Berry Global Group, Inc - Climate Change 2022

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 48,000 employees and generated $13.9 billion of pro forma net sales in fiscal year 2021, from operations that span over 290 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 2020 - October 2nd, 2021.

C0.2

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

	Start date	End date	Indicate if you are providing emissions data for past reporting years	Select the number of past reporting years you will be providing emissions data for
Reporting year	October 1 2020	September 30 2021	No	<Not Applicable>

C0.3

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

Argentina
Australia
Belgium
Bosnia & Herzegovina
Brazil
Canada
China
Colombia
Czechia
Denmark
Estonia
Finland
France
Germany
Hong Kong SAR, China
Hungary
Iceland
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

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(s)	Please explain
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 met 4 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 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 2021 fiscal year the audit committee met 4 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	Reviewing and guiding strategy Reviewing and guiding major plans of action Reviewing and guiding risk management policies Reviewing and guiding business plans Setting performance objectives Monitoring implementation and performance of objectives Monitoring and overseeing progress against goals and targets for addressing climate-related issues	<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 2021 fiscal year the board met 4 times. 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 4 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 4 times during the Company's 2021 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.

Name of the position(s) and/or committee(s)	Reporting line	Responsibility	Coverage of responsibility	Frequency of reporting to the board on climate-related issues
Chief Executive Officer (CEO)	<Not Applicable>	Both assessing and managing climate-related risks and opportunities	<Not Applicable>	Quarterly

C1.2a

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

The Berry Global CEO, who is also the Chair of the Berry Global Board, holds overall responsibility for corporate strategy governance, performance, internal controls, and risk management. The responsibility for climate-related issues therefore rests ultimately with the CEO and the Berry Global Board. Climate-related issues are monitored by the CEO and the Board, if these are raised by the Chief Legal Officer as part of the Company's annual Enterprise Risk Assessment process, as reported to the Berry Global Audit & Finance Committee, Berry Global Nominating and Governance Committee, Chief Strategy Officer, or the Executive VP Operations . The Chief Strategy Officer and his team, inclusive of the company VP Sustainability, also raise climate-related issues to the CEO independent of the Enterprise Risk Assessment as they arise. The Berry Global Chief Strategy Officer reports directly to the CEO and is responsible for setting and implementing the overall strategy for Berry Global. Climate-related risks and opportunities factor directly into this, and are monitored by the Chief Strategy Officer through oversight of the results of the ERA, which will identify any significant issues that need to be assessed as to their impact on Company strategy. The VP of Sustainability, whose role covers climate-related issues such as GHG targets, reporting and compliance, reports directly to the Chief Strategy Officer and completes an annual carbon and physical climate risk assessment in addition to the ERA. Results of this assessment are reported through the Chief Strategy Officer to the CEO and Board Chair.

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	We provide internal and external recognition for employees working at facilities that perform the best year-over-year in relation to our climate-related KPIs.

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	Type of incentive	Activity incentivized	Comment
Facilities manager	Non-monetary reward	Energy reduction project Energy reduction target	Energy performance is tracked on and reported monthly. Each month, the facilities that have performed the best year-over-year are recognized for their achievements. The recognition is done in a monthly email that goes to executive leadership, operations leadership, and energy reduction focal point(s) at each facility. Additionally, we have a separate recognition system for sharing best practices. Whenever a site completes a significant energy reduction or efficiency project, a summary of the project is sent out to executive leadership, operations leadership, and energy reduction focal point(s) at each facility. At that time, the entire team involved with implementing the project is recognized for their achievements.

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:

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 multi-disciplinary Berry Global Enterprise Risk Assessment, annual carbon risk assessment in line with TCFD guidelines, and quarterly meetings with key resin suppliers to assess carbon risk.

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. This process is carried out by a 3rd party every other year in order to remain subjective, the process is carried out internally on alternate years.

The ERA identifies risk through a number of processes. 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 (immediate 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. 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 quarterly with out key resin suppliers to understand their carbon strategy, and how they are approaching a strategy to achieve net zero.

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

Berry Global operates over 290 manufacturing sites globally across a number of different countries, uses over 6.2 million MWh of energy annually and has a Scope 1 & 2 CO2e footprint of almost 2 million MT. With the increased use of carbon pricing, this has the potential to increase our direct cost of energy. 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
Medium

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

Potential financial impact figure (currency)
24070000

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

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

Explanation of financial impact figure
To calculate the potential Impact figure 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. 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. For example, our facilities in Sweden already operate with a carbon price of $119 USD, so we anticipate very little annual increase, whereas the majority of our sites in the US operate in regions where there is no carbon price in place ($0 USD/MT CO2e). The formula for the calculation per region is (X MT CO2e * $120) - (X MT CO2e * Current Tax rate) = Additional Tax by 2030, which can then be summed.

With this methodology, we have anticipated a potentiaL total annual Carbon Tax risk annually of $217 million in 2030, which is an average annual increase of 24 million p.a. ($216,615,316 USD /9 years=$24,068,368 USD, rounded to $24,070,000 USD.

Cost of response to risk
14610000

Description of response and explanation of cost calculation
In order to completely mitigate the potential impact of carbon taxes, we would need to offset our direct use of energy onsite; our Scope 1 emissions, and purchase renewable energy to eliminate Scope 2 emissions.

Based on our 2021 Fiscal year Scope 1 emissions of 172,225 MT CO2e, and a current cost to offset these emissions of $15-50 USD/MT CO2e, we estimate the annual cost of offsetting these emissions to be between $2.5-8.6m USD. [172,225*$15 USD = ~$2,583,375 USD, 172,225*$50 USD= ~$8,611,250 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.

Based on our 2021 Fiscal Scope 2 emissions of 1,802,041 MT CO2e, and an average REC price of $5 USD, we estimate the annual cost of purchasing 100% renewable energy to be around $9m USD. [1,802,041*5 = $9,010,205 USD]. This should be considered a conservative estimate; in-practice, more cost-effective methods would be used to procure and produce renewable energy, with some solutions being financial beneficial. 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.

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 $14.6m [(($2.5m USD + $8.6m USD) / 2) + $9.0m USD = $14,607,518 USD, rounded to $14,610,000]. We understand this 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
Increased use of carbon pricing has the potential to increase energy costs for Berry's raw material suppliers, when this cost is passed down the supply chain it therefore becomes 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 medium magnitude on our business as a whole.

Time horizon
Medium-term

Likelihood
Likely

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)
60420000

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.

Through our annual scope 3 analysis we have determined the carbon impact to produce all the resin we purchased to be around 5,035,354 MT CO2e. We have completed anaylsis based on the current location of our most critical suppliers, and have estimated that the average annual increase to produce our purchased resin will be in the region of $12 USD/MT CO2e. This would therefore result in an overall potential annual impact in the order of $40 million USD [5,035,354*$12 USD= $60,424,248 USD, rounded to $60,420,000].

However, since producing plastic resin is typically less energy intensive than alternatives, such as paper, metal, and glass, we believe we could be well positioned to capture additional market share; even though our costs would increase for our raw materials, this may be offset by increased sales, as plastics would be less affected than alternative substrates, on a functional unit basis. This analysis is not factored into the Potential Impact Figure as we are using a conservative estimate.

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 conventual 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. 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 2021, products in CPI & CPNA derived from fossil fuels represented approximately 53% of Berry sales, so the risk to the company is therefore significant, with medium magnitude.

Time horizon
Long-term

Likelihood
Unlikely

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)
73405000

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

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

Explanation of financial impact figure
We believe that due to alternative environmental and function benefits plastic provides over other substrates, such as a lower carbon footprint, the likelihood of consumers moving away from our products is very unlikely, and therefore we have estimated the risk of a potential loss of 1% of total sales of CPNA and CPI division.

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 $73 million USD, as their total combined revenue is $7.3 billion USD [($7,340,500,000/100)*1 = $73,405,000 USD] If loss of sales was higher than 1% due to decreased demand, then the financial impact would be higher and more significant.

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 shift, which we still consider very unlikely at this time. 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

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
Medium-high

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

Potential financial impact figure (currency)
138500000

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 $138,500,000 USD. [($13,850,000,000 USD/100)*1=$138,500,000 USD

Cost to realize opportunity
90000000

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 $90 million USD in FY2021. We do not disclose further detail about research spend, but the with these associated resources are very capable of 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 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
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)
0

Potential financial impact figure – maximum (currency)
10000000

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 over the next 10 years. 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-$10m USD.

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
Berry Global is committed 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 FY21, and are looking into avenues to increase our share of renewable energy from 2.8% in 2021.

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
Medium-high

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

Potential financial impact figure (currency)
216600000

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

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

Explanation of financial impact figure
By reducing our emissions through the procurement of renewable energy, we are taking the opportunity to avoid current and future carbon taxes.

At a company-wide level we therefore have estimated that there will be a carbon price of $120 USD/MT CO2e in 2030.

Extrapolating our FY20 emissions of 1.97 million MT CO2e to FY30, this would result in a total annual impact in 2030 of around $236.9m USD, compared to a current estimated annual impact of around $2035m USD. This leaves a potential total impact figure of around $216.6m USD [$236.9 USD -$20.3m USD = $216.6m USD] Through energy reduction initiatives and the procurement of renewable energy we have the opportunity to reduce and eliminate these emissions, and avoid this cost.

Cost to realize opportunity
14610000

Strategy to realize opportunity and explanation of cost calculation
In order to realize the opportunity to avoid carbon taxes, we would need to offset our direct use of energy onsite; our Scope 1 emissions, and purchase renewable energy to eliminate Scope 2 emissions.

Based on our 2021 Fiscal year Scope 1 emissions of 172,225 MT CO2e, and a current cost to offset these emissions of $15-50 USD/MT CO2e, we estimate the annual cost of offsetting these emissions to be between $2.5-8.6m USD. [172,225*$15 USD = ~$2,583,375 USD, 172,225*$50 USD= ~$8,611,250 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.

Based on our 2021 Fiscal Scope 2 emissions of 1,802,041 MT CO2e, and an average REC price of $5 USD, we estimate the annual cost of purchasing 100% renewable energy to be around $9m USD. [1,802,041*5 = $9,010,205 USD]. This should be considered a conservative estimate; in-practice, more cost-effective methods would be used to procure and produce renewable energy, with some solutions being financial beneficial. 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.

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 $14.6m [(($2.5m USD + $8.6m USD) / 2) + $9.0m USD = $14,607,518 USD, rounded to $14,610,000 USD]. We understand the need to reevaluate this strategy annually, as the price of RECs and Carbon Offsets can fluctuate wildly, and we anticipate this to be far higher in 2030 than current levels.

Comment

C3. Business Strategy

C3.1

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

Row 1

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

Publicly available transition plan
No

Mechanism by which feedback is collected from shareholders on your 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.

Frequency of feedback collection
More frequently than annually

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

Explain why your organization does not have a transition plan that aligns with a 1.5°C world and any plans to develop one in the future
<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 extent of 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 annual capex availability for energy reduction projects and sourcing of renewable energy was put in place. We are driving a clear focus on energy and GHG reduction across the business to ensure emissions reductions are in line with our strategy and climate modeling. 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. 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.
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 extent of 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 annual capex availability for energy reduction projects and sourcing of renewable energy was put in place. We are driving a clear focus on energy and GHG reduction across the business to ensure emissions reductions are in line with our strategy and climate modeling. 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. 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.
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 extent of 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 annual capex availability for energy reduction projects and sourcing of renewable energy was put in place. We are driving a clear focus on energy and GHG reduction across the business to ensure emissions reductions are in line with our strategy and climate modeling. 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. 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.

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.

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.
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 renewables 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.

C3.5

(C3.5) In your organization's financial accounting, do you identify spending/revenue that is aligned with your organization's transition to a 1.5°C world?

No, and we do not plan to in the next two years

C4. Targets and performance

C4.1

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

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)
176192

Base year Scope 2 emissions covered by target (metric tons CO2e)
2223158

Base year 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)
2399350

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 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]
1794713.8

Scope 1 emissions in reporting year covered by target (metric tons CO2e)
172225

Scope 2 emissions in reporting year covered by target (metric tons CO2e)
1802041

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)
1974266

% of target achieved relative to base year [auto-calculated]
70.3040936020701

Target status in reporting year
Underway

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

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 Impact 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 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 FY22, 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

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 emissions covered by target (metric tons CO2e)
9329766

Total base year emissions covered by target in all selected Scopes (metric tons CO2e)
9329766

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 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]
6978664.968

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 emissions in reporting year covered by target (metric tons CO2e)
8434521

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

8434521

% of target achieved relative to base year [auto-calculated]
38.0776915927958

Target status in reporting year
Underway

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

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 Impact 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>

Target reference number
Abs 3

Year target was set
2020

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 emissions covered by target (metric tons CO2e)
9329766

Total base year emissions covered by target in all selected Scopes (metric tons CO2e)
9329766

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 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 (%)
8.2

Total emissions in target year covered by target in all selected Scopes (metric tons CO2e) [auto-calculated]
8564725.188

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 emissions in reporting year covered by target (metric tons CO2e)
8434521

Total emissions in reporting year covered by target in all selected scopes (metric tons CO2e)
8434521

% of target achieved relative to base year [auto-calculated]
117.019247333958

Target status in reporting year
Achieved

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

Target ambition
2°C aligned

Please explain target coverage and identify any exclusions
Berry Global committed to reduce absolute scope 3 emissions 8% by 2025 from a 2019 base year, in line with a 2 degree Celsius scenario, and this target was approved by the SBTi. This target covered 100 of our upstream emissions across the whole business as per our reporting methodology laid out in our Impact Report, and in our submission to SBTi. We achieved this target, and then set an updated target in line with 1.5 degree Celsius, which is listed in CDP under Abs 2.

Plan for achieving target, and progress made to the end of the reporting year
<Not Applicable>

List the emissions reduction initiatives which contributed most to achieving this target
This target was achieved by working with our resin suppliers to reduce their operational emissions, which lead to a large reduction in the industry average emissions factors for the resin that we convert into our products. We will continue to communicate with these suppliers to see further reductions in this industry average. Additionally, we reduced our Scope 3 footprint by moving towards increased use of PCR, which has a much lower emission factor than virgin resin.

C4.2

(C4.2) Did you have any other climate-related targets that were active in the reporting year?
No other climate-related targets

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*	195	16796.2
Implementation commenced*	0	0
Implemented*	368	43974.1
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)
255.4

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)
1709130

Investment required (unit currency – as specified in C0.4)
1919763

Payback period
1-3 years

Estimated lifetime of the initiative
6-10 years

Comment
Across Berry we spent $1.919m on automation energy initiatives, saving 746,751 KWh of energy annually, which calculates at 255.4 MT of CO2e reduction across Scope 1 and Scope 2, using an average of 0.000342 MT CO2e per KWh. [756,751*0.000342=255.4]

The annual expected monetary savings is $1.709m, giving a payback period of 1-3 years. [1.919/1.709 = 1.12 years]

Initiative category & Initiative type

Energy efficiency in production processes	Compressed air

Estimated annual CO2e savings (metric tonnes CO2e)
8075.9

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)
3015408

Investment required (unit currency – as specified in C0.4)
2976264

Payback period
<1 year

Estimated lifetime of the initiative
6-10 years

Comment
Across Berry we spent $2.976m on Compressed air initiatives, saving 23,613,708 KWh of energy annually, which calculates to 8,075.9 MT of CO2e reduction across Scope 1 and Scope 2, using an average of 0.000342 MT CO2e per KWh. [23,613,708*0.000342=8,075.9]

The annual expected monetary savings is $3.015m, giving a payback period of <1 year. [2.976/3.015 = 0.987 years]

Initiative category & Initiative type

Energy efficiency in production processes	Cooling technology

Estimated annual CO2e savings (metric tonnes CO2e)
6515.3

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)
3420908

Investment required (unit currency – as specified in C0.4)
6311959

Payback period
1-3 years

Estimated lifetime of the initiative
6-10 years

Comment
Across Berry we spent $6.312m on Cooling Technology initiatives saving 19,050,655 KWh of energy annually, which calculates to 6,515.3 MT of CO2e reduction across

Scope 1 and Scope 2, using an average of 0.000342 MT CO2e per KWh. [19,050,655*0.000342=6,515.3]

The annual expected monetary savings is $3.421m, giving a payback period of 1-3 years. [6.312/3.421 = 1.85 years]

Initiative category & Initiative type

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

Estimated annual CO2e savings (metric tonnes CO2e)
3177.3

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)
997349

Investment required (unit currency – as specified in C0.4)
3935925

Payback period
1-3 years

Estimated lifetime of the initiative
6-10 years

Comment
Across Berry we spent $3.936m on HVAC initiatives, saving 9,290,429 KWh of energy annually, which calculates to 3,177.3 MT of CO2e reduction across Scope 1 and Scope 2, using an average of 0.000342 MT CO2e per KWh. [9,290,429*0.000342=3,177.3]

The annual expected monetary savings is $0.997m, giving a payback period in the 1-3 years category. [3.936/0.997 = 3.95 years]

Initiative category & Initiative type

Energy efficiency in buildings	Insulation

Estimated annual CO2e savings (metric tonnes CO2e)
237.2

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)
33727

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 improved building insulation, at no capital cost, saving 693,573 KWh of energy annually, which calculates to 237.2 MT of CO2e reduction across Scope 1 and Scope 2, using an average of 0.000342 MT CO2e per KWh. [693,573*0.000342=237.2]

The annual expected monetary savings is $33,727, giving instant payback (<1 years) [0 spent/33,727 savings per annum = instant payback]

Initiative category & Initiative type

Energy efficiency in buildings	Lighting

Estimated annual CO2e savings (metric tonnes CO2e)
10102.9

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)
1650230

Investment required (unit currency – as specified in C0.4)
292494

Payback period
<1 year

Estimated lifetime of the initiative
6-10 years

Comment
Across Berry we spent $0.292m on lighting energy initiatives, saving 29,540,680 KWh of energy annually, which calculates to 10,102.9 MT of CO2e reduction across Scope 2, using an average of 0.000342 MT CO2e per KWh. [29,540,680*0.000342=10,102.9]

The annual expected monetary savings is $1.650m, giving a payback period of < 1 year [1.650/0.292 = 0.17 years]

Initiative category & Initiative type

Energy efficiency in production processes	Machine/equipment replacement

Estimated annual CO2e savings (metric tonnes CO2e)
7161.3

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)
11958248

Investment required (unit currency – as specified in C0.4)
26521966

Payback period
1-3 years

Estimated lifetime of the initiative
6-10 years

Comment
Across Berry we spent $26.522m on replacing machinery/equipment, saving 20,939,414 KWh of energy annually, which calculates to 7,161.3 MT of CO2e reduction across Scope 1 and Scope 2, using an average of 0.000342 MT CO2e per KWh. [20,939,414*0.000342=7,161.3]

The annual expected monetary savings is $11.958m, giving a payback period in the 1-3 years category. [26.522/11.958 = 2.22 years]

Initiative category & Initiative type

Energy efficiency in buildings	Maintenance program

Estimated annual CO2e savings (metric tonnes CO2e)
58.3

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)
17000

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 improved our maintenance program, at no capital cost, saving 170,606 KWh of energy annually, which calculates to 58.3 MT of CO2e reduction across Scope 1 and Scope 2, using an average of 0.000342 MT CO2e per KWh. [170,606*0.000342=58.3]

The annual expected monetary savings is $17,000 giving instant payback (<1 years) as no capital was spent. [0 spent/17,000 savings per annum = instant payback]

Initiative category & Initiative type

Energy efficiency in production processes	Motors and drives

Estimated annual CO2e savings (metric tonnes CO2e)
1974.1

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)
802657

Investment required (unit currency – as specified in C0.4)
2189257

Payback period
1-3 years

Estimated lifetime of the initiative
6-10 years

Comment
Across Berry we spent $2.189m on upgrading motors and drives, saving 5,772,096 KWh of energy annually, which calculates to 1,974.1 MT of CO2e reduction across Scope 1 and Scope 2, using an average of 0.000342 MT CO2e per KWh. [5,772,096*0.000342=1,974.1]

The annual expected monetary savings is $0.803m, giving a payback period in the 1-3 years category. [2.189/0.803 = 2.73 years]

Initiative category & Initiative type

Non-energy industrial process emissions reductions	Process equipment replacement

Estimated annual CO2e savings (metric tonnes CO2e)
1672.2

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)
5198326

Investment required (unit currency – as specified in C0.4)
2048228

Payback period
<1 year

Estimated lifetime of the initiative
6-10 years

Comment
Across Berry we spent $2.048m on process equipment replacement where energy savings also occurred, saving 4,889,432 KWh of energy annually, which calculates to 1,672.2 MT of CO2e reduction across Scope 1 and Scope 2, using an average of 0.000342 MT CO2e per KWh. [4,889,432*0.000342=1,672.2]

The annual expected monetary savings is $5.198m, giving a payback period of < 1 year. [2.048/5.198 = 0.39 years]

Initiative category & Initiative type

Energy efficiency in production processes	Process optimization

Estimated annual CO2e savings (metric tonnes CO2e)
1662.8

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)
12481457

Investment required (unit currency – as specified in C0.4)
23171807

Payback period
1-3 years

Estimated lifetime of the initiative
6-10 years

Comment
Across Berry we spent $23.172m on process optimization, saving 4,861,936 KWh of energy annually, which calculates to 1662.8 MT of CO2e reduction across Scope 1 and Scope 2, using an average of 0.000342 MT CO2e per KWh. [4,861,936*0.000342=1662.8]

The annual expected monetary savings is $12.481m, giving a payback period in the 1-3 years category. [23.172/12.481 = 1.86 years]

Initiative category & Initiative type

Energy efficiency in production processes	Reuse of steam

Estimated annual CO2e savings (metric tonnes CO2e)
1497

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)
183197

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, saving 4,377,070 KWh of energy annually, which calculates to 1497 MT of CO2e reduction across Scope 1 and Scope 2, using an average of 0.000342 MT CO2e per KWh. [4,377,070*0.000342=1497]

The annual expected monetary savings is $183,197 giving instant payback (<1 years) as no capital was spent. [0 spent/17,000 savings per annum = instant payback]

Initiative category & Initiative type

Energy efficiency in production processes	Waste heat recovery

Estimated annual CO2e savings (metric tonnes CO2e)
1496.5

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)
102400

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 implemented waste heat recovery at no capital cost, saving 4,375,800 KWh of energy annually, which calculates to 1496.5 MT of CO2e reduction across Scope 1 and Scope 2, using an average of 0.000342 MT CO2e per KWh. [4,375,800*0.000342=1,496.5]

The annual expected monetary savings is $102,400 giving instant payback (<1 years) as no capital was spent. [0 spent/17,000 savings per annum = instant payback]

Initiative category & Initiative type

Energy efficiency in production processes	Smart control system

Estimated annual CO2e savings (metric tonnes CO2e)
88

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)
273685

Investment required (unit currency – as specified in C0.4)
595568

Payback period
1-3 years

Estimated lifetime of the initiative
6-10 years

Comment
Across Berry we spent $0.596m on smart control systems, saving 257,215 KWh of energy annually, which calculates to 88 MT of CO2e reduction across Scope 1 and Scope 2, using an average of 0.000342 MT CO2e per KWh. [257,215*0.000342=88]

The annual expected monetary savings is $0.274m, giving a payback period in the 1-3 years category. [0.596/0.274 = 2.18 years]

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.
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.
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 2021.
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.

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 9 facilities;
Amber
Columbus, GA
Zlin
Superfos Printing
Homer, LA
Macedon, NY
Milwaukee, WI
Pewaukee, WI
Schaumburg, IL

Details of structural change(s), including completion dates
All divestment's were completed during the fiscal year. Emissions for these facilities for months prior to the divestment are still included in 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	As part of our verification process in 2021, we learned that a large amount of energy usage at one of our largest facilities, Old Hickory, was incorrectly being reported in our Scope 1 emissions, rather than under Scope 2. Through this process we have now improved and updated our reporting methodology, with this data now correctly reported under Scope 2. Although the overall effect on our total Scope 1 and 2 emissions was minimal, this has meant that there is a large variance between our reported Scope 1 emissions in 2020 and in 2021, as a portion of these emissions now lie under Scope 2. Additionally, during FY21 we updated from using IEA 2017 emission factors to IEA 2021 emission factors for our global facilities, and EPA 2020 to EPA 2021 for our US facilities. With this update, some regions had large year over year improvements in grid factors, which can be reflected as a main driver in our overall reduction of Scope 2 emissions. Finally, we also had 7 facilities close during the FY21 reporting period, which reduced our overall Scope 1 and 2 emissions for FY21 when compared to previous years.

C5.1c

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

	Base year recalculation	Base year emissions recalculation policy, including significance threshold
Row 1	No, because the impact does not meet our significance threshold	In line with the SBTi expectations, we will reset our baseline as a result of acquisitions, divestment's, mergers, or reporting methodology changes that account for greater than 5% of annual GHG emissions.

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)
176192

Comment

Scope 2 (location-based)

Base year start
October 1 2018

Base year end
September 30 2019

Base year emissions (metric tons CO2e)
2234264

Comment

Scope 2 (market-based)

Base year start
October 1 2018

Base year end
September 30 2019

Base year emissions (metric tons CO2e)
2223158

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)
7818380

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)
597939

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)
463263

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)
225363

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)
7404

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)
21045

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)
10680

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)
138331

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)
47362

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)
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)
172225

Start date
<Not Applicable>

End date
<Not Applicable>

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
1885765

Scope 2, market-based (if applicable)
1802041

Start date
<Not Applicable>

End date
<Not Applicable>

Comment

C6.4

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

C6.4a

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

Source
Non-Production Facilities

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 (if applicable)
Emissions are not relevant

Explain why this source is excluded
As per our reporting methodology, emissions from non-manufacturing facilities, such as offices, are excluded as they are de minimis usage (<1% of total emissions).

Estimated percentage of total Scope 1+2 emissions this excluded source represents
0

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 0.5% of total emissions.

Source
Additional fuel sources at sites that predominately use Natural Gas

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

Relevance of location-based Scope 2 emissions from this source
No emissions from this source

Relevance of market-based Scope 2 emissions from this source (if applicable)
No emissions from this source

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.

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

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 FY21, as part of a process carried out by ERM, 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
Process emissions: SOx, NOx, VOCs, and Fugitive emissions such as refrigerants and air conditioning leaks.

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 (if applicable)
Emissions are not relevant

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.

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

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.

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)
6933258

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
Our purchased goods and services comprise of 3 categories, each calculated using a different methodology; our purchased resin, water, and other goods and services. We calculated emissions associated with purchased resin by multiplying the amount of resin purchased (MT) by the emission factor for that resin type, for that region. For example HDPE purchased in the US would be multiplied by a factor of 1.61 kg CO2e per kg purchased as per the ACC 2020. Through these calculations, we have a total emissions from purchased resin of 5,035,354 MT.

We calculated emissions associated with purchased water by multiplying the amount of municipal water withdrawals by a DEFRA 2021 factor of 0.149kg CO2e per cubic meter for water supply, and 0.272 kg CO2e per cubic meter for water treatment. This results in emissions of 3,646 MT. [(8,660,840M3 * 0.149) + (8,660,840M3 * 0.272) = 3,646,214 kg or 3,646MT]

To calculate emissions associated with other purchased goods we use the Quantis Scope 3 evaluator tool, which calculates the emissions associated with different purchases (such as wood, textiles, metals etc.) based on spend (USD). Through inputting our spend for each category, the tool calculated emissions of 1,894,258 MT. It does not break this down by category.

By summing the above, this means out total emissions are 6,933,258MT CO2e [5,035,354 + 3,646 + 1,894,258 = 6,933,258]

Capital goods

Evaluation status
Relevant, calculated

Emissions in reporting year (metric tons CO2e)
659391

Emissions calculation methodology
Spend-based method

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

Please explain
To calculate emissions associated with other purchased goods we use the Quantis Scope 3 evaluator tool, which calculates the emissions associated with capital goods purchases. Through inputting our capital goods spend for FY21 [676,000,000 USD] the tool calculated emissions of 659,391 MT CO2e, at an average of 0.975kg CO2e per USD. [676,000,000*0.9754299/1000=659,391MT]

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

Evaluation status
Relevant, calculated

Emissions in reporting year (metric tons CO2e)
459622

Emissions calculation methodology
Average data method

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

Please explain
Emissions were calculated by multiplying each energy type by the relevant Scope 3 emission factor from DEFRA 2021 and IEA 2019. For electricity this was a factor for WTT, T&D, and WTT(T&D), as well as WTT factors for Natural Gas, Gas Oil, Kerosene, HFO, Gasoline, Diesel, Coal, Steam and LPG. This resulted from total emissions from each category summing to 459,622 [Elec WTT [293,072] + Elec T&D [107,953] + Elec WTT (T&D) [20,995], Nat Gas [24,833] + Gas Oil [331] + Kerosene [62] + HFO [96] + Gasoline [200] + Diesel [478] + Coal [1,557] + Steam [8,815] + LPG [275] = 459,622

Upstream transportation and distribution

Evaluation status
Relevant, calculated

Emissions in reporting year (metric tons CO2e)
200111

Emissions calculation methodology
Fuel-based method
Distance-based method

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

Please explain
We estimated the emissions required required for estimated supply of resin to our facilities based on emission factors for rail, sea and HGV travel, and estimated distances from suppliers. The total of this estimate came to 33,782 MT. In addition, we also included the sum of all shipping where we, Berry, paid for delivery to our customers. This totaled at 166,328.

Summed, the total for this category is 200,111 [33,782+166,328 = 200,111]

Waste generated in operations

Evaluation status
Relevant, calculated

Emissions in reporting year (metric tons CO2e)
6751

Emissions calculation methodology
Waste-type-specific method

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

Please explain
We used the EPA WARM model to calculate emissions associated with our waste generated in our operations. We input the totals for waste land filled [21,727], Incinerated [397] and Incinerated with Energy Recovery [3,159] into the model, and the output was 6,751 MT CO2e.

Business travel

Evaluation status
Relevant, calculated

Emissions in reporting year (metric tons CO2e)
5775

Emissions calculation methodology
Supplier-specific method

Percentage of emissions calculated using data obtained from suppliers or value chain partners
50

Please explain
We are provided with this data direct from the travel agencies for all facilities excluding those as part of the RPC acquisition in 2019. We then extrapolate out this data to account for those facilities until we are able to source them directly from travel agencies. Based on the data provided, for FY21 this total extrapolation was 5,775 MT CO2e. At the total from this category is less than 1% of total Scope 3, greater accuracy is not required.

Employee commuting

Evaluation status
Relevant, calculated

Emissions in reporting year (metric tons CO2e)
9710

Emissions calculation methodology
Average data method
Distance-based method

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

Please explain
We calculate this based on the assumption that an average employee travels 50 miles each week commuting to/from work, 52 weeks of the year, by car. Using a car emission factor [Defra 2021] of 0.07903 kg CO2e per mile, this calculates to 9,710 MT CO2e. [47,255 employees * 50 miles * 52 weeks * 0.07903 /1000 = 9,710 MT CO2e]. At the total emissions from this category is less than 1% of total Scope 3, greater accuracy is not required.

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

Downstream transportation and distribution

Evaluation status
Relevant, calculated

Emissions in reporting year (metric tons CO2e)
110481

Emissions calculation methodology
Fuel-based method
Distance-based method

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

Please explain
Downstream transport of our products to our customers, when they are paid for by our customers, are calculated by our logistics team, who collect data for mileage and weight, and multiply by the relevant emissions factors [Defra 2021. The total of these calculations for FY21 came to 110,481 MT CO2e.

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)
49424

Emissions calculation methodology
Average product method
Waste-type-specific method

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

Please explain
To calculate these emissions we multiply our total production, split by region, by emissions factors for each end of life category based on the end of life split in those regions. End of life emission factors are from Defra 2021. As the total from this category is less than 1% of total Scope 3, greater accuracy is not required.

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.

C6.7

(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
0.0001425

Metric numerator (Gross global combined Scope 1 and 2 emissions, metric tons CO2e)
1974266

Metric denominator
unit total revenue

Metric denominator: Unit total
13850000000

Scope 2 figure used
Market-based

% change from previous year
25

Direction of change
Decreased

Reason for change
During 2021 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
0.474

Metric numerator (Gross global combined Scope 1 and 2 emissions, metric tons CO2e)
1974266

Metric denominator
metric ton of product

Metric denominator: Unit total
4162067

Scope 2 figure used
Market-based

% change from previous year
14.6

Direction of change
Decreased

Reason for change
During 2021 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.

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	171557	IPCC Sixth Assessment Report (AR6 - 100 year)
CH4	456	IPCC Sixth Assessment Report (AR6 - 100 year)
N2O	212	IPCC Sixth Assessment Report (AR6 - 100 year)

C7.2

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

Country/Region	Scope 1 emissions (metric tons CO2e)
Argentina	18
Australia	14
Belgium	284
Canada	5512
Colombia	188
Czechia	146
Denmark	70
Estonia	67
France	12733
Germany	22021
Iceland	552
India	10299
Italy	2636
Mexico	1100
Netherlands	7318
China	2892
Philippines	55
Poland	2760
Romania	106
Russian Federation	41
Slovakia	167
South Africa	293
Spain	755
Sweden	71
Thailand	40
Tunisia	31
United Kingdom of Great Britain and Northern Ireland	13199
United States of America	88800
Bosnia & Herzegovina	16
Norway	2
Brazil	0
Finland	39

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	22101
Engineered Materials	33342
Health, Hygiene & Specialties	87330
Consumer Packaging International	29452

C7.5

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

Country/Region	Scope 2, location-based (metric tons CO2e)	Scope 2, market-based (metric tons CO2e)
Argentina	10882	6634
Australia	3746	3746
Belgium	11608	11608
Brazil	15163	15163
Canada	8726	8726
Colombia	7197	7197
Czechia	4462	4462
Denmark	3913	3913
Estonia	3409	3409
Finland	476	476
Germany	113228	113228
Iceland	3	3
India	14626	14626
Italy	18202	18202
Mexico	37433	37433
Netherlands	49016	49016
Norway	224	224
China	165495	102955
Philippines	7235	7235
Poland	65384	65384
Romania	3714	3714
Russian Federation	2389	2389
Slovakia	1587	1587
South Africa	47950	47950
Spain	21496	14605
Sweden	489	489
Thailand	4178	4178
Tunisia	1715	1715
United Kingdom of Great Britain and Northern Ireland	80867	80867
United States of America	1156225	1146180
France	16128	16128
Bosnia & Herzegovina	8599	8599

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	566971	566761
Engineered Materials	325626	315791
Health, Hygiene & Specialties	476937	443206
Consumer Packaging International	516231	476283

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	Emissions value (percentage)	Please explain calculation
Change in renewable energy consumption	4704	Increased	0.2	In FY21 we increased the amount of renewable energy consumed by 11,671 MWh, from 165,337 MWh in FY20 to 177,008 MWh in FY21. 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 87,963 MT CO2e in FY20, to 83,259 MT CO2e in FY21. This meant there was a small decrease in emissions saved by using renewable energy of 4,704 MT CO2e, so for this question this is an increase of 4,704. This accounts for a 0.2% increase from previous years' emissions, which totaled 2,225,810 MT CO2e. [4,704/2,225,810*1000= 0.2%
Other emissions reduction activities	43974	Decreased	2	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 43,974 MT CO2e. This accounts for a 2.0% reduction from previous years' emissions, which totaled 2,225,810 MT CO2e. [43,974/2,225,810*1000= 2.0%
Divestment	29685	Decreased	1.3	During FY21 a number of sites were divested. As this did not meet our threshold for re-baselining, they are still included in our inventory up until the point of sale. In FY20, these sites represented 37,533MT CO2e, falling to 7,848 MT CO2e in FY21, a decrease of 29,685. This accounts for a 1.3% reduction from previous years' emissions, which totaled 2,225,810 MT CO2e. [29,685/2,225,810*1000= 1.3%
Acquisitions		<Not Applicable>		
Mergers		<Not Applicable>		
Change in output	86807	Increased	3.9	In FY21, Production Volume rose 3.9% year over year, from 4,006,262 MT in FY20, to 4,162,067 MT in FY21. We are unable to assign specific production increases to exact increases in emissions, so have aggregated that this would have lead to a 3.9% increase in emissions over the previous year, which totals 86,807 MT CO2e. This accounts for a 3.9% increase from previous years' emissions, which totaled 2,225,810 MT CO2e. [86807/2,225,810*1000= 3.9%
Change in methodology	269396	Decreased	12.1	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 FY21, improvements across almost all countries grid emission factors lead to an overall reduction of 269,396 MT CO2e from our inventory. This accounts for a 12.1% decrease from previous years' emissions, which totaled 2,225,810 MT CO2e. [269,396/2,225,810*1000= 12.1%
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	875317	875317
Consumption of purchased or acquired electricity	<Not Applicable>	177008	4920222	5097230
Consumption of purchased or acquired heat	<Not Applicable>	<Not Applicable>	<Not Applicable>	<Not Applicable>
Consumption of purchased or acquired steam	<Not Applicable>	0	265733	265733
Consumption of purchased or acquired cooling	<Not Applicable>	0	36038	36038
Consumption of self-generated non-fuel renewable energy	<Not Applicable>	<Not Applicable>	<Not Applicable>	<Not Applicable>
Total energy consumption	<Not Applicable>	177008	6097310	6274318

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
34042

MWh fuel consumed for self-generation of electricity
0

MWh fuel consumed for self-generation of heat
34042

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
48025

MWh fuel consumed for self-generation of electricity
0

MWh fuel consumed for self-generation of heat
48025

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
793250

MWh fuel consumed for self-generation of electricity
126275

MWh fuel consumed for self-generation of heat
638638

MWh fuel consumed for self-generation of steam
28337

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
875317

MWh fuel consumed for self-generation of electricity
126275

MWh fuel consumed for self-generation of heat
720705

MWh fuel consumed for self-generation of steam
28337

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.

Sourcing method
Unbundled energy attribute certificates (EACs) purchase

Energy carrier
Electricity

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

Country/area of low-carbon energy consumption

China

Tracking instrument used
I-REC

Low-carbon energy consumed via selected sourcing method in the reporting year (MWh)
100000

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

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

Comment

Sourcing method
Unbundled energy attribute certificates (EACs) purchase

Energy carrier
Electricity

Low-carbon technology type
Wind

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

Tracking instrument used
I-REC

Low-carbon energy consumed via selected sourcing method in the reporting year (MWh)
26971

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

Commissioning year of the energy generation facility (e.g. date of first commercial operation or repowering)
2020

Comment

Sourcing method
Unbundled energy attribute certificates (EACs) purchase

Energy carrier
Electricity

Low-carbon technology type
Wind

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

Tracking instrument used
I-REC

Low-carbon energy consumed via selected sourcing method in the reporting year (MWh)
681

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

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

Comment

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

Country/area of low-carbon energy consumption
Argentina

Tracking instrument used
Contract

Low-carbon energy consumed via selected sourcing method in the reporting year (MWh)
14750

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

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

2020

Comment

Sourcing method
Direct procurement from an off-site grid- connected generator e.g. Power purchase agreement (PPA)

Energy carrier
Electricity

Low-carbon technology type
Solar

Country/area of low-carbon energy consumption
Spain

Tracking instrument used
I-REC

Low-carbon energy consumed via selected sourcing method in the reporting year (MWh)
34606

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

Commissioning year of the energy generation facility (e.g. date of first commercial operation or repowering)
2021

Comment

C8.2g

(C8.2g) Provide a breakdown of your non-fuel energy consumption by country.

Country/area
Argentina

Consumption of electricity (MWh)
37787

Consumption of heat, steam, and cooling (MWh)
0

Total non-fuel energy consumption (MWh) [Auto-calculated]
37787

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

Country/area
Australia

Consumption of electricity (MWh)
5449

Consumption of heat, steam, and cooling (MWh)
0

Total non-fuel energy consumption (MWh) [Auto-calculated]
5449

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

Country/area
Belgium

Consumption of electricity (MWh)
69895

Consumption of heat, steam, and cooling (MWh)
0

Total non-fuel energy consumption (MWh) [Auto-calculated]
69895

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

Country/area
Bosnia & Herzegovina

Consumption of electricity (MWh)
11709

Consumption of heat, steam, and cooling (MWh)
0

Total non-fuel energy consumption (MWh) [Auto-calculated]
11709

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

Country/area
Brazil

Consumption of electricity (MWh)
145256

Consumption of heat, steam, and cooling (MWh)
0

Total non-fuel energy consumption (MWh) [Auto-calculated]
145256

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

Country/area
Canada

Consumption of electricity (MWh)
67244

Consumption of heat, steam, and cooling (MWh)
0

Total non-fuel energy consumption (MWh) [Auto-calculated]
67244

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

Country/area
China

Consumption of electricity (MWh)
258485

Consumption of heat, steam, and cooling (MWh)
16860

Total non-fuel energy consumption (MWh) [Auto-calculated]
275345

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

Country/area
Colombia

Consumption of electricity (MWh)
37359

Consumption of heat, steam, and cooling (MWh)
0

Total non-fuel energy consumption (MWh) [Auto-calculated]
37359

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

Country/area
Czechia

Consumption of electricity (MWh)
10083

Consumption of heat, steam, and cooling (MWh)
0

Total non-fuel energy consumption (MWh) [Auto-calculated]
10083

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

Country/area
Denmark

Consumption of electricity (MWh)
40271

Consumption of heat, steam, and cooling (MWh)
0

Total non-fuel energy consumption (MWh) [Auto-calculated]
40271

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

Country/area
Estonia

Consumption of electricity (MWh)
5057

Consumption of heat, steam, and cooling (MWh)
0

Total non-fuel energy consumption (MWh) [Auto-calculated]
5057

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

Country/area
Finland

Consumption of electricity (MWh)
5131

Consumption of heat, steam, and cooling (MWh)
0

Total non-fuel energy consumption (MWh) [Auto-calculated]
5131

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

Country/area
France

Consumption of electricity (MWh)
299840

Consumption of heat, steam, and cooling (MWh)
0

Total non-fuel energy consumption (MWh) [Auto-calculated]
299840

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

Country/area
Germany

Consumption of electricity (MWh)
327087

Consumption of heat, steam, and cooling (MWh)
0

Total non-fuel energy consumption (MWh) [Auto-calculated]
327087

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

Country/area
Iceland

Consumption of electricity (MWh)
15286

Consumption of heat, steam, and cooling (MWh)
0

Total non-fuel energy consumption (MWh) [Auto-calculated]
15286

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

Country/area
India

Consumption of electricity (MWh)
20153

Consumption of heat, steam, and cooling (MWh)
0

Total non-fuel energy consumption (MWh) [Auto-calculated]
20153

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

Country/area
Italy

Consumption of electricity (MWh)
63631

Consumption of heat, steam, and cooling (MWh)
0

Total non-fuel energy consumption (MWh) [Auto-calculated]
63631

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

Country/area
Mexico

Consumption of electricity (MWh)
93973

Consumption of heat, steam, and cooling (MWh)
0

Total non-fuel energy consumption (MWh) [Auto-calculated]
93973

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

Country/area
Netherlands

Consumption of electricity (MWh)
114189

Consumption of heat, steam, and cooling (MWh)
30061

Total non-fuel energy consumption (MWh) [Auto-calculated]
144250

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

Country/area
Norway

Consumption of electricity (MWh)
21754

Consumption of heat, steam, and cooling (MWh)
0

Total non-fuel energy consumption (MWh) [Auto-calculated]
21754

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

Country/area
Philippines

Consumption of electricity (MWh)
10718

Consumption of heat, steam, and cooling (MWh)
0

Total non-fuel energy consumption (MWh) [Auto-calculated]
10718

Is this consumption excluded from your RE100 commitment?

<Not Applicable>

Country/area
Poland

Consumption of electricity (MWh)
97938

Consumption of heat, steam, and cooling (MWh)
0

Total non-fuel energy consumption (MWh) [Auto-calculated]
97938

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

Country/area
Romania

Consumption of electricity (MWh)
10762

Consumption of heat, steam, and cooling (MWh)
0

Total non-fuel energy consumption (MWh) [Auto-calculated]
10762

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

Country/area
Russian Federation

Consumption of electricity (MWh)
6371

Consumption of heat, steam, and cooling (MWh)
0

Total non-fuel energy consumption (MWh) [Auto-calculated]
6371

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

Country/area
Slovakia

Consumption of electricity (MWh)
11463

Consumption of heat, steam, and cooling (MWh)
0

Total non-fuel energy consumption (MWh) [Auto-calculated]
11463

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

Country/area
South Africa

Consumption of electricity (MWh)
51220

Consumption of heat, steam, and cooling (MWh)
0

Total non-fuel energy consumption (MWh) [Auto-calculated]
51220

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

Country/area
Spain

Consumption of electricity (MWh)
107930

Consumption of heat, steam, and cooling (MWh)
0

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

107930

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

Country/area
Sweden

Consumption of electricity (MWh)
38240

Consumption of heat, steam, and cooling (MWh)
0

Total non-fuel energy consumption (MWh) [Auto-calculated]
38240

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

Country/area
Thailand

Consumption of electricity (MWh)
8979

Consumption of heat, steam, and cooling (MWh)
0

Total non-fuel energy consumption (MWh) [Auto-calculated]
8979

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

Country/area
Tunisia

Consumption of electricity (MWh)
4033

Consumption of heat, steam, and cooling (MWh)
0

Total non-fuel energy consumption (MWh) [Auto-calculated]
4033

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

Country/area
United Kingdom of Great Britain and Northern Ireland

Consumption of electricity (MWh)
384459

Consumption of heat, steam, and cooling (MWh)
0

Total non-fuel energy consumption (MWh) [Auto-calculated]
384459

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

Country/area
United States of America

Consumption of electricity (MWh)
2715478

Consumption of heat, steam, and cooling (MWh)
254851

Total non-fuel energy consumption (MWh) [Auto-calculated]
2970329

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

C9. Additional metrics

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

Description
Waste

Metric value
0.71

Metric numerator
Landfill waste (MT)

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

% change from previous year
12

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 reduced the amount of waste disposed via landfill by over 2,000 MT, achieving a landfill waste intensity reduction of 12%, well above our year-over-year target of 5%; this also reflects a 9% reduction from 2019. To continue to meet our annual waste targets in 2022, 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
4.5

Direction of change
Decreased

Please explain
Energy intensity (energy use per metric ton of production) fell by over 4% from the previous year, exceeding our Impact 2025 target of 1% year-over-year. This also represents a 13% reduction since 2017, underlining our dedication to this focus area of operational improvement over the last five years.

Description
Other, please specify (Scope 1 emissions Intensity)

Metric value
0.04

Metric numerator
Scope 1 emissions (CO2e): 172,225 MT

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

% change from previous year
9

Direction of change
Decreased

Please explain
During 2021 we implemented a number of energy efficiency and energy reduction initiatives across the company (as outlined in section 4.3), and moved towards electrifying our Scope 1 inventory.

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
15

Direction of change
Decreased

Please explain
During 2021 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.

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

Metric value
0.45

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
15

Direction of change
Decreased

Please explain
During 2021 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. This, coupled with an increase in total revenue, meant we made a large improvement across our intensity figures.

C10. Verification

C10.1

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

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

C10.1a

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

Verification or assurance cycle in place
Annual process

Status in the current reporting year
Complete

Type of verification or assurance
Limited assurance

Attach the statement
FY21 Assurance Statement.pdf

Page/ section reference
Page 1/1

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
FY21 Assurance Statement.pdf

Page/ section reference
Page 1/1

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
Please select

Attach the statement
FY21 Assurance Statement.pdf

Page/ section reference
Page 1/1

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?
Yes

C10.2a

(C10.2a) Which data points within your CDP disclosure have been verified, and which verification standards were used?

Disclosure module verification relates to	Data verified	Verification standard	Please explain
C6. Emissions data	Other, please specify (Emissions Intensity (Per Metric Ton produced))	ISAE3000	Verification of our Scope 1 and Scope 2 emissions by ERM CVS included verification of our intensity metric (per metric ton production) for Scope 1 and Scope 2 outlined in question 6.10, and individual S1 & S2 intensity metrics outlined in C9.

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 originated or purchased any project-based carbon credits within the reporting period?
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.

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

GHG Scope
Scope 1
Scope 2
Scope 3

Application
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.

Actual price(s) used (Currency /metric ton)
120

Variance of price(s) used
The least aggressive estimates used are that anticipate current carbon prices will stay flat. The most aggressive scenario used assumes a global price of carbon of $120/MT CO2 by 2030. This is based on IEA's and IRENA's estimate of $120/MT in OECD countries by 2030.

Type of internal carbon price
Shadow price

Impact & implication
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
Innovation & collaboration (changing markets)

Details of engagement
Run a campaign to encourage innovation to reduce climate impacts on products and services

% 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.

Comment

Type of engagement
Information collection (understanding supplier behavior)

Details of engagement
Other, please specify (Identifying Climate Risk of Suppliers, and performing in-depth risk analysis on high-risk suppliers and all critical suppliers)

% of suppliers by number
68

% total procurement spend (direct and indirect)
45

% of supplier-related Scope 3 emissions as reported in C6.5
45

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 2,015 suppliers have been analysed through our system, 20% of our total supply chain, with 42 suppliers having been identified as high risk so far. These 42 are among 88 suppliers have undertaken the additional assessment, with a total of 68% of our high risk and critical suppliers having completed this assessment. After completion, any that fall short of our ESG, or Climate Risk, expectations are asked to implement corrective action (48 suppliers have completed 532 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 FY20 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.

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

Direct or indirect engagement that could influence policy, law, or regulation that may impact the climate
Yes, we engage indirectly through trade associations

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 engagement activities are consistent with your overall climate change strategy
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 engages with which are likely to take a position on any policy, law or regulation that may impact the climate.

Trade association
Other, please specify (American Chemistry Council: Plastics Division)

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

Has your organization influenced, or is your organization attempting to influence their position?
We are not attempting to influence their position

State the trade association's position on climate change, explain where your organization's position differs, and how you are attempting to influence their position (if applicable)
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, if applicable (currency as selected in C0.4) (optional)

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
berry-impact-report-2021v2.pdf

Page/Section reference
27-34

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

Comment

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 impact of its value chain on biodiversity?

	Does your organization assess the impact of its value chain on biodiversity?	Portfolio
Row 1	No, but we plan to assess biodiversity-related impacts within the next two years	<Not Applicable>

C15.4

(C15.4) 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>

C15.5