 100% was supplied from Celanese's Narrows facility. Allocation is based on the site-specific Scope 2 emissions intensity estimates.

Emissions in metric tonnes of CO₂e

327

Uncertainty (±%)

10

Major sources of emissions

Purchased power.

Verified

No

Allocation method

Allocation based on mass of products purchased

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

1,006

Unit for market value or quantity of goods/services supplied

Metric tons

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

Energy consumption is measured directly. The allocation of emissions to BAT is based on 2022 sales volume of 1006 MT of tow purchased by BAT and specific Scope 2 emissions (tons CO₂ per ton of tow produced) for the Narrows, VA USA facility, over multiple production steps.

Requesting member

Imperial Brands

Scope of emissions

Scope 1

Scope 2 accounting method

Scope 3 category(ies)

Allocation level

Facility

Allocation level detail

Allocation is based on purchases of cellulose acetate tow. Of the acetate tow provided by Celanese, 100% was supplied from Celanese's Narrows facility. Allocation is based on the site-specific Scope 1 emissions intensity estimates.

Emissions in metric tonnes of CO₂e

6,586

Uncertainty (±%)

10

Major sources of emissions

Natural gas for steam and power generation; Waste gas incineration

Verified

No

Allocation method

Allocation based on mass of products purchased

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

1,104

Unit for market value or quantity of goods/services supplied

Metric tons

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

The amount of natural gas used for steam and power production is measured directly. The allocation of emissions to ITG is based on 2022 sales volume of 1104 MT, and specific Scope 1 emissions (tons CO₂ per ton of tow produced) for the Narrows, VA USA facility, over multiple production steps.

Requesting member

Imperial Brands

Scope of emissions

Scope 2

Scope 2 accounting method

Location-based

Scope 3 category(ies)

Allocation level

Facility

Allocation level detail

Allocation is based on purchases of cellulose acetate tow. Of the acetate tow provided by Celanese, 100% was supplied from Celanese's Narrows facility. Allocation is based on the site-specific Scope 2 emissions intensity estimates.

Emissions in metric tonnes of CO₂e

358

Uncertainty (±%)

10

Major sources of emissions

Purchased power.

Verified

No

Allocation method

Allocation based on mass of products purchased

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

1,104

Unit for market value or quantity of goods/services supplied

Metric tons

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

Energy consumption is measured directly. The allocation of emissions to ITG is based on 2022 sales volume of 1104 MT of tow purchased by ITG and specific Scope 2 emissions (tons CO₂ per ton of tow produced) for the Narrows, VA USA facility, over multiple production steps.

Requesting member

Philip Morris International

Scope of emissions

Scope 1

Scope 2 accounting method

Scope 3 category(ies)

Allocation level

Facility

Allocation level detail

Allocation is based on purchases of cellulose acetate tow. Of the acetate tow provided by Celanese, 100% was supplied from Celanese's two tow facilities: Narrows, VA and Lanaken, Belgium. Allocation is based on the Scope 1 emissions intensity estimates for these facilities.

Emissions in metric tonnes of CO₂e

209,428

Uncertainty (±%)

10

Major sources of emissions

Natural gas for steam and power generation; Waste gas incineration

Verified

No

Allocation method

Allocation based on mass of products purchased

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

35,675

Unit for market value or quantity of goods/services supplied

Metric tons

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

The amount of natural gas used for steam and power production is measured directly. The allocation of emissions to PMI is based on 2022 sales volume of 35,675 MT, and specific Scope 1 emissions (tons CO₂ per ton of tow produced) for the Narrows, VA USA and Lanaken, Belgium facilities, over multiple production steps.

Requesting member

Philip Morris International

Scope of emissions

Scope 2

Scope 2 accounting method

Location-based

Scope 3 category(ies)

Allocation level

Facility

Allocation level detail

Allocation is based on purchases of cellulose acetate tow. Of the acetate tow provided by Celanese, 100% was supplied from Celanese's two tow facilities: Narrows, VA and Lanaken, Belgium. Allocation is based on the Scope 2 emissions intensity estimates for these facilities.

Emissions in metric tonnes of CO2e

10,805

Uncertainty (±%)

10

Major sources of emissions

Purchased power.

Verified

No

Allocation method

Allocation based on mass of products purchased

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

35,675

Unit for market value or quantity of goods/services supplied

Metric tons

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

Energy consumption is measured directly. The allocation of emissions to PMI is based on 2022 sales volume of 35,675 MT of tow purchased by PMI and specific Scope 2 emissions (tons CO2 per ton of tow produced) for the Narrows, VA USA and Lanaken, Belgium facilities, over multiple production steps.

SC1.2

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

no reference

SC1.3

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

Allocation challenges	Please explain what would help you overcome these challenges
Diversity of product lines makes accurately accounting	Celanese produces hundreds of products, across different major business lines, plant sites, and geographies. Improving the granularity

for each product/product line cost ineffective	of our data collection would be necessary to help overcome these challenges. Celanese continues to work to make these improvements in data collection.
Customer base is too large and diverse to accurately track emissions to the customer level	Celanese produces hundreds of products, across different major business lines, plant sites, and geographies. Customers often buy multiple products, and these products can be sourced from multiple sites and/or geographies. This adds complexity to the ability to accurately allocate emissions. Emissions data granularity and robust, consolidated data collection would help to improve our allocations estimates. Celanese continues to work to improve our abilities to allocate emissions to our customers who request this information.

SC1.4

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

Yes

SC1.4a

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

Celanese continues to work to develop greater means and higher accuracy of our emissions allocations. Our ability to estimate, report and allocate Scope 3 emissions at the customer level is not developed. Our global footprint, extensive and multi-regional product lines, and shared site production capabilities make these extensive project undertakings.

SC2.1

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

Requesting member

Altria Group, Inc.

Group type of project

Relationship sustainability assessment

Type of project

Aligning goals to feed into customers targets and ambitions

Emissions targeted

Actions that would reduce our own operational emissions (our scope 1 & 2)

Estimated timeframe for carbon reductions to be realized

Other, please specify
Unknown at this point.

Estimated lifetime CO2e savings

Estimated payback

Details of proposal

Unknown at this point. As Celanese's operational emissions feed into your Scope 3 emissions, reductions of our own Scope 1 & 2 emissions will benefit your goals on Scope 3 emissions reductions.

Requesting member

ARKEMA

Group type of project

Relationship sustainability assessment

Type of project

Aligning goals to feed into customers targets and ambitions

Emissions targeted

Actions that would reduce our own operational emissions (our scope 1 & 2)

Estimated timeframe for carbon reductions to be realized

Other, please specify

Unknown at this point.

Estimated lifetime CO2e savings

Estimated payback

Details of proposal

Unknown at this point. As Celanese's operational emissions feed into your Scope 3 emissions, reductions of our own Scope 1 & 2 emissions will benefit your goals on Scope 3 emissions reductions.

Requesting member

Bayer AG

Group type of project

Relationship sustainability assessment

Type of project

Aligning goals to feed into customers targets and ambitions

Emissions targeted

Actions that would reduce our own operational emissions (our scope 1 & 2)

Estimated timeframe for carbon reductions to be realized

Other, please specify

Unknown at this point.

Estimated lifetime CO2e savings

Estimated payback

Details of proposal

Unknown at this point. As Celanese's operational emissions feed into your Scope 3 emissions, reductions of our own Scope 1 & 2 emissions will benefit your goals on Scope 3 emissions reductions.

Requesting member

Braskem S/A

Group type of project

Relationship sustainability assessment

Type of project

Aligning goals to feed into customers targets and ambitions

Emissions targeted

Actions that would reduce our own operational emissions (our scope 1 & 2)

Estimated timeframe for carbon reductions to be realized

Other, please specify

Unknown at this point.

Estimated lifetime CO2e savings

Estimated payback

Details of proposal

Unknown at this point. As Celanese's operational emissions feed into your Scope 3 emissions, reductions of our own Scope 1 & 2 emissions will benefit your goals on Scope 3 emissions reductions.

Requesting member

British American Tobacco

Group type of project

Relationship sustainability assessment

Type of project

Aligning goals to feed into customers targets and ambitions

Emissions targeted

Actions that would reduce our own operational emissions (our scope 1 & 2)

Estimated timeframe for carbon reductions to be realized

Other, please specify
Unknown at this point.

Estimated lifetime CO2e savings

Estimated payback

Details of proposal

Unknown at this point. As Celanese's operational emissions feed into your Scope 3 emissions, reductions of our own Scope 1 & 2 emissions will benefit your goals on Scope 3 emissions reductions.

Requesting member

Corning Incorporated

Group type of project

Relationship sustainability assessment

Type of project

Aligning goals to feed into customers targets and ambitions

Emissions targeted

Actions that would reduce our own operational emissions (our scope 1 & 2)

Estimated timeframe for carbon reductions to be realized

Other, please specify
Unknown at this point.

Estimated lifetime CO2e savings

Estimated payback

Details of proposal

Unknown at this point. As Celanese's operational emissions feed into your Scope 3 emissions, reductions of our own Scope 1 & 2 emissions will benefit your goals on Scope 3 emissions reductions.

Requesting member

Eaton Corporation

Group type of project

Relationship sustainability assessment

Type of project

Aligning goals to feed into customers targets and ambitions

Emissions targeted

Actions that would reduce our own operational emissions (our scope 1 & 2)

Estimated timeframe for carbon reductions to be realized

Other, please specify

Unknown at this point.

Estimated lifetime CO2e savings

Estimated payback

Details of proposal

Unknown at this point. As Celanese's operational emissions feed into your Scope 3 emissions, reductions of our own Scope 1 & 2 emissions will benefit your goals on Scope 3 emissions reductions.

Requesting member

Ecolab Inc.

Group type of project

Relationship sustainability assessment

Type of project

Aligning goals to feed into customers targets and ambitions

Emissions targeted

Actions that would reduce our own operational emissions (our scope 1 & 2)

Estimated timeframe for carbon reductions to be realized

Other, please specify

Unknown at this point.

Estimated lifetime CO2e savings

Estimated payback

Details of proposal

Unknown at this point. As Celanese's operational emissions feed into your Scope 3 emissions, reductions of our own Scope 1 & 2 emissions will benefit your goals on Scope 3 emissions reductions.

Requesting member

Faurecia

Group type of project

Relationship sustainability assessment

Type of project

Aligning goals to feed into customers targets and ambitions

Emissions targeted

Actions that would reduce our own operational emissions (our scope 1 & 2)

Estimated timeframe for carbon reductions to be realized

Other, please specify

Unknown at this point.

Estimated lifetime CO2e savings

Estimated payback

Details of proposal

Unknown at this point. As Celanese's operational emissions feed into your Scope 3 emissions, reductions of our own Scope 1 & 2 emissions will benefit your goals on Scope 3 emissions reductions.

Requesting member

General Motors Company

Group type of project

Relationship sustainability assessment

Type of project

Aligning goals to feed into customers targets and ambitions

Emissions targeted

Actions that would reduce our own operational emissions (our scope 1 & 2)

Estimated timeframe for carbon reductions to be realized

Other, please specify

Unknown at this point.

Estimated lifetime CO2e savings

Estimated payback

Details of proposal

Unknown at this point. As Celanese's operational emissions feed into your Scope 3 emissions, reductions of our own Scope 1 & 2 emissions will benefit your goals on Scope 3 emissions reductions.

Requesting member

Imperial Brands

Group type of project

Relationship sustainability assessment

Type of project

Aligning goals to feed into customers targets and ambitions

Emissions targeted

Actions that would reduce our own operational emissions (our scope 1 & 2)

Estimated timeframe for carbon reductions to be realized

Other, please specify

Unknown at this point.

Estimated lifetime CO2e savings

Estimated payback

Details of proposal

Unknown at this point. As Celanese's operational emissions feed into your Scope 3 emissions, reductions of our own Scope 1 & 2 emissions will benefit your goals on Scope 3 emissions reductions.

Requesting member

International Flavors & Fragrances Inc.

Group type of project

Relationship sustainability assessment

Type of project

Aligning goals to feed into customers targets and ambitions

Emissions targeted

Actions that would reduce our own operational emissions (our scope 1 & 2)

Estimated timeframe for carbon reductions to be realized

Other, please specify
Unknown at this point.

Estimated lifetime CO2e savings

Estimated payback

Details of proposal

Unknown at this point. As Celanese's operational emissions feed into your Scope 3 emissions, reductions of our own Scope 1 & 2 emissions will benefit your goals on Scope 3 emissions reductions.

Requesting member

KAUTEX TEXTRON GMBH & CO. KG

Group type of project

Relationship sustainability assessment

Type of project

Aligning goals to feed into customers targets and ambitions

Emissions targeted

Actions that would reduce our own operational emissions (our scope 1 & 2)

Estimated timeframe for carbon reductions to be realized

Other, please specify
Unknown at this point.

Estimated lifetime CO2e savings

Estimated payback

Details of proposal

Unknown at this point. As Celanese's operational emissions feed into your Scope 3 emissions, reductions of our own Scope 1 & 2 emissions will benefit your goals on Scope 3 emissions reductions.

Requesting member

OMV AG

Group type of project

Relationship sustainability assessment

Type of project

Aligning goals to feed into customers targets and ambitions

Emissions targeted

Actions that would reduce our own operational emissions (our scope 1 & 2)

Estimated timeframe for carbon reductions to be realized

Other, please specify
Unknown at this point.

Estimated lifetime CO2e savings

Estimated payback

Details of proposal

Unknown at this point. As Celanese's operational emissions feed into your Scope 3 emissions, reductions of our own Scope 1 & 2 emissions will benefit your goals on Scope 3 emissions reductions.

Requesting member

Philip Morris International

Group type of project

Relationship sustainability assessment

Type of project

Aligning goals to feed into customers targets and ambitions

Emissions targeted

Actions that would reduce our own operational emissions (our scope 1 & 2)

Estimated timeframe for carbon reductions to be realized

Other, please specify

Unknown at this point.

Estimated lifetime CO2e savings

Estimated payback

Details of proposal

Unknown at this point. As Celanese's operational emissions feed into your Scope 3 emissions, reductions of our own Scope 1 & 2 emissions will benefit your goals on Scope 3 emissions reductions.

Requesting member

Prysmian SpA

Group type of project

Relationship sustainability assessment

Type of project

Aligning goals to feed into customers targets and ambitions

Emissions targeted

Actions that would reduce our own operational emissions (our scope 1 & 2)

Estimated timeframe for carbon reductions to be realized

Other, please specify

Unknown at this point.

Estimated lifetime CO2e savings

Estimated payback

Details of proposal

Unknown at this point. As Celanese's operational emissions feed into your Scope 3 emissions, reductions of our own Scope 1 & 2 emissions will benefit your goals on Scope 3 emissions reductions.

Requesting member

Robert Bosch GmbH

Group type of project

Relationship sustainability assessment

Type of project

Aligning goals to feed into customers targets and ambitions

Emissions targeted

Actions that would reduce our own operational emissions (our scope 1 & 2)

Estimated timeframe for carbon reductions to be realized

Other, please specify

Unknown at this point.

Estimated lifetime CO2e savings

Estimated payback

Details of proposal

Unknown at this point. As Celanese's operational emissions feed into your Scope 3 emissions, reductions of our own Scope 1 & 2 emissions will benefit your goals on Scope 3 emissions reductions.

Requesting member

Schaeffler

Group type of project

Relationship sustainability assessment

Type of project

Aligning goals to feed into customers targets and ambitions

Emissions targeted

Actions that would reduce our own operational emissions (our scope 1 & 2)

Estimated timeframe for carbon reductions to be realized

Other, please specify

Unknown at this point.

Estimated lifetime CO2e savings

Estimated payback

Details of proposal

Unknown at this point. As Celanese's operational emissions feed into your Scope 3 emissions, reductions of our own Scope 1 & 2 emissions will benefit your goals on Scope 3 emissions reductions.

Requesting member

Schneider Electric

Group type of project

Relationship sustainability assessment

Type of project

Aligning goals to feed into customers targets and ambitions

Emissions targeted

Actions that would reduce our own operational emissions (our scope 1 & 2)

Estimated timeframe for carbon reductions to be realized

Other, please specify

Unknown at this point.

Estimated lifetime CO2e savings

Estimated payback

Details of proposal

Unknown at this point. As Celanese's operational emissions feed into your Scope 3 emissions, reductions of our own Scope 1 & 2 emissions will benefit your goals on Scope 3 emissions reductions.

Requesting member

Stanley Black & Decker, Inc.

Group type of project

Relationship sustainability assessment

Type of project

Aligning goals to feed into customers targets and ambitions

Emissions targeted

Actions that would reduce our own operational emissions (our scope 1 & 2)

Estimated timeframe for carbon reductions to be realized

Other, please specify

Unknown at this point.

Estimated lifetime CO2e savings

Estimated payback

Details of proposal

Unknown at this point. As Celanese's operational emissions feed into your Scope 3 emissions, reductions of our own Scope 1 & 2 emissions will benefit your goals on Scope 3 emissions reductions.

Requesting member

The Dow Chemical Company

Group type of project

Relationship sustainability assessment

Type of project

Aligning goals to feed into customers targets and ambitions

Emissions targeted

Actions that would reduce our own operational emissions (our scope 1 & 2)

Estimated timeframe for carbon reductions to be realized

Other, please specify

Unknown at this point.

Estimated lifetime CO2e savings

Estimated payback

Details of proposal

Unknown at this point. As Celanese's operational emissions feed into your Scope 3 emissions, reductions of our own Scope 1 & 2 emissions will benefit your goals on Scope 3 emissions reductions.

Requesting member

The LEGO Group

Group type of project

Relationship sustainability assessment

Type of project

Aligning goals to feed into customers targets and ambitions

Emissions targeted

Actions that would reduce our own operational emissions (our scope 1 & 2)

Estimated timeframe for carbon reductions to be realized

Other, please specify
Unknown at this point.

Estimated lifetime CO2e savings

Estimated payback

Details of proposal

Unknown at this point. As Celanese's operational emissions feed into your Scope 3 emissions, reductions of our own Scope 1 & 2 emissions will benefit your goals on Scope 3 emissions reductions.

Requesting member

Trelleborg AB

Group type of project

Relationship sustainability assessment

Type of project

Aligning goals to feed into customers targets and ambitions

Emissions targeted

Actions that would reduce our own operational emissions (our scope 1 & 2)

Estimated timeframe for carbon reductions to be realized

Other, please specify
Unknown at this point.

Estimated lifetime CO2e savings

Estimated payback

Details of proposal

Unknown at this point. As Celanese's operational emissions feed into your Scope 3 emissions, reductions of our own Scope 1 & 2 emissions will benefit your goals on Scope 3 emissions reductions.

Requesting member

Velux A/S

Group type of project

Relationship sustainability assessment

Type of project

Aligning goals to feed into customers targets and ambitions

Emissions targeted

Actions that would reduce our own operational emissions (our scope 1 & 2)

Estimated timeframe for carbon reductions to be realized

Other, please specify

Unknown at this point.

Estimated lifetime CO2e savings

Estimated payback

Details of proposal

Unknown at this point. As Celanese's operational emissions feed into your Scope 3 emissions, reductions of our own Scope 1 & 2 emissions will benefit your goals on Scope 3 emissions reductions.

Requesting member

Versuni

Group type of project

Relationship sustainability assessment

Type of project

Aligning goals to feed into customers targets and ambitions

Emissions targeted

Actions that would reduce our own operational emissions (our scope 1 & 2)

Estimated timeframe for carbon reductions to be realized

Other, please specify

Unknown at this point.

Estimated lifetime CO2e savings

Estimated payback

Details of proposal

Unknown at this point. As Celanese's operational emissions feed into your Scope 3 emissions, reductions of our own Scope 1 & 2 emissions will benefit your goals on Scope 3 emissions reductions.

Requesting member

WestRock Company

Group type of project

Relationship sustainability assessment

Type of project

Aligning goals to feed into customers targets and ambitions

Emissions targeted

Actions that would reduce our own operational emissions (our scope 1 & 2)

Estimated timeframe for carbon reductions to be realized

Other, please specify

Unknown at this point.

Estimated lifetime CO2e savings

Estimated payback

Details of proposal

Unknown at this point. As Celanese's operational emissions feed into your Scope 3 emissions, reductions of our own Scope 1 & 2 emissions will benefit your goals on Scope 3 emissions reductions.

Requesting member

Zimmer Biomet Holdings, Inc.

Group type of project

Relationship sustainability assessment

Type of project

Aligning goals to feed into customers targets and ambitions

Emissions targeted

Actions that would reduce our own operational emissions (our scope 1 & 2)

Estimated timeframe for carbon reductions to be realized

Other, please specify
Unknown at this point.

Estimated lifetime CO2e savings

Estimated payback

Details of proposal

Unknown at this point. As Celanese's operational emissions feed into your Scope 3 emissions, reductions of our own Scope 1 & 2 emissions will benefit your goals on Scope 3 emissions reductions.

SC2.2

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

SC4.1

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

No, I am not providing data

Submit your response

In which language are you submitting your response?

English

Please confirm how your response should be handled by CDP

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	I understand that my response will be shared with all requesting stakeholders	Response permission

Please select your submission options	Yes	Public
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Please confirm below

I have read and accept the applicable Terms