Berry Global Group, Inc - Climate Change 2023

C0. Introduction

C0.1

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

Berry Global Group, Inc. (NYSE:BERY), headquartered in Evansville, Indiana, is committed to its mission of 'Always Advancing to Protect What's Important,' and proudly partners with its customers to provide them with value-added protective solutions that are increasingly light-weighted and easier to recycle or reuse. The Company is a leading global supplier of a broad range of innovative rigid, flexible, and nonwoven products used every day within consumer and industrial end markets. Berry, a Fortune 500 company, has over 46,000 employees and generated almost $14.5 billion of pro forma net sales in fiscal year 2022, from operations that span over 265 manufacturing locations on six continents. For additional information, visit Berry's website at berryglobal.com. Data in this response aligns to our Fiscal Year, which ran from from September 27th 2021 - October 1st, 2022. Our Scope 1 & 2 Greenhouse Gas emissions data is calendar normalized to a 1st October 2021 – 30th September 2022 reporting period in line with our external assurance process.

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
October 1 2021

End date
September 30 2022

Indicate if you are providing emissions data for past reporting years
Yes

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

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

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

C0.3

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

Argentina
Belgium
Bosnia & Herzegovina
Brazil
Canada
China
Colombia
Czechia
Denmark
Estonia
Finland
France
Germany
Hungary
India
Italy
Lithuania
Malaysia
Mexico
Netherlands
Norway
Philippines
Poland
Romania
Russian Federation
Slovakia
South Africa
Spain
Sweden
Switzerland
Thailand
Tunisia
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

Polymers

Bulk inorganic chemicals

Other 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	08579W1036

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
Director on board	The Berry Global board hold the highest level of direct responsibility for decisions relating to the company strategy in respect of all areas inclusive of environmental issues such as climate change. The board ensures Berry Global operates to the highest standards in all aspects of governance and risk management. The Berry Global board held 4 regular meetings and 4 special meetings during its 2022 fiscal year. The Berry Global board reviews the Company's long term strategic plans and the principal issues that the company will face in the future (including climate-related risks) during at least one Board meeting each year. An example of a climate related decision made by the board is to approve our updated Impact 2025 sustainability strategy targets in line with science-based targets to reduce absolute greenhouse gas emissions by 25% by 2025 based on a 2019 baseline. This decision was made through an assessment of climate related risk to the company based on the IEA NZE2050 (Net-Zero Emissions by 2025 Scenario) pathway, which is compatible with modeling to limit warming to 1.5 degrees Celsius by 2100. These targets have since been approved by the SBTi.
Board Chair	The Board Chair (who also holds the position of Berry Global CEO) has overall responsibility for risk management, including climate-related risk. The CEO also has oversight of the Berry Global corporate goals, which include greenhouse gas emissions reduction and other climate-related metrics such as the GHG emissions target set out in the Berry Global Impact 2025 sustainability strategy.
Board-level committee	The Berry Global Nominating and Governance Committee, which is comprised of members of the board, has the primary function to serve as an independent and objective party to oversee the Company's environmental, social and governance ("ESG") strategy, initiatives and disclosure, including corporate responsibility, sustainability, and climate-related risks and opportunities. The committee meets as often as it determines necessary, but not less frequently than quarterly. In the Company's 2022 fiscal year the audit committee met 5 times.

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	Scope of board-level oversight	Please explain
Scheduled – some meetings	Overseeing and guiding employee incentives Reviewing and guiding strategy Overseeing and guiding the development of a transition plan Overseeing the setting of corporate targets Monitoring progress towards corporate targets Reviewing and guiding the risk management process	<Not Applicable>	It is the direct responsibility of the Chief Executive Officer and the other members of management to manage the Company's enterprise risks on a day-to-day basis. The Board of Directors has responsibility for the oversight of risk management on an enterprise-wide basis through regular updates from management and the strategic planning process. The Audit Committee assists the Board of Directors in fulfilling its oversight responsibilities by reviewing and discussing with management the Company's major risk exposures and the results of an annual corporate-wide risk assessment, the related corporate guidelines, and policies for risk assessment and risk management. The Company's approach to risk management is to identify, prioritize, monitor and appropriately mitigate all material business risks in order to support the Company's strategy, including proper financial management and sustainable growth, while protecting and enhancing stockholder value. In addition, the Board of Directors delegates certain risk management oversight responsibilities to its committees; for example, the Audit Committee is responsible for overseeing our material financial and other risk exposures, including risks relating to the financial reporting process and internal controls, as well as risks from related party transactions, and the Compensation Committee is responsible for overseeing risks relating to our compensation programs. In addition, the Nominating and Governance Committee assists the Board in overseeing the Company's environmental, social and governance ("ESG") strategy, initiatives and disclosure, including corporate responsibility, sustainability, and climate-related risks and opportunities. The Berry Global board meets at least 4 times per year, approximately 25% of the boards time is spent on governance, internal controls and risk in which climate related issues would be discussed. During the Company's 2022 fiscal year the board held 4 regular meetings and 4 special meetings. The Berry Global audit committee, made up of members of the Berry Global board, review and oversee effectiveness of the risk management framework and internal controls, including the internal audit function, on behalf of the board. The committee met 5 times with risk management being discussed at all of these meetings. The Nominating and Governance committee, responsible for overseeing the Company's climate-related risks and opportunities, also met 5 times during the Company's 2022 fiscal year. The Berry Global board are responsible for: carrying out an annual strategy review which takes in to account strategic and other relevant risks; approving yearly financial budgets; oversight of the Enterprise Risk Assessment that identifies and details specific risks relevant to the business as assessed by the audit committee and company wide risk assessment process.

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	Primary reason for no board-level competence on climate-related issues	Explain why your organization does not have at least one board member with competence on climate-related issues and any plans to address board-level competence in the future
Row 1	No, but we plan to address this within the next two years	<Not Applicable>	Important but not an immediate priority	As The Berry Global board has had increased oversight of ESG climate related issues, we have felt the need for increased competence on the board in regards to climate and ESG as a whole - though this requirement has only gained importance over the last few years. We currently spend time making sure the Board of Directors are familiar with climate-related matters, both in general and specific to Berry Global, and we are working to ensure that within the next two years, one or more members of the board have been trained, or have pre-existing competence, on ESG and specifically climate-related issues.

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
Integrating climate-related issues into the strategy
Setting climate-related corporate targets
Assessing climate-related risks and opportunities
Managing climate-related risks and opportunities

Coverage of responsibilities
<Not Applicable>

Reporting line
Reports to the board directly

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

Please explain
The CEO holds overall responsibility for corporate strategy governance, performance, internal controls, and risk management, alongside the Berry Global Board, and monitors climate-related issues raised by the Chief Legal Officer as part of the company's annual Enterprise Risk Assessment (ERA) process. The CEO also has oversight of the Berry Global corporate goals, which include greenhouse gas emissions reduction and other climate-related metrics such as the GHG emissions target set out in the Berry Global Impact 2025 sustainability 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	In order to more closely align the interests of its executive officers and stockholders, the Compensation Committee determined that beginning in fiscal 2023 the annual equity and equity-based awards to our executive officers will consist of 40% stock options and 60% performance-based restricted stock units, each of which will be subject to the terms and conditions discussed below. In order to tie executive compensation with the Company's climate-related goals, the Compensation & Talent Development Committee determined that beginning in fiscal 2023 the short-term annual performance-based cash incentive will be comprised of three components that are tied directly to the financial and climate-related performance of the Company: (i) an Adjusted EBITDA target (70% of the target award); (ii) a free cash flow target (20% of the target award); and (iii) a Greenhouse Gas emissions target (10% of the target award).

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
Corporate executive team

Type of incentive
Monetary reward

Incentive(s)
Bonus - % of salary

Performance indicator(s)
Achievement of a climate-related target

Incentive plan(s) this incentive is linked to
Short-Term Incentive Plan

Further details of incentive(s)
In order to tie executive compensation with the Company's climate-related goals, the Compensation & Talent Development Committee determined that beginning in fiscal 2023 the short-term annual performance-based cash incentive will be comprised of three components that are tied directly to the financial and climate-related performance of the Company: (i) an Adjusted EBITDA target (70% of the target award); (ii) a free cash flow target (20% of the target award); and (iii) a Greenhouse Gas emissions target (10% of the target award).

Explain how this incentive contributes to the implementation of your organization's climate commitments and/or climate transition plan
The annual Greenhouse Gas emissions target in question is aligned with our short term SBTi target of a 25% reduction by 2025 from a 2019 baseline - developed in-line with preventing 1.5C warming under the IEA NZE Scenario, and in-line with our transition plan to reach net-zero emissions by 2050.

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	1	
Medium-term	1	3	
Long-term	3		

C2.1b

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

Berry Global defines substantive financial and strategic impact through a scale of impact that ranges from insignificant to catastrophic as set out below. Substantive financial and strategic impact are those that are considered significant and above.

Insignificant - Consequences can be readily absorbed under normal operating conditions

• <1% on pre-tax earnings

• No potential impact on market share

• No impact on brand value

• No resolution required

Significant - An Event which can be managed under normal operating conditions

• 1% - 3% on pre-tax earnings

• Minor potential impact on market share

• Minor impact on brand value

• Issues would be delegated to management / staff to resolve

Serious - Major events which can be managed but require additional resources and management effort

• 3% - 5% on pre-tax earnings

• Market share and/or brand value will be affected in short term

• Cash flow may be affected

• The event will require senior management intervention

Critical - Critical event which can be endured but which may have a prolonged negative impact and extensive consequences

• 5% - 10% on pre-tax earnings

• Serious diminution in brand value / market share

• Cash flow may be adversely affected

• Key alliances are threatened

• Events and problems will require board / senior management attention

Catastrophic Disaster with potential to lead to collapse of business that is fundamental to the achievement of objectives

• >10% on pre-tax earnings

• Imminent cash-flow problems

• Loss of key alliances

• Sustained serious loss in market share

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
Berry Global performs multiple risk management processes annually in relation to climate change risk; the integrated multi-disciplinary Berry Global Enterprise Risk Assessment, an annual carbon risk assessment in line with TCFD guidelines, and quarterly meetings with key resin suppliers to assess carbon risk. . With two main separate annual processes for assessing climate risk, in addition to a quarterly value-chain process, with consider climate risk to be assessed at a frequency of more than once a year.

The Berry Global risk management framework process provides a consistent methodology by which every business, division, senior management and ultimately the board assess the risks that the group faces against a defined set of probability and impact criteria

The Berry Global Enterprise Risk Assessment (ERA) is completed on an annual basis. The ERA identifies risk through a number of processes. The Berry Global Board of Directors and approximately 35 members of the Berry senior management team from across the company are interviewed to identify risks they perceive as being applicable to the business. These interviews are conducted across a number of geographies and functional areas such as legal, division leads, purchasing, sustainability etc. in order to obtain results representative of the global operations of Berry. A questionnaire is also sent to approximately 100 employees, representing a mix of job functions and locations, across the organisation to identify any further risks.

The information from both of these risk identification processes is then gathered in to a central database and the risks are categorized in to a number of themes (approx. 15) such as supply chain (upstream), production (direct operations), infrastructure and external market forces (downstream). Each risk identified is rated based on the risk impact (insignificant to catastrophic), the likelihood of occurrence (unlikely to almost certain) and speed of onset (short-term to long-term). Each of the ratings are associated with a risk score, the higher the impact, likelihood or speed of onset the higher the risk score for each risk identified. An example of climate-related physical risks identified through the Berry Global risk process is a natural disaster which results in the destruction of company facilities and production capabilities. For Berry Global this risk is higher and more likely in areas which are more susceptible to natural disasters such as India (cyclones and floods), parts of the United States (tornadoes, hurricanes, flooding) and China (flooding, droughts, typhoons and earthquakes) where Berry Global operations are located. An example of a climate-related transitional risk identified through the Berry Global risk process is the change in consumer perception of plastics due to the negative perception of plastics impact on the environment which is driving a market shift towards non-plastic packaging. As Berry Global is one of the world's largest manufacturers of plastic packaging this risk could have significant strategic and financial impact. The top 5 risk themes are then extracted from the risk database, transcribed in to a report that details the inherent risk and key mitigation activities. This report is submitted to the audit committee and the board for appropriate mitigation plans to be actioned against the most significant risks identified by the process.

In addition to and contributory to the Enterprise Risk Assessment, an annual carbon risk assessment and physical risk assessment are also performed, covering our direct operations, and upstream and downstream value chain, and covering all time horizons. The Berry Global GHG inventory is used to estimate the current portion of energy costs due to carbon taxes, emissions trading schemes etc. based on the latest regulatory information. Forward looking carbon risk is then estimated based on a variety of scenarios using different carbon prices, geographies and time horizons. For the purposes of this assessment a substantive financial impact would be one that increases costs significantly above typical inflation. Alongside these measures, risk is identified and assessed continually across the company through the use of live dashboards that monitor energy use and GHG emissions based on usage data. Monitoring of data in this way allows a more frequent response to risks and opportunities than the annual Enterprise Risk Assessment.

To further understand potential climate risks to the business, we also meet on a quarterly basis with out key resin suppliers to understand their carbon strategy, and how they are approaching a strategy to achieve net zero.

Both the Enterprise Risk Assessment and the supplementary carbon risk assessment identify risks based on speed of onset, in-line with the time horizons definitions outlined in C2.1a - covering short-, medium-, and long-term risk.

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	Climate change regulation is a fundamental part of the risk assessment process. Berry Global is in the manufacturing sector, and a number of climate change regulations can significantly affect the company. One example of current regulation that is considered is the Climate Change Act in the UK where Berry Global has a significant number of manufacturing facilities. The cost of such regulation, in this case the climate change levy rates applied to energy purchases, is significant and forecast to rise.
Emerging regulation	Relevant, always included	Climate change regulation is a fundamental part of the risk assessment process. Berry Global is in the manufacturing sector, and a number of climate change regulations, such as the current and future carbon prices as called for by regulation can significantly affect the company. For example, according to a 2019 World Bank report on trends the average carbon prices could increase more than sevenfold to US$120 per metric ton by 2030. Berry Global has manufacturing facilities in >40 countries with current carbon pricing ranging from $0-120 so an increase to $120 per metric ton of carbon would have a significant financial impact.
Technology	Relevant, always included	Technology as a climate related risk is considered by Berry's risk assessment process. Technology is a very important lever for reducing both energy intensity in Berry Global operations (more efficient equipment/processes) as well as the emissions intensity of the energy we purchase (primary focus on renewable energy). Risks related to energy cost management are identified during site risk assessments and the development of energy efficiency programs is actioned to mitigate risks in this area. Technology has been utilized in parts of the company to reduce risks related to increased carbon emissions. For example, the installation of the world's largest electrically-heated rotational moulding machine has delivered a significant reduction in CO2e emissions at Berry's Sæplast Iceland factory. Conventional roto moulding machines are heated with fossil fuel burners. However, when the site wanted to expand capacity, it was decided to explore the opportunity to utilize a greener form of energy for the new machine. Since its installation over 6 years ago, the use of greener electricity has eliminated the need for around 800,000 litres of diesel fuel – equivalent to the annual usage of approximately 500 cars. As a result, CO2e emissions from the plant are now 30% lower despite a volume increase of over 20%.
Legal	Relevant, always included	The Berry risk assessment process is all encompassing and we stay up-to-date on climate-related issues, including lawsuits. At this time, we do not believe the likelihood of a climate-related lawsuit targeting Berry is high. We are aware of previous lawsuits, for example the case brought by DC and Minnesota against large oil and gas companies, and will continue to monitor this risk in relation to plastic manufacturers.
Market	Relevant, always included	Market shifts and forecasts around fossil fuels are closely monitored since fossil fuels represent not just our primary energy sources, but also the primary source for most of our raw materials. Fuel and energy represents more than 5% but less than or equal to 10% of operational spend for Berry Global so any fluctuation in fuel/energy taxes will have a significant impact on site operational spend and financial performance and therefore commodity supply changes including energy supply so is always included in climate related risk assessment. Berry Global is in the manufacturing sector, and number of climate change regulations, including Climate Change Act in the UK, has significant impact, including the impact of associated costs such as Climate change levy rates, therefore it is considered in risk assessments (for example total CCL we pay at the moment is significant, and its forecasted to increase already in the future).
Reputation	Relevant, always included	Berry Global has identified increased risk associated with general perception of the products, including adverse publicity regarding plastic waste on the environment. The Group already produces a significant amount of recyclable products and through innovation will continue to work with customers to meet any change in demands and to reduce the carbon footprint and therefore the climate impact of products supplied. Alongside reducing the carbon impact of products manufactured, Berry Global employs strict control measures and externally accredited systems to ensure the safety and quality of products that are manufactured. These control measures also help to reduce waste and associated carbon emissions. Berry Global is a signatory of the Ellen MacArthur Foundation's Global Commitment and the Alliance to End Plastic Waste in order to improve the reputation of plastic and to work towards common industry goals related to improving the environmental impact of plastic.
Acute physical	Relevant, always included	Berry Global businesses face the potential risk of operations being affected by disruption due to loss of supply, failures with technology, industrial disputes and physical damage arising from extreme weather events, such as flood or other catastrophe. The occurrence of these events might be significantly influenced by climate change. The loss of essential services or supplies could have a significant impact on Berry's ability to service its customers. As an example the Berry manufacturing site in Bosnia, that experienced damage from flooding, invested in significantly raising the floor height of the production area to mitigate against future flood risk.
Chronic physical	Relevant, always included	Chronic physical risks are considered in the analysis of external risks. External risks occur in the environment outside the Group and its business units and tend to be risks over which it has little or no control including the physical environment, political, legal, economic, social, cultural and demographic factors. An example of where this risk has been assessed at Berry Global is chronic physical risks associated with water use. Using the WRI Aqueduct tool we have identified 17 sites in 2020 that are categorized as being in high chronic physical risk regions and may be susceptible to chronic events such as severe droughts or floods which could impact manufacturing operations.

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

Climate risk type mapped to traditional financial services industry risk classification

<Not Applicable>

Company-specific description

In order to meet globally defined GHG Emissions targets, as defined by the Paris Agreement, radical changes in emissions regulaion is expected, with current pricing regulation on carbon considered unsustainble and expected to rise. Based on scenario analysis, under a NZE Scenario, a worst-case scenario of $120/Ton CO2e Carbon tax could be implemented by 2030. Berry Global operates over 280 manufacturing sites globally across a number of different countries, using 5.9 million MWh of energy annually and has an annual Scope 1 & 2 CO2e footprint of 1.85 million MT. Current Carbon pricing regulation across our business is averaged at $14.5/MT. Due to our large emissions footprint, a rise from an average of $14.5/MT to $120/MT by 2030, means we would be subject to significant risk of increased costs in our direct operations relating to these emissions, and the energy that we purchase. This increase in price is expected to be far higher than the typical price of inflation, and therefore for the purpose of this analysis, it is considered to have a substantive financial impact on every facility that currently uses non renewable-energy, and a medium magnitude on our business as a whole.

Time horizon

Short-term

Likelihood
Likely

Magnitude of impact
High

Are you able to provide a potential financial impact figure?
Yes, a single figure estimate

Potential financial impact figure (currency)
24375000

Potential financial impact figure – minimum (currency)
<Not Applicable>

Potential financial impact figure – maximum (currency)
<Not Applicable>

Explanation of financial impact figure
Berry Global has committed to net-zero by 2050, with an SBti approved, short-term target of a 25% reduction in Scope 1+2 emissions by 2025 from a 2019 baseline. In-line to achiveing net-zero, we would be working towards a 50% reduction by 2030 from a 2019 baseline. Although we expect to be on-track to hit these goals as part of our net zero strategy, under a worst-case scenario we can assume no further reduction in GHG Emissions from our 2022 total of 1.848 million MT CO2e.

To calculate the potential Impact figure under this worst-case scenario we have calculated the difference between current carbon taxes in regions that we operate, and the anticipation of an average Carbon Tax of $120 USD/MT CO2e in 2030 under NZE Scenario. We have sites in many different regions; some sites lie in areas that have already implemented a carbon pricing structure, while others operate in jurisdictions that do not currently have carbon pricing. The average current Carbon Price across regions we operate in is $14.5/MT. This results in an increased long-term risk in 2030 of $195 million USD annually, based on the assumptions listed above, and a short-term potential risk increase of $24.375 million USD for 2023.

1.848 million MT CO2e * $14.5/MT = $26.8 million current
1.848 million MT CO2e * $120/MT = $221.8 million in 2030.

Difference = $195 million USD.

$195/8 = $24.375 million USD per year risk increase.

Cost of response to risk
29240000

Description of response and explanation of cost calculation
Under a worse-case scenario, assuming no further reduction in GHG Emissions from energy efficiency projects or production optimization, we would need to realize the long-term risk opportunity of mitigating carbon taxes in 2030 through the offset of our direct use of energy onsite; our Scope 1 emissions, and through the purchase renewable energy certificates to eliminate Scope 2 emissions.

Based on our 2022 Fiscal year Scope 1 emissions of 149,258 MT CO2e, and a current cost to offset these emissions of $35 USD/MT CO2e, we estimate the annual cost of offsetting these emissions to be $4.48 million USD. There is $0 USD of other additional cost relating to this response, such as employee function costs, as it would be completed within the bandwidth of existing resources.

149,258*$35=$4.48 million USD

Based on our 2022 Fiscal Scope 2 electricity usage of 4,951,619 MWh, and an average REC price of $5 USD per MWh, we estimate the annual cost of purchasing 100% renewable electricity to be $24.8 million USD. There is $0 USD of other additional cost relating to this response, such as employee function costs, as it would be completed within the bandwidth of existing resources.

4,951,619*$5=$24.76 million USD

Therefore, by summing the annual cost to offset Scope 1 emissions, and purchase renewable energy certificates for Scope 2, we can estimate the total cost of the response to be $29.24 million USD, based on the assumptions outlined above.

$4.48+$24.76 = $29.24 million USD

We understand that in addition to the previously mentioned assumptions, this also assumes no change to current REC or carbon offset pricing. We understand the risk response is required to be reevaluated annually due to the volatile nature of REC and Carbon Offset pricing.

Comment

Identifier
Risk 2

Where in the value chain does the risk driver occur?
Upstream

Risk type & Primary climate-related risk driver

Emerging regulation	Carbon pricing mechanisms

Primary potential financial impact
Increased indirect (operating) costs

Climate risk type mapped to traditional financial services industry risk classification
<Not Applicable>

Company-specific description
In order to meet globally defined GHG Emissions targets, as defined by the Paris Agreement, radical changes in emissions regulaion is expected, with current pricing regulation on carbon considered unsustainble and expected to rise. Based on scenario analysis, under a NZE Scenario, a worst-case scenario of $120/Ton CO2e Carbon tax could be implemented by 2030. Berry calculates the emissions footprint of its value chain annually, with 7,207,852 MT CO2e attributed to our purchase of goods and services in 2022. Due to this large emissions requirements to produce the products we purchase, an average carbon tax of $120/MT by 2030, means there is significant risk of increased costs to our indirect operations relating to the increased costs to our suppliers to produce these projducts, which ultimately could be passed down the supply chain as a risk for Berry Global related to increased raw material costs. Berry Global facilities with raw material suppliers exposed to increased/new carbon prices are expected to have raw material cost increases above typical inflation, which for the purposes of this analysis, is considered a substantive financial impact for facilities, and a high magnitude on our business as a whole.

Time horizon
Short-term

Likelihood
Likely

Magnitude of impact
High

Are you able to provide a potential financial impact figure?
Yes, a single figure estimate

Potential financial impact figure (currency)
564000000

Potential financial impact figure – minimum (currency)
<Not Applicable>

Potential financial impact figure – maximum (currency)
<Not Applicable>

Explanation of financial impact figure
Berry's primary raw material is resin and represents one of our highest costs. If our resin suppliers experience cost increases to produce that resin due to increase carbon pricing, they would attempt to pass those increases on to us. Berry Global has committed to net-zero by 2050, with an SBti approved, short-term target of a 25% reduction in Scope 3 emissions by 2025 from a 2019 baseline. In-line to achieving net-zero, we would be working towards a 50% reduction by 2030 from a 2019 baseline. Although we expect to be on-track to hit these goals as part of our net zero strategy, under a worst-case scenario we can assume no further reduction in GHG Emissions relating to purchased resin from our 2022 total of 4.7 million MT CO2e.

To calculate the potential Impact figure under this worst-case scenario we have calculated the potential cost if all carbon tax increases are passed on to us, with an anticipation of an average Carbon Tax of $120 USD/MT CO2e in 2030 under NZE Scenario. This results in an increased long-term risk in 2030 of $564 million USD annually, based on the assumptions listed above, and a short term potential risk increase of $70.5 million USD for 2023.

4.7*$120=$564 million USD

$564/8 = $70.5 million USD

Cost of response to risk
0

Description of response and explanation of cost calculation
Historically, we have been able to successfully manage the impact of higher raw material costs by increasing our selling prices. Sales contracts have cost pass-through clauses wherever possible. Furthermore, we continually strive to lightweight our products, which reduces our exposure to raw material risks, and leads to additional cost savings.

Additionally, we meet with our critical resin suppliers on a quarterly basis to drive them to reduce their emissions, through energy efficiency and the procurement of renewable energy to replace conventional energy sources. This would therefore reduce the impact of carbon pricing on their business, and associated cost impacts passed on to us. Over the last 10 years we have seen emissions factors associated with resin production falling substantially; US produced PP has fallen 18% over a 10 year period for example. If this trend continues, it will mitigate a large portion of the Potential Impact Figure.

There is $0 USD additional cost to managing these risks using the methods that are outlined above, as all work is completed within the bandwidth of existing resources and employees.

Comment

Identifier
Risk 3

Where in the value chain does the risk driver occur?
Direct operations

Risk type & Primary climate-related risk driver

Market	Changing customer behavior

Primary potential financial impact
Decreased revenues due to reduced demand for products and services

Climate risk type mapped to traditional financial services industry risk classification
<Not Applicable>

Company-specific description
As the world shifts to a low-carbon economy and consumers become more aware and educated about climate change, it has the potential to negatively impact consumers'

view of fossil fuels and cause them to move away from the purchase of products that utilize fossil fuels in their manufacture. The primary raw material of Berry is polymer resin derived from fossil fuels, therefore posing a risk to the products that Berry manufactures as Berry's customers may change their purchasing behavior as a result of changes in perception of packaging. The CPI & CPNA divisions of Berry manufacture fast moving consumer goods packaging where numerous other substrates are available from competitors that could be perceived as more environmentally conscious materials, despite the fact that plastic packaging often has a lower carbon footprint than alternative materials. In FY 2022, products in CPI & CPNA derived from fossil fuels represented approximately 53% of Berry sales, so if even a small percentage of revenue was lost due to a chance in consumer perception, the risk to the company is therefore significant, with high magnitude.

Time horizon
Long-term

Likelihood
About as likely as not

Magnitude of impact
Medium-high

Are you able to provide a potential financial impact figure?
Yes, a single figure estimate

Potential financial impact figure (currency)
78000000

Potential financial impact figure – minimum (currency)
<Not Applicable>

Potential financial impact figure – maximum (currency)
<Not Applicable>

Explanation of financial impact figure
As identified by studies such as by the UK and European Plastics Pacts, consumer perception of packaging's sustainability will be a key driver in he long-term, over the next 10 years. While Berry has strategies in place to continually progress the sustainablilty credentials of our product portfolio, in some cases other material substrates may still be considered by consumers as more sustainable, and therefore there is potential to have a decrease in revenue. The CPI & CPNA divisions of Berry manufacture fast moving consumer goods packaging where numerous other substrates are available from competitors that could be perceived as more environmentally conscious materials, despite the fact that plastic packaging often has a lower carbon footprint than alternative materials. We have therefore estimated the risk of a potential loss of 1% of total sales of CPNA and CPI division in the long-term.

A 1% loss in company sales from these divisions due to decreased demand for Berry products the inherent financial risk should we fail to notice or fail to take action, would be in the order of magnitude of $78 million USD, as their total combined revenue is $7.8 billion USD. If loss of sales was higher than 1% due to decreased demand, then the financial impact would be higher and more significant.

$7,800,000,000/100 = $78,000,000 USD

Cost of response to risk
0

Description of response and explanation of cost calculation
As part of our materiality assessment, we ask our key customers about their long-term vision for their products and partner with them to realize that vision. We would therefore not be blindsided by a large-scale shift. We also regularly monitor market trends, based on both external research, internal consumer research, and ultimately sales data - we would be one of the first to know if the market was shifting away from plastics. Additionally, we work with customers to educate them on the benefits of plastics and our products. We also work in our communities as well as with trade associations to educate end-consumers on the benefits of plastics.

There is $0 USD additional cost to managing these risks. All the methods outlined above are done within the bandwidth of existing resources or included in activities that would be done anyway, such as marketing the benefits of our products and participating in trade associations that represent us on a broad range of issues.

Comment

Identifier
Risk 4

Where in the value chain does the risk driver occur?
Direct operations

Risk type & Primary climate-related risk driver

Acute physical	Other, please specify (Sum of all potential acute physical risks, which, in the locations we operate, are namely; flooding, drought, and storm/hurricane impacts.)

Primary potential financial impact
Decreased revenues due to reduced production capacity

Climate risk type mapped to traditional financial services industry risk classification
<Not Applicable>

Company-specific description
Berry Global operates in some geographic regions that are at acute physical climate risk from extreme weather events such as flooding e.g. mainland European manufacturing facilities, drought e.g. African manufacturing facilities, or storm/hurricane impacts e.g. South East USA. Specific examples to our business would be impacts from Hurricane Laura in 2020 , which led to property damage and business interruption, as well as interruption due to resin delivery shortage. Another example is Storm Uri in 2021 which also lead to CBI, business interruption and property damage.

In many cases where this risk is apparent, whether it be on our direct manufacturing facilities, our suppliers, or the transportation of our products, some continuity of supply can be maintained by transferring business to alternative Berry sites, reducing the risk.

Time horizon
Short-term

Likelihood
About as likely as not

Magnitude of impact
Medium-low

Are you able to provide a potential financial impact figure?
Yes, an estimated range

Potential financial impact figure (currency)
<Not Applicable>

Potential financial impact figure – minimum (currency)
2000000

Potential financial impact figure – maximum (currency)
20000000

Explanation of financial impact figure
Any loss of business due to extreme weather events would adversely affect profit, depending on the size of the event and the number of sites that are affected. Excluding deductibles, the impact of Hurricane Laura in 2020 lead to an total insurance claims over over $10 million USD for business interruption & property damage, CBI, and incremental costs - relating to a resin shortage.

The impact of Winter Storm Uri in 2021 on our business sat in the region of between $10 million USD and $20 million USD.

Based on the data above, we can estimate that the potential upper limit impact on our business as a result of each extreme weather event lies around $20 million USD, as the two examples above represent the largest Impact an extreme weather event has had on our business over the last 10 years. There have been a number of smaller-impact extreme weather events over the last 10 years where costs have been in the region of $2-5million USD, so $2million USD will be used as a lower limit.

We anticipate on average, one extreme weather event per annum, based on historical data, so for this excerise, we submit a Pontential Impact range of $2-$20 million USD p.a.

Cost of response to risk
1000000

Description of response and explanation of cost calculation
The primary method to manage this risk is through insurance. Potential insurance deductibles for each extreme weather invent lie in the region of $1 million USD for business interruption, property insurance and other incremental costs. This is the minimum cost to any response to mitigate the impact of an extreme event that has a substantial affect on our business. Additionally we pay annual premiums for this insurance which are not included in our Cost of Response figure.

Comment

Identifier
Risk 5

Where in the value chain does the risk driver occur?
Downstream

Risk type & Primary climate-related risk driver

Emerging regulation	Mandates on and regulation of existing products and services

Primary potential financial impact
Decreased revenues due to reduced demand for products and services

Climate risk type mapped to traditional financial services industry risk classification
<Not Applicable>

Company-specific description
The effects of climate change and greenhouse gases production are leading to the potential introduction of new regulatory changes addressing the causes of climate change, including mandates on plastic packaging and the circular economy. Future recyclability mandates may allow only plastic products that are designed for recycling.

Designing for recyclability is now an essential part of any new pack development, particularly as we are seeing legislation moving toward the requirement to have recyclability at scale. For example, the current proposal of the Packaging and Packaging Waste Directive from the European Commission that is now under review proposes a requirement to allow only packaging that is designed for recyclability by 2030. As a result of these developments, food companies are now looking for alternative materials that can offer the same benefits as PVC film but demonstrate an improved environmental profile. If we are unable to adapt and design reformulated products that are considered recyclable, then there is significant risk of losing that business. The loss of our PVC film business in Europe would have a low magnitude impact overall.

Time horizon
Long-term

Likelihood
Likely

Magnitude of impact
Low

Are you able to provide a potential financial impact figure?
Yes, an estimated range

Potential financial impact figure (currency)
<Not Applicable>

Potential financial impact figure – minimum (currency)
3000000

Potential financial impact figure – maximum (currency)
4000000

Explanation of financial impact figure
The current proposal of the Packaging and Packaging Waste Directive from the European Commission that is now under review proposes a requirement to allow only packaging that is designed for recyclability by 2030. As a result of these developments, food companies are now looking for alternative materials that can offer the same benefits as PVC film but demonstrate an improved environmental profile. If we are unable to adapt and design reformulated products that are considered recyclable, then there is significant risk of losing that business. Our PVC film business in Europe, which is considered unrecyclable under potential incoming mandates, is between 3 – 4 million dollars per annum. The business accounts for over 50% of one sites' total business, and could mean site closure if the business was lost.

Cost of response to risk
3500000

Description of response and explanation of cost calculation

Comment
The primary method to manage this risk is through development of a new, recyclable, alternative solution. This requires research and development spend and the purchase of new lines for production. For development of a replacement for this business, we estimate this will require one-off costs of $500,000 in R&D and around $3,000,000 in new equipment. Once in place, additional extra costs will be negligible.

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?
Downstream

Opportunity type
Products and services

Primary climate-related opportunity driver
Development of new products or services through R&D and innovation

Primary potential financial impact
Increased revenues resulting from increased demand for products and services

Company-specific description
For most of Berry Global's customers, Scope 3 GHG emissions represent the largest portion of their total GHG emissions. We anticipate that will drive demand for products with lower emissions intensity. Plastics are already very well positioned since they typically have lower GHG emissions per functional unit than alternatives.

Furthermore, Berry has a long history of light-weighting our products - further reducing their carbon intensity. There is also significant work being done on the use of recycled content, which has lower associated GHG emissions than virgin resin. We currently commercially sell many products with recycled content, and that list is ever-expanding.

An example where this opportunity has been realized is for beverage cups produced by Berry in North America. Berry converted a line of paper cups with a PS lid to PP cups, this resulted in a GHG emissions saving of 23% and a resin reduction of 12%. We heavily invest in R&D to ensure that opportunities like the above can be realized.

Time horizon
Short-term

Likelihood
Likely

Magnitude of impact
High

Are you able to provide a potential financial impact figure?
Yes, a single figure estimate

Potential financial impact figure (currency)
145000000

Potential financial impact figure – minimum (currency)
<Not Applicable>

Potential financial impact figure – maximum (currency)
<Not Applicable>

Explanation of financial impact figure
Factoring in the likelihood of this opportunity to be realized, we estimate that new business as a result of our ability to provide low-carbon products could lead to around a 1% increase in revenue. We do not expect all of our customers to change at once. We anticipate the transition may be relatively slow. A 1% increase in revenue would result in an opportunity in the region of $145,000,000 USD, based on our current revenue of $14.5 billion USD.

$14,500,000,000 USD/100=$145,000,000 USD

Cost to realize opportunity
81000000

Strategy to realize opportunity and explanation of cost calculation
Many of our development work over the years has been related to offering lighter weight products - whether lighter than our existing products, or alternative products made from heavier substrates such as paper, metal, and glass. Lightweighting has therefore been in our DNA since prior to sustainability or climate change being in our lexicon. This is because lighter parts typically cost less - a true triple bottom line success! Although our top line sales may decrease with lightweighting, by staying ahead of our competitors, we are able to gain market share, and typically improve margin. In addition, we can also offer recyclable and renewable products.

The total cost of research and development for Berry was $81 million USD in FY2022. We do not disclose further detail about research spend, but within these associated resources we work each year to realizing this opportunity.

Comment

Identifier
Opp2

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
Returns on investment in low-emission technology

Company-specific description
To aid our commitment to reducing our greenhouse gas emissions, we have the opportunity to enter into Purchase Power Agreements (PPAs) or Virtual Purchase Power Agreements (VPPAs). These would allow us to increase our renewable energy consumption, whether it be via a physical connection, or ownership of RECs, to reach our environmental goals, whilst also having the potential to save capital when electricity rates fluctuate.

An example of a VPPA opportunity we have realized in the last two years is a project in Spain where we entered into a VPPA agreement with Axpo in 2021 to purchase 70GWh annually of renewable energy from a new solar park development in Guadalajara. We receive RECs for this energy, and estimate this will provide us with an annual reduction of around 20,000MT CO2e.

Time horizon
Short-term

Likelihood
Virtually certain

Magnitude of impact
Low

Are you able to provide a potential financial impact figure?
Yes, an estimated range

Potential financial impact figure (currency)
<Not Applicable>

Potential financial impact figure – minimum (currency)
0

Potential financial impact figure – maximum (currency)
5000000

Explanation of financial impact figure
A VPPA exchanges the variable OMIP market price for electricity against a fixed price per MWh based on our purchase annually. Therefore the exact gains that will be realised will depend upon the actual market prices experienced during this period. The VPPA contract opportunity we are currently realizing had an estimated value of around $1 million, which it has far exceeded - while future ventures might not be as profitable. Based on this, we have set a Potential Impact figure of $0-$5m USD. As we investigate other vPPA opportunities we anticipate similar expected returns within this range.

Cost to realize opportunity
0

Strategy to realize opportunity and explanation of cost calculation
Based on analysis that is conducted internally, we would not enter contracts where it is expected to generate a financial loss, so the potential cost of this project is $0. vPPA Projects can be completed using $0 USD of additional cost relating to achieving this opportunity, such as employee or third-party function costs, as any accrued costs would have occurred within the bandwidth of already existing resources.

Comment

Identifier
Opp3

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
Other, please specify (Reduced exposure to GHG emissions and therefore less sensitivity to changes in cost of carbon)

Company-specific description
In order to meet globally defined GHG Emissions targets, as defined by the Paris Agreement, radical changes in emissions regulaion is expected, with current pricing regulation on carbon considered unsustainble and expected to rise. Based on scenario analysis, under a NZE Scenario, a worst-case scenario of $120/Ton CO2e Carbon tax could be implemented by 2030. Berry Global operates over 280 manufacturing sites globally across a number of different countries, using 5.9 million MWh of energy annually and has an annual Scope 1 & 2 CO2e footprint of 1.85 million MT. Current Carbon pricing regulation across our business is averaged at $14.5/MT. Due to our large emissions footprint, a rise from an average of $14.5/MT to $120/MT by 2030, means we would have a significant opportunity to reduce costs in our direct operations relating to these emissions, and the energy that we purchase by committing to reducing our energy consumption and lowering our carbon footprint by diversifying energy sources and procuring more low-carbon energy, as well as implementing energy reduction initiatives. For example we have an internal program to reduce 100,000,000KWh of energy use in FY22, and are looking into avenues to increase our share of renewable energy from 3% in 2022. Taking this action gives us the additional opportunity to have reduced exposure to the current carbon taxes that are in place, and any future risk from carbon tax increases.

Time horizon
Long-term

Likelihood
Virtually certain

Magnitude of impact
High

Are you able to provide a potential financial impact figure?
Yes, a single figure estimate

Potential financial impact figure (currency)
222000000

Potential financial impact figure – minimum (currency)
<Not Applicable>

Potential financial impact figure – maximum (currency)
<Not Applicable>

Explanation of financial impact figure
Berry Global has committed to net-zero by 2050, with an SBti approved, short-term target of a 25% reduction in Scope 1+2 emissions by 2025 from a 2019 baseline. In-line to achiveing net-zero, we would be working towards a 50% reduction by 2030 from a 2019 baseline. Although we expect to be on-track to hit these goals as part of our net zero strategy, under a worst-case scenario we can assume no further reduction in GHG Emissions from our 2022 total of 1.848 million MT CO2e, but we would still have the opportunity to eliminate our emissions through carbon offsets and renewable energy contracts.

To calculate the potential Impact figure under this worst-case scenario we have calculated the total costs under an anticipation of an average Carbon Tax of $120 USD/MT CO2e in 2030 under NZE Scenario using current emissions. This results in an increased long-term risk in 2030 of $222 million USD annually, based on the assumptions listed above.

1.848 million MT CO2e * $120/MT = $222 million in 2030.

Cost to realize opportunity
29240000

Strategy to realize opportunity and explanation of cost calculation
Under a worse-case scenario, assuming no further reduction in GHG Emissions from energy efficiency projects or production optimization, we would need to realize the long-term risk opportunity of mitigating carbon taxes in 2030 through the offset of our direct use of energy onsite; our Scope 1 emissions, and through the purchase renewable energy certificates to eliminate Scope 2 emissions.

Based on our 2022 Fiscal year Scope 1 emissions of 149,258 MT CO2e, and a current cost to offset these emissions of $35 USD/MT CO2e, we estimate the annual cost of offsetting these emissions to be $4.48 million USD. There is $0 USD of other additional cost relating to this response, such as employee function costs, as it would be completed within the bandwidth of existing resources.

149,258*$35=$4.48 million USD

Based on our 2022 Fiscal Scope 2 electricity usage of 4,951,619 MWh, and an average REC price of $5 USD per MWh, we estimate the annual cost of purchasing 100% renewable electricity to be $24.8 million USD. There is $0 USD of other additional cost relating to this response, such as employee function costs, as it would be completed within the bandwidth of existing resources.

4,951,619*$5=$24.76 million USD

Therefore, by summing the annual cost to offset Scope 1 emissions, and purchase renewable energy certificates for Scope 2, we can estimate the total cost of the response to be $29.24 million USD, based on the assumptions outlined above.

$4.48+$24.76 = $29.24 million USD

We understand that in addition to the previously mentioned assumptions, this also assumes no change to current REC or carbon offset pricing. We understand the risk response is required to be reevaluated annually due to the volatile nature of REC and Carbon Offset pricing.

Comment

Identifier
Opp4

Where in the value chain does the opportunity occur?
Downstream

Opportunity type
Products and services

Primary climate-related opportunity driver
Development of new products or services through R&D and innovation

Primary potential financial impact
Increased revenues resulting from increased demand for products and services

Company-specific description
The effects of climate change and greenhouse gases production are leading to the potential introduction of new regulatory changes addressing the causes of climate change, including mandates on plastic packaging and the circular economy. Future recyclability mandates may allow only plastic products that are designed for recycling.

Designing for recyclability is now an essential part of any new pack development, particularly as we are seeing legislation moving toward the requirement to have recyclability at scale. For example, the current proposal of the Packaging and Packaging Waste Directive from the European Commission that is now under review proposes a requirement to allow only packaging that is designed for recyclability by 2030. As a result of these developments, food companies are now looking for alternative materials that can offer the same benefits as PVC film but demonstrate an improved environmental profile. We have the opportunity to develop new products that align with these mandates to replace current business and potentially capture new businesses if peers are unable to adapt.

Time horizon
Long-term

Likelihood
Likely

Magnitude of impact
Low

Are you able to provide a potential financial impact figure?
Yes, an estimated range

Potential financial impact figure (currency)
<Not Applicable>

Potential financial impact figure – minimum (currency)
3000000

Potential financial impact figure – maximum (currency)
4000000

Explanation of financial impact figure
The current proposal of the Packaging and Packaging Waste Directive from the European Commission that is now under review proposes a requirement to allow only packaging that is designed for recyclability by 2030. As a result of these developments, food companies are now looking for alternative materials that can offer the same benefits as PVC film but demonstrate an improved environmental profile. We have the opportunity to adapt and design reformulated products in order to retain this business, and grow the business if peers are unable to adapt. Our current PVC film business in Europe, which is considered unrecyclable under potential incoming mandates, is between 3 – 4 million dollars per annum, so as a worst-case scenario we have the opportunity to retain this value.

Cost to realize opportunity
3500000

Strategy to realize opportunity and explanation of cost calculation
The primary method to achieve this opportunity is through development of a new, recyclable, alternative solution. This requires research and development spend and the purchase of new lines for production. For development of a replacement for this business, we estimate this will require one-off costs of $500,000 in R&D and around $3,000,000 in new equipment. Once in place, additional extra costs will be negligible.

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

Yes, we have a climate transition plan which aligns with a 1.5°C world

Publicly available climate transition plan

No

Mechanism by which feedback is collected from shareholders on your climate transition plan

We have a different feedback mechanism in place

Description of feedback mechanism

Over the last year we have expanded our Impact 2025 strategy based on the IEA NZE2050 (Net-Zero Emissions by 2025 Scenario) pathway, which is compatible with modeling to limit warming to 1.5 degrees Celsius by 2100; we have also set an appropriate science-based GHG emissions reduction target, approved by the SBTi. This is the next major step in mitigating substantial climate risk and developing our long-term goal of net-zero emissions. The Berry Global board reviews the Company's long term strategic plans and the principal issues that the company will face in the future (including our Impact 2025 strategy and transition to net-zero emissions) during at least one Board meeting each year. After review with the board, we set our first net-zero target in 2023 (Net zero emissions by 2050).

Frequency of feedback collection

More frequently than annually

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

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

<Not Applicable>

Explain why climate-related risks and opportunities have not influenced your strategy

<Not Applicable>

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	Primary reason why your organization does not use climate-related scenario analysis to inform its strategy	Explain why your organization does not use climate-related scenario analysis to inform its strategy and any plans to use it in the future
Row 1	Yes, qualitative and quantitative	<Not Applicable>	<Not Applicable>

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
Transition scenarios – IEA NZE 2050	Company-wide	<Not Applicable>	When developing our Impact 2025 Sustainability Strategy, we used the 2DS climate-related scenario to model the impact on operations in comparison to a business-as-usual pathway, such as the IEA STEPS (Stated Policies Scenario). Results of the scenario analysis determined the target for GHG emissions reductions in our strategy. This was set at a 25% intensity reduction in GHG emissions by 2025 from a 2016 baseline, in line with the 2DS pathway. As a direct result of the 2DS and GHG reduction target, further global energy reduction targets were calculated, and capex availability for energy reduction projects and renewable energy sourcing was put in place. In 2022 we expanded our Impact 2025 strategy based on the IEA NZE2050 (Net-Zero Emissions by 2050 Scenario) pathway and RCP 2.6 Physical climate scenario, through which we identified our ability to be compatible with modeling to limit warming to 1.5 degrees Celsius by 2100; we have also set an appropriate science-based GHG emissions reduction target, approved by the SBTi, and committed to net-zero emissions. The IEA NZE scenario sets out a potentially achievable pathway to achieve net zero emissions by 2050. The scenario shows what is needed for the world to achieve net zero energy emissions by 2050. The Net Zero scenario would mean a huge decline in the use of fossil fuels, with the fossil fuels that remain in 2050 being used in goods where the carbon is embodied in the product such as plastics, or in facilities fitted with Carbon Capture Utilization & Storage (CCUS). Although growth will slow in comparison to the previous two decades, under this scenario global demand for primary chemicals will still be 30% higher in 2050 than in 2020 - appropriate plastic solutions will continue to see growth opportunities. The chemicals sector will, however, need to reduce emissions from 1.3 Gt in 2020 to 65 Mt in 2050. Amongst other solutions, this will be achieved through increased recycling (global plastic recycling collection rates would hit 27% by 2030 and 54% by 2050) to aid a transition away from virgin-based plastics to recycled and reused plastic, removing GHG emissions from the chemical production industry. For our business, this would mean a required transition towards increased use of recycled resin. The remaining use of virgin resin would need to be produced through CCUS applications, using hydrogen-based solutions, or with electrolysis.
Transition scenarios – IEA STEPS (previously IEA NPS)	Company-wide	<Not Applicable>	When developing our Impact 2025 Sustainability Strategy, we used the 2DS climate-related scenario to model the impact on operations in comparison to a business-as-usual pathway, such as the IEA STEPS (Stated Policies Scenario). Results of the scenario analysis determined the target for GHG emissions reductions in our strategy. This was set at a 25% intensity reduction in GHG emissions by 2025 from a 2016 baseline, in line with the 2DS pathway. As a direct result of the 2DS and GHG reduction target, further global energy reduction targets were calculated, and capex availability for energy reduction projects and renewable energy sourcing was put in place. We are driving a clear focus on energy across the business to ensure emissions reductions are in line with our strategy and climate modeling. In 2022 we expanded our Impact 2025 strategy based on the IEA NZE2050 (Net-Zero Emissions by 2050 Scenario) pathway, which is compatible with modeling to limit warming to 1.5 degrees Celsius by 2100; we have also set an appropriate science-based GHG emissions reduction target, approved by the SBTi, and committed to net-zero emissions. The STEPS Scenario lays out future outcomes based on assessment of the specific policies that are currently in place, or have been announced, by governments around the world. As this Scenario is based on current policy decisions, which are ever evolving, the scenario's outlook changes over time. The most recent scenario is the 2021 STEPS. Under the scenario, global average surface temperature would reach 1.5°C before 2030, with temperatures continuing to climb, reaching 2.6°C in 2100. Warming such as this would lead to heightened frequency and intensity of climate-related disasters and increased climate risk on our business and our industry. Focusing on our industry, under the STEPS scenario, global plastics recycling rate is expected to only reach 20% by 2030. With continued low recycling rates, and therefore lack of alternative recycled feedstock available, it would mean less opportunity to move away from a product portfolio which is heavily virgin based. Increased demand for oil from the Petrochemical sector, amongst others, will additionally lead to increased oil prices as new oil supply lines will be required to meet demand. With crude oil remaining the predominantly available plastic feedstock, this would exert price-pressures on our business. Remaining on a STEPS trajectory would be unilaterally detrimental to our business.
Transition scenarios – IEA 2DS	Company-wide	<Not Applicable>	When developing our Impact 2025 Sustainability Strategy, we used the 2DS climate-related scenario to model the impact on operations in comparison to a business-as-usual pathway, such as the IEA STEPS (Stated Policies Scenario). Results of the scenario analysis determined the target for GHG emissions reductions in our strategy. This was set at a 25% intensity reduction in GHG emissions by 2025 from a 2016 baseline, in line with the 2DS pathway. As a direct result of the 2DS and GHG reduction target, further global energy reduction targets were calculated, and capex availability for energy reduction projects and renewable energy sourcing was put in place. We are driving a clear focus on energy across the business to ensure emissions reductions are in line with our strategy and climate modeling. In 2022 we expanded our Impact 2025 strategy based on the IEA NZE2050 (Net-Zero Emissions by 2050 Scenario) pathway, which is compatible with modeling to limit warming to 1.5 degrees Celsius by 2100; we have also set an appropriate science-based GHG emissions reduction target, approved by the SBTi, and committed to net-zero emissions. The IEA ETP 2DS Scenario outlines a potential pathway with at least a 50% chance to limit average global surface warming to 2°C by 2100. Compared to the IEA STEPS scenario, this scenario requires a challenging global transformation of how energy is produced and used. While energy usage continues to rise under the 2DS Scenario, emissions from the energy section would be required to fall to one-quarter of 2017 levels by 2060, with fossil fuels only providing 35% of primary energy demand. For the chemical and petrochemical sector to thrive under a 2DS Scenario, annual direct CO_2 emissions increases must remain below 3.6% up to 2025 while demand increases by 47%. Increased pre-and post-consumer recycling will be required to decarbonize the industry sector, by providing process pathways that are more energy-efficient than conventional virgin-based resin pathways. In addition, bio-based routes for downstream plastic products are further avenues for sector decarbonization. Analysis of this Scenario in 2019 helped shape our principal forward-looking sustainability strategy, Impact 2025, and progressed the transition of our business towards a lower carbon future.
Physical climate scenarios – RCP 2.6	Company-wide	<Not Applicable>	When developing our Impact 2025 Sustainability Strategy, we used the 2DS climate-related scenario to model the impact on operations in comparison to a business-as-usual pathway, such as the IEA STEPS (Stated Policies Scenario). Results of the scenario analysis determined the target for GHG emissions reductions in our strategy. This was set at a 25% intensity reduction in GHG emissions by 2025 from a 2016 baseline, in line with the 2DS pathway. As a direct result of the 2DS and GHG reduction target, further global energy reduction targets were calculated, and capex availability for energy reduction projects and renewable energy sourcing was put in place. In 2022 we expanded our Impact 2025 strategy based on the IEA NZE2050 (Net-Zero Emissions by 2050 Scenario) pathway and RCP 2.6 Physical climate scenario, through which we identified our ability to be compatible with modeling to limit warming to 1.5 degrees Celsius by 2100; we have also set an appropriate science-based GHG emissions reduction target, approved by the SBTi, and committed to net-zero emissions. The RCP 2.6 scenario entails a significant decline in the use of fossil fuels, and plastics manufacturers would need to adapt to this transition. In the plastics industry, this would mean moving towards more sustainable practices, such as increasing recycling rates, transitioning away from virgin-based plastics to recycled and reused plastics, and adopting low-carbon production methods. To thrive under the RCP 2.6 scenario, our business would be required to transition towards an increased use of recycled resin, promoting circular economy principles. Additionally, any remaining use of virgin resin would need to be produced through low-carbon methods, such as Carbon Capture Utilization & Storage (CCUS) applications, hydrogen-based solutions, or electrolysis.

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

When updating our Impact 2025 Sustainability Strategy, we used the IEA NZE2050 (Net-Zero Emissions by 2025 Scenario) pathway, which is compatible with modeling to limit warming to 1.5 degrees Celsius by 2100; to model the impact on operations in comparison to a business-as-usual pathway, such as the IEA STEPS (Stated Policies Scenario), to understand future viability of plastics as a material in the circular, net-zero, economy in each scenario, when compared to other alternative materials. In addition, we wanted to understand what was the most viable feedstock for plastics products under each scenario, to influence our procurement strategy going forward.

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

Under the IEA STEPS pathway, we expect a higher proportion of our materials to be fossil-fuel based, whereas under the IEA NZE2050 pathway we expect to incorporate increased recycled material, with our current Impact 2025 strategy set at 10% recycled content by 2025. Through scenario analysis we also concluded evidence that plastics offer a lower-carbon footprint than alternative materials which enables their continued use in a low-carbon world, where recycled or renewable feedstocks remain available. Analysis has also enabled us to set targets to increase the recyclablity of our products - to enable circularity and increase recycled content availability. We have set the target of 100% recyclable or reusable packaging by 2025.

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	Berry is proactively taking steps to reduce the climate impact of our products. It is our strategy to be a leader in the markets in which we participate. As a leader, we closely monitor consumer/customer preferences and develop products in response to demand. The Berry Global Impact 2025 sustainability strategy has been directly influenced by this with one of the three pillars of the strategy focused on the impact of products. In order to reduce the climate-related impact of our products the strategy has the following targets; 100% of packaging to be reusable, recyclable or compostable by 2025, to lightweight products, achieve 10% recycled content across fast-moving consumer goods packaging and to encourage the development of renewable materials. The time horizon for achieving these targets is by 2025. The most substantial strategic decision influenced by climate-related risk and opportunities made in this area to date was the acquisition of RPC Group in July 2019. The acquisition of RPC Group and Berry creates a leading global supplier of valued-added protective solutions and one of the world's largest plastic packaging companies. With the market focus on the reduced environmental impact of packaging the acquisition of RPC Group introduced plastic recycling facilities in to the Berry Global business, which will reduce the climate impact of raw material sourcing. The combination of both companies also provides opportunities to leverage the combined know-how in innovative material science, product development, and manufacturing technologies to reduce the climate impact of the Berry Global's products. An additional recent strategic decision influenced by climate-related risk and opportunities is the building of a new recycling facility in Leamington Spa which went on-line in 2023, capable of handling highly contaminated waste and we are continually working to increase the quality of the recycled material. This will enable us to incorporate more recycled content into our products, in line with our target of 10% recycled content across all our packaging by 2025 and reducing transitional risks related to our products and services outlined in 2.3a.
Supply chain and/or value chain	Yes	Growing pressure from consumers, customers and regulation to mitigate climate change has influenced the Berry Global strategy in relation to the supply and value chain in which the company operates. The Berry Global Impact 2025 sustainability strategy has been directly influenced by this with one of the three pillars of the strategy focused on partnerships. The overarching aim of this pillar of the strategy is to maximize positive impacts by engaging partners on key issues. Strategy has been influenced here by the need to reduce the climate related risks of our business that sit outside of our direct control such as, expanding and modernizing waste infrastructure to increase recovery and prevent plastic loss to the environment and to limit global warning by increasing the supply chain use of renewable energy and promoting science-based targets for GHG emissions. Although the timeline of the Berry Global Strategy is 2025 we see this as a much longer term strategy influence in order to drive reduced climate-related impacts of our supply and value chains. The most substantial strategic decision influenced by climate-related risk and opportunities made in this area to date are partnerships such as projects like the Pacific Northwest secondary sorting demonstration project, sponsored by Berry Global. This innovative project aims to capture the value of six additional streams of plastic recyclables which would have otherwise become waste, therefore reducing the climate impact of the associated plastic waste and also creating the opportunity for increased recycling and reduced climate impact of the need for virgin materials. Additionally, the strategic decision to begin using EcoVadis in May 2021 as a supplier evaluation and risk mitigation tool, was partially driven by the need to evaluate and mitigate climate risk in our supply chain.
Investment in R&D	Yes	Strategy in the area of investment in R&D has been influenced by the recognition that in line with customer, consumer and regulatory pressures the Berry Global portfolio of products needs to adapt to mitigate climate-related risk. In light of this Investment in R&D has increased over 170% from 2015 $33 million to $90 million in 2021. R&D is an integral part of our long term strategy as a company. Increased R&D spend ensures that Berry Global remains at the forefront of product design and engineering. Investment in R&D can be linked directly to reputational risk as identified in the Berry Global Enterprise Risk Assessment and the risk related to the consumer perception of plastic driving a market change and reduction in demand for plastic products. Through R&D we can support the development on new low-carbon products, and acquire increased business. Through an increased investment in R&D Berry Global is advancing the sustainability strategy to reduce the climate-related impact of products. An example where this opportunity has been realized is for beverage cups produced by Berry in North America. Berry converted a line of paper cups with a PS lid to PP cups, this resulted in a GHG emissions saving of 23% and a resin reduction of 12%. We heavily invest in R&D to ensure that opportunities like the above can be realized.
Operations	Yes	Climate-related risks and opportunities have directly influenced the Berry Global strategy. One of the 3 pillars of the Berry Global Impact 2025 sustainability strategy is related to minimizing the environmental impact of operations. As a large manufacturing business with over 290 global operational facilities there is a clear need to focus on risks and opportunities related to climate in this area. The Impact 2025 strategy has a target to reduce GHG emissions by 25% by 2025 and energy consumption as a complementary target to this. The initial time horizon for this achievement is 2025 although GHG emissions reduction and energy efficiency are long term ambitions with the ultimate goal of the company to be carbon neutral in the future. A case study of a strategic decision made in this area is the move to renewable energy sourcing for Berry Global operations where possible. We increased our renewable energy use this year to over 170,000 MWh by purchasing RECs. This reduces our climate related risk in relation to GHG emissions, long term availability of fossil fuels and carbon taxes. We are also looking throughout our Operations for further opportunities to enter into renewable energy contracts, such as the VPPA outlined in 2.4a.

C3.4

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

	Financial planning elements that have been influenced	Description of influence
Row 1	Revenues Direct costs Capital expenditures Assets	Financial planning has been influenced in the areas of revenue, direct costs, capital expenditures and assets. As an example for direct costs, Berry Global operates in an energy intensive sector which has high associated emissions and energy represents a significant portion of our raw material costs in addition to utility costs. Part of the Berry Global budgeting process includes anticipating energy prices, with carbon pricing being an influential element of this. As part of the financial planning process for energy, carbon pricing across all countries where Berry Global has facilities is analysed to inform budgets. Through these process risk countries can be identified where carbon taxes are increasing and therefore energy costs will increase, however increased carbon taxes and therefore energy process provide us with more of an economic opportunity to explore other sources of energy such as renewable energy, which will have a lower GHG impact. Carbon pricing has been considered on a long term time horizon to 2030 with projections available to this timescale and the potential financial impact has been mapped for all countries Berry operates in. As an example for Capital Expenditures, GHG emissions have now been incorporated into the CapEx process to ensure the effect on operational emissions are taken into account when potential projects are identified. We have an internal tool which automates this process based on a projects' potential energy savings by type. In 2023 we also produced a tool which provides information on the average emissions intensity of grid electricity in locations where we operate. As a direct result of this process we have been able to incorporate GHG impact into financial decisions relating to production optimization and consider the impact on emissions volume output when managing production changes across multiple facilities.

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	Indicate the level at which you identify the alignment of your spending/revenue with a sustainable finance taxonomy
Row 1	No, and we do not plan to in the next two years	<Not Applicable>

C4. Targets and performance

C4.1

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

Absolute target

C4.1a

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

Target reference number

Abs 1

Is this a science-based target?

Yes, and this target has been approved by the Science Based Targets initiative

Target ambition

1.5°C aligned

Year target was set

2020

Target coverage

Company-wide

Scope(s)

Scope 1
Scope 2

Scope 2 accounting method

Market-based

Scope 3 category(ies)

<Not Applicable>

Base year

2019

Base year Scope 1 emissions covered by target (metric tons CO2e)

150284

Base year Scope 2 emissions covered by target (metric tons CO2e)

2190090

Base year Scope 3, Category 1: Purchased goods and services emissions covered by target (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Category 2: Capital goods emissions covered by target (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Category 3: Fuel-and-energy-related activities (not included in Scopes 1 or 2) emissions covered by target (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Category 4: Upstream transportation and distribution emissions covered by target (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Category 5: Waste generated in operations emissions covered by target (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Category 6: Business travel emissions covered by target (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Category 7: Employee commuting emissions covered by target (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Category 8: Upstream leased assets emissions covered by target (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Category 9: Downstream transportation and distribution emissions covered by target (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Category 10: Processing of sold products emissions covered by target (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Category 11: Use of sold products emissions covered by target (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Category 12: End-of-life treatment of sold products emissions covered by target (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Category 13: Downstream leased assets emissions covered by target (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Category 14: Franchises emissions covered by target (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Category 15: Investments emissions covered by target (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Other (upstream) emissions covered by target (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Other (downstream) emissions covered by target (metric tons CO2e)
<Not Applicable>

Base year total Scope 3 emissions covered by target (metric tons CO2e)
<Not Applicable>

Total base year emissions covered by target in all selected Scopes (metric tons CO2e)
2340375

Base year Scope 1 emissions covered by target as % of total base year emissions in Scope 1
100

Base year Scope 2 emissions covered by target as % of total base year emissions in Scope 2
100

Base year Scope 3, Category 1: Purchased goods and services emissions covered by target as % of total base year emissions in Scope 3, Category 1: Purchased goods and services (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Category 2: Capital goods emissions covered by target as % of total base year emissions in Scope 3, Category 2: Capital goods (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Category 3: Fuel-and-energy-related activities (not included in Scopes 1 or 2) emissions covered by target as % of total base year emissions in Scope 3, Category 3: Fuel-and-energy-related activities (not included in Scopes 1 or 2) (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Category 4: Upstream transportation and distribution covered by target as % of total base year emissions in Scope 3, Category 4: Upstream transportation and distribution (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Category 5: Waste generated in operations emissions covered by target as % of total base year emissions in Scope 3, Category 5: Waste generated in operations (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Category 6: Business travel emissions covered by target as % of total base year emissions in Scope 3, Category 6: Business travel (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Category 7: Employee commuting covered by target as % of total base year emissions in Scope 3, Category 7: Employee commuting (metric tons CO2e)

<Not Applicable>

Base year Scope 3, Category 8: Upstream leased assets emissions covered by target as % of total base year emissions in Scope 3, Category 8: Upstream leased assets (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Category 9: Downstream transportation and distribution emissions covered by target as % of total base year emissions in Scope 3, Category 9: Downstream transportation and distribution (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Category 10: Processing of sold products emissions covered by target as % of total base year emissions in Scope 3, Category 10: Processing of sold products (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Category 11: Use of sold products emissions covered by target as % of total base year emissions in Scope 3, Category 11: Use of sold products (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Category 12: End-of-life treatment of sold products emissions covered by target as % of total base year emissions in Scope 3, Category 12: End-of-life treatment of sold products (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Category 13: Downstream leased assets emissions covered by target as % of total base year emissions in Scope 3, Category 13: Downstream leased assets (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Category 14: Franchises emissions covered by target as % of total base year emissions in Scope 3, Category 14: Franchises (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Category 15: Investments emissions covered by target as % of total base year emissions in Scope 3, Category 15: Investments (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Other (upstream) emissions covered by target as % of total base year emissions in Scope 3, Other (upstream) (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Other (downstream) emissions covered by target as % of total base year emissions in Scope 3, Other (downstream) (metric tons CO2e)
<Not Applicable>

Base year total Scope 3 emissions covered by target as % of total base year emissions in Scope 3 (in all Scope 3 categories)
<Not Applicable>

Base year emissions covered by target in all selected Scopes as % of total base year emissions in all selected Scopes
100

Target year
2025

Targeted reduction from base year (%)
25.2

Total emissions in target year covered by target in all selected Scopes (metric tons CO2e) [auto-calculated]
1750600.5

Scope 1 emissions in reporting year covered by target (metric tons CO2e)
149258

Scope 2 emissions in reporting year covered by target (metric tons CO2e)
1696528

Scope 3, Category 1: Purchased goods and services emissions in reporting year covered by target (metric tons CO2e)
<Not Applicable>

Scope 3, Category 2: Capital goods emissions in reporting year covered by target (metric tons CO2e)
<Not Applicable>

Scope 3, Category 3: Fuel-and-energy-related activities (not included in Scopes 1 or 2) emissions in reporting year covered by target (metric tons CO2e)
<Not Applicable>

Scope 3, Category 4: Upstream transportation and distribution emissions in reporting year covered by target (metric tons CO2e)
<Not Applicable>

Scope 3, Category 5: Waste generated in operations emissions in reporting year covered by target (metric tons CO2e)
<Not Applicable>

Scope 3, Category 6: Business travel emissions in reporting year covered by target (metric tons CO2e)
<Not Applicable>

Scope 3, Category 7: Employee commuting emissions in reporting year covered by target (metric tons CO2e)
<Not Applicable>

Scope 3, Category 8: Upstream leased assets emissions in reporting year covered by target (metric tons CO2e)
<Not Applicable>

Scope 3, Category 9: Downstream transportation and distribution emissions in reporting year covered by target (metric tons CO2e)
<Not Applicable>

Scope 3, Category 10: Processing of sold products emissions in reporting year covered by target (metric tons CO2e)
<Not Applicable>

Scope 3, Category 11: Use of sold products emissions in reporting year covered by target (metric tons CO2e)
<Not Applicable>

Scope 3, Category 12: End-of-life treatment of sold products emissions in reporting year covered by target (metric tons CO2e)
<Not Applicable>

Scope 3, Category 13: Downstream leased assets emissions in reporting year covered by target (metric tons CO2e)
<Not Applicable>

Scope 3, Category 14: Franchises emissions in reporting year covered by target (metric tons CO2e)
<Not Applicable>

Scope 3, Category 15: Investments emissions in reporting year covered by target (metric tons CO2e)
<Not Applicable>

Scope 3, Other (upstream) emissions in reporting year covered by target (metric tons CO2e)
<Not Applicable>

Scope 3, Other (downstream) emissions in reporting year covered by target (metric tons CO2e)
<Not Applicable>

Total Scope 3 emissions in reporting year covered by target (metric tons CO2e)
<Not Applicable>

Total emissions in reporting year covered by target in all selected scopes (metric tons CO2e)
1845786

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]
83.860695910047

Target status in reporting year
Underway

Please explain target coverage and identify any exclusions
Berry Global commits to reduce absolute scope 1 and 2 GHG emissions 25% by 2025 from a 2019 base year, in line with a 1.5 degree Celsius scenario, and this target has been approved by the SBTi. This target covers 100% of emissions across the whole business as per our reporting methodology laid out in our ESG report, and in our submission to SBTi.

Plan for achieving target, and progress made to the end of the reporting year
We are currently ahead of target - and expect to complete the target well in advance of 2025 - in-part due to our energy efficiency projects such as the 100million KWh challenge. We plan to achieve our target through the continuation of this challenge in FY23, through the R&D of Renewable Energy Projects, and the continued decrease of grid emissions factors.

List the emissions reduction initiatives which contributed most to achieving this target
<Not Applicable>

Target reference number
Abs 2

Is this a science-based target?
Yes, and this target has been approved by the Science Based Targets initiative

Target ambition
1.5°C aligned

Year target was set
2021

Target coverage
Company-wide

Scope(s)
Scope 3

Scope 2 accounting method
<Not Applicable>

Scope 3 category(ies)
Category 1: Purchased goods and services
Category 2: Capital goods
Category 3: Fuel-and-energy-related activities (not included in Scopes 1 or 2)
Category 4: Upstream transportation and distribution
Category 5: Waste generated in operations
Category 6: Business travel
Category 7: Employee commuting
Category 9: Downstream transportation and distribution
Category 12: End-of-life treatment of sold products

Base year
2019

Base year Scope 1 emissions covered by target (metric tons CO2e)
<Not Applicable>

Base year Scope 2 emissions covered by target (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Category 1: Purchased goods and services emissions covered by target (metric tons CO2e)
8424800

Base year Scope 3, Category 2: Capital goods emissions covered by target (metric tons CO2e)
443259

Base year Scope 3, Category 3: Fuel-and-energy-related activities (not included in Scopes 1 or 2) emissions covered by target (metric tons CO2e)
451816

Base year Scope 3, Category 4: Upstream transportation and distribution emissions covered by target (metric tons CO2e)
567618

Base year Scope 3, Category 5: Waste generated in operations emissions covered by target (metric tons CO2e)
31955

Base year Scope 3, Category 6: Business travel emissions covered by target (metric tons CO2e)
28742

Base year Scope 3, Category 7: Employee commuting emissions covered by target (metric tons CO2e)
225152

Base year Scope 3, Category 8: Upstream leased assets emissions covered by target (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Category 9: Downstream transportation and distribution emissions covered by target (metric tons CO2e)
377850

Base year Scope 3, Category 10: Processing of sold products emissions covered by target (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Category 11: Use of sold products emissions covered by target (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Category 12: End-of-life treatment of sold products emissions covered by target (metric tons CO2e)
1571285

Base year Scope 3, Category 13: Downstream leased assets emissions covered by target (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Category 14: Franchises emissions covered by target (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Category 15: Investments emissions covered by target (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Other (upstream) emissions covered by target (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Other (downstream) emissions covered by target (metric tons CO2e)
<Not Applicable>

Base year total Scope 3 emissions covered by target (metric tons CO2e)
12122477

Total base year emissions covered by target in all selected Scopes (metric tons CO2e)
12122477

Base year Scope 1 emissions covered by target as % of total base year emissions in Scope 1
<Not Applicable>

Base year Scope 2 emissions covered by target as % of total base year emissions in Scope 2
<Not Applicable>

Base year Scope 3, Category 1: Purchased goods and services emissions covered by target as % of total base year emissions in Scope 3, Category 1: Purchased goods and services (metric tons CO2e)
100

Base year Scope 3, Category 2: Capital goods emissions covered by target as % of total base year emissions in Scope 3, Category 2: Capital goods (metric tons CO2e)
100

Base year Scope 3, Category 3: Fuel-and-energy-related activities (not included in Scopes 1 or 2) emissions covered by target as % of total base year emissions in Scope 3, Category 3: Fuel-and-energy-related activities (not included in Scopes 1 or 2) (metric tons CO2e)
100

Base year Scope 3, Category 4: Upstream transportation and distribution covered by target as % of total base year emissions in Scope 3, Category 4: Upstream transportation and distribution (metric tons CO2e)
100

Base year Scope 3, Category 5: Waste generated in operations emissions covered by target as % of total base year emissions in Scope 3, Category 5: Waste generated in operations (metric tons CO2e)
100

Base year Scope 3, Category 6: Business travel emissions covered by target as % of total base year emissions in Scope 3, Category 6: Business travel (metric tons CO2e)
100

Base year Scope 3, Category 7: Employee commuting covered by target as % of total base year emissions in Scope 3, Category 7: Employee commuting (metric tons CO2e)
100

Base year Scope 3, Category 8: Upstream leased assets emissions covered by target as % of total base year emissions in Scope 3, Category 8: Upstream leased assets (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Category 9: Downstream transportation and distribution emissions covered by target as % of total base year emissions in Scope 3, Category 9: Downstream transportation and distribution (metric tons CO2e)
100

Base year Scope 3, Category 10: Processing of sold products emissions covered by target as % of total base year emissions in Scope 3, Category 10: Processing of sold products (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Category 11: Use of sold products emissions covered by target as % of total base year emissions in Scope 3, Category 11: Use of sold products (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Category 12: End-of-life treatment of sold products emissions covered by target as % of total base year emissions in Scope 3, Category 12: End-of-life treatment of sold products (metric tons CO2e)
100

Base year Scope 3, Category 13: Downstream leased assets emissions covered by target as % of total base year emissions in Scope 3, Category 13: Downstream leased assets (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Category 14: Franchises emissions covered by target as % of total base year emissions in Scope 3, Category 14: Franchises (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Category 15: Investments emissions covered by target as % of total base year emissions in Scope 3, Category 15: Investments (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Other (upstream) emissions covered by target as % of total base year emissions in Scope 3, Other (upstream) (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Other (downstream) emissions covered by target as % of total base year emissions in Scope 3, Other (downstream) (metric tons CO2e)
<Not Applicable>

Base year total Scope 3 emissions covered by target as % of total base year emissions in Scope 3 (in all Scope 3 categories)
100

Base year emissions covered by target in all selected Scopes as % of total base year emissions in all selected Scopes
100

Target year
2025

Targeted reduction from base year (%)
25.2

Total emissions in target year covered by target in all selected Scopes (metric tons CO2e) [auto-calculated]
9067612.796

Scope 1 emissions in reporting year covered by target (metric tons CO2e)
<Not Applicable>

Scope 2 emissions in reporting year covered by target (metric tons CO2e)
<Not Applicable>

Scope 3, Category 1: Purchased goods and services emissions in reporting year covered by target (metric tons CO2e)
7207852

Scope 3, Category 2: Capital goods emissions in reporting year covered by target (metric tons CO2e)
496769

Scope 3, Category 3: Fuel-and-energy-related activities (not included in Scopes 1 or 2) emissions in reporting year covered by target (metric tons CO2e)
445893

Scope 3, Category 4: Upstream transportation and distribution emissions in reporting year covered by target (metric tons CO2e)
605039

Scope 3, Category 5: Waste generated in operations emissions in reporting year covered by target (metric tons CO2e)
27985

Scope 3, Category 6: Business travel emissions in reporting year covered by target (metric tons CO2e)
16913

Scope 3, Category 7: Employee commuting emissions in reporting year covered by target (metric tons CO2e)
208473

Scope 3, Category 8: Upstream leased assets emissions in reporting year covered by target (metric tons CO2e)
<Not Applicable>

Scope 3, Category 9: Downstream transportation and distribution emissions in reporting year covered by target (metric tons CO2e)
270195

Scope 3, Category 10: Processing of sold products emissions in reporting year covered by target (metric tons CO2e)
<Not Applicable>

Scope 3, Category 11: Use of sold products emissions in reporting year covered by target (metric tons CO2e)
<Not Applicable>

Scope 3, Category 12: End-of-life treatment of sold products emissions in reporting year covered by target (metric tons CO2e)
1654208

Scope 3, Category 13: Downstream leased assets emissions in reporting year covered by target (metric tons CO2e)
<Not Applicable>

Scope 3, Category 14: Franchises emissions in reporting year covered by target (metric tons CO2e)
<Not Applicable>

Scope 3, Category 15: Investments emissions in reporting year covered by target (metric tons CO2e)
<Not Applicable>

Scope 3, Other (upstream) emissions in reporting year covered by target (metric tons CO2e)
<Not Applicable>

Scope 3, Other (downstream) emissions in reporting year covered by target (metric tons CO2e)
<Not Applicable>

Total Scope 3 emissions in reporting year covered by target (metric tons CO2e)
10933327

Total emissions in reporting year covered by target in all selected scopes (metric tons CO2e)
10933327

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]
38.9264438806459

Target status in reporting year
Underway

Please explain target coverage and identify any exclusions
Berry Global commits to reduce absolute scope 3 emissions 25% by 2025 from a 2019 base year, in line with a 1.5 degree Celsius scenario, and this target has been approved by the SBTi. This target covers 100 of our upstream emissions across the whole business as per our reporting methodology laid out in our ESG Report, and in our submission to SBTi.

Plan for achieving target, and progress made to the end of the reporting year
The largest portion of our Scope 3 emissions is our purchased goods and services, namely our resin purchases. We continue to work with resin suppliers to work on initiatives to reduce their own operational emissions, which in turn reduces the emission factors associated with purchased resin. We plan that through these discussions we will move towards our target. In addition, recycled resin has a lower Carbon Footprint that virgin resin, and we have committed to achieving 10% recycled content in our products by 2025, which - if achieved - will allow us to achieve our Scope 3 target.

List the emissions reduction initiatives which contributed most to achieving this target
<Not Applicable>

C4.2

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

C4.2c

(C4.2c) Provide details of your net-zero target(s).

Target reference number
NZ1

Target coverage
Company-wide

Absolute/intensity emission target(s) linked to this net-zero target
Abs1
Abs2

Target year for achieving net zero
2050

Is this a science-based target?
Yes, we consider this a science-based target, and we have committed to seek validation of this target by the Science Based Targets initiative in the next two years

Please explain target coverage and identify any exclusions
We have recently committed to this Net Zero target, which has been calculated using the SBTi Net-zero target setting tool. We will validate the target with SBTi within the next two years.

Do you intend to neutralize any unabated emissions with permanent carbon removals at the target year?
Yes

Planned milestones and/or near-term investments for neutralization at target year
As part of our net-zero pathway, we have set anticipated milestones of 25% reduction by 2025, 50% reduction by 2030, 70% reduction by 2035, and 80% reduction by 2040. We will achieve a 90% reduction by 2050, with the remaining 10% of emisisons neutralized to achieve net-zero.

Planned actions to mitigate emissions beyond your value chain (optional)

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	0	0
To be implemented*	290	19523
Implementation commenced*	0	0
Implemented*	364	25494
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	Automation

Estimated annual CO2e savings (metric tonnes CO2e)
359

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)
1221528

Investment required (unit currency – as specified in C0.4)
2189994

Payback period
1-3 years

Estimated lifetime of the initiative

6-10 years

Comment
Across Berry we spent $2.19m on automation energy initiatives, saving 932,799 KWh of energy annually, which calculates at 359 MT of CO2e reduction. The annual expected monetary savings is $1.22m, giving a payback period of 1-3 years. [2.19/1.22=1.79 years]

Initiative category & Initiative type

Energy efficiency in production processes	Compressed air

Estimated annual CO2e savings (metric tonnes CO2e)
2837

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)
2030949

Investment required (unit currency – as specified in C0.4)
1040094

Payback period
<1 year

Estimated lifetime of the initiative
6-10 years

Comment
Across Berry we spent $1.04m on Compressed air initiatives, saving 11,510,923 KWh of energy annually, which calculates to 2837 MT of CO2e reduction across Scope 1 and Scope 2. The annual expected monetary savings is $2.03m, giving a payback period of <1 year. [1.04/2.03 = 0.5 years]

Initiative category & Initiative type

Energy efficiency in production processes	Smart control system

Estimated annual CO2e savings (metric tonnes CO2e)
605

Scope(s) or Scope 3 category(ies) where emissions savings occur
Scope 2 (location-based)
Scope 2 (market-based)

Voluntary/Mandatory
Voluntary

Annual monetary savings (unit currency – as specified in C0.4)
320039

Investment required (unit currency – as specified in C0.4)
614690

Payback period
1-3 years

Estimated lifetime of the initiative
11-15 years

Comment
Across Berry we spent $614,690 on Control system upgrade initiatives, saving 1702885 KWh of energy annually, which calculates to 605 MT of CO2e reduction across Scope 2. The annual expected monetary savings is $320,039, giving a payback period of 1-3 years. [614,690/320,039 = 1.92 years]

Initiative category & Initiative type

Energy efficiency in production processes	Cooling technology

Estimated annual CO2e savings (metric tonnes CO2e)
3813

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)

2100629

Investment required (unit currency – as specified in C0.4)
6772959

Payback period
1-3 years

Estimated lifetime of the initiative
6-10 years

Comment
Across Berry we spent $6.77m on Cooling Technology initiatives saving 10,565,388 KWh of energy annually, which calculates to 3,813 MT of CO2e reduction across Scope 1 and Scope 2. The annual expected monetary savings is $2.1m, giving a payback period of 1-3 years. [6.77/2.1 = 3.2 years]

Initiative category & Initiative type

Company policy or behavioral change	Resource efficiency

Estimated annual CO2e savings (metric tonnes CO2e)
60

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)
135000

Investment required (unit currency – as specified in C0.4)
0

Payback period
<1 year

Estimated lifetime of the initiative
6-10 years

Comment
Across Berry we audited our energy processes based on employee behavior and resource efficiency. We found savings of 1,109,000 KWh of energy annually, which calculates to 60 MT of CO2e reduction across Scope 1 and Scope 2. The annual expected monetary savings is $135,000, and with no investment required this gives a payback period of <1 year.

Initiative category & Initiative type

Energy efficiency in buildings	Heating, Ventilation and Air Conditioning (HVAC)

Estimated annual CO2e savings (metric tonnes CO2e)
280

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)
192727

Investment required (unit currency – as specified in C0.4)
56623

Payback period
<1 year

Estimated lifetime of the initiative
6-10 years

Comment
Across Berry we spent $56,623 on HVAC initiatives, saving 1,001,536 KWh of energy annually, which calculates to 280 MT of CO2e reduction across Scope 1 and Scope 2. The annual expected monetary savings is $192,727, giving a payback period of <1 year. [56,623/192,727 = 0.29 years]

Initiative category & Initiative type

Energy efficiency in buildings	Insulation

Estimated annual CO2e savings (metric tonnes CO2e)

378

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)
311824

Investment required (unit currency – as specified in C0.4)
48180

Payback period
<1 year

Estimated lifetime of the initiative
6-10 years

Comment
Across Berry we spent $48,180 on improved building insulation, saving 2,608,369 KWh of energy annually, which calculates to 378 MT of CO2e reduction across Scope 1 and Scope 2. The annual expected monetary savings is $311,824, giving a payback period of <1 year. [48,180/311,824 = 0.15 years]

Initiative category & Initiative type

Energy efficiency in buildings	Lighting

Estimated annual CO2e savings (metric tonnes CO2e)
1632

Scope(s) or Scope 3 category(ies) where emissions savings occur
Scope 2 (location-based)
Scope 2 (market-based)

Voluntary/Mandatory
Voluntary

Annual monetary savings (unit currency – as specified in C0.4)
605883

Investment required (unit currency – as specified in C0.4)
650947

Payback period
1-3 years

Estimated lifetime of the initiative
6-10 years

Comment
Across Berry we spent $650,947 on lighting energy initiatives, saving 5,306,326 KWh of energy annually, which calculates to 1632 MT of CO2e reduction across Scope 2. The annual expected monetary savings is $605,883, giving a payback period of 1-3 years. [650,947/605,883 = 1.07 years]

Initiative category & Initiative type

Energy efficiency in production processes	Machine/equipment replacement

Estimated annual CO2e savings (metric tonnes CO2e)
9807

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)
23625082

Investment required (unit currency – as specified in C0.4)
50166505

Payback period
1-3 years

Estimated lifetime of the initiative
6-10 years

Comment
Across Berry we spent $50.2m on replacing machinery/equipment, saving 23,939,617 KWh of energy annually, which calculates to 9,807 MT of CO2e reduction across Scope 1 & 2. The annual expected monetary savings is $23.6m, giving a payback period of 1-3 years. [50.2/23.6 = 2.12 years]

Initiative category & Initiative type

Energy efficiency in buildings	Maintenance program

Estimated annual CO2e savings (metric tonnes CO2e)
698

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)
283511

Investment required (unit currency – as specified in C0.4)
537199

Payback period
1-3 years

Estimated lifetime of the initiative
6-10 years

Comment
Across Berry we spent $537,199 to improve our maintenance program, saving 1,852,472 KWh of energy annually, which calculates to 698 MT of CO2e reduction across Scope 1 & 2. The annual expected monetary savings is $283,511, giving a payback period of 1-3 years. [537,199/283,511 = 1.89 years]

Initiative category & Initiative type

Energy efficiency in production processes	Motors and drives

Estimated annual CO2e savings (metric tonnes CO2e)
1298

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)
409464

Investment required (unit currency – as specified in C0.4)
328177

Payback period
<1 year

Estimated lifetime of the initiative
6-10 years

Comment
Across Berry we spent $328,177 on upgrading motors and drives, saving 3,747,983 KWh of energy annually, which calculates to 1,298 MT of CO2e reduction across Scope 1 and Scope 2. The annual expected monetary savings is $409,464, giving a payback period of <1 year. [328,177/409,464 = 0.8 years]

Initiative category & Initiative type

Non-energy industrial process emissions reductions	Process equipment replacement

Estimated annual CO2e savings (metric tonnes CO2e)
2205

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)
7820981

Investment required (unit currency – as specified in C0.4)
9240349

Payback period
1-3 years

Estimated lifetime of the initiative
6-10 years

Comment
Across Berry we spent $9.2m on process equipment replacement where energy savings also occurred, saving 8,184,383 KWh of energy annually, which calculates to 2,205 MT of CO2e reduction across Scope 1 & 2. The annual expected monetary savings is $7.8m giving a payback period of 1-3 years. [9.2/7.8 = 1.2 years]

Initiative category & Initiative type

Energy efficiency in production processes	Process optimization

Estimated annual CO2e savings (metric tonnes CO2e)
1474

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)
2814530

Investment required (unit currency – as specified in C0.4)
2142719

Payback period
<1 year

Estimated lifetime of the initiative
6-10 years

Comment
Across Berry we spent $2.14m on process optimization, saving 5,832,242 KWh of energy annually, which calculates to 1,474 MT of CO2e reduction across Scope 1 and Scope 2. The annual expected monetary savings is $2.81, giving a payback period of <1 year. [2.14/2.81 = 0.8 years]

Initiative category & Initiative type

Energy efficiency in production processes	Reuse of water

Estimated annual CO2e savings (metric tonnes CO2e)
48

Scope(s) or Scope 3 category(ies) where emissions savings occur
Scope 2 (location-based)
Scope 2 (market-based)

Voluntary/Mandatory
Voluntary

Annual monetary savings (unit currency – as specified in C0.4)
33506

Investment required (unit currency – as specified in C0.4)
0

Payback period
<1 year

Estimated lifetime of the initiative
6-10 years

Comment
Across Berry we made changes to reuse steam, at no capital cost. We found savings of 77,760 KWh of energy annually, which calculates to 48 MT of CO2e reduction across Scope 1 and Scope 2. The annual expected monetary savings is $33,506, and with no investment required this gives a payback period of <1 year.

C4.3c

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

Method	Comment
Internal incentives/recognition programs	The primary drivers for decreasing energy and emissions are our electricity, natural gas, and greenhouse gas reduction goals. These corporate level goals roll down to each division and each plant. It is then up to each plant to determine what investment is necessary to meet the goal. Plants are recognized both for meeting their goals as well as for implementing projects toward the goals. Our 100 million KWh initiative is an industry leader in encouraging our different facilities and business units to uncover new ways to save energy and to share best practice with other units. Additionally, executive compensation is tied to our greenhouse gas emissions targets, which are predominantly determined by our energy usage and efficiency improvements, which encourages a greater drive for investment in this area.
Financial optimization calculations	We regularly stress the cost of energy and that those costs can be reduced by reducing energy consumption. All of our sites are therefore motivated to reduce energy consumption not only for the environmental benefits but also the financial benefits. We have developed tools which ensure emissions savings calculations are taken into account as part of wider financial optimization processes, including CapEx identification and production transfer optimization.
Internal price on carbon	A shadow price for carbon has been implemented to raise awareness of the potential costs of GHG emissions and drive efforts to reduce GHG emissions.
Compliance with regulatory requirements/standards	Targets set by compliance schemes such as the Climate Change Agreement for UK sites or targets set as part of the ISO 50001 accreditation drives emissions reduction activities.
Dedicated budget for energy efficiency	Manufacturing sites across Berry set energy efficiency budgets on an annual basis from which projects are generated. A portion of our capital budget is dedicated to energy efficiency projects, and through this we have an internal goal of achieving an energy reduction of 100 million KWh annually, which we achieved in fiscal year 2022.
Employee engagement	Employee engagement has been increased in regards to energy efficiency through the implementation of the Berry Global sustainability strategy as well as initiatives such as the increased uptake of ISO 50001 across the company, which requires employee engagement and training on energy use and efficiency.

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 (Plastics Products)

Description of product(s) or service(s)

We class all Plastic products as low carbon, as they have a lower contribution to climate change than alternative materials. TruCost published a study called "Plastics and Sustainability: A Valuation [...] for Continuous Improvement". In this study, they found plastic products to have 61% lower contributions to climate change than plastic alternatives (metal, glass, paper, etc.). Franklin Associates reached a similar conclusion in their Life Cycle Assessment "IMPACT OF PLASTICS PACKAGING [...] IN THE UNITED STATES AND CANADA: Substitution Analysis", which found plastic packaging had 56% lower GHG emissions than alternatives based on the substitution method. Additionally, our packaging innovation provides product protection; in multi-layer barrier packaging technology means that products have a long shelf life and reduces food waste throughout the supply chain and in the consumer's home which has a major environmental impact. We further reduce the carbon impact of all products by; Using recycled content, Lightweighting and using renewable materials. As 100% of our products are plastic, we believe they can reasonably be classed as a low carbon products when compared to alternative packaging materials.

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

No

Methodology used to calculate avoided emissions

<Not Applicable>

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

<Not Applicable>

Functional unit used

<Not Applicable>

Reference product/service or baseline scenario used

<Not Applicable>

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

<Not Applicable>

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

<Not Applicable>

Explain your calculation of avoided emissions, including any assumptions

<Not Applicable>

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

100

C5. Emissions methodology

C5.1

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

No

C5.1a

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

Row 1

Has there been a structural change?

Yes, a divestment

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

During the fiscal year we divested the below facilities.
Synergy Packaging, Australia
St John, Canada
Hockenheim, Germany
Iberia, Spain
Montoir, France
Annezin, France
Tempra, Iceland
Dalvik, Iceland
Rijen, Netherlands
Deventer, Netherlands
Miedzyrzecz, Poland

Details of structural change(s), including completion dates

All divestment's were completed during the fiscal year. Emissions for divested facilities have been removed from our inventory.

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?	Details of methodology, boundary, and/or reporting year definition change(s)
Row 1	Yes, a change in methodology	We improved our methodology for calculating our Scope 3 emissions to align further with the GHG protocol's principles of relevance, completeness, consistency, transparency, and accuracy. In cases, distinct trade-offs have still been made, as we favour the principles of relevance, completeness and consistency, sometimes at the expense to accuracy, in order to be able to provide a comprehensive overview of our whole value chain emissions to our stakeholders. We expect to continue to improve disclosure on Scope 3 emissions in time, lessening the need for such trade-offs and reducing reliance on extrapolation as we improve our methodology.

C5.1c

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

	Base year recalculation	Scope(s) recalculated	Base year emissions recalculation policy, including significance threshold	Past years' recalculation
Row 1	Yes	Scope 1 Scope 2, location-based Scope 2, market-based Scope 3	In line with the SBTi expectations, we reset our baseline as a result of acquisitions, divestment's, mergers, or reporting methodology changes that accounted for greater than 5% of annual GHG emissions. During this process we also updated and re-reported our data from years between the current reporting year and the baseline. As part of our Scope 3 methodology update, we also updated the methodology for prior years where possible and recalculated the data accordingly.	Yes

C5.2

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

Scope 1

Base year start
October 1 2018

Base year end
September 30 2019

Base year emissions (metric tons CO2e)
150284

Comment

Scope 2 (location-based)

Base year start
October 1 2018

Base year end
September 30 2019

Base year emissions (metric tons CO2e)
2206480

Comment

Scope 2 (market-based)

Base year start
October 1 2018

Base year end
September 30 2019

Base year emissions (metric tons CO2e)
2190090

Comment

Scope 3 category 1: Purchased goods and services

Base year start
October 1 2018

Base year end
September 30 2019

Base year emissions (metric tons CO2e)
8424800

Comment

Scope 3 category 2: Capital goods

Base year start
October 1 2018

Base year end
September 30 2019

Base year emissions (metric tons CO2e)
443259

Comment

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

Base year start
October 1 2018

Base year end
September 30 2019

Base year emissions (metric tons CO2e)
451816

Comment

Scope 3 category 4: Upstream transportation and distribution

Base year start
October 1 2018

Base year end
September 30 2019

Base year emissions (metric tons CO2e)
567618

Comment

Scope 3 category 5: Waste generated in operations

Base year start
October 1 2018

Base year end
September 30 2019

Base year emissions (metric tons CO2e)
31955

Comment

Scope 3 category 6: Business travel

Base year start
October 1 2018

Base year end
September 30 2019

Base year emissions (metric tons CO2e)
28742

Comment

Scope 3 category 7: Employee commuting

Base year start
October 1 2018

Base year end
September 30 2019

Base year emissions (metric tons CO2e)
225152

Comment

Scope 3 category 8: Upstream leased assets

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment

Scope 3 category 9: Downstream transportation and distribution

Base year start
October 1 2018

Base year end
September 30 2019

Base year emissions (metric tons CO2e)
377850

Comment

Scope 3 category 10: Processing of sold products

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment

Scope 3 category 11: Use of sold products

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment

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

Base year start
October 1 2018

Base year end
September 30 2019

Base year emissions (metric tons CO2e)
1571285

Comment

Scope 3 category 13: Downstream leased assets

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment

Scope 3 category 14: Franchises

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment

Scope 3 category 15: Investments

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment

Scope 3: Other (upstream)

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment

Scope 3: Other (downstream)

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment

C5.3

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

Defra Environmental Reporting Guidelines: Including streamlined energy and carbon reporting guidance, 2019
IEA CO2 Emissions from Fuel Combustion
The Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard (Revised Edition)
The Greenhouse Gas Protocol: Corporate Value Chain (Scope 3) Standard
US EPA Center for Corporate Climate Leadership: Direct Emissions from Stationary Combustion Sources
US EPA Emissions & Generation Resource Integrated Database (eGRID)

C6. Emissions data

C6.1

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

Reporting year

Gross global Scope 1 emissions (metric tons CO2e)
149258

Start date
October 1 2021

End date
September 30 2022

Comment
Our Scope 1 & 2 Greenhouse Gas emissions data is calendar normalized to a 1st October 2021 – 30th September 2022 reporting period in line with our external assurance process

Past year 1

Gross global Scope 1 emissions (metric tons CO2e)
157141

Start date
October 1 2020

End date
September 30 2021

Comment

Past year 2

Gross global Scope 1 emissions (metric tons CO2e)
159517

Start date
October 1 2019

End date
September 30 2020

Comment

Past year 3

Gross global Scope 1 emissions (metric tons CO2e)
150284

Start date
October 1 2018

End date
September 30 2019

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
Our market-based number is calculated using location-based data combined with our renewable energy purchases, and does not include other supplier specific contracts or emission factors.

C6.3

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

Reporting year

Scope 2, location-based
1750769

Scope 2, market-based (if applicable)
1696528

Start date
October 1 2021

End date
September 30 2022

Comment
Our Scope 1 & 2 Greenhouse Gas emissions data is calendar normalized to a 1st October 2021 – 30th September 2022 reporting period in line with our external assurance process

Past year 1

Scope 2, location-based
1875982

Scope 2, market-based (if applicable)
1786394

Start date
October 1 2020

End date
September 30 2021

Comment

Past year 2

Scope 2, location-based
2110915

Scope 2, market-based (if applicable)
2017154

Start date
October 1 2019

End date
September 30 2020

Comment

Past year 3

Scope 2, location-based
2206480

Scope 2, market-based (if applicable)
2190090

Start date
October 1 2018

End date
September 30 2019

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
Non-Production Facilities

Scope(s) or Scope 3 category(ies)
Scope 1
Scope 2 (location-based)
Scope 2 (market-based)

Scope 3: Purchased goods and services
Scope 3: Fuel and energy-related activities (not included in Scopes 1 or 2)
Scope 3: Waste generated in operations

Relevance of Scope 1 emissions from this source
Emissions are not relevant

Relevance of location-based Scope 2 emissions from this source
Emissions are not relevant

Relevance of market-based Scope 2 emissions from this source
Emissions are not relevant

Relevance of Scope 3 emissions from this source
Emissions are not relevant

Date of completion of acquisition or merger
<Not Applicable>

Estimated percentage of total Scope 1+2 emissions this excluded source represents
0.1

Estimated percentage of total Scope 3 emissions this excluded source represents
0.1

Explain why this source is excluded
As per our reporting methodology, operational emissions from non-manufacturing facilities, such as offices, are excluded as they are de minimis usage (<1% of total emissions). In line with exclusions from our operational emissions boundary, purchased water (category 1), fuel and energy-related activities (category 3) and Waste at Operations (category 5) value chain emissions from offices and non-production facilities are not included within the reporting boundary.

Explain how you estimated the percentage of emissions this excluded source represents
Sales site have been excluded from the inventory, as these are mostly rented office buildings with minimal operational control. Where operational control is in place, an internal exercise during the 2017/2018 reporting period concluded that emissions from this source comprised of well under 0.1% of total emissions. Scope 3 emissions relating to energy, water and operational waste generation total only 4.3% of our total scope 3 footprint. With offices using minimal energy and water, and producing minimal waste compared to manufacturing sites (as demonstrated by offices only anticipated to be 0.1% of total Scope 1+2 footprint), we can consider Scope 3 emissions from these categories to be de-minimis, well under 0.1% of our total Scope 3 footprint) and are therefore excluded.

Source of excluded emissions
Additional fuel sources at sites that predominately use Natural Gas

Scope(s) or Scope 3 category(ies)
Scope 1
Scope 2 (location-based)
Scope 2 (market-based)
Scope 3: Fuel and energy-related activities (not included in Scopes 1 or 2)

Relevance of Scope 1 emissions from this source
Emissions are not relevant

Relevance of location-based Scope 2 emissions from this source
Emissions are not relevant

Relevance of market-based Scope 2 emissions from this source
Emissions are not relevant

Relevance of Scope 3 emissions from this source
Emissions are not relevant

Date of completion of acquisition or merger
<Not Applicable>

Estimated percentage of total Scope 1+2 emissions this excluded source represents
3

Estimated percentage of total Scope 3 emissions this excluded source represents
0.1

Explain why this source is excluded
As per our reporting methodology, our manufacturing facilities that rely heavily on natural gas as their primary form of fuel use are not required to report de minimis usage of other fuels. Additionally, value chain emissions from other energy sources excluded from our operational reporting scope are excluded from the fuel and energy-related activities category.

Explain how you estimated the percentage of emissions this excluded source represents
Historical exercises determined that fuel usage from these facilities was de minimis, as it represented under 3% of total emissions. In 2022, as part of an assurance process of our FY21 Scope 1 and 2 emissions, it was estimated these emissions remained under 3% of total emissions and could still be considered de minimis. Additionally, an additional internal analysis of propane purchases for our US facilities in FY21 estimated these emissions to be around 4,200MT (well under 1% of total emissions from US sites in FY20). As the company works towards electrification of processes, we anticipate these numbers to fall further year-over-year.

Source of excluded emissions
Process emissions: SOx, NOx, VOCs, and Fugitive emissions such as refrigerants and air conditioning leaks.

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 are not relevant

Relevance of location-based Scope 2 emissions from this source
Emissions are not relevant

Relevance of market-based Scope 2 emissions from this source
Emissions are not relevant

Relevance of Scope 3 emissions from this source
<Not Applicable>

Date of completion of acquisition or merger
<Not Applicable>

Estimated percentage of total Scope 1+2 emissions this excluded source represents
0.1

Estimated percentage of total Scope 3 emissions this excluded source represents
<Not Applicable>

Explain why this source is excluded
VOCs are not identified as a process emission, and air emissions of SOx and NOx are only tracked at site level, as internal investigations have concluded that these are not significant emissions at a company-wide level, and can be considered de minimis. Similar investigations have taken place regarding fugitive emissions from refrigerants, air conditioning leaks, and tooling gases, which have also been determined de minimis.

Explain how you estimated the percentage of emissions this excluded source represents
An exercise to quantify these emissions was carried out in 2015. It was found that these emissions would account for around only 0.9% of total global emissions. It was therefore deemed that the process of collecting and converting the data was too complex and time consuming compared to the output of emissions and contribution to the total carbon emissions. We anticipate an updated investigation would determine an even lower percentage, but are investigating ways to collect this data for future years.

Source of excluded emissions
Emissions relating to the end-of-life treatment of secondary and tertiary packaging for our sold products are excluded in our to End-of-Life Treatment of Sold Products (category 12), emissions.

Scope(s) or Scope 3 category(ies)
Scope 3: End-of-life treatment of sold products

Relevance of Scope 1 emissions from this source
<Not Applicable>

Relevance of location-based Scope 2 emissions from this source
<Not Applicable>

Relevance of market-based Scope 2 emissions from this source
<Not Applicable>

Relevance of Scope 3 emissions from this source
Emissions are relevant but not yet calculated

Date of completion of acquisition or merger
<Not Applicable>

Estimated percentage of total Scope 1+2 emissions this excluded source represents
<Not Applicable>

Estimated percentage of total Scope 3 emissions this excluded source represents
1

Explain why this source is excluded
We currently do not have the systems in place to capture activity data related to this packaging to a degree that will enable us to provide a sufficient level of accuracy.

Explain how you estimated the percentage of emissions this excluded source represents
The End-of-Life Treatment of Sold Products (category 12), emissions category accounts for 15.1% of our total Scope 3 footprint. We estimate that end-of-life emissions for secondary and tertiary packaging of our sold products would only add an additional 5% of the total end of life treatment category, so overall the exclusion would only account for less than 1% of our Total Scope 3 footprint.

C6.5

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

Purchased goods and services

Evaluation status
Relevant, calculated

Emissions in reporting year (metric tons CO2e)
7207852

Emissions calculation methodology
Average data method
Spend-based method

Percentage of emissions calculated using data obtained from suppliers or value chain partners
0

Please explain
Calculation Status Rationale
The emissions from Berry's purchase of resin and other materials and services are relevant and material to Berry's Scope 3 emissions inventory. While not material, the purchase of water is still relevant and is therefore calculated.

Calculation methodology
Activity data for purchased resin is collected through purchasing systems, with splits by region and resin type. Resin data is then multiplied by industry average emission factors also split by region and resin type (ACC & Plastics Europe). For other purchased goods and services, a spend-based method was used, where total spend per spend category for facilities where data is available is input into the Quantis Scope 3 Calculator. Data is extrapolated for facilities where activity data was not available, to cover the entirety of Berry's operations. Emissions related to purchased water were calculated through multiplying the quantity of water withdrawals and water discharge by average water supply and treatment emissions factors respectively.

Allocations and Key Assumptions
Location specific resin data is not available in all regions where Berry global purchases resin, so resin purchases were grouped together into two regions for emissions calculations. Additionally, for resin purchases where emission factors are not available for that resin type, an average resin emission factor was used.

For use of the GHG Protocol Quantis Scope 3 Calculator, assumptions were made about the definitions of each listed purchasing category when grouping Berry's Global's purchases into a category. When extrapolating data to cover facilities where activity data was not available, this has been completed based on average spend per tracked facility. DEFRA GHG emission conversion factors are used for water across the business on the assumption that factor rates do not differ materially by region, with the principle of compiling complete data traded-off against accuracy. Over time Berry's aim to move towards using regional-based factors. Water discharge data is not collected for all facilities, so where data is not available, extrapolation is used to estimate water discharge based on 1) previous years discharge rate and 2) the average discharge rate from facilities where data is available.

Exclusions: Water withdrawals and discharge from offices are excluded from Scope.

Capital goods

Evaluation status
Relevant, calculated

Emissions in reporting year (metric tons CO2e)
496769

Emissions calculation methodology
Spend-based method

Percentage of emissions calculated using data obtained from suppliers or value chain partners
0

Please explain
Calculation Status Rationale

The emissions from Berry's purchase of capital goods are relevant and material to Berry's Scope 3 emissions inventory.

Calculation methodology

A spend-based method was used, where total spend on capital goods, as outlined in our annual report, was input into the GHG Protocol Quantis Scope 3 Calculator. Supplier specific emissions data sources were not used.

Allocations and Key Assumptions

None

Exclusions

None

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

Evaluation status
Relevant, calculated

Emissions in reporting year (metric tons CO2e)
445893

Emissions calculation methodology
Average data method

Percentage of emissions calculated using data obtained from suppliers or value chain partners
0

Please explain
Calculation Status Rationale

The value chain emissions from Berry's purchase of fuels and energy-related activities are relevant and material to Berry's Scope 3 emissions inventory.

Calculation methodology

Value Chain emissions related to purchased fuel and energy-related activities are calculated through multiplying the quantity of energy usage, by type, by the relevant secondary emissions data source. Supplier specific emissions data sources were not used.

Allocations and Key Assumptions

DEFRA GHG emission conversion factors are used for gas and fuel usage across the business on the assumption that factor rates do not differ materially by region, with the principle of compiling complete data traded-off against accuracy. Over time Berry aims to move towards using regional-based factors.

Exclusions

In line with exclusions from our operational emissions boundary, fuel and energy-related activities (category 3) value chain emissions from offices and non-production facilities are not included within the reporting boundary. Additionally, value chain emissions from other energy sources excluded from our operational reporting scope are excluded from the fuel and energy-related activities category.

• Use of Refrigerants
• Use of Welding Gas
• Use of LPG, NFO, Kerosene, Gasoline & Diesel at none CPI and EM: BPI Facilities. (Where large usage at specific sites has been identified, this usage is included within scope)

Upstream transportation and distribution

Evaluation status
Relevant, calculated

Emissions in reporting year (metric tons CO2e)
605039

Emissions calculation methodology
Average data method
Distance-based method

Percentage of emissions calculated using data obtained from suppliers or value chain partners
27

Please explain
Calculation Status Rationale

Emissions resulting from upstream transport and distribution are material and relevant to our inventory and therefore calculated.

Calculation methodology

Value chain emissions relating to the delivery of resin to our facilities are calculated by multiplying the volume of resin delivered by delivery vehicle by the appropriate emission factor and multiplied by estimate delivery distance.

Emissions relating to the delivery of other goods are calculated using available mileage and tonnage data provided by our logistics system, multiplied by relevant emission factors for HGVs. Data is then extrapolated to cover the entirety of Berry Global's operations.

Emissions relating to the delivery of goods to our customers, paid for by Berry, are calculated by our logistics company in partnership with the Smart Freight Center. Data is then extrapolated to cover the entirety of Berry Global's operations.

Allocations and Key Assumptions

Due to the number of resin suppliers for our operations, estimations have been used for the average delivery vehicle and distance. Deliveries to North America are estimated to on average require a 1573km journey by train. Deliveries outside of North America are estimated to travel 1000km by ship and 300km by HGV.

When extrapolating data for delivery of other goods to cover facilities where activity data was not available, this has been completed based on average delivery emissions per dollar ($) spend on other goods.

When extrapolating data for delivery of goods to customers to cover facilities where activity data was not available, this has been completed based on the number of facilities covered by the provided data versus total facilities.

Exclusions

None.

Waste generated in operations

Evaluation status
Relevant, calculated

Emissions in reporting year (metric tons CO2e)
27985

Emissions calculation methodology
Average data method

Percentage of emissions calculated using data obtained from suppliers or value chain partners
0

Please explain
Calculation Status Rationale

While not material, emissions resulting from waste generated by our operations is still relevant to our inventory and is therefore calculated.

Calculation methodology

Value Chain emissions related to waste generated at our operations are calculated through multiplying the quantity of waste, by end-of-life category, by the relevant secondary emissions data source. Supplier specific emissions data sources were not used.

Waste data is not collected by all facilities; therefore, extrapolation methods are used to determine estimated waste data for those facilities. Extrapolation is based on average-waste data from facilities that track waste metrics, and previous year values for facilities if available.

Allocations and Key Assumptions

Waste data is not collected by all facilities; therefore, extrapolation methods are used to determine estimated waste data for those facilities. Extrapolation is based on average-waste data from facilities that track waste metrics, and previous year values for facilities if available.

Exclusions

Value chain emissions related to waste in operations from offices and non-production facilities are not included within the reporting boundary.

Business travel

Evaluation status
Relevant, calculated

Emissions in reporting year (metric tons CO2e)
16913

Emissions calculation methodology
Average data method

Percentage of emissions calculated using data obtained from suppliers or value chain partners
37

Please explain
Calculation Status Rationale

While not material, emissions resulting from business travel is still relevant to our inventory and is therefore calculated.

Calculation methodology

Value chain emissions related to business travel is provided from our third patty business travel providers for North American facilities. This data is extrapolated to cover the whole of Berry operations.

Allocations and Key Assumptions

As third-party emissions data has been provided, so assumptions have been made that the calculation methodology and data provided by these third parties are accurate.

Data is not provided for all facilities; therefore, extrapolation methods are used to determine estimated data for remaining facilities. When extrapolating data, this has been completed based on the number of facilities covered by the provided data versus total facilities.

Exclusions

None.

Employee commuting

Evaluation status
Relevant, calculated

Emissions in reporting year (metric tons CO2e)
208473

Emissions calculation methodology
Average data method

Percentage of emissions calculated using data obtained from suppliers or value chain partners
0

Please explain
Calculation Status Rationale

While not material, emissions resulting from Employee Commuting is still relevant to our inventory and is therefore calculated.

Calculation methodology

Value chain emissions are calculated by multiplying the number of employees by an average commuting distance and transport method emission factor.

Allocations and Key Assumptions

We are unable at this time to collect actual employee commuting data from across our business. Instead we utilize average US commuting statistics and apply these to our methodology for commuting distances and transport methods.

Commuting Assumptions:
• 17.9% Workforce do not commute
• 67.8% Employees travel by Car Alone
• 5.9% Carpooled with 1 other person; 1.2% Carpooled with 2 others; 0.8% Carpooled with 3 others
• 1.5% by Taxi
• 2.5% Travel by Train/Bus
• 2.6% Travel by Bike/Walk
• 65km a day average commute
• Estimate of average of 261 working days.
Over time Berry aims to move towards using regional-based factors and employee specific commuting data where possible.

Exclusions

None.

Upstream leased assets

Evaluation status
Not relevant, explanation provided

Emissions in reporting year (metric tons CO2e)
<Not Applicable>

Emissions calculation methodology
<Not Applicable>

Percentage of emissions calculated using data obtained from suppliers or value chain partners
<Not Applicable>

Please explain
The company does not have upstream leased assets for which it has operational control, and this category is therefore not relevant and not calculated.

Downstream transportation and distribution

Evaluation status
Relevant, calculated

Emissions in reporting year (metric tons CO2e)
270195

Emissions calculation methodology
Average data method

Percentage of emissions calculated using data obtained from suppliers or value chain partners
37

Please explain
Calculation Status Rationale

While not material, emissions resulting from downstream transport and distribution are still relevant to our inventory and is therefore calculated.

Calculation methodology

Emissions relating to the delivery of goods to our customers, paid for by customers, are calculated by our logistics company in partnership with the Smart Freight Centre. Data is then extrapolated to cover the entirety of Berry Global's operations.

Allocations and Key Assumptions

When extrapolating data for delivery of goods to customers to cover facilities where activity data was not available, this has been completed based on the number of facilities covered by the provided data versus total facilities.

Exclusions

None.

Processing of sold products

Evaluation status
Not relevant, explanation provided

Emissions in reporting year (metric tons CO2e)
<Not Applicable>

Emissions calculation methodology
<Not Applicable>

Percentage of emissions calculated using data obtained from suppliers or value chain partners
<Not Applicable>

Please explain
Berry Global produces finished goods that require no further processing once leaving our facilities. Because of this, the Scope 3 emissions from this category can be considered not relevant, non-existent, and not included.

Use of sold products

Evaluation status
Not relevant, explanation provided

Emissions in reporting year (metric tons CO2e)
<Not Applicable>

Emissions calculation methodology
<Not Applicable>

Percentage of emissions calculated using data obtained from suppliers or value chain partners
<Not Applicable>

Please explain
There are no further emissions associated with our products during their "use" phase, so therefore this section can be considered not relevant, non-existent, and not included.

End of life treatment of sold products

Evaluation status
Relevant, calculated

Emissions in reporting year (metric tons CO2e)
1654208

Emissions calculation methodology
Average data method

Percentage of emissions calculated using data obtained from suppliers or value chain partners
0

Please explain
Calculation Status Rationale

The emissions from the End-of-Life treatment of Berry's Sold Products are relevant and material to Berry's Scope 3 emissions inventory.

Calculation methodology

An average-data methodology was used, where global sales tonnage was multiplied by end-of-life scenario emissions factors, based on the average end-of-life scenario rate.

Allocations and Key Assumptions

Average end-of-life rates taken from most recent OECD data for recycling, landfilling and combustion. Global rates are currently used with our global production tonnage. Over time Berry aims to move towards using regional-based factors where possible.

Exclusions

As outlined in 2.1, emissions relating to the end-of-life treatment of secondary and tertiary packaging for our sold products are excluded. We currently do not have the systems in place to capture activity data related to this packaging to a degree that will enable us to provide a sufficient level of accuracy.

Downstream leased assets

Evaluation status
Not relevant, explanation provided

Emissions in reporting year (metric tons CO2e)
<Not Applicable>

Emissions calculation methodology
<Not Applicable>

Percentage of emissions calculated using data obtained from suppliers or value chain partners
<Not Applicable>

Please explain
We do not have any downstream leased assets so therefore the emissions are not relevant, non-existent, and not included.

Franchises

Evaluation status
Not relevant, explanation provided

Emissions in reporting year (metric tons CO2e)
<Not Applicable>

Emissions calculation methodology
<Not Applicable>

Percentage of emissions calculated using data obtained from suppliers or value chain partners
<Not Applicable>

Please explain
We do not have any franchises so therefore the emissions are not relevant, non-existent, and not included.

Investments

Evaluation status
Not relevant, explanation provided

Emissions in reporting year (metric tons CO2e)
<Not Applicable>

Emissions calculation methodology
<Not Applicable>

Percentage of emissions calculated using data obtained from suppliers or value chain partners
<Not Applicable>

Please explain
We do not have any investments so therefore the emissions are not relevant, non-existent, and not included

Other (upstream)

Evaluation status
Not relevant, explanation provided

Emissions in reporting year (metric tons CO2e)
<Not Applicable>

Emissions calculation methodology
<Not Applicable>

Percentage of emissions calculated using data obtained from suppliers or value chain partners
<Not Applicable>

Please explain
We do not have any other upstream emissions not already included in other categories so therefore the emissions from this category are not relevant, non-existent, and not included.

Other (downstream)

Evaluation status
Not relevant, explanation provided

Emissions in reporting year (metric tons CO2e)
<Not Applicable>

Emissions calculation methodology
<Not Applicable>

Percentage of emissions calculated using data obtained from suppliers or value chain partners
<Not Applicable>

Please explain
We do not have any other downstream emissions not already included in other categories so therefore the emissions from this category are not relevant, non-existent, and not included.

C6.5a

(C6.5a) Disclose or restate your Scope 3 emissions data for previous years.

Past year 1

Start date
October 1 2020

End date
September 30 2021

Scope 3: Purchased goods and services (metric tons CO2e)
7651549

Scope 3: Capital goods (metric tons CO2e)
488815

Scope 3: Fuel and energy-related activities (not included in Scopes 1 or 2) (metric tons CO2e)
471298

Scope 3: Upstream transportation and distribution (metric tons CO2e)
615597

Scope 3: Waste generated in operations (metric tons CO2e)
29532

Scope 3: Business travel (metric tons CO2e)
7888

Scope 3: Employee commuting (metric tons CO2e)
220486

Scope 3: Upstream leased assets (metric tons CO2e)

Scope 3: Downstream transportation and distribution (metric tons CO2e)
301777

Scope 3: Processing of sold products (metric tons CO2e)

Scope 3: Use of sold products (metric tons CO2e)

Scope 3: End of life treatment of sold products (metric tons CO2e)
1757361

Scope 3: Downstream leased assets (metric tons CO2e)

Scope 3: Franchises (metric tons CO2e)

Scope 3: Investments (metric tons CO2e)

Scope 3: Other (upstream) (metric tons CO2e)

Scope 3: Other (downstream) (metric tons CO2e)

Comment

Past year 2

Start date
October 1 2019

End date
September 30 2020

Scope 3: Purchased goods and services (metric tons CO2e)
7870667

Scope 3: Capital goods (metric tons CO2e)
421557

Scope 3: Fuel and energy-related activities (not included in Scopes 1 or 2) (metric tons CO2e)
455012

Scope 3: Upstream transportation and distribution (metric tons CO2e)
529359

Scope 3: Waste generated in operations (metric tons CO2e)
34964

Scope 3: Business travel (metric tons CO2e)
16345

Scope 3: Employee commuting (metric tons CO2e)
218939

Scope 3: Upstream leased assets (metric tons CO2e)

Scope 3: Downstream transportation and distribution (metric tons CO2e)
334351

Scope 3: Processing of sold products (metric tons CO2e)

Scope 3: Use of sold products (metric tons CO2e)

Scope 3: End of life treatment of sold products (metric tons CO2e)
1607918

Scope 3: Downstream leased assets (metric tons CO2e)

Scope 3: Franchises (metric tons CO2e)

Scope 3: Investments (metric tons CO2e)

Scope 3: Other (upstream) (metric tons CO2e)

Scope 3: Other (downstream) (metric tons CO2e)

Comment

Past year 3

Start date
October 1 2018

End date
September 30 2019

Scope 3: Purchased goods and services (metric tons CO2e)
8424800

Scope 3: Capital goods (metric tons CO2e)
443259

Scope 3: Fuel and energy-related activities (not included in Scopes 1 or 2) (metric tons CO2e)
451816

Scope 3: Upstream transportation and distribution (metric tons CO2e)
567618

Scope 3: Waste generated in operations (metric tons CO2e)
31955

Scope 3: Business travel (metric tons CO2e)
28742

Scope 3: Employee commuting (metric tons CO2e)
225152

Scope 3: Upstream leased assets (metric tons CO2e)

Scope 3: Downstream transportation and distribution (metric tons CO2e)
377850

Scope 3: Processing of sold products (metric tons CO2e)

Scope 3: Use of sold products (metric tons CO2e)

Scope 3: End of life treatment of sold products (metric tons CO2e)
1571285

Scope 3: Downstream leased assets (metric tons CO2e)

Scope 3: Franchises (metric tons CO2e)

Scope 3: Investments (metric tons CO2e)

Scope 3: Other (upstream) (metric tons CO2e)

Scope 3: Other (downstream) (metric tons CO2e)

Comment

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
0.000127339

Metric numerator (Gross global combined Scope 1 and 2 emissions, metric tons CO2e)
1845786

Metric denominator
unit total revenue

Metric denominator: Unit total
14495000000

Scope 2 figure used
Market-based

% change from previous year
9.26

Direction of change
Decreased

Reason(s) for change
Change in renewable energy consumption
Other emissions reduction activities
Change in revenue

Please explain
During 2022 we implemented a number of energy efficiency and energy reduction initiatives across the company (as outlined in section 4.3), saw large improvements across the average grid factor we used in the countries we operate, and we also increased our renewable energy purchases across the business. This, coupled with an increase in total revenue, meant we made a large improvement across our intensity figures.

Intensity figure
0.468

Metric numerator (Gross global combined Scope 1 and 2 emissions, metric tons CO2e)
1845786

Metric denominator
metric ton of product

Metric denominator: Unit total
3945814

Scope 2 figure used
Market-based

% change from previous year
0.66

Direction of change
Increased

Reason(s) for change
Change in renewable energy consumption
Other emissions reduction activities
Change in output

Please explain
During 2022 we implemented a number of energy efficiency and energy reduction initiatives across the company (as outlined in section 4.3), saw large improvements across the average grid factor, we used in the countries we operate, and we also increased our renewable energy purchases across the business. These decreased our total emissions; however, we saw a comparably larger decrease in production tonnage. Lower production tonnage leads to inefficiencies in energy usage, which ultimately led to our intensity ratio increasing very slightly – less than 1%.

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	148616	IPCC Fourth Assessment Report (AR4 - 100 year)
CH4	4	IPCC Fourth Assessment Report (AR4 - 100 year)
N2O	2	IPCC Fourth Assessment Report (AR4 - 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)
Argentina	19.8
Belgium	173.9
Canada	3993.3
Colombia	162.2
Czechia	126.6
Denmark	55.7
Estonia	78
France	9230.2
Germany	20316.4
India	9752.9
Italy	2558.6
Mexico	1373.4
Netherlands	6216.7
China	3255.9
Philippines	96.7
Poland	961.8
Romania	113.6
Russian Federation	27.3
Slovakia	166
South Africa	299.5
Spain	400.6
Sweden	89.6
Thailand	45.7
Tunisia	28.7
United Kingdom of Great Britain and Northern Ireland	9781.7
United States of America	79855.5
Bosnia & Herzegovina	16.5
Norway	2.1
Brazil	0
Finland	59.5

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 CO2e)
Consumer Packaging North America	19718
Engineered Materials	31038
Health, Hygiene & Specialties	81712
Consumer Packaging International	16790

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

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

	Gross Scope 1 emissions, metric tons CO2e	Net Scope 1 emissions , metric tons CO2e	Comment
Cement production activities	<Not Applicable>	<Not Applicable>	<Not Applicable>
Chemicals production activities	0	<Not Applicable>	We do not produce chemicals; we are a plastics converter and recycler.
Coal production activities	<Not Applicable>	<Not Applicable>	<Not Applicable>
Electric utility activities	<Not Applicable>	<Not Applicable>	<Not Applicable>
Metals and mining production activities	<Not Applicable>	<Not Applicable>	<Not Applicable>
Oil and gas production activities (upstream)	<Not Applicable>	<Not Applicable>	<Not Applicable>
Oil and gas production activities (midstream)	<Not Applicable>	<Not Applicable>	<Not Applicable>
Oil and gas production activities (downstream)	<Not Applicable>	<Not Applicable>	<Not Applicable>
Steel production activities	<Not Applicable>	<Not Applicable>	<Not Applicable>
Transport OEM activities	<Not Applicable>	<Not Applicable>	<Not Applicable>
Transport services activities	<Not Applicable>	<Not Applicable>	<Not Applicable>

C7.5

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

Country/area/region	Scope 2, location-based (metric tons CO2e)	Scope 2, market-based (metric tons CO2e)
Argentina	9988.6	5102.2
Belgium	11693.9	11693.9
Brazil	14282.9	14282.9
Canada	7952.4	7952.4
Colombia	7516.8	7516.8
Czechia	2806.7	2806.7
Denmark	3756.6	3756.6
Estonia	3330.9	3330.9
Finland	456.7	456.7
Germany	111179.6	111179.6
India	16390.2	10875.9
Italy	17573.2	17573.2
Mexico	40713.7	34477.2
Netherlands	43216.4	43216.4
Norway	228.4	228.4
China	157608.1	152306.3
Philippines	8109.5	8109.5
Poland	65763.4	65763.4
Romania	3989.5	3989.5
Russian Federation	1685.3	1685.3
Slovakia	1699.7	1699.7
South Africa	47886.5	47886.5
Spain	21839.3	0
Sweden	478.9	478.9
Thailand	4581.9	4581.9
Tunisia	1828.4	1828.4
United Kingdom of Great Britain and Northern Ireland	79393.7	79393.7
United States of America	1040247.5	1029784.8
France	15526.1	15526.1
Bosnia & Herzegovina	9044.2	9044.2

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 CO2e)	Scope 2, market-based (metric tons CO2e)
Consumer Packaging North America	512520	510722
Engineered Materials	291269	282605
Health, Hygiene & Specialties	445629	425482
Consumer Packaging International	501351	477719

C7.7

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

No

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

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

	Scope 2, location-based, metric tons CO2e	Scope 2, market-based (if applicable), metric tons CO2e	Comment
Cement production activities	<Not Applicable>	<Not Applicable>	<Not Applicable>
Chemicals production activities	0	0	We do not produce chemicals; we are a plastics converter and recycler.
Coal production activities	<Not Applicable>	<Not Applicable>	<Not Applicable>
Metals and mining production activities	<Not Applicable>	<Not Applicable>	<Not Applicable>
Oil and gas production activities (upstream)	<Not Applicable>	<Not Applicable>	<Not Applicable>
Oil and gas production activities (midstream)	<Not Applicable>	<Not Applicable>	<Not Applicable>
Oil and gas production activities (downstream)	<Not Applicable>	<Not Applicable>	<Not Applicable>
Steel production activities	<Not Applicable>	<Not Applicable>	<Not Applicable>
Transport OEM activities	<Not Applicable>	<Not Applicable>	<Not Applicable>
Transport services activities	<Not Applicable>	<Not Applicable>	<Not Applicable>

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 tCO2e 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 (CO2)	0	We do not sell GHG products; we are a plastics converter and recycler.
Methane (CH4)	0	We do not sell GHG products; we are a plastics converter and recycler.
Nitrous oxide (N2O)	0	We do not sell GHG products; we are a plastics converter and recycler.
Hydrofluorocarbons (HFC)	0	We do not sell GHG products; we are a plastics converter and recycler.
Perfluorocarbons (PFC)	0	We do not sell GHG products; we are a plastics converter and recycler.
Sulphur hexafluoride (SF6)	0	We do not sell GHG products; we are a plastics converter and recycler.
Nitrogen trifluoride (NF3)	0	We do not sell GHG products; we are a plastics converter and recycler.

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	35953	Increased	1.85	In FY22 we increased the amount of renewable energy consumed by 1,048 MWh, from 183,499 MWh in FY21 to 184,547 MWh in FY22. However, due to both improving grid emission factors, and the location in which this renewable energy was procured and consumed, the emissions value saved by using renewable energy fell from 88,588 MT CO2e in FY21, to 52,635 MT CO2e in FY22. This meant there was a decrease in emissions saved by using renewable energy of 35,953 MT CO2e, so for this question this is an increase of 35,953 MT. This accounts for a 1.85% increase from previous years' emissions, which totaled 1,943,536 MT CO2e. [35,953/1,943,536*100= 1.85%
Other emissions reduction activities	25494	Decreased	1.31	As outlined in question 4.3a, we implemented emissions reduction projects as part of our 100 million KWh challenge, which aimed to reduce our energy usage by 100 million KWh across our global business. Through this challenge, a number of different types of efficiency projects were implemented, saving a total of 25,494 MT CO2e. This accounts for a 1.31% reduction from previous years' emissions, which totaled 1,943,536 MT CO2e. [25,494/1,943,536*100= 1.31%
Divestment		<Not Applicable>		
Acquisitions		<Not Applicable>		
Mergers		<Not Applicable>		
Change in output	12936	Decreased	0.67	In FY22, Production Volume fell 5.5% year over year, from 4,177,090 MT in FY21, to 3,945,814 MT in FY22. As a result of the decrease in production, we saw an estimated 0.6% decrease in emissions compared to the previous year, which totals 12,936 MT CO2e. This accounts for a 0.7% decrease from previous years' emissions, which totaled 1,943,536 MT CO2e. [12.936/1,943,536*100= 0.7%
Change in methodology	95273	Decreased	4.9	Each year we update the grid, gas, and fuel emission factors, from which we calculate our emissions, using the latest e-GRID and IEA data available; multiplying our usage in each country or region, by the relevant emission factor. In FY22, improvements across almost all countries grid emission factors lead to an overall reduction of 95,273 MT CO2e from our inventory. This accounts for a 4.90% decrease from previous years' emissions, which totaled 1,943,536 MT CO2e. [95,273/1,943,536*100= 4.90%
Change in boundary		<Not Applicable>		
Change in physical operating conditions		<Not Applicable>		
Unidentified		<Not Applicable>		
Other		<Not Applicable>		

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	No
Consumption of purchased or acquired steam	Yes
Consumption of purchased or acquired cooling	Yes
Generation of electricity, heat, steam, or cooling	No

C8.2a

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

	Heating value	MWh from renewable sources	MWh from non-renewable sources	Total (renewable and non-renewable) MWh
Consumption of fuel (excluding feedstock)	LHV (lower heating value)	0	727538	727538
Consumption of purchased or acquired electricity	<Not Applicable>	184547	4765400	4949947
Consumption of purchased or acquired heat	<Not Applicable>	<Not Applicable>	<Not Applicable>	<Not Applicable>
Consumption of purchased or acquired steam	<Not Applicable>	0	300056	260501
Consumption of purchased or acquired cooling	<Not Applicable>	0	39555	39555
Consumption of self-generated non-fuel renewable energy	<Not Applicable>	<Not Applicable>	<Not Applicable>	<Not Applicable>
Total energy consumption	<Not Applicable>	184547	5792944	5977541

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

MWh consumed from renewable sources inside chemical sector boundary

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

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

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

Consumption of purchased or acquired electricity

Heating value
<Not Applicable>

MWh consumed from renewable sources inside chemical sector boundary

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

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

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

Consumption of purchased or acquired steam

Heating value
<Not Applicable>

MWh consumed from renewable sources inside chemical sector boundary

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

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

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

Consumption of purchased or acquired cooling

Heating value
<Not Applicable>

MWh consumed from renewable sources inside chemical sector boundary

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

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

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

Total energy consumption

Heating value
<Not Applicable>

MWh consumed from renewable sources inside chemical sector boundary

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

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

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

C8.2b

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

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

C8.2c

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

Sustainable biomass

Heating value
LHV

Total fuel MWh consumed by the organization
0

MWh fuel consumed for self-generation of electricity
0

MWh fuel consumed for self-generation of heat
0

MWh fuel consumed for self-generation of steam
0

MWh fuel consumed for self-generation of cooling
<Not Applicable>

MWh fuel consumed for self- cogeneration or self-trigeneration
<Not Applicable>

Comment

Other biomass

Heating value
LHV

Total fuel MWh consumed by the organization
0

MWh fuel consumed for self-generation of electricity
0

MWh fuel consumed for self-generation of heat
0

MWh fuel consumed for self-generation of steam
0

MWh fuel consumed for self-generation of cooling
<Not Applicable>

MWh fuel consumed for self- cogeneration or self-trigeneration
<Not Applicable>

Comment

Other renewable fuels (e.g. renewable hydrogen)

Heating value
LHV

Total fuel MWh consumed by the organization
0

MWh fuel consumed for self-generation of electricity
0

MWh fuel consumed for self-generation of heat
0

MWh fuel consumed for self-generation of steam
0

MWh fuel consumed for self-generation of cooling
<Not Applicable>

MWh fuel consumed for self- cogeneration or self-trigeneration
<Not Applicable>

Comment

Coal

Heating value
LHV

Total fuel MWh consumed by the organization
32266

MWh fuel consumed for self-generation of electricity
0

MWh fuel consumed for self-generation of heat
32266

MWh fuel consumed for self-generation of steam
0

MWh fuel consumed for self-generation of cooling
<Not Applicable>

MWh fuel consumed for self- cogeneration or self-trigeneration
<Not Applicable>

Comment

Oil

Heating value
LHV

Total fuel MWh consumed by the organization
21789

MWh fuel consumed for self-generation of electricity
0

MWh fuel consumed for self-generation of heat
21789

MWh fuel consumed for self-generation of steam
0

MWh fuel consumed for self-generation of cooling
<Not Applicable>

MWh fuel consumed for self- cogeneration or self-trigeneration
<Not Applicable>

Comment

Gas

Heating value
LHV

Total fuel MWh consumed by the organization
673483

MWh fuel consumed for self-generation of electricity
68259

MWh fuel consumed for self-generation of heat
577676

MWh fuel consumed for self-generation of steam
27548

MWh fuel consumed for self-generation of cooling
<Not Applicable>

MWh fuel consumed for self- cogeneration or self-trigeneration
<Not Applicable>

Comment

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

Heating value
LHV

Total fuel MWh consumed by the organization
0

MWh fuel consumed for self-generation of electricity
0

MWh fuel consumed for self-generation of heat
0

MWh fuel consumed for self-generation of steam
0

MWh fuel consumed for self-generation of cooling
<Not Applicable>

MWh fuel consumed for self- cogeneration or self-trigeneration
<Not Applicable>

Comment

Total fuel

Heating value
LHV

Total fuel MWh consumed by the organization
727538

MWh fuel consumed for self-generation of electricity
68259

MWh fuel consumed for self-generation of heat
631731

MWh fuel consumed for self-generation of steam
27548

MWh fuel consumed for self-generation of cooling
<Not Applicable>

MWh fuel consumed for self- cogeneration or self-trigeneration
<Not Applicable>

Comment

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
China

Sourcing method
Unbundled procurement of energy attribute certificates (EACs)

Energy carrier
Electricity

Low-carbon technology type
Large hydropower (>25 MW)

Low-carbon energy consumed via selected sourcing method in the reporting year (MWh)
7000

Tracking instrument used
I-REC

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?
Yes

Commissioning year of the energy generation facility (e.g. date of first commercial operation or repowering)
2013

Comment

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

Sourcing method
Unbundled procurement of energy attribute certificates (EACs)

Energy carrier
Electricity

Low-carbon technology type
Wind

Low-carbon energy consumed via selected sourcing method in the reporting year (MWh)
25548

Tracking instrument used
I-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
United States of America

Sourcing method
Unbundled procurement of energy attribute certificates (EACs)

Energy carrier
Electricity

Low-carbon technology type
Wind

Low-carbon energy consumed via selected sourcing method in the reporting year (MWh)
676

Tracking instrument used
I-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)
2019

Comment

Country/area of low-carbon energy consumption
Argentina

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
Wind

Low-carbon energy consumed via selected sourcing method in the reporting year (MWh)
16967

Tracking instrument used
Contract

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

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
Spain

Sourcing method
Financial (virtual) power purchase agreement (VPPA)

Energy carrier
Electricity

Low-carbon technology type
Solar

Low-carbon energy consumed via selected sourcing method in the reporting year (MWh)
69040

Tracking instrument used
Contract

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

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)
2021

Comment

Country/area of low-carbon energy consumption
Spain

Sourcing method
Retail supply contract with an electricity supplier (retail green electricity)

Energy carrier
Electricity

Low-carbon technology type
Solar

Low-carbon energy consumed via selected sourcing method in the reporting year (MWh)
40595

Tracking instrument used
Contract

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

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)
2019

Comment

Country/area of low-carbon energy consumption
Mexico

Sourcing method
Retail supply contract with an electricity supplier (retail green electricity)

Energy carrier
Electricity

Low-carbon technology type
Wind

Low-carbon energy consumed via selected sourcing method in the reporting year (MWh)
15654

Tracking instrument used
Contract

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

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
China

Sourcing method
Purchase from an on-site installation owned by a third party (on-site PPA)

Energy carrier
Electricity

Low-carbon technology type
Solar

Low-carbon energy consumed via selected sourcing method in the reporting year (MWh)
1473

Tracking instrument used
Contract

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?
Yes

Commissioning year of the energy generation facility (e.g. date of first commercial operation or repowering)
2022

Comment

Country/area of low-carbon energy consumption
India

Sourcing method
Retail supply contract with an electricity supplier (retail green electricity)

Energy carrier
Electricity

Low-carbon technology type
Solar

Low-carbon energy consumed via selected sourcing method in the reporting year (MWh)
7594

Tracking instrument used
Contract

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?
Yes

Commissioning year of the energy generation facility (e.g. date of first commercial operation or repowering)
2019

Comment

C8.2g

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

Country/area
Argentina

Consumption of purchased electricity (MWh)
34683

Consumption of self-generated electricity (MWh)
0

Is this electricity consumption excluded from your RE100 commitment?
<Not Applicable>

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]
34683

Country/area
Belgium

Consumption of purchased electricity (MWh)
70403

Consumption of self-generated electricity (MWh)
0

Is this electricity consumption excluded from your RE100 commitment?
<Not Applicable>

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]
70403

Country/area
Bosnia & Herzegovina

Consumption of purchased electricity (MWh)
12310

Consumption of self-generated electricity (MWh)
0

Is this electricity consumption excluded from your RE100 commitment?
<Not Applicable>

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]
12310

Country/area
Brazil

Consumption of purchased electricity (MWh)
136809

Consumption of self-generated electricity (MWh)
0

Is this electricity consumption excluded from your RE100 commitment?
<Not Applicable>

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]
136809

Country/area
Canada

Consumption of purchased electricity (MWh)
61267

Consumption of self-generated electricity (MWh)
0

Is this electricity consumption excluded from your RE100 commitment?
<Not Applicable>

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]
61267

Country/area
China

Consumption of purchased electricity (MWh)
246127

Consumption of self-generated electricity (MWh)
0

Is this electricity consumption excluded from your RE100 commitment?
<Not Applicable>

Consumption of purchased heat, steam, and cooling (MWh)
15834

Consumption of self-generated heat, steam, and cooling (MWh)
0

Total non-fuel energy consumption (MWh) [Auto-calculated]
261961

Country/area
Colombia

Consumption of purchased electricity (MWh)
39008

Consumption of self-generated electricity (MWh)
0

Is this electricity consumption excluded from your RE100 commitment?
<Not Applicable>

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]
39008

Country/area
Czechia

Consumption of purchased electricity (MWh)
6340

Consumption of self-generated electricity (MWh)
0

Is this electricity consumption excluded from your RE100 commitment?
<Not Applicable>

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]
6340

Country/area
Denmark

Consumption of purchased electricity (MWh)
38648

Consumption of self-generated electricity (MWh)
0

Is this electricity consumption excluded from your RE100 commitment?
<Not Applicable>

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]
38648

Country/area
Estonia

Consumption of purchased electricity (MWh)
4939

Consumption of self-generated electricity (MWh)
0

Is this electricity consumption excluded from your RE100 commitment?
<Not Applicable>

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]
4939

Country/area
Finland

Consumption of purchased electricity (MWh)
4916

Consumption of self-generated electricity (MWh)
0

Is this electricity consumption excluded from your RE100 commitment?
<Not Applicable>

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]
4916

Country/area
France

Consumption of purchased electricity (MWh)
288589

Consumption of self-generated electricity (MWh)
0

Is this electricity consumption excluded from your RE100 commitment?
<Not Applicable>

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]
288589

Country/area
Germany

Consumption of purchased electricity (MWh)
321050

Consumption of self-generated electricity (MWh)
0

Is this electricity consumption excluded from your RE100 commitment?
<Not Applicable>

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]
321050

Country/area
India

Consumption of purchased electricity (MWh)
22573

Consumption of self-generated electricity (MWh)
0

Is this electricity consumption excluded from your RE100 commitment?
<Not Applicable>

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]
22573

Country/area
Italy

Consumption of purchased electricity (MWh)
61423

Consumption of self-generated electricity (MWh)
0

Is this electricity consumption excluded from your RE100 commitment?
<Not Applicable>

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]
61423

Country/area
Mexico

Consumption of purchased electricity (MWh)
102193

Consumption of self-generated electricity (MWh)
0

Is this electricity consumption excluded from your RE100 commitment?
<Not Applicable>

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]
102193

Country/area
Netherlands

Consumption of purchased electricity (MWh)
103358

Consumption of self-generated electricity (MWh)
0

Is this electricity consumption excluded from your RE100 commitment?
<Not Applicable>

Consumption of purchased heat, steam, and cooling (MWh)
22113

Consumption of self-generated heat, steam, and cooling (MWh)
0

Total non-fuel energy consumption (MWh) [Auto-calculated]
125471

Country/area
Norway

Consumption of purchased electricity (MWh)
22173

Consumption of self-generated electricity (MWh)
0

Is this electricity consumption excluded from your RE100 commitment?
<Not Applicable>

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]
22173

Country/area
Philippines

Consumption of purchased electricity (MWh)
12009

Consumption of self-generated electricity (MWh)
0

Is this electricity consumption excluded from your RE100 commitment?
<Not Applicable>

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]
12009

Country/area
Poland

Consumption of purchased electricity (MWh)
98463

Consumption of self-generated electricity (MWh)
0

Is this electricity consumption excluded from your RE100 commitment?
<Not Applicable>

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]
98463

Country/area
Romania

Consumption of purchased electricity (MWh)
11557

Consumption of self-generated electricity (MWh)
0

Is this electricity consumption excluded from your RE100 commitment?
<Not Applicable>

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]
11557

Country/area
Russian Federation

Consumption of purchased electricity (MWh)
4494

Consumption of self-generated electricity (MWh)
0

Is this electricity consumption excluded from your RE100 commitment?
<Not Applicable>

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]
4494

Country/area
Slovakia

Consumption of purchased electricity (MWh)
12272

Consumption of self-generated electricity (MWh)
0

Is this electricity consumption excluded from your RE100 commitment?
<Not Applicable>

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]
12272

Country/area

South Africa

Consumption of purchased electricity (MWh)
51128

Consumption of self-generated electricity (MWh)
0

Is this electricity consumption excluded from your RE100 commitment?
<Not Applicable>

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]
51128

Country/area
Spain

Consumption of purchased electricity (MWh)
109635

Consumption of self-generated electricity (MWh)
0

Is this electricity consumption excluded from your RE100 commitment?
<Not Applicable>

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]
109635

Country/area
Sweden

Consumption of purchased electricity (MWh)
37412

Consumption of self-generated electricity (MWh)
0

Is this electricity consumption excluded from your RE100 commitment?
<Not Applicable>

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]
37412

Country/area
Thailand

Consumption of purchased electricity (MWh)
9843

Consumption of self-generated electricity (MWh)
0

Is this electricity consumption excluded from your RE100 commitment?
<Not Applicable>

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]
9843

Country/area
Thailand

Consumption of purchased electricity (MWh)
4299

Consumption of self-generated electricity (MWh)
0

Is this electricity consumption excluded from your RE100 commitment?
<Not Applicable>

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]
4299

Country/area
United Kingdom of Great Britain and Northern Ireland

Consumption of purchased electricity (MWh)
377346

Consumption of self-generated electricity (MWh)
0

Is this electricity consumption excluded from your RE100 commitment?
<Not Applicable>

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]
377346

Country/area
United States of America

Consumption of purchased electricity (MWh)
2646353

Consumption of self-generated electricity (MWh)
0

Is this electricity consumption excluded from your RE100 commitment?
<Not Applicable>

Consumption of purchased heat, steam, and cooling (MWh)
262109

Consumption of self-generated heat, steam, and cooling (MWh)
0

Total non-fuel energy consumption (MWh) [Auto-calculated]
2908462

C-CH8.3

(C-CH8.3) Does your organization consume fuels as feedstocks for chemical production activities?
No

C9. Additional metrics

C9.1

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

Description
Waste

Metric value
0.64

Metric numerator
Landfill waste (MT)

Metric denominator (intensity metric only)
Production tonnage (MT)

% change from previous year
7.6

Direction of change
Decreased

Please explain
We have a target to reduce landfill waste intensity 5% year over year as part of our Impact 2025 strategy. We achieved a landfill waste intensity reduction of 7.6%, well above our year-over-year target of 5%. To continue to meet our annual waste targets in 2023, we are assessing further potential routes of improvement and identifying opportunities we can explore with our worst performing facilities.

Description
Energy usage

Metric value
1.51

Metric numerator
Total Energy Use (MWh)

Metric denominator (intensity metric only)
Production Tonnage (MT)

% change from previous year
3.1

Direction of change
Increased

Please explain
Energy intensity (energy use per metric ton of production) increased by around 3% from the previous year, failing to meet our Impact 2025 target of a 1% year-over-year reduction. This is predominantly due to a reduction in volume, which results in production inefficiencies.

Description
Other, please specify (Scope 1 emissions Intensity)

Metric value
0.04

Metric numerator
Scope 1 emissions (CO2e):

Metric denominator (intensity metric only)
Production Volume (Tonnes Produced):

% change from previous year
0

Direction of change
No change

Please explain

Description
Other, please specify (Scope 2 Market Based Emissions Intensity)

Metric value
0.43

Metric numerator
S2 Market Based emissions (CO2e): 1,802,041 MT

Metric denominator (intensity metric only)
Production Volume (Tonnes Produced): 4,162,067 MT

% change from previous year
0

Direction of change
No change

Please explain

Description
Other, please specify (Scope 2 Location Based Emissions Intensity)

Metric value
0.44

Metric numerator
S2 Location Based emissions (CO2e): 1,802,041 MT

Metric denominator (intensity metric only)
Production Volume (Tonnes Produced): 4,162,067 MT

% change from previous year
2

Direction of change

Decreased

Please explain

C-CH9.3a

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

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	Please select	

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	Third-party verification or assurance process in place

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
ERM CVS Assurance Report for Berry 2023 CDP Questionnaire.pdf

Page/ section reference
Whole Document (3 pages).

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 location-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
ERM CVS Assurance Report for Berry 2023 CDP Questionnaire.pdf

Page/ section reference
Whole Document (3 pages).

Relevant standard
ISAE3000

Proportion of reported emissions verified (%)
100

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
ERM CVS Assurance Report for Berry 2023 CDP Questionnaire.pdf

Page/ section reference
Whole Document (3 pages)

Relevant standard
ISAE3000

Proportion of reported emissions verified (%)
100

C10.1c

(C10.1c) Provide further details of the verification/assurance undertaken for your Scope 3 emissions and attach the relevant statements.

Scope 3 category
Scope 3: Purchased goods and services
Scope 3: Capital goods
Scope 3: Fuel and energy-related activities (not included in Scopes 1 or 2)
Scope 3: Upstream transportation and distribution
Scope 3: Waste generated in operations
Scope 3: Business travel
Scope 3: Employee commuting
Scope 3: Downstream transportation and distribution
Scope 3: End-of-life treatment of sold products

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
ERM CVS Assurance Report for Berry 2023 CDP Questionnaire.pdf

Page/section reference
Whole Document (3 pages)

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

C11.2

(C11.2) Has your organization canceled any project-based carbon credits within the reporting year?
No

C11.3

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

C11.3a

(C11.3a) Provide details of how your organization uses an internal price on carbon.

Type of internal carbon price
Shadow price

How the price is determined
Alignment with the price of allowances under an Emissions Trading Scheme
Alignment with the price of a carbon tax
Price/cost of voluntary carbon offset credits

Objective(s) for implementing this internal carbon price
Change internal behavior
Drive energy efficiency
Drive low-carbon investment
Identify and seize low-carbon opportunities
Navigate GHG regulations
Stress test investments

Scope(s) covered
Scope 1
Scope 2
Scope 3 (upstream)
Scope 3 (downstream)

Pricing approach used – spatial variance
Uniform

Pricing approach used – temporal variance
Static

Indicate how you expect the price to change over time
<Not Applicable>

Actual price(s) used – minimum (currency as specified in C0.4 per metric ton CO2e)
120

Actual price(s) used – maximum (currency as specified in C0.4 per metric ton CO2e)
120

Business decision-making processes this internal carbon price is applied to
Capital expenditure
Operations
Risk management
Opportunity management

Mandatory enforcement of this internal carbon price within these business decision-making processes
No

Explain how this internal carbon price has contributed to the implementation of your organization's climate commitments and/or climate transition plan
The analysis is performed at corporate level and then rolled out to divisional and facility level where necessary. The application of the shadow price is to analyse our future risk associated with energy prices, and better understand the regulation around it, and use that to chance internal behavior, and as an analysis tool for investments into low carbon technology and energy efficiency. At this time, the analysis is primarily being done to 1) better understand potential future risks relating to Carbon pricing, and being able to estimate the potential magnitude of these risks on an annual basis 2) increase awareness of potential energy price inflation driven by increased carbon pricing, and associated price inflation for our raw material supply. The carbon pricing analysis has raised awareness on our strategy to manage our carbon usage and we are identifying how to use this for analysis for individual projects, such as how to fund renewable energy projects on an annual basis.

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
Engagement & incentivization (changing supplier behavior)

Details of engagement
Directly work with suppliers on exploring corporate renewable energy sourcing mechanisms

% of suppliers by number
100

% total procurement spend (direct and indirect)
50

% of supplier-related Scope 3 emissions as reported in C6.5
50

Rationale for the coverage of your engagement
We have quarterly meetings with our largest resin suppliers, which make up 100% of our critical suppliers by number, and over 50% of total procurement spend/Scope 3 emissions from our suppliers. As the majority of our Scope 3 emissions come from the purchase of resin, we work to collaborate with these critical suppliers to explore avenues to reduce their direct emissions, which in turn would decrease the emission factors associated with the resin that we purchase, reducing the largest part of our Scope 3 footprint.

Impact of engagement, including measures of success
By working to accelerate our resin suppliers' innovation in regards to advanced recycling and producing recycled resin, which reduces GHG emissions, we have now secured commitments of 300 million lbs of resin from advanced recycling from 2025, which, once in place, will significantly reduce our scope 3 emissions vs virgin resin. This is just one measurable result of working with these suppliers to collaborate to increase the circularity of resin, and decrease the carbon intensity of the supply chain and plastics' industry as a whole. Additionally, we have seen global emission factors for the emissions relating to the Cradle-to-Incoming Materials, and Virgin Resin Production fall substantially from 2011 to 2021. For example, the PP related factors fell by 16.8% (as defined by ACC), and HDPE factors fell by 15%. Although we cannot directly attribute these reductions to our specific engagement, they are the result of ourselves, our supply chain, and the industry collaborating to explore avenues for emissions reduction.

Comment

Type of engagement
Information collection (understanding supplier behavior)

Details of engagement
Collect other climate related information at least annually from suppliers

% of suppliers by number
78

% total procurement spend (direct and indirect)
42

% of supplier-related Scope 3 emissions as reported in C6.5
42

Rationale for the coverage of your engagement
Leveraged by EcoVadis, we use a two step process to identifying and mitigate ESG risk, including climate risk, in our supply chain. We use EcoVadis IQ to analyze the risk across the whole of our supply chain. Through this process a number of suppliers can be identified as having a high level of inherent risk. We require these suppliers that we identify as high risk to complete an additional comprehensive ESG assessment, which includes an assessment of Climate Risk, through the EcoVadis Platform, in addition to all critical suppliers having to take the same assessment. By ensuring that all critical and high risk suppliers undertake this assessment, we can reduce climate risk in our supply chain, and also raise awareness within our supply chain for the actions that are required as we move towards a net-zero world.

Impact of engagement, including measures of success
So far we have analyzed 2,016 suppliers have been analysed through our system, 20% of our total supply chain, with 52 suppliers having been identified as high risk so far. These 52 are among 281 suppliers have undertaken the additional assessment, with a total of 78% of our high risk and critical suppliers having completed this assessment, with at least 73% of suppliers scoring a silver or higher rating for climate. After completion, any that fall short of our ESG, or Climate Risk, expectations are asked to implement corrective action (47 suppliers have completed 562 pieces of corrective action in the last 12 months).

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	Run an engagement campaign to educate customers about the climate change impacts of (using) your products, goods, and/or services

% of customers by number

100

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

100

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

Berry Global's customers have significant control over the design choices and climate change impact related to the packaging supplied to them which can be positively influenced by an increased awareness of the impacts of design and material choices. Over the last 3 years we have initiated a webinar programme for our customers on topics such as design for the circular economy and chemical recycling. These webinars are open to all of our customers and engagement is sought through direct customer communications and advertisement of the webinars on social media and the Berry Global website.

Additionally, Our R&D and innovation teams work with all customers to be able to provide sustainable solutions and meet their needs. This is approached differently which each customer depending on their needs, but our teams work to supply a number of different solutions which will reduce the customers CO2e footprint and/or other environmental impacts. We are also able to customers with LCAs for potential solutions to compare environmental impacts, to make sure we deliver the best product available.

Impact of engagement, including measures of success

Through the Berry Global webinars customers gain a greater understanding of the changes they can make to their products to reduce their climate impact. Success of webinars is measured through engagement (number of attendees) and also on any follow up discussions that occur as a result of webinars.

Ultimate success is measured in terms of increased sales of climate-advantaged products. A number of successful projects have begun implementation, or have been implemented, during FY22 as a result of working closely with the customer to provide a more sustainable solution, such as light weighting of bottles (reducing CO2e impact during manufacturing and transport), increased use of PCR (reducing CO2e impact from raw materials) and increasing the recyclability of our products (reducing net CO2e emissions at EoL). We also measure the success of our work with our customers through customer satisfaction surveys, which include questions regarding our ability to meet our customers sustainability needs. We believe through webinars and one-on-one discussions with our trained sales staff directly with suppliers, we hit 100% of our critical customers by both number and scope 3 emissions.

One main example of success measure is the amount of recycled content we use in our products. Due to their reduced climate change impacts compared to virgin resin we have been promoting the impact of using recycled content to our customers through webinars, the production of Life-cycle-analysis comparison reports, and direct engagement with our R&D teams. The amount of PCR used in our products has risen from 2.3% in 2020 to 3.4% in 2022 as a direct result of customer demand through our customer engagement processes. We have undertaken similar engagement with our customers regarding the use of recyclable products; educating them on the climate-benefits of having us produce recyclable products for them. As a result of this process, 79% of our products are now recyclable, and we have developed validated recyclable solutions for an additional 11% of key product lines and are working with customers to implement these solutions in FY23.

C12.1d

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

As a plastics converter, Berry Global represents just one part of a much larger supply chain which ranges from raw material suppliers to the waste and resource management services that handle our products at the end of their lifecycle. As a result, it is not always possible for us to work in isolation to make advancements in areas that impact across the supply chain. In addition to our customers and suppliers, we therefore seek to collaborate with relevant international organisations, trade associations, charities and nongovernmental organisations that are involved with the plastic supply chain. This allows us to provide input into legislative changes and to work in partnership on areas

such as educational initiatives. Engagement activities throughout the rest of the supply chain are treated as equal priorities, we see the value in engaging with all aspects of the supply chain.

As well as those directly involved in our supply chain, we are also involved with many external organisations whose work impacts and influences our business activities related to sustainability and climate change. Liaising with non-governmental organisations (NGOs), for example, gives us the opportunity to highlight the need for the establishment of a more standardized system for the collection of materials for recycling. We can provide advice for best practice design and manufacturing for the circular economy, such as our work with the Ellen MacArthur Foundation. At individual site level, we regularly get involved with schools and colleges both to provide information and education on plastics' role in our world and to promote career opportunities within the Group and the wider industry. We regularly meet with legislators and other opinion formers to ensure they have a greater understanding of our operations. This also enables us to provide input into discussions surrounding any proposed legislative or regulatory developments.

Success can be measured by positive outcomes achieved during the reporting year. This includes educating our supply chain on environmental and climate change topics. To educate around the role of plastics in today's environmentally-focused world, we provide regular support such as visits to our factories and training facilities for those in the supply chain or indirectly related to the supply chain such as educational visits. We have

held a number of webinars on climate and sustainability related topics and updated the sustainability area of the Berry Global website to increase education on this topic.

Success can also be measured through our increased engagement with organisations during the reporting year. We are a signatory of the Ellen MacArthur Global commitment and also the Alliance to End Plastic Waste, and continue to work with both organisations with a primary focus to reduce the climate related impact of plastic and packaging by driving circular economies. We are also represented on the boards of RecyClass, the international design tool for checking the recyclability of plastic packaging, and The Polyolefin Circular Economy Platform (PCEP), established by the European plastics industry to encourage and support strong value chain cooperation in the advancement of the circular economy. We are also still actively involved in The Circular Plastics Alliance (CPA), set up in 2019 by the European Commission, to drive plastic recycling of plastics across Europe.

An example of our engagement with the wider supply chain is Berry Global's engagement with with policy makers and influencers, particularly in Europe, to explain and demonstrate how, used in the correct way, plastic can still be a force for good. One of the most effective ways is to show people around our factories so they can see our operations at first hand and talk to the people involved.

C12.2

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

No, but we plan to introduce climate-related requirements within the next two years

C12.3

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

Row 1

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

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?

No, but we plan to have one in the next two years

Attach commitment or position statement(s)

<Not Applicable>

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

Berry generally does not get involved with policy, especially at regional levels. Our engagements primarily consist of signing onto support letters, and these interactions are specifically targeted toward increasing the availability of recycling or renewable energy and are driven by the sustainability department, which easily ensures alignment. Since Berry does not generally get involved with policy, any decisions to get involved are approved by the CEO, who ensures alignment with our global strategies, including on climate change.

Primary reason for not engaging in activities that could directly or indirectly influence policy, law, or regulation that may impact the climate

<Not Applicable>

Explain why your organization does not engage in activities that could directly or indirectly influence policy, law, or regulation that may impact the climate

<Not Applicable>

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?
No, we did not attempt to influence their 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
American Chemistry Council Plastics Division encourages reduced impacts on natural resources, minimized waste generation, and a shift toward renewable energy; all of which reduces greenhouse gas impacts. They also encourage policy decisions to be guided by scientific data that measures the impacts of products over their life cycle. To support climate progress, ACC calls on Congress to enact legislation to: Increase government investment and scientific resources to develop and deploy low emissions technologies in the manufacturing sector; Adopt transparent, predictable, technology- and revenue-neutral, market-based, economy-wide carbon price signals; and Encourage adoption of emissions-avoiding solutions and technologies throughout the economy to achieve significant emissions savings.
Berry generally does not get involved with policy, especially at regional levels. Our engagements primarily consist of signing onto support letters, and these interactions are specifically targeted toward increasing the availability of recycling or renewable energy and are driven by the sustainability department, which easily ensures alignment. Since Berry does not generally get involved with policy, any decisions to get involved are approved by the CEO, who ensures alignment with our global strategies, including on climate change.

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
<Not Applicable>

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, incorporating the TCFD recommendations

Status
Complete

Attach the document

Page/Section reference
Governance, Strategy, Risks & Opps outlined on pages 37-39
Emissions metrics and targets outlined on pages 40-42, 90-91
Other GHG related metrics on pages 23-25,43-45,91-93

Content elements
Governance
Strategy
Risks & opportunities
Emissions figures
Emission targets
Other metrics

Comment
Stand-alone TCFD report guides users to the pages above and our latest published CDP report.

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	Business Ambition for 1.5C Science Based Targets Network (SBTN) Task Force on Climate-related Financial Disclosures (TCFD)	Berry is a member of the Business Ambition for 1.5°C Campaign, having joined in 2021. As part of this membership we have committed to science-based, 1.5°C ambition. This commitment is in the form of two SBTi approved targets; to reduce our Scope 1&2 emissions by 25% by 2025 from a 2019 baseline, and to reduce our Scope 3 emissions by 25% over the same time period. As part of our ongoing engagement we are committed to reporting annual company-wide GHG emissions and progress against our targets through our sustainability reports, website, and or this CDP questionnaire. Additionlly we are part of the Science Based Targets Network, having set those short term SBTi targets mentioned above in 2021. We also complete an annual Task Force on Climate-related Financial Disclosures (TCFD) report to showcase our climate governance, strategy and risk management process alignment with the TCFD.

C15. Biodiversity

C15.1

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

	Board-level oversight and/or executive management-level responsibility for biodiversity-related issues	Description of oversight and objectives relating to biodiversity	Scope of board-level oversight
Row 1	Yes, both board-level oversight and executive management-level responsibility	The Berry Global board hold the highest level of direct responsibility for decisions relating to the company strategy in respect of all areas inclusive of environmental issues such as biodiversity. The board ensures Berry Global operates to the highest standards in all aspects of governance and risk management. The Berry Global board met 8 times during its 2021 fiscal year. The Berry Global board reviews the Company's long term strategic plans and the principal issues that the company will face in the future (including biodiversity) during at least one Board meeting each year.	<Not Applicable>

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	Biodiversity-related public commitments	Initiatives endorsed
Row 1	No, but we plan to do so within the next 2 years	<Not Applicable>	<Not Applicable>

C15.3

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

Impacts on biodiversity

Indicate whether your organization undertakes this type of assessment
No, but we plan to within the next two years

Value chain stage(s) covered
<Not Applicable>

Portfolio activity
<Not Applicable>

Tools and methods to assess impacts and/or dependencies on biodiversity
<Not Applicable>

Please explain how the tools and methods are implemented and provide an indication of the associated outcome(s)
<Not Applicable>

Dependencies on biodiversity

Indicate whether your organization undertakes this type of assessment
No, but we plan to within the next two years

Value chain stage(s) covered
<Not Applicable>

Portfolio activity
<Not Applicable>

Tools and methods to assess impacts and/or dependencies on biodiversity
<Not Applicable>

Please explain how the tools and methods are implemented and provide an indication of the associated outcome(s)
<Not Applicable>

C15.4

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

C15.4a

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

Classification of biodiversity -sensitive area
Key Biodiversity Area (KBAs)

Country/area
United States of America

Name of the biodiversity-sensitive area
This is our first year of tracking biodiversity data and are not yet able to supply a breakdown by individual locations. We have identified 26 locations in proximity to a KBA.

Proximity
Up to 10 km

Briefly describe your organization's activities in the reporting year located in or near to the selected area
This is our first year of tracking biodiversity data and are not yet able to supply a breakdown by individual locations. All locations in question are manufacturing facilities with minimal impact on the surrounding area.

Indicate whether any of your organization's activities located in or near to the selected area could negatively affect biodiversity
Not assessed

Mitigation measures implemented within the selected area
<Not Applicable>

Explain how your organization's activities located in or near to the selected area could negatively affect biodiversity, how this was assessed, and describe any mitigation measures implemented
<Not Applicable>

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?	Type of action taken to progress biodiversity- related commitments
Row 1	No, we are not taking any actions to progress our biodiversity-related commitments, but we plan to within the next two years	<Not Applicable>