Graphic Packaging International LLC - Climate Change 2020

C0. Introduction

C0.1

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

Graphic Packaging Holding Company (together with its subsidiaries, “Graphic Packaging” or the “Company”) is committed to providing consumer packaging that makes a world of difference. The Company is a leading provider of paper-based packaging solutions for a wide variety of products to food, beverage, foodservice, and other consumer products companies. The Company operates on a global basis, is one of the largest producers of folding cartons in the United States ("U.S.") and holds leading market positions in coated unbleached kraft paperboard (“CUK”), coated-recycled paperboard (“CRB”) and solid bleached sulfate paperboard ("SBS"). The Company’s customers include many of the world’s most widely recognized companies and brands with prominent market positions in beverage, food, food service, and other consumer products. The Company strives to provide its customers with packaging solutions designed to deliver marketing and performance benefits at a competitive cost by capitalizing on its low-cost paperboard mills and carton manufacturing plants, its proprietary carton, container and packaging designs, and its commitment to quality and service.

Sustainability is one of the strongest trends in the packaging industry today. Given the significant sustainability characteristics of paperboard, we are uniquely positioned to capture new opportunities with our global fiber-based packaging platform. We have a long history of environmental and social responsibility practices at the Company and we continue to improve our manufacturing processes.

At Graphic Packaging, our packaging solutions are made primarily from renewable wood fiber, and most of our paperboard packaging and food service products can be recycled today. We intend to leverage our industry-leading sustainability profile and continue to reduce our impact on the environment through our own operations and through innovative paperboard solutions. As part of our Vision 2025, we challenged our team to achieve significant improvements. In the next few years, we intend to reduce greenhouse gas emissions, non-renewable energy usage, and mill water effluents by 15%, and reduce the use of low-density polyethylene (LDPE) by 40%.

In addition, we have established a 100% recyclability goal for all Graphic Packaging products. We are committed to continuous improvement to benefit the communities in which we live and work, and we will provide updates on milestones achieved in our annual sustainability reports.

Certain statements regarding the expectations of Graphic Packaging, including, but not limited to, the Company’s plans or estimates with respect to energy use reductions, water usage and climate related events in this report constitute “forward-looking statements” as defined in the Private Securities Litigation Reform Act of 1995. Such statements are based on currently available operating, financial and competitive information and are subject to various risks and uncertainties that could cause actual results to differ materially from the Company’s historical experience and its present expectations. These risks and uncertainties include, but are not limited to, the Company’s ability to obtain permits and other administrative approvals, changes in revenue due to climate related concerns, and supply chain disruptions. Undue reliance should not be placed on such forward-looking statements, as such statements speak only as of the date on which they are made, and the Company undertakes no obligation to update such statements, except as may be required by law. Additional information regarding these and other risks is contained in Part I, “Item 1A., Risk Factors” of the Company’s 2019 Annual Report on Form 10-K, and in other filings with the Securities and Exchange Commission.

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	January 1 2019	December 31 2019	No	<Not Applicable>

C0.3

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

Australia
Brazil
Canada
France
Germany
Italy
Mexico
Netherlands
New Zealand
Spain
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.

Financial control

C-AC0.6/C-FB0.6/C-PF0.6

(C-AC0.6/C-FB0.6/C-PF0.6) Are emissions from agricultural/forestry, processing/manufacturing, distribution activities or emissions from the consumption of your products – whether in your direct operations or in other parts of your value chain – relevant to your current CDP climate change disclosure?

	Relevance
Agriculture/Forestry	Elsewhere in the value chain only [Agriculture/Forestry/processing/manufacturing/Distribution only]
Processing/Manufacturing	Both direct operations and elsewhere in the value chain [Processing/manufacturing/Distribution only]
Distribution	Elsewhere in the value chain only [Agriculture/Forestry/processing/manufacturing/Distribution only]
Consumption	Yes [Consumption only]

C-AC0.6b/C-FB0.6b/C-PF0.6b

(C-AC0.6b/C-FB0.6b/C-PF0.6b) Why are emissions from agricultural/forestry activities undertaken on your own land not relevant to your current CDP climate change disclosure?

Row 1

Primary reason

Evaluated but judged to be unimportant

Please explain

Graphic Packaging owns and manages less than 2,500 Hectares of forest land. We estimate that our wood basket is represented by 5 million hectors. Therefore, our managed land is represented by 0.05% of the forest land required to service the Company' mills. Graphic Packaging has no material direct emissions associated with the agricultural/forestry activities undertaken to harvest the resources used at our facilities.

C-AC0.6f/C-FB0.6f/C-PF0.6f

(C-AC0.6f/C-FB0.6f/C-PF0.6f) Why are emissions from distribution activities within your direct operations not relevant to your current CDP climate change disclosure?

Row 1

Primary reason

Evaluated but judged to be unimportant

Please explain

Graphic Packaging has a small fleet of trucks servicing several UK facilities. We assessed this fleet in context to our total distribution network and since the Company does not have their own truck fleet for the operations outside of the UK, the emissions from distribution activities have a limited direct impact on our operations. However, Graphic Packaging does distribute our products with 3rd parties so the relative emissions are relevant to our supply chain.

C-AC0.7/C-FB0.7/C-PF0.7

(C-AC0.7/C-FB0.7/C-PF0.7) Which agricultural commodity(ies) that your organization produces and/or sources are the most significant to your business by revenue? Select up to five.

Agricultural commodity
Timber

% of revenue dependent on this agricultural commodity
60-80%

Produced or sourced
Sourced

Please explain
Graphic Packaging manufactures paperboard and paperboard packaging. Over 70% of the paperboard and paperboard packaging utilize wood as a raw material. Revenue from our coated recycled paperboard packaging products and plastic packaging was not included.

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
Board-level committee	Our Board of Directors sets expectations in demonstrating our culture and guiding our purpose, values, sustainability and strategy relative to climate-change. Set forth in our Corporate Governance Guidelines, our Board is responsible for reviewing, approving and monitoring business strategies and financial performance and ensuring appropriate oversight is in place. The Board fulfills these responsibilities through practices including approval of the annual operating and strategic long-range plans, review of results against such plans and review and approval of significant corporate actions. In 2019, the Nominating and Corporate Governance Committee of the Board was responsible for the oversight and review of the Company's sustainability policy and practices toward climate-related issues. This includes a review of the Company's sustainability targets, public reporting and recommendations to leadership. The Board has the ultimate responsibility to drive accountability and performance.

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 risk management policies Reviewing and guiding business plans Monitoring implementation and performance of objectives	<Not Applicable>	The Company's Board of Directors Audit Committee oversees our integrated risk management framework that is designed to identify, prioritize, address, manage, monitor and communicate our top strategic, financial, operating, business, compliance, safety, reputational and other risks, including climate-related risks across the organization. The Nominating and Corporate Governance Committee of the Board of Directors is responsible for the oversight and review of the Company's sustainability policy and practices for consistency with its responsibility toward sustainability and climate-related risks and opportunities. This includes the review of the Company's sustainability targets and sustainability public reporting. The Committee makes recommendations to the Board and management as it deems advisable. In November 2019, Management updated the Board and the Committee as part of its annual sustainability update and review of the company's supplemented sustainability report.

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
Other C-Suite Officer, please specify (EVP, General Counsel & Secretary)	<Not Applicable>	Both assessing and managing climate-related risks and opportunities	<Not Applicable>	More frequently than quarterly
Other C-Suite Officer, please specify (Vice President of Government Affairs and Sustainability)	<Not Applicable>	Both assessing and managing climate-related risks and opportunities	<Not Applicable>	More frequently than quarterly
Chief Executive Officer (CEO)	<Not Applicable>	Both assessing and managing climate-related risks and opportunities	<Not Applicable>	More frequently than quarterly
Other, please specify (The Executive Leadership Team)	<Not Applicable>	Managing climate-related risks and opportunities	<Not Applicable>	More frequently than 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 CEO has ultimate responsibility for the implementation of sustainability practices across the Company. The CEO is a proponent of the strategy to achieve the company's GHG targets and meets with the Executive Leadership Team on more than a quarterly basis to monitor progress towards those goals.

Graphic Packaging's Executive Vice President, General Counsel and Secretary is the highest management-level and C-Suite Officer within the organization to hold responsibility for climate-related issues below the CEO and Company's Board of Directors. She has direct oversight of the Vice President of Government Affairs and Sustainability, who is a member of the extended Executive Leadership Team. Together they are accountable for aligning the Company's Leadership Team on strategic decisions regarding mitigating climate risks, enhancing our reputation and positioning the Company for future success.

The Vice President of Government Affairs and Sustainability's background includes package engineering, purchasing, marketing, business development, government affairs and sustainability and is uniquely qualified to assess the impacts of climate change on the operations and sales of the Company. He is accountable for, developing strategy and executing the day-to-day requirements to meet the Company's sustainability goals. Further, he is uniquely qualified to engage with customers, suppliers and other external stakeholders to ensure comprehensive value chain execution of the sustainability program.

Climate-related issues are monitored on a formal monthly basis and in real time. A report on water, energy and GHG emissions is generated, which provides insight into the amount consumed or generated year to date, versus previous year and versus plan. The Company develops and executes countermeasures as appropriate based on monthly trends. The Company also monitors wood purchases monthly and these purchases as well as wood balances and availability are reviewed by a multi-stakeholder team. For example, in 2018 -2019, due to an extremely wet period, access to forests for harvesting activities at certain virgin mills was virtually impossible and thus alternative wood sources, outside our traditional wood basket were identified. The countermeasures were identified in real time with the data from the monthly review.

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	

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 inventivized	Comment
Corporate executive team	Monetary reward	Emissions reduction target	Targets are established for key environmental metrics. These environmental metrics are monitored and tied to financial and productivity metrics which also have monetary incentives associated with them. The metrics are monitored monthly in our Mill division as that business unit represents a significant percentage of the Graphic Packaging environmental profile.
All employees	Monetary reward	Emissions reduction target	Environmental KPIs are embedded into the performance management framework and along with other metrics are serving as a basis for remuneration and salary review process

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	Decisions regarding climate related risks and opportunities are made in real time as risks are identified and assessed or as they emerge. Climate related risks are included in the annual multi-disciplinary enterprise-wide processes. Management is responsible for identifying, mitigating, and managing risks across the organization. Risks or opportunities are identified using a variety of methods and tools.
Medium-term	1	3	Climate related risks and opportunities are identified, assessed, and planned for annually in two distinct processes. The annual enterprise strategic risk assessment process and during the development of the long-range strategic business plan for the 1 – 3 year forward outlook. Any identified risk or opportunity is incorporated in the plans, including mitigation and monitoring strategies, planning and budgeting, and continued risk reporting, as appropriate. The CEO and Board oversee the sustainability office and the Audit Committee oversees the enterprise strategic risk management function, activities and reporting.
Long-term	3	5	As part of our long-range strategic planning, any risks or opportunities that may be identified that are longer than 3 years will be assessed, and the velocity of the risk is determined. The Board oversees the sustainability program, the Nominating and Corporate Governance Committee of the Board of Directors is responsible for the oversight and review of our sustainability program and the Audit Committee oversees the enterprise strategic risk management function, activities and reporting.

C2.1b

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

Graphic Packaging defines significant financial impact as a loss of key alliances and customers, sustained serious loss in market share or Company value with a long-term impact on reputation, litigation and/or regulatory/legislative response significance, and whether the event requires engagement of the Executive Committee and Board for all strategic risks including climate-related risks. These factors are weighed against: (a) The proportion of business units affected; (b) The size of the impact on those business units, and (c) The potential for shareholder or customer concern. A substantive financial impact of relatively high magnitude could occur because of a large change in one of these aspects, or small changes in all three combining to create a larger impact. As a hypothetical, and for example, a loss of market share impacting Graphic Packaging's 2019 revenue by 1% would equate to approximately $61.6 million.

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
Graphic Packaging has developed a Risk Management System (RMS) with includes formal policies, procedures, and governance and defines and communicates the Company's policy regarding the management and oversight of risk. The RMS system assures the effective identification, analysis, prioritization and management of risks. Stakeholders including the Board, Audit Committee, Management and staff have oversight and execution of the RMS. Management is responsible for identifying, mitigating, and managing risks across the organization. The CEO and Board oversee the Sustainability office and the Audit Committee oversees the enterprise strategic risk management function, activities, and reporting. Key risks related to climate change are included in the Annual Report on Form 10-K. The Executive Leadership Team reviews priorities and results in workshops, staff meetings, and communicates these electronically to multiple levels of leadership. The Audit Committee reviews the enterprise strategic risk assessment annually. This includes climate-related risks at operational levels, energy use, material supply, production, transportation, human resources, and weather/natural risks. Risks changes are also reported 3 times per year to the Audit Committee based on input from the risk owners and senior leadership. The opportunities and risks are evaluated and prioritised based on formal defined risk ranking criteria for significance of impact and likelihood of occurrence. Impact represents the potential effect of an event, and likelihood represents the possibility that a given event will occur, and both are measured on a scaled and weighted approach with clear definitions and ranking criteria. Risks are identified through a variety of people, process, methodologies and tools including but not limited to professional and trade related business associations and their publications and journals, input from C-Suite leadership, business leaders, other Company leadership, stakeholders, board of directors, and professional services firms, industry alerts, changes in market conditions, government agencies communications, employee communication, media, informal discussions, changes in financial results, focused workshops or scenario analysis, the Company Alert line and allegations reporting, and various conferences or round tables. Additionally, active programs exist to monitor the Company's customer base and end-consumer responses to paperboard products and we seek to continue to improve the image and recyclable attributes of all of the Company's packaging including the Board of Directors for the Paper & Packaging Board to improve the image of paperboard products. The Board receives updates on sustainability, social responsibility health, safety and environmental compliance matters, continually. Overall responsibility for our sustainability and social responsibility strategy is with our executive leadership team. The Vice President of Government Affairs and Sustainability provides the strategic direction. This individual is a member of the extended executive leadership team and reports regularly on key programs to the CEO and Board of Directors. Our Vice President of Health, Safety and Environmental (HS&E) reports to our CEO on significant projects and compliance matters. The General Counsel regularly provides HS&E and sustainability highlights, presents annual compliance reports and any significant developments to the Board. In November 2019 the Nominating and Corporate Governance Committee received its annual update of the program and provided feedback as part of that committee's oversight responsibilities. We have specific teams that meet quarterly to support and play a key role in climate change related risk management and are assigned responsibilities for developing corporate policy and regulatory positions. Our HS&E Steering Committee discusses sustainability matters every 60 days and report their progress to the Board of Directors. Our Global Sustainability and Social Steering Committee is a cross-functional group that includes leaders of Sustainability, Legal and Human Resources, as well as site and facility managers, from three key regions and promotes responsibility globally. Our North America Social Responsibility Leadership team reviews our sustainability and social responsibilities processes and reports. Our Compliance Committee is a cross-functional group that develops, implements and provides guidance on effective compliance and ethics program to promote an organizational culture that encourages law abiding and ethical conduct, and assesses risks and receives and reviews reports on legal and regulatory changes, policies, training, auditing and monitoring, issues and allegations, audits and monitoring activities, and related organizational responses to these activities. Our Certification Committee is a cross-functional group that reviews the annual public company filings that include the risk related disclosures. In addition, we evaluate our programs and monitor progress towards our commitments to achieve our goals including our Sustainability Vision 2025 through annual Board Sustainability report updates, Compliance reports, Sustainability Performance reviews, and a CEO Scorecard. Our CEO and our General Counsel report to the Board on sustainability and social responsibility and HS&E matters. Graphic Packaging currently utilizes a formal risk assessment process to help identify and mitigate risks associated to physical climate-related impacts. For example, we assess appropriate levels of property insurance to minimize financial implications related to damages from flooding and other natural disasters . For example, sites located in Louisiana, California, Missouri, and North Carolina have experienced flooding events in the past few years, which has caused us to take measures to ensure we're mitigating property damages and minimizing production disruptions. In particular, one of the wood baskets, which Graphic Packaging relies upon to source wood was negatively impacted by excessive rain. Graphic Packaging had to shift sourcing for raw materials to another wood basket outside our traditional woodbasket. Graphic Packaging understands that we could face potential risks related to GHG emissions. In order to mitigate these risks, we have sought to utilize energy as efficiently as possible within our operations. For example, we invest capital and resources on an annual basis in a variety of energy efficiency initiatives across our operations so that we are well positioned if there are market and / or cost implications related to GHG emissions . For example, during 2019, we announced a transformational $600 million investment in Kalamazoo, Michigan that will result in cost and quality advantages for years to come. The new world-class Coated Recycled Board (CRB) machine will have a positive environmental impact by reducing greenhouse gases, water usage and purchased energy.

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	Graphic Packaging has determined that current regulation risks related to climate change are included in our annual risk assessment. Since 2019 we disclosed GHG information under the UK SECR scheme. Non-compliance may lead to penalties up to 40K GBP. Graphic Packaging's business practices ensure that these penalties will not be realised, thus these risks were deemed insignificant to the business. The Company will continue to mitigate these risks through its methodology.
Emerging regulation	Relevant, always included	Graphic Packaging has determined that emerging regulation risks related to climate change are included in our risk assessments and continue to be evaluated through ongoing informal reviews that occur as part of normal business practices. Single-use packaging regulation in the United States could emerge and impact the company's Foodservice business which was approximately 23% of the company's 2019 revenue. Graphic Packaging continues to monitor the developments of regulations regarding single use packaging closely due to the proportion of the business that new regulation could impact. However, Graphic Packaging is engaged with elected officials on advocacy to increase the recycling of single use packaging and has made product innovations that will allow the company to move swiftly and react to any market changes quickly. This flexibility strengthens the company's position as a leader in the sector.
Technology	Relevant, always included	Graphic Packaging has determined that technology-related risks related to climate change are included in our risk assessments and are evaluated through ongoing informal reviews that occur as part of normal business practices. Although a relatively small number of large competitors hold a significant portion of the paperboard packaging market, our business is subject to strong competition. As consumer's preferences shift towards more sustainable packaging, we may face higher increases in competition. If we do not invest the right resources to ensure we're utilizing the most appropriate technologies to meet consumer's demand, this could have an adverse impact on our bottom line. Therefore in 2019, we announced a transformational $600 million investment in our Kalamazoo, Michigan paperboard mill that will result in cost and quality advantages for years to come. The new world-class Coated Recycled Board (CRB) machine will have a positive environmental impact by reducing greenhouse gases (by 4%), water usage and purchased energy (each by 1%). The Company expects the investment will be capacity neutral by eliminating higher cost production at other facilities and will deliver an incremental $100 million in annualized EBITDA once fully ramped in 2022. As demonstrated in this response, the Company has a strong innovation pipeline with new technologies that are designed to benefit the Environment and positioned to meet market expectations.
Legal	Relevant, always included	Graphic Packaging has determined that legal risks related to climate change are included in our risk assessments and are evaluated through ongoing informal reviews that occur as part of normal business practices. For example, we are subject to a range of foreign, federal, state and local environmental regulations. We face risks both in terms of tangible costs from environmental litigation, as well as reputational risks. The magnitude of this risk has been evaluated and determined to be insignificant in relation to other current business-related risks. Historically litigation claims made against Graphic Packaging have been insignificant.
Market	Relevant, always included	Graphic Packaging has determined that market-related risks related to climate change are included in our risk assessments and are evaluated through ongoing informal reviews that occur as part of normal business practices. As a paperboard manufacturer, we utilize a variety of raw materials in the production of our products. We face risks related to both the volatility of prices as well as the availability of our raw materials. The company is also exposed to market shifts from one material to another. For example, in 2019 we analysed the market expectation for alternatives to Low Density Polyethylene (LDPE). This material is applied to foodservice packaging and paper cups. Recyclability of foodservice packaging and paper cups is an important environmental concern and with LDPE applied to this packaging it is less desirable in the recycling system. We set a goal of reducing our LDPE purchases by 40% by 2025. The reduction will be in the form of substituting the LDPE with an advanced barrier technology. With the market expectation for an alternative to LDPE, there is both a risk and an opportunity. If we were unable to develop the advanced coating or another packaging supplier developed and implemented advanced coating before Graphic Packaging this could impact the company's Foodservice business which was approximately 23% of 2019 revenue.
Reputation	Relevant, always included	Graphic Packaging has determined that reputational risks related to climate change are included in our risk assessments and are evaluated through ongoing informal reviews that occur as part of normal business practices. Although a relatively small number of large competitors hold a significant portion of the paperboard packaging market, our business is subject to strong competition. As consumer's preference shifts towards more sustainable packaging, we may face higher increases in competition. Therefore, we continuously monitor reputational risks, for example, we assess our customers' feedback on an ongoing basis to ensure that we are adapting to the market. In 2019 Graphic Packaging conducted a Voice-of-Customer (VOC) survey. A VOC survey has similar attributes to a Materiality Assessment but addresses innovation and supply chain along with the sustainability. As with other VOC surveys Graphic Packaging was rated in the 90's (scale of 0 – 100 with 100 being a high ranking). These rankings from the VOC as conducted every 3 years confirms that we are meeting our customer's sustainability expectations and confirms that our reputation is viewed favourably by major consumer branded customers.
Acute physical	Relevant, always included	Graphic Packaging has determined that acute physical risks related to climate change are included in our risk assessments and are evaluated through ongoing informal reviews that occur as part of normal business practices. For example, although we take appropriate measures to minimize the risk and effect of material disruptions to the business conducted at our facilities, climate-related natural disasters such as hurricanes, tornadoes, floods and fires can impact production, increase our manufacturing costs and potentially impact our customer's ability to operate. As an example, the Graphic Packaging paperboard mill in West Monroe, Louisiana was damaged by a tornado. The impact on operations was minimal and the costs of the damage were approximately $3-5 million. As shown in our response to the events at West Monroe, Graphic Packaging is well-positioned to react to extreme weather events and is well prepared to ensure that the impact from the next event is minimal. We are also exposed to acute physical risk related to floods at our Pacific, Missouri carton plant. The facility experienced two one-hundred- year floods in a three- year time frame. During each flood, the company minimized the impact of elevating equipment and inventory to prevent water damage and relocated manufacturing until the flood receded. The company has also invested in an AquaDam to place around the facility in the case of another flood. The cost was less than $1 million for the AquaDam. The magnitude of this risk has been evaluated and determined to have a potential impact, but with low probability thus has limited risk in relation to other business-related risks. Our wood baskets may be impacted by heavy rain impacting our ability to access wood nearby and compelling expansion of our supply area beyond the local basket.
Chronic physical	Relevant, always included	Graphic Packaging has determined that chronic physical risks related to climate change are included in our risk assessments and are evaluated through ongoing informal reviews that occur as part of normal business practices. For example, although we take appropriate measures to minimize the risk and effect of material disruptions to the business conducted at our facilities, climate-related natural disasters such as heavy rain can impact production, increase our manufacturing costs and potentially impact our customer's ability to operate. One of the wood baskets, which Graphic Packaging relies upon to source wood was negatively impacted by excessive rain. Graphic Packaging had to shift sourcing for raw materials to another wood basket outside our traditional wood supply region. The shift was executed in real-time and did not have a negative impact.

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

Acute physical	Increased severity and frequency of extreme weather events such as cyclones and floods

Primary potential financial impact

Increased direct costs

Climate risk type mapped to traditional financial services industry risk classification

<Not Applicable>

Company-specific description

Graphic's operations face climate-related physical risks related to hurricanes and increased flooding. If the severity of extreme weather events increases and results in any

of our facilities becoming inoperable it could have a direct impact on our production, sales and / or costs. For example, sites located in Louisiana, California, Missouri, and North Carolina have experienced flooding events in the past few years, which has caused us to take measures to ensure we are mitigating property damages and minimizing production disruptions. In particular, one of the wood baskets, which Graphic Packaging relies upon to source wood was negatively impacted by excessive rain. Graphic Packaging had to shift sourcing for raw materials to another wood basket outside of our traditional wood supply region. Additionally, while wildfires in California did not affect regional facilities, some local Graphic Packaging employees' homes were damaged. This natural disaster resulted in shifts in employee availability, schedules and some operations while employees regained security for their families. Insurance policies are in place to mitigate potential loss or damage and recovery time. Crisis management procedures are in place and have been tested. Multiple sites are qualified to produce products and allow manufacturing redundancy. Reliability Center Maintenance teams are in place to monitor and perform maintenance over assets. Pumps and other flood mitigating controls are at the ready to prevent or limit damages. Inventory of critical spare parts is managed based on lead time. Back-up plans are in place in the event resources cannot get to the worksite. In addition, we regularly review physical controls and additional insurance at these locations.

Time horizon
Short-term

Likelihood
Unlikely

Magnitude of impact
Low

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

Potential financial impact figure (currency)
<Not Applicable>

Potential financial impact figure – minimum (currency)
3000000

Potential financial impact figure – maximum (currency)
5000000

Explanation of financial impact figure
Financial implications from climate related events are difficult to quantify due to unforeseen variables that can impact the overall significance of these risks and the fact that Graphic Packaging reacts and deploys mitigation measures in real time, as such, the impact has not been quantified financially. We do have experience with prior events and as indicated the financial implications have ranged up to $5 million. Although viewed as unlikely, financial implications could impact our overall costs of operations as well as our ability to fund capital expenses. These financial implications are considered immaterial.

Cost of response to risk
50000

Description of response and explanation of cost calculation
It is expected that financial impacts related to extreme weather events are managed in an effective manner so that the company performance is not severely impacted. We continue to manage this through our risk management process that seeks to ensure that the appropriate insurance is maintained, and proactive actions are taken to minimize any impacts. We have insurance in the place where needed and perform an annual insurance assessment and review that is reported up to the Audit Committee. Recently, this review resulted in the purchase of additional insurance for one of our manufacturing facilities. In addition, to create a water dam around key facilities, temporary barriers are available to deploy as necessary. Reliability experts and maintenance personnel are staffed and at the ready, if a crisis occurs. Critical parts are maintained to ensure production can be commenced as quickly as possible. Anti-flood protection devices such as pumps are stored and ready to reduce the impact of water. Several Graphic Packaging plants have experienced a flood event and each event was addressed effectively with redundant capacity and proactive measures where possible. The figure provided is an estimate based on learnings from historic weather events which have caused damage and interruption to our operations. Most notably the incident at the site in Pacific, Missouri. The flood caused damage to the site, requiring us to move production equipment and redirect resources into repairing the damage caused.

Comment
Graphic Packaging has invested in flood mitigation measures as appropriate and the risk management program is monitored and reviewed on an annual basis. The cost of administering our risk management program is less than $50,000.

Identifier
Risk 2

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
A significant proportion of our customers are increasingly looking to source sustainable packaging for their products. The risk is a loss of sales for Graphic Packaging if we fail to meet these customer expectations. Sustainability represents one of the strongest trends in the packaging industry and we continue to focus on developing more sustainable and eco-friendly manufacturing processes and products. Graphic Packaging has a strong innovation pipeline with packaging solutions that are targeted for sustainability. In our Vision 2025, we have targeted $400 - $700 million over the period of 2020 – 2025 in net new product sales for our innovation efforts. The risk is that our innovative products are not adopted by the market place.

Time horizon
Medium-term

Likelihood
Likely

Magnitude of impact
Low

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

Potential financial impact figure (currency)
400000000

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

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

Explanation of financial impact figure
We anticipate that investments in sustainable innovation will have a positive impact on revenue and as communicated in our 2025 Vision are targeted to generate $400 - $700 million over the 2020 to 2025 period.

Cost of response to risk
9200000

Description of response and explanation of cost calculation
The cost of research and development as quoted in the 2019 10k was $9,200,000.

Comment

Identifier
Risk 3

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

Risk type & Primary climate-related risk driver

Emerging regulation	Mandates on and regulation of existing products and services

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

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

Company-specific description
The emerging risk of single-use packaging regulation may be introduced in the United States and Europe. This could impact the company's Foodservice business which was approximately .1% of food service business revenue. Graphic Packaging is working continuously on product innovations which will allow the company to move swiftly and react to any market changes quickly. This flexibility strengthens the company's position as a leader in the sector.

Time horizon
Long-term

Likelihood
Likely

Magnitude of impact
High

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

Potential financial impact figure (currency)
1400000

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

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

Explanation of financial impact figure
Potential single use packaging regulation could have an impact on our food service packaging business, which represented approximately .1% of food service business revenue. It is difficult to estimate the financial impact in view of the scope of potential outcomes, including increased recycling of single use packaging, a focus on innovation, and the value that single use packaging presents when considering mitigating COVID-19 spread. Based on market conditions and the advocacy work that Graphic Packaging is engaged the company believes that a negative impact is remote. If potential regulation were to be put into law the impact is estimated to be immaterial.

Cost of response to risk
9200000

Description of response and explanation of cost calculation
Graphic Packaging is driving innovative paperboard solutions and practices. We are developing new products that incorporate the latest materials and processes to meet or exceed our customers' performance criteria with the right economics. Increased investment in new paperboard solutions and barrier coatings, through R&D and design, is resulting in increased adoption of new solutions replacing plastic materials. For example, Graphic Packaging has a line of compostable single use food service packaging sold under its "Ecotainer" brand. This innovative package structure meets most of the current and proposed local regulations for being compostable or recyclable. The figure has been taken from the company's 10k report, this is the cost of R&D.

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?
Direct operations

Opportunity type
Products and services

Primary climate-related opportunity driver
Development and/or expansion of low emission goods and services

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

Company-specific description
Sustainability represents one of the strongest trends in the packaging industry and the Company focuses on developing sustainable and eco-friendly manufacturing processes and products. The Company's strategy is to combine sustainability with innovation to create new packaging solutions for its customers. The Company is positioned well in the market as a wood fiber-based packaging company. We aspire to create the ultimate package that is made from renewable materials, with renewable energy that is recyclable or compostable. We consider the full life cycle of the package and product that it protects. With each innovation challenge, we assess the current package's position on the Package Sustainability Continuum and identify areas where an innovative approach will move that package closer to our aspirational goal. Our innovation efforts center on new wood-fiber based packaging solutions that we believe are more sustainable, renewable, and recyclable than existing alternatives. Our efforts offer enhanced convenience features for consumer and brand building opportunities for our customers. Across 2019 we have continued to develop our range of products which look to have a positive environmental impact. We are focusing on providing wood-fiber based solutions to the problems surrounding single-use plastics. In particular, we have two products, the KeelClip and Ecotainer, which provide solutions to the beverage and foodservice. These products are a couple of several sustainable packaging solutions that will support our revenue of $400 - $700 million over the period of 2020 – 2025 for our innovation efforts.

Time horizon
Short-term

Likelihood
Very likely

Magnitude of impact
Medium-high

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

Potential financial impact figure (currency)
<Not Applicable>

Potential financial impact figure – minimum (currency)
400000000

Potential financial impact figure – maximum (currency)
700000000

Explanation of financial impact figure
In our 2025 Vision we have targeted revenue of $400 - $700 million over the period of 2020 – 2025 for our innovation efforts. This figure has been based on assessment of user service demand for sustainable packaging.

Cost to realize opportunity
9200000

Strategy to realize opportunity and explanation of cost calculation
Graphic Packaging is committed to sustainable innovation and has allocated investments both in terms of research and development as well as capital allocation to ensure that we have the appropriate resources to develop packaging solutions that will improve the environmental metrics of our customers' products. We also keep abreast of consumer expectations to ensure that we're meeting preferences as they continue to shift towards more sustainable packaging. As detailed in our 10k, our 2019 R&D investment is $9.2 million.

Comment
Graphic Packaging continues to invest in R&D and innovation across the world which is considered part of normal business practices.

Identifier
Opp2

Where in the value chain does the opportunity occur?
Direct operations

Opportunity type
Resource efficiency

Primary climate-related opportunity driver

Use of more efficient production and distribution processes

Primary potential financial impact
Reduced indirect (operating) costs

Company-specific description
As a company we're always striving to improve our resource efficiency at each facility. Over the course of the year we have identified areas for improvement and looked to act on these where appropriate. We understand that improvements in our processes will lead to a reduction in both energy consumption and GHG emissions. In 2019 for example, we announced a transformational $600 million investment in Kalamazoo, Michigan that will result in cost and quality advantages for years to come. The new world-class Coated Recycled Board (CRB) machine will have a positive environmental impact by reducing greenhouse gases, water usage and purchased energy. Our new investment strengthens our leadership across the industry and will yield quality and efficiency enhancements.

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)
100000000

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

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

Explanation of financial impact figure
We expect to generate $100 million in incremental EBITDA once the new paper machine is fully ramped in 2022. This figure has been provided following a full market assessment of current future demand to move product range to more sustainable packaging products.

Cost to realize opportunity
600000000

Strategy to realize opportunity and explanation of cost calculation
Graphic Packaging is always looking at opportunities to improve our resource efficiency. Our biggest investment and main driver for resource efficiency has been at our Kalamazoo, Michigan site. This investment will result in cost and quality advantages for years to come. The cost to realize opportunity reflects the size of the investment made in the Kalamazoo site.

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
Reduced direct costs

Company-specific description
As a company, we are committed to using renewable energy sources to help us reduce our emissions. We have implemented targets into our Sustainability Vision of reducing both our greenhouse gas emissions and our non-renewable energy consumption by 15% by 2025. Where possible, we aim to generate our own energy and reduce our reliance on the electrical grid. This will allow us to be in control of our own energy supply and therefore reduce the cost of our energy demand. We would also have the opportunity to sell any surplus energy produced at sites back into the electricity grid. The investment will support our commitment to our sustainability vision 2025 with solar power at our Sneek, NL, facility. This investment will reduce fossil fuel electricity needs and reduce the emissions associated with this site.

Time horizon
Short-term

Likelihood
Very 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)
117000

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

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

Explanation of financial impact figure
The solar panels installed at the Sneek, NL, facility are forecast to produce 50% of the site's electricity consumption. The figure provided is roughly half of the electricity spend at that site. The cost of the investment is expected to be recovered over time with less electricity costs at the facility.

Cost to realize opportunity
2000000

Strategy to realize opportunity and explanation of cost calculation
Graphic Packaging assesses projects that will reduce our environmental profile as part of our Sustainability Visions 2025. A project to add solar panels to our Sneek, NL facility was under assessment in 2019 and is pending for a potential installation in 2020 – 2022. The solar panels will provide electricity to the Sneek carton manufacturing facility and increase the company's use of renewable energy. The figure provided is an estimation of the cost of the solar installation at Sneek.

Comment

C3. Business Strategy

C3.1

(C3.1) Have climate-related risks and opportunities influenced your organization's strategy and/or financial planning?
Yes, and we have developed a low-carbon transition plan

C3.1a

(C3.1a) Does your organization use climate-related scenario analysis to inform its strategy?
No, but we anticipate using qualitative and/or quantitative analysis in the next two years

C3.1c

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

While Graphic Packaging has utilized scenario-based analysis to help evaluate climate-related risks as part of their overall enterprise strategic risk management process, this is currently not being done on a recurring or regular basis. As part of Graphic's strategic planning process, we have chosen to prioritize raw materials and market place concerns with one of our major product lines. Wood purchases that occurred in late 2018 and 2019 required significant actions to mitigate supply issues. Due to an extremely wet period, access to forests that were identified for harvest was impossible and thus alternative wood sources, outside our traditional wood basket were identified. The countermeasures were identified in real time with the data from our monthly review. Visibility to the issues in real time is important and a cross functional team was established to provide visibility and react appropriately. While we do utilize a five year forward view with associated financial modelling related to these topics of concern, we haven't fully integrated climate-related scenario analysis as part of our overall business strategy.

As we start assessing risks and opportunities in further depth, we will seek to include climate-related scenario analysis as part of our enterprise strategic risk management process that will routinely inform our business strategy. The priority level and complexity of a risk or opportunity will be evaluated and will determine the appropriate time and level of depth that climate-related scenario analysis will be leveraged.

C3.1d

(C3.1d) 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	Graphic Packaging has determined that our products and services have been impacted based on our evaluation of climate-related risks and opportunities. Graphic Packaging manufactures and sells paperboard packaging. This packaging is made from renewable materials, tree fibers, and virtually all is recyclable. A significant majority of the paperboard packaging is made using renewable energy. When comparing the environmental profile of paperboard packaging with other packaging formats, like plastic, glass, metal, paperboard packaging can present a lower environmental profile including lower GHG emissions when using ISO Life Cycle assessment methodologies. Additionally, we understand that there are reputation risks based on consumer preferences for packaging made from renewable materials that is recyclable. In our Vision 2025, we have targeted $400 - $700 Million in revenue generated from the sale of new innovative packaging. These sales will be predominately from innovative packaging solutions that provide a sustainability benefit to the marketplace. As an example, in 2019 we launched the KeelClip™, a paperboard packaging solution for beverage cans that offers sustainability advantages and merchandising benefits as compared to other packaging options, such as plastic rings Hi-Cone. KeelClip, the company's latest innovation in paperboard packaging solutions, performs well in high-speed environments enabled by the corresponding KeelClip 1600 machinery system.
Supply chain and/or value chain	Yes	Graphic Packaging has determined that our supply chain has been impacted for some suppliers, facilities or product lines based on our evaluation of climate-related risks and opportunities. For example, we understand that there are limitations on the availability of, and increases in, the costs of raw materials, including secondary fiber, petroleum-based materials, energy, wood, transportation and other necessary goods and services which could impact the reliability of our supply chain. Because negotiated sales contracts and the market largely determine the pricing for its products, the Company is at times limited in its ability to raise prices and pass through any inflationary or other cost increases that the Company may incur to its customers. Therefore, we have established processes that enable us to work closely with our suppliers to ensure that we're being proactive in identifying any risks that could impact our supply chain and mitigate risks where possible . . Wood fibre is a critical raw material to the company's process. Preparing for Graphic Packaging's long-range planning process, our assessment of forest related risks and opportunities have focused on macro influencers on its wood basket. These influences can be shifts in market demand from local, national and international demand patterns based on climate change or other reactions related to climate change by working with an external party to model scenarios. For example, to accomplish the UK's carbon reduction goals, many utilities have transitioned to generated electricity from coal to biomass sources. Certain UK utilities source wood from the United States which also impacts the overall supply of this raw material. We have communicated to the EU and UK government that subsidy of biomass energy supply is having a detrimental impact on business. Therefore it could result in higher costs for UK and EU customers for paperboard products. The company run wood basket assessments to predict the impact of the government subsidies from the UK and EU. Based on these assessments the company alters its wood basket purchasing strategy.
Investment in R&D	Yes	Graphic Packaging has determined that investment in R&D has been impacted based on our evaluation of climate-related risks and opportunities. We understand that there are reputation risks based on consumer preferences for packaging made from renewable materials. There has been increasing evidence of this shift through public statements made by buyers of packaging, including food, beverage and foodservice companies. Therefore, Graphic Packaging continues to engage in research and development activities that seek to identify technologies that would allow for alternative packaging for liquid and food products to replace plastic. Additionally, we seek to invest resources for the research and development of any efficient technologies that could be utilized in our manufacturing processes to be more efficient. In our Vision 2025, we have targeted $400 - $700 million over the period of 2020 – 2025 in net new product sales for our innovation efforts. Graphic Packaging continues to invest in R&D as reflected in our financial reports showing an increased investment year on year. In 2019 Graphic Packaging invested $9.2 million into R&D. An example of a substantive investment decision; in 2019 was our announcement of a transformational $600 million investment in Kalamazoo, Michigan that will result in cost and quality advantages for years to come. The new world-class Coated Recycled Board (CRB) machine will reduce other commodity input costs due to its greater efficiencies, as well as having a positive environmental impact by reducing greenhouse gases, water usage, and purchased energy. Our new investment strengthens our leadership across the industry and will yield quality and efficiency enhancements.
Operations	Yes	As a company, we're always striving to improve our resource efficiency at each facility. over the course of the year, we have identified areas for improvement and looked to act on these where appropriate. We understand that improvements in our processes will lead to a reduction in both energy consumption and GHG emissions. In 2019 for example, we announced a transformational $600 million investment in Kalamazoo, Michigan that will result in cost and quality advantages for years to come. The new world-class Coated Recycled Board (CRB) machine will have a positive environmental impact by reducing greenhouse gases, water usage and purchased energy. The project began in 2019 and the company hope to see the full benefits by 2022. We will continue to review these opportunities in line with sustainability targets for 2025. Our new investment strengthens our leadership across the industry and will yield quality and efficiency enhancements.

C3.1e

(C3.1e) 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	Graphic Packaging has evaluated how revenues are impacted by climate-related risks and opportunities in relation to our organization's business, strategy, and financial planning. For example, our Company's research and development team works directly with its sales, marketing and consumer insights personnel to understand long-term consumer and retailer trends and create relevant new packaging. These innovative solutions provide customers with differentiated packaging to meet customer needs. The Company's development efforts include, but are not limited to, extending the shelf life of customers' products; reducing production and waste costs; enhancing the heat-managing characteristics of food packaging; improving the sturdiness and compression strength of packaging to meet store display needs; and refining packaging appearance through new printing techniques and materials. Sustainability represents one of the strongest trends in the packaging industry and the Company focuses on developing more sustainable and eco-friendly manufacturing processes and products. The overall magnitude of our impact is evaluated to be significant in relation to our overall organization's financial planning and bottom line. In our 2025 Vision we have targeted revenue of $400 - $700 million over the period of 2020 – 2025 for our innovation efforts.

C3.1f

(C3.1f) Provide any additional information on how climate-related risks and opportunities have influenced your strategy and financial planning (optional).

C4. Targets and performance

C4.1

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

Both absolute and intensity targets

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
2017

Target coverage
Company-wide

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

Base year
2016

Covered emissions in base year (metric tons CO2e)
2050506.53

Covered emissions in base year as % of total base year emissions in selected Scope(s) (or Scope 3 category)
100

Target year
2025

Targeted reduction from base year (%)
10

Covered emissions in target year (metric tons CO2e) [auto-calculated]
1845455.877

Covered emissions in reporting year (metric tons CO2e)
2142901.58

% of target achieved [auto-calculated]
-45.05962241437

Target status in reporting year
Underway

Is this a science-based target?
No, but we anticipate setting one in the next 2 years

Please explain (including target coverage)
Graphic Packaging reported this target to CDP in 2018 and is reporting progress against the same target in 2020. The 2019 increase in Graphic Packaging's scope 1 + 2 emissions caused the total emissions to exceed the baseline, and as such 0% of the target is currently achieved.

C4.1b

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

Target reference number
Int 1

Year target was set
2017

Target coverage
Company-wide

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

Intensity metric
Metric tons CO2e per unit revenue

Base year
2016

Intensity figure in base year (metric tons CO2e per unit of activity)
0.000477073

% of total base year emissions in selected Scope(s) (or Scope 3 category) covered by this intensity figure
100

Target year
2025

Targeted reduction from base year (%)
15

Intensity figure in target year (metric tons CO2e per unit of activity) [auto-calculated]
0.00040551205

% change anticipated in absolute Scope 1+2 emissions
10

% change anticipated in absolute Scope 3 emissions
0

Intensity figure in reporting year (metric tons CO2e per unit of activity)
0.000347868

% of target achieved [auto-calculated]
180.552382269939

Target status in reporting year
Underway

Is this a science-based target?
No, but we anticipate setting one in the next 2 years

Please explain (including target coverage)
Graphic Packaging reported this target to CDP in 2018 and is reporting progress against the same target in 2019. Despite, the increase in scope 1 and 2 emissions in 2019, the significant increase in revenue in 2019 compared to 2016 has reduced Graphic's intensity by 27% or 17% greater than the target.

C4.2

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

C4.2b

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

Target reference number
Oth 1

Year target was set
2018

Target coverage
Company-wide

Target type: absolute or intensity
Intensity

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

Energy consumption or efficiency	million Btu

Target denominator (intensity targets only)
Other, please specify ($1,000 sales)

Base year
2016

Figure or percentage in base year
6.565789212

Target year
2025

Figure or percentage in target year
5.58092083

Figure or percentage in reporting year
4.783869414

% of target achieved [auto-calculated]
180.929739502999

Target status in reporting year
Underway

Is this target part of an emissions target?
No

Is this target part of an overarching initiative?
No, it's not part of an overarching initiative

Please explain (including target coverage)
Graphic Packaging is targeting to reduce company wide non-renewable energy use by 15% (MMBTU/ $1,000 sales) in 2025 compared to 2016. Graphic's intensity has reduced by 27.1% compared to the base year, exceeding the target set.

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	200	0
To be implemented*	157	137292
Implementation commenced*	38	33655
Implemented*	17	14899
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

Other, please specify	Other, please specify (Process emission reduction)

Estimated annual CO2e savings (metric tonnes CO2e)
8000

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

Voluntary/Mandatory
Voluntary

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

Investment required (unit currency – as specified in C0.4)
350000000

Payback period
1-3 years

Estimated lifetime of the initiative
11-15 years

Comment
Curtain Coater Project (5 curtain coaters)

Initiative category & Initiative type

Other, please specify	Other, please specify (Process Emission Reduction)

Estimated annual CO2e savings (metric tonnes CO2e)
400

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

Voluntary/Mandatory
Voluntary

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

Investment required (unit currency – as specified in C0.4)
350000000

Payback period
1-3 years

Estimated lifetime of the initiative
11-15 years

Comment
Mill System Water Meter Upgrades

Initiative category & Initiative type

Energy efficiency in production processes	Process optimization

Estimated annual CO2e savings (metric tonnes CO2e)
49

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

Voluntary/Mandatory
Voluntary

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

Investment required (unit currency – as specified in C0.4)
350000000

Payback period
1-3 years

Estimated lifetime of the initiative
11-15 years

Comment
Mill Water Strainer

Initiative category & Initiative type

Energy efficiency in production processes	Process optimization

Estimated annual CO2e savings (metric tonnes CO2e)
150

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

Voluntary/Mandatory
Voluntary

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

Investment required (unit currency – as specified in C0.4)
350000000

Payback period
1-3 years

Estimated lifetime of the initiative
11-15 years

Comment
White Water Surge Tank

Initiative category & Initiative type

Energy efficiency in production processes	Process optimization

Estimated annual CO2e savings (metric tonnes CO2e)
8500

Scope(s)
Scope 2 (market-based)

Voluntary/Mandatory
Voluntary

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

Investment required (unit currency – as specified in C0.4)
600000000

Payback period
1-3 years

Estimated lifetime of the initiative
11-15 years

Comment
New Paper Recycled Paperboard Machine

C4.3c

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

Method	Comment
Compliance with regulatory requirements/standards	Compliance with regulatory requirements / standards: Graphic Packaging is in a heavily regulated industry and thus a portion of capital investments are directed to meet regulatory compliance. We continually assess capital investments for opportunities to achieve higher reductions in greenhouse gas emissions.
Financial optimization calculations	Financial optimization calculations: As a public company, Graphic Packaging applies financial rigor to capital investments to understand the return on investment. These calculations include factors such as emission reduction savings, productivity implications, and overall strategic impacts.
Internal finance mechanisms	Internal finance mechanisms: In addition to return on investment calculations, potential savings and revenue opportunities are assessed as part of our overall financial analysis.
Partnering with governments on technology development	Partnering with governments on technology development: Graphic Packaging has partnered with the Department of Energy and California Air Resources Board to develop projects.
Other	Graphic Packaging employees Lean Six Sigma as part of our continuous improvement process which includes defined environmental impacts.

C4.5

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

C4.5a

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

Level of aggregation
Group of products

Description of product/Group of products
Graphic Packaging manufactures and sells paperboard packaging which is made from a renewable material, tree fiber. A significant portion of the paperboard packaging is also made using renewable energy. When comparing the environmental life cycle of paperboard packaging with other packaging materials such as plastic, glass, or metal, it typically represents a lower environmental footprint. Graphic Packaging partnered with a third-party to better understand the emissions reductions through a life-cycle analysis.

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

Taxonomy, project or methodology used to classify product(s) as low-carbon or to calculate avoided emissions
Please select

% revenue from low carbon product(s) in the reporting year
100

% of total portfolio value
<Not Applicable>

Asset classes/ product types
<Not Applicable>

Comment

C5. Emissions methodology

C5.1

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

Scope 1

Base year start
January 1 2016

Base year end
December 31 2016

Base year emissions (metric tons CO2e)
1257469.257

Comment

Scope 2 (location-based)

Base year start
January 1 2016

Base year end
December 31 2016

Base year emissions (metric tons CO2e)
789906.468

Comment

Scope 2 (market-based)

Base year start
January 1 2016

Base year end
December 31 2016

Base year emissions (metric tons CO2e)
793037.275

Comment

C5.2

(C5.2) Select the name of the standard, protocol, or methodology you have used to collect activity data and calculate emissions.
IPCC Guidelines for National Greenhouse Gas Inventories, 2006
The Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard (Revised Edition)

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)
1318746.714

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

C6.3

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

Reporting year

Scope 2, location-based
757538.152

Scope 2, market-based (if applicable)
824154.867

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?
No

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

Metric tonnes CO2e
1987798

Emissions calculation methodology
The estimated emissions were calculated using the GHG Protocol Quantis Scope 3 Evaluator Tool. Financial expenditure data was collected and allocated according to purchase type (i.e. standard goods and services). Based on this allocation, Quantis applied emission factors specific to the pulp, paper, printing and publishing sector per dollar spent to calculate the respective emissions.

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

Please explain

Capital goods

Evaluation status
Relevant, calculated

Metric tonnes CO2e
125821

Emissions calculation methodology
The estimated emissions were calculated using the GHG Protocol Quantis Scope 3 Evaluator Tool. Financial expenditure data was collected and allocated according to purchase type (capital goods). Based on this allocation, Quantis applied emission factors specific to the pulp, paper, printing and publishing sector per dollar spent to calculate the respective emissions.

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

Please explain

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

Evaluation status
Relevant, calculated

Metric tonnes CO2e
38268

Emissions calculation methodology
The estimated transmission and distribution loss emissions were calculated by taking the product of the final market-based electric power emissions for the Graphic Packaging portfolio and the EIA. State Electricity Profile loss factors.

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

Please explain

Upstream transportation and distribution

Evaluation status
Relevant, calculated

Metric tonnes CO2e
212842

Emissions calculation methodology
The estimated emissions were calculated using the GHG Protocol Quantis Scope 3 Evaluator Tool. Financial expenditure data was collected and allocated according to third party transportation (air, water, rail, road freight) and distribution (warehousing and upstream). Based on this allocation, Quantis applied emission factors specific to the pulp, paper, printing and publishing sector per dollar spent to calculate the respective emissions.

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

Please explain

Waste generated in operations

Evaluation status
Relevant, calculated

Metric tonnes CO2e
40074

Emissions calculation methodology
The estimated emissions were calculated using the GHG Protocol Quantis Scope 3 Evaluator Tool. Financial expenditure data was collected for Graphic Packaging's waste management services. Based on this allocation, Quantis applied emission factors specific to the pulp, paper, printing and publishing sector per dollar spent to calculate the respective emissions.

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

Please explain

Business travel

Evaluation status
Relevant, calculated

Metric tonnes CO2e
19596

Emissions calculation methodology
The estimated emissions were calculated using the GHG Protocol Quantis Scope 3 Evaluator Tool. Financial expenditure data was collected and allocated according to travel activity (auto rentals, taxi, hotel stays, air travel). Based on this allocation, Quantis applied emission factors specific to the pulp, paper, printing and publishing sector per dollar spent to calculate the respective emissions.

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

Please explain

Employee commuting

Evaluation status
Relevant, calculated

Metric tonnes CO2e
36

Emissions calculation methodology
The estimated emissions were calculated using the GHG Protocol Quantis Scope 3 Evaluator Tool. Graphic Packaging's employee range was input into the tool, in which Quantis applied emission factors specific to the pulp, paper, printing and publishing sector per dollar spent to calculate the respective emissions.

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

Please explain

Upstream leased assets

Evaluation status
Not relevant, explanation provided

Metric tonnes 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
This Scope 3 category does not meet any of the criteria (size, influence, risk, stakeholders, outsourcing, etc.) deemed as relevant under the WRI / WBCSD "Corporate Value Chain (Scope 3) Accounting & Reporting Standard" criteria of "sector guidance" as defined in Table 6.1 based on Graphic Packaging's review of operations.

Downstream transportation and distribution

Evaluation status
Relevant, calculated

Metric tonnes CO2e
311830

Emissions calculation methodology
The estimated emissions were calculated using the GHG Protocol Quantis Scope 3 Evaluator Tool. Financial expenditure data was collected and allocated according distribution (downstream). Based on this allocation, Quantis applied emission factors specific to the pulp, paper, printing and publishing sector per dollar spent to calculate the respective emissions.

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

Please explain

Processing of sold products

Evaluation status
Not relevant, explanation provided

Metric tonnes 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
This Scope 3 category does not meet any of the criteria (size, influence, risk, stakeholders, outsourcing, etc.) deemed as relevant under the WRI / WBCSD "Corporate Value Chain (Scope 3) Accounting & Reporting Standard" criteria of "sector guidance" as defined in Table 6.1 based on Graphic Packaging's review of operations.

Use of sold products

Evaluation status
Not relevant, explanation provided

Metric tonnes 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
This Scope 3 category does not meet any of the criteria (size, influence, risk, stakeholders, outsourcing, etc.) deemed as relevant under the WRI / WBCSD "Corporate Value Chain (Scope 3) Accounting & Reporting Standard" criteria of "sector guidance" as defined in Table 6.1 based on Graphic Packaging's review of operations.

End of life treatment of sold products

Evaluation status
Relevant, calculated

Metric tonnes CO2e
489

Emissions calculation methodology
The estimated emissions were calculated using the GHG Protocol Quantis Scope 3 Evaluator Tool. The respective material mass of sold products was collected and allocated according product material grouping (i.e. paper, metals, plastics, organics, and mixed). Based on this allocation, Quantis applied emission factors specific to the pulp, paper, printing and publishing sector per dollar spent to calculate the respective emissions.

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

Please explain

Downstream leased assets

Evaluation status
Relevant, calculated

Metric tonnes CO2e
768140

Emissions calculation methodology
The estimated emissions were calculated using the GHG Protocol Quantis Scope 3 Evaluator Tool. Leased income by facility type was collected. Based on this allocation, Quantis applied emission factors specific to the pulp, paper, printing and publishing sector per dollar spent to calculate the respective emissions.

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

Please explain

Franchises

Evaluation status
Not relevant, explanation provided

Metric tonnes 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
Graphic Packaging does not operate any franchises and as such this Scope 3 category does not meet any of the criteria (size, influence, risk, stakeholders, outsourcing, etc.) deemed as relevant under the WRI / WBCSD "Corporate Value Chain (Scope 3) Accounting & Reporting Standard" criteria of "sector guidance" as defined in Table 6.1 based on Graphic Packaging's review of operations.

Investments

Evaluation status
Not relevant, explanation provided

Metric tonnes 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
This Scope 3 category does not meet any of the criteria (size, influence, risk, stakeholders, outsourcing, etc.) deemed as relevant under the WRI / WBCSD "Corporate Value Chain (Scope 3) Accounting & Reporting Standard" criteria of "sector guidance" as defined in Table 6.1 based on Graphic Packaging's review of operations.

Other (upstream)

Evaluation status
Not evaluated

Metric tonnes 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
Not Applicable

Other (downstream)

Evaluation status
Not evaluated

Metric tonnes 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
Not Applicable

C-AC6.6/C-FB6.6/C-PF6.6

(C-AC6.6/C-FB6.6/C-PF6.6) Can you break down your Scope 3 emissions by relevant business activity area?
No

C-AC6.6b/C-FB6.6b/C-PF6.6b

(C-AC6.6b/C-FB6.6b/C-PF6.6b) Why can you not report your Scope 3 emissions by business activity area?

Row 1

Primary reason
Lack of internal resources

Please explain
Graphic Packaging's supply chain resources are focused on executing contracts and securing raw material. We have not allocated resources to generate this level of data.

C-AC6.8/C-FB6.8/C-PF6.8

(C-AC6.8/C-FB6.8/C-PF6.8) Is biogenic carbon pertaining to your direct operations relevant to your current CDP climate change disclosure?
Yes

C-AC6.8a/C-FB6.8a/C-PF6.8a

(C-AC6.8a/C-FB6.8a/C-PF6.8a) Account for biogenic carbon data pertaining to your direct operations and identify any exclusions.

CO2 emissions from biofuel combustion (processing/manufacturing machinery)

Emissions (metric tons CO2)
5652244.895

Methodology
Default emissions factors

Please explain
Biogenic carbon dioxide emissions were calculated for bark, black liquor, and railroad cross ties using the US EPA MRR Final Rule (40 CFR 98) - Industrial Sector 2013 emission factor set based on the energy generated from the combustion of these sources. Biogenic carbon dioxide emissions were calculated for sludge using aa custom factor calculated by assuming 12.4% carbon content per wet ton of sludge using a GPI custom HHV.

C-AC6.9/C-FB6.9/C-PF6.9

(C-AC6.9/C-FB6.9/C-PF6.9) Do you collect or calculate greenhouse gas emissions for each commodity reported as significant to your business in C-AC0.7/FB0.7/PF0.7?

Agricultural commodities
Timber

Do you collect or calculate GHG emissions for this commodity?
No

Please explain
Graphic Packaging's resources are focused on executing contracts and securing raw material. We have not allocated resources to generate this level of data.

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
0.000347868

Metric numerator (Gross global combined Scope 1 and 2 emissions, metric tons CO2e)
2142902

Metric denominator
unit total revenue

Metric denominator: Unit total
6160100000

Scope 2 figure used
Market-based

% change from previous year
0.06

Direction of change
Decreased

Reason for change
The Company's total Scope 1 and Scope 2 emissions have increased year over year by approximately 2.10%, however revenues have increased at a higer rate of 2.17% therefore reducing the intensity of emissions per unit of revenue by 0.06%.

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	1287827.28	IPCC Fifth Assessment Report (AR5 – 100 year)
CH4	6837.761	IPCC Fifth Assessment Report (AR5 – 100 year)
N2O	24081.674	IPCC Fifth Assessment Report (AR5 – 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)
Canada	34011.089
United States of America	1279503.371
New Zealand	0
United Kingdom of Great Britain and Northern Ireland	3916.02
Netherlands	1100.909
Spain	30.457
France	157.287
Australia	0
Mexico	0
Germany	27.582

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)
Americas Converting	27214.787
Benson Group	2476.472
Beverage Packaging	2144.678
Graphic Packaging, LLC	14389.666
Headquarters / Sales	149.484
Machinery	307.977
Mills Division	1272063.65

C-AC7.4/C-FB7.4/C-PF7.4

(C-AC7.4/C-FB7.4/C-PF7.4) Do you include emissions pertaining to your business activity(ies) in your direct operations as part of your global gross Scope 1 figure?

Yes

C-AC7.4b/C-FB7.4b/C-PF7.4b

(C-AC7.4b/C-FB7.4b/C-PF7.4b) Report the Scope 1 emissions pertaining to your business activity(ies) and explain any exclusions. If applicable, disaggregate your agricultural/forestry by GHG emissions category.

Activity

Processing/Manufacturing

Emissions category

<Not Applicable>

Emissions (metric tons CO2e)

1272063.65

Methodology

Default emissions factor

Please explain

Over half of Graphic Packaging's Scope 1 emissions result from activities from the mill operations, which are the core of our processing and manufacturing activities. To calculate the respective emissions, the energy activity is multiplied by standard (default) emission factors.

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)	Purchased and consumed electricity, heat, steam or cooling (MWh)	Purchased and consumed low-carbon electricity, heat, steam or cooling accounted for in Scope 2 market-based approach (MWh)
Australia	2351.435	2351.435	3152.93	0
Brazil	176.459	176.459	1509.62	0
Canada	10169.695	1981.348	71337.65	0
France	374.913	287.482	5403.79	0
Germany	1451.478	2526.482	3467.16	0
Mexico	6957.017	6957.017	14535.02	0
Netherlands	6610.964	8038.008	15069.67	0
New Zealand	299.493	299.493	2586.51	0
Spain	3677.081	5724.977	12696.5	0
United Kingdom of Great Britain and Northern Ireland	9117.407	14065.071	36920.07	0
United States of America	716352.211	781747.095	1392314.12	0

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)
Americas Converting	164887.462	163636.033
Benson Group	3705.963	5717.046
Beverage Packaging	15622.448	20166.967
Graphic Packaging	126194.052	127542.115
Headquarters / Sales	1191.219	1150.219
Machinery	651.094	651.094
Mills Division	445285.915	505291.395

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?

Increased

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	0	No change	0	
Other emissions reduction activities	14899	Decreased	0.71	Efficiency projects undertaken at our mills accounted for 14,899 mtons CO2e reduction compared to the prior year. This reduction compared to the prior year scope 1 and 2 emissions of 2,098,759.6 represents a 0.71% decrease (14,899/2098759.6) in emissions.
Divestment	0	No change	0	
Acquisitions	0	No change	0	
Mergers	0	No change	0	
Change in output	0	No change	0	
Change in methodology	0	No change	0	
Change in boundary	0	No change	0	
Change in physical operating conditions	0	No change	0	
Unidentified	59040.99	Increased	2.81	While year over year, Graphic's scope 1 and 2 CO2e emissions increased by 44.1k mtons, Graphic did incur 14.9k mtons CO2e in reductions attributed to realized energy effiiciency reductions. Therefore, the remaining increase is 59.0k mtons (44.1k+14.9k). Compared to the prior year scope 1 and 2 emissions of 2,098,760 mtons, this represents a 2.81% increase (59,040.99/2,098,759.6) in emissions. Specifically, this increase is attributed to increases observed in the scope 2 market-based electric power emission factors year over year.
Other	0	No change	0	

C7.9b

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

Market-based

C8. Energy

C8.1

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

More than 0% but less than or equal to 5%

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

C8.2a

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

	Heating value	MWh from renewable sources	MWh from non-renewable sources	Total (renewable and non-renewable) MWh
Consumption of fuel (excluding feedstock)	HHV (higher heating value)	5812370.5	18871354.43	24683724.93
Consumption of purchased or acquired electricity	<Not Applicable>	0	1558993.04	1558993.04
Consumption of purchased or acquired heat	<Not Applicable>	<Not Applicable>	<Not Applicable>	<Not Applicable>
Consumption of purchased or acquired steam	<Not Applicable>	<Not Applicable>	<Not Applicable>	<Not Applicable>
Consumption of purchased or acquired cooling	<Not Applicable>	<Not Applicable>	<Not Applicable>	<Not Applicable>
Consumption of self-generated non-fuel renewable energy	<Not Applicable>	0	<Not Applicable>	0
Total energy consumption	<Not Applicable>	5812370.5	20430347.46	26242717.97

C8.2b

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

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

C8.2c

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

Fuels (excluding feedstocks)
Wood

Heating value
HHV (higher heating value)

Total fuel MWh consumed by the organization
5812370.5

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

MWh fuel consumed for self-generation of heat

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

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

MWh fuel consumed for self-cogeneration or self-trigeneration
5812370.5

Emission factor
1.16

Unit
kg CO2e per million Btu

Emissions factor source
US EPA MRR Final Rule (40 CFR 98) - Industrial Sector 2013

Comment

Fuels (excluding feedstocks)
Black Liquor

Heating value
HHV (higher heating value)

Total fuel MWh consumed by the organization
11701859.91

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

MWh fuel consumed for self-generation of heat

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

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

MWh fuel consumed for self-cogeneration or self-trigeneration
11701859.91

Emission factor
0.16

Unit
kg CO2e per million Btu

Emissions factor source
US EPA MRR Final Rule (40 CFR 98) - Industrial Sector 2013

Comment

Fuels (excluding feedstocks)
Coal

Heating value
HHV (higher heating value)

Total fuel MWh consumed by the organization
20722.21

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

MWh fuel consumed for self-generation of heat

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

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

MWh fuel consumed for self-cogeneration or self-trigeneration
20722.21

Emission factor
95.4

Unit
kg CO2e per million Btu

Emissions factor source
US EPA MRR Final Rule (40 CFR 98) - Industrial Sector 2013

Comment

Fuels (excluding feedstocks)
Diesel

Heating value
HHV (higher heating value)

Total fuel MWh consumed by the organization
58130.24

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

MWh fuel consumed for self-generation of heat

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

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

MWh fuel consumed for self-cogeneration or self-trigeneration
58130.24

Emission factor
74.2

Unit
kg CO2e per million Btu

Emissions factor source
US EPA MRR Final Rule (40 CFR 98) - Industrial Sector 2013

Comment

Fuels (excluding feedstocks)
Motor Gasoline

Heating value
HHV (higher heating value)

Total fuel MWh consumed by the organization
4334.92

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

MWh fuel consumed for self-generation of heat

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

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

MWh fuel consumed for self-cogeneration or self-trigeneration
4334.92

Emission factor
70.46

Unit
kg CO2e per million Btu

Emissions factor source
US EPA MRR Final Rule (40 CFR 98) - Industrial Sector 2013

Comment

Fuels (excluding feedstocks)
Kerosene

Heating value
HHV (higher heating value)

Total fuel MWh consumed by the organization
405.38

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

MWh fuel consumed for self-generation of heat

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

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

MWh fuel consumed for self-cogeneration or self-trigeneration
405.38

Emission factor
75.44

Unit
kg CO2e per million Btu

Emissions factor source
US EPA MRR Final Rule (40 CFR 98) - Industrial Sector 2013

Comment

Fuels (excluding feedstocks)
Natural Gas

Heating value
HHV (higher heating value)

Total fuel MWh consumed by the organization
6916772.69

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

MWh fuel consumed for self-generation of heat

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

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

MWh fuel consumed for self-cogeneration or self-trigeneration
6916772.69

Emission factor
53.12

Unit
kg CO2e per million Btu

Emissions factor source
US EPA MRR Final Rule (40 CFR 98) - Industrial Sector 2013

Comment

Fuels (excluding feedstocks)
Fuel Oil Number 2

Heating value
HHV (higher heating value)

Total fuel MWh consumed by the organization
5070.89

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

MWh fuel consumed for self-generation of heat

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

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

MWh fuel consumed for self-cogeneration or self-trigeneration
5070.89

Emission factor
74.2

Unit
kg CO2e per million Btu

Emissions factor source
US EPA MRR Final Rule (40 CFR 98) - Industrial Sector 2013

Comment

Fuels (excluding feedstocks)
Propane Liquid

Heating value
HHV (higher heating value)

Total fuel MWh consumed by the organization
46164.37

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

MWh fuel consumed for self-generation of heat

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

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

MWh fuel consumed for self-cogeneration or self-trigeneration
46164.37

Emission factor
63.11

Unit
kg CO2e per million Btu

Emissions factor source
US EPA MRR Final Rule (40 CFR 98) - Industrial Sector 2013

Comment

Fuels (excluding feedstocks)
Waste Oils

Heating value
HHV (higher heating value)

Total fuel MWh consumed by the organization
25951.09

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

MWh fuel consumed for self-generation of heat

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

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

MWh fuel consumed for self-cogeneration or self-trigeneration

25951.09

Emission factor
21.1

Unit
kg CO2e per million Btu

Emissions factor source
IPCC - Intergovernmental Panel on Climate Change 2006 IPCC Guidelines

Comment

Fuels (excluding feedstocks)
Other, please specify (Sludge)

Heating value
HHV (higher heating value)

Total fuel MWh consumed by the organization
91942.73

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

MWh fuel consumed for self-generation of heat

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

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

MWh fuel consumed for self-cogeneration or self-trigeneration
91942.73

Emission factor
72.57

Unit
kg CO2 per million Btu

Emissions factor source
Custom factor calculated by assuming 12.4% carbon content per wet ton of sludge using the custom Graphic HHV

Comment

C8.2d

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

	Total Gross generation (MWh)	Generation that is consumed by the organization (MWh)	Gross generation from renewable sources (MWh)	Generation from renewable sources that is consumed by the organization (MWh)
Electricity	1914331.96	1897104.5	0	0
Heat	0	0	0	0
Steam	0	0	0	0
Cooling	0	0	0	0

C8.2e

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

Sourcing method
None (no purchases of low-carbon electricity, heat, steam or cooling)

Low-carbon technology type
<Not Applicable>

Country/region of consumption of low-carbon electricity, heat, steam or cooling
<Not Applicable>

MWh consumed accounted for at a zero emission factor
<Not Applicable>

Comment

C9. Additional metrics

C9.1

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

C10. Verification

C10.1

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

	Verification/assurance status
Scope 1	Third-party verification or assurance process in place
Scope 2 (location-based or market-based)	Third-party verification or assurance process in place
Scope 3	Third-party verification or assurance process in place

C10.1a

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

Verification or assurance cycle in place
Annual process

Status in the current reporting year
Complete

Type of verification or assurance
Limited assurance

Attach the statement
FY19 GPI Verification Statement-ASRauthorized.pdf

Page/ section reference
2

Relevant standard
ISO14064-3

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
FY19 GPI Verification Statement-ASRauthorized.pdf

Page/ section reference
2

Relevant standard
ISO14064-3

Proportion of reported emissions verified (%)
100

Scope 2 approach
Scope 2 market-based

Verification or assurance cycle in place
Annual process

Status in the current reporting year
Complete

Type of verification or assurance
Limited assurance

Attach the statement
FY19 GPI Verification Statement-ASRauthorized.pdf

Page/ section reference
2

Relevant standard
ISO14064-3

Proportion of reported emissions verified (%)
100

C10.1c

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

Scope 3 category
Scope 3: Purchased goods and services

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
FY19 GPI Verification Statement-ASRauthorized.pdf

Page/section reference
2

Relevant standard
ISO14064-3

Proportion of reported emissions verified (%)
100

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

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
FY19 GPI Verification Statement-ASRauthorized.pdf

Page/section reference
2

Relevant standard
ISO14064-3

Proportion of reported emissions verified (%)
100

Scope 3 category
Scope 3: Upstream transportation and distribution

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
FY19 GPI Verification Statement-ASRauthorized.pdf

Page/section reference
2

Relevant standard
ISO14064-3

Proportion of reported emissions verified (%)
100

Scope 3 category
Scope 3: Waste generated in operations

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
FY19 GPI Verification Statement-ASRauthorized.pdf

Page/section reference
2

Relevant standard
ISO14064-3

Proportion of reported emissions verified (%)
100

Scope 3 category
Scope 3: Business travel

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
FY19 GPI Verification Statement-ASRauthorized.pdf

Page/section reference
2

Relevant standard
ISO14064-3

Proportion of reported emissions verified (%)
100

Scope 3 category
Scope 3: Employee commuting

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
FY19 GPI Verification Statement-ASRauthorized.pdf

Page/section reference
2

Relevant standard
ISO14064-3

Proportion of reported emissions verified (%)
100

C10.2

(C10.2) Do you verify any climate-related information reported in your CDP disclosure other than the emissions figures reported in C6.1, C6.3, and C6.5?
No, we do not verify any other climate-related information reported in our CDP disclosure

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?
No, but we anticipate doing so in the next two years

C12. Engagement

C12.1

(C12.1) Do you engage with your value chain on climate-related issues?
Yes, our suppliers
Yes, our customers

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
10

% total procurement spend (direct and indirect)
0

% of supplier-related Scope 3 emissions as reported in C6.5
0

Rationale for the coverage of your engagement
We engage with 10% of number of our largest suppliers through active programs to upgrade performance of the materials and reduce amount of material required for producing our products. The engagement is in innovation – designing coatings and tapes that are made from renewable materials and recyclable material. We are addressing End-of-Life challenges that petroleum-based resins present . Coatings innovation work are in regard to replacing PE on Foodservice packaging. The coatings will meet recycling needs and thus improve the recovery of foodservice packaging. The higher recovery rate will avoid Greenhouse Gases that would be generated when the foodservice package is sent to the land fill. Innovation efforts on resin based tapes will allow 100% recovery of the package as the tape will be fiber based and can be processed in a recycled paperboard mill.

Impact of engagement, including measures of success
The impact of the engagement will allow Graphic Packaging to provide environmentally responsible packaging solutions that are made from renewable materials and are recyclable and / or compostable. Graphic Packaging measures the success of our engagement with our suppliers through new product sales metrics against our long-range operating plan. In 2019 we reduced LDPE purchase by 4.3%. These innovation efforts will support or our 2025 Vision where we have targeted revenue of $400 - $700 million over the period of 2020 – 2025 for our innovation efforts

Comment
A significant challenge with products like Paper Cups & Food Service Packaging is the resin material that is added to the package for barrier protection. Traditional solutions include petroleum-based resins that are considered a contaminant in the paper recycling stream. These solutions are also not compostable. Graphic Packaging has developed advanced biobased resins that provide barrier and are recyclable and / or compostable.

C12.1b

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

Type of engagement
Collaboration & innovation

Details of engagement
Other, please specify (GPI engages in projects with customers to reduce the environmental profile of their packaging. Examples are reducing package size or thickness, as well as converting oackaging materials.)

% of customers by number
10

% of customer - related Scope 3 emissions as reported in C6.5
0

Portfolio coverage (total or outstanding)
<Not Applicable>

Please explain the rationale for selecting this group of customers and scope of engagement
Innovation partnerships and projects with customers a key tenant of Graphic Packaging Vision 2025 business strategy. We engage as appropriate with customers, who have strategic projects with us to convert to fibre-based, recyclable products, comprising of up to approximately 10% of our total number of customers. Customer engagements can vary from initiation and scope. The project initiation can be from an innovation personation to the customer resulting in an innovation project or as a result of the customer requesting an innovative solution as part of their strategy. The project scope can range from innovation development by GPI from customer design guidance or through a collaborative effort with a project team comprising of Graphic Packaging and customer employees. Through engagement with these customers we commercialize new technologies that will have a positive impact on the environment and reduce our customers packaging environmental profile .

Impact of engagement, including measures of success
The impact of the engagement will allow Graphic Packaging customers to provide environmentally responsible packaging solutions that are recyclable and / or compostable. In our Vision 2025 we have announced our target of sales of $400 - $700 Million over the period of 2020 – 2025, associated with conversion to more sustainable packaging. As an example, in 2019 we launched the KeelClip™, a paperboard packaging solution for beverage cans that offers sustainability advantages and merchandising benefits as compared to other packaging options, such as plastic rings Hi-Cone. KeelClip, the company's latest innovation in paperboard packaging solutions, performs well in high-speed environments enabled by the corresponding KeelClip machinery system. Success will be measured by achieving commercial implementations of KeelClip and meeting our revenue targets over the period . On average we are working with our customers to reduce the wood fibre in their packaging by 1%, this reduction has been implemented as a result of engagement.

C-AC12.2/C-FB12.2/C-PF12.2

(C-AC12.2/C-FB12.2/C-PF12.2) Do you encourage your suppliers to undertake any agricultural or forest management practices with climate change mitigation and/or adaptation benefits?
Yes

C-AC12.2a/C-FB12.2a/C-PF12.2a

(C-AC12.2a/C-FB12.2a/C-PF12.2a) Specify which agricultural or forest management practices with climate change mitigation and/or adaptation benefits you encourage your suppliers to undertake and describe your role in the implementation of each practice.

Management practice reference number
MP1

Management practice
Knowledge sharing

Description of management practice
Graphic Packaging engages with landowners, loggers, and land managers on a recurring frequency at training events hosted by Graphic Packaging at the West Monroe and Macon mills . These training events are facilitated by professors and wood procurement managers, who instruct continuing professional educational classes on sustainable forestry management practices. In 2019 we facilitated training sessions in West Monroe, LA and Macon, GA. Additionally, Graphic Packaging engages regional members of forestry certification bodies. Graphic Packaging has chosen knowledge sharing as the management practice as it directly empowers our suppliers to make informed and educated decisions with the resources shared by our industry. We expect the sharing of knowledge to create more sustainable wood baskets that increase the resiliency of our supply chain.

Your role in the implementation
Knowledge sharing

Explanation of how you encourage implementation
Suppliers are encouraged to implement these new practices through personal instruction at Graphic Packaging hosted informational training sessions at our West Monroe and Macon mills.

Climate change related benefit
Increasing resilience to climate change (adaptation)
Increase carbon sink (mitigation)
Reduced demand for fertilizers (adaptation)

Comment

C-AC12.2b/C-FB12.2b/C-PF12.2b

(C-AC12.2b/C-FB12.2b/C-PF12.2b) Do you collect information from your suppliers about the outcomes of any implemented agricultural/forest management practices you have encouraged?
No

C12.3

(C12.3) Do you engage in activities that could either directly or indirectly influence public policy on climate-related issues through any of the following?
Direct engagement with policy makers
Trade associations
Funding research organizations

C12.3a

(C12.3a) On what issues have you been engaging directly with policy makers?

Focus of legislation	Corporate position	Details of engagement	Proposed legislative solution
Cap and trade	Oppose	Advocacy to federal and state legislators and regulators. Graphic Packaging provides the impact of the legislation to our operations and provides insight on the progress that has been made by the company to reduce our GHG levels. . Our outreach provides the progress that has been made in reducing GHG and the annual costs to comply. Graphic Packaging works with trade associations (American Forest & Paper Association and Paper Recycling Coalition) and scientific labs (National Council for Air and Stream Improvement) in the advocacy efforts. In California Graphic Packaging is a member of the California Manufacturers and Technical Association.	Graphic Packaging supports regulatory reform that requires rulemaking to include science-based measurements, a cost benefit analysis and public review and comment.
Carbon tax	Oppose	Advocacy to federal and state legislators and regulators. Graphic Packaging provides the impact of the legislation to our operations and provides insight on the progress that has been made to reduce our GHG levels. Graphic Packaging utilizes biomass, a renewable energy source, for more than 65% of our global energy. Legislation and regulatory advocacy program regarding the carbon neutrality of biomass is critical to the company. Graphic Packaging has participated with industry associations, scientific labs and ENGO's to develop an accounting for the biogenic carbon generated from biomass energy. This data is a cornerstone of our messaging confirming that biogenic carbon should continue to be considered carbon neutral in the atmosphere. Graphic Packaging works with trade associations (American Forest & Paper Association and Paper Recycling Coalition) and scientific labs (National Council for Air and Stream Improvement) in the advocacy efforts.	Graphic Packaging supports regulatory reform that requires rulemaking to include science-based measurements, a cost benefit analysis and public review and comment. Graphic Packaging also supports legislation and regulatory language that clearly defines biogenic carbon as a carbon neutral renewable energy source.
Energy efficiency	Support	Advocacy to federal and state legislators and regulators. Graphic Packaging was recognized with the Energy Leader Award for reducing energy. The company was supported by an EPA consultant on energy management as part of the program. Graphic Packaging works with trade associations (American Forest & Paper Association and Paper Recycling Coalition) and scientific labs (National Council for Air and Stream Improvement) in the advocacy efforts. We have also worked with the Department of Energy for advice on "best practices" for energy efficiency programs.	Energy efficiency in the areas of research and development and innovation is where legislation may support breakthrough advancements. These could be in the form of research grants or innovation centers. Legislation structured to support advancements in new battery technology would make renewable energy like wind and solar viable as a full-service energy source. This is also an area that is related to energy efficiency.

C12.3b

(C12.3b) Are you on the board of any trade associations or do you provide funding beyond membership?

Yes

C12.3c

(C12.3c) Enter the details of those trade associations that are likely to take a position on climate change legislation.

Trade association

American Forest and Paper Association

Is your position on climate change consistent with theirs?

Consistent

Please explain the trade association's position

AF&PA members have long been good stewards of our planet's resources. The industry produces recyclable products made from a renewable resource and believe that sustainable practices today will yield positive results for a better tomorrow. Better Practices, Better Planet 2020 - the AF&PA's sustainability initiative - is a proactive commitment to the long-term success of our industry, our communities, our environment and the nearly 900,000 men and women who make the paper and wood products vital to the lives of people around the world. This initiative aligns the objectives of one of the United Nations Sustainable Development Goals (UNSDGs). The six goals targeted within Better Practices Better Planet focus on increasing paper recovery for recycling, improving energy efficiency, reducing greenhouse gas emissions, promoting sustainable forestry practices, improving workplace safety, and reducing water use.

How have you influenced, or are you attempting to influence their position?

Graphic Packaging participated in drafting and writing the position. The company provides environmental data to support the industry's measurement and ultimately the 2020 goals. Graphic Packaging is also engaged in setting the next sustainability goals for the industry.

Trade association

Paper Recycling Coalition

Is your position on climate change consistent with theirs?

Consistent

Please explain the trade association's position

The Paper Recycling Coalition, Inc. represents the interests of the 100% recycled paperboard and containerboard industries. As a net negative emitter of carbon dioxide CO_2, this industry is a leader in sustainability. For every ton of 100% recycled paperboard produced, 3.17 tons of CO_2 are avoided, when measured using the EPA WARM Model. The Coalition consists of nine companies with 50,000 employees in facilities located in 43 states. The Mission of the Paper Recycling Coalition is to protect the U.S. recovered fiber supply from market distorting government subsidies and costly government regulations. The use of recovered paper to make new products will contribute to reducing atmospheric carbon. Paper and paperboard recycling are one of our country's greatest environmental success stories. The amount of used paper recovered for recycling has nearly doubled since 1990. Over 66% of paper and paperboard materials were recovered in 2019 .

How have you influenced, or are you attempting to influence their position?

Graphic Packaging helped draft the position, participated in developing the carbon accounting, and is aligned with the position. We continue to participate in advocacy and other activities to support the industry .

C12.3d

(C12.3d) Do you publicly disclose a list of all research organizations that you fund?

Yes

C12.3f

(C12.3f) What processes do you have in place to ensure that all of your direct and indirect activities that influence policy are consistent with your overall climate change strategy?

Graphic Packaging's VP of Government Affairs and Sustainability provides strategic direction and ensures that the direct and indirect activities regarding climate change policies are consistent with the strategy. The strategy is reviewed formally each year and on an adhoc basis. Graphic Packaging's President and CEO and other members of the Executive Team participate in policy discussions at Federal and State levels.

Environmental and climate change risks and opportunities, along with macroeconomic trends, are incorporated in our long-range plan, as appropriate. The long-range plan is presented to the Board of Directors for its consideration.

C12.4

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

Publication
In mainstream reports

Status
Complete

Attach the document
gpi-sustainability-report-2018.pdf

Page/Section reference
All pages

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

Comment
The company published a Sustainability and Social Responsibility Update in the 4th quarter of 2019 and will publish a report in 2020 in the 4th quarter.

Publication
In mainstream reports

Status
Complete

Attach the document
Graphic_Packaging_Holding_Company_2019 10-k.pdf

Page/Section reference
Risk Factors. Page 14-17

Content elements
Risks & opportunities

Comment

C13. Other land management impacts

C-AC13.2/C-FB13.2/C-PF13.2

(C-AC13.2/C-FB13.2/C-PF13.2) Do you know if any of the management practices mentioned in C-AC12.2a/C-FB12.2a/C-PF12.2a that were implemented by your suppliers have other impacts besides climate change mitigation/adaptation?
No

C15. Signoff

C-FI

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

C15.1

(C15.1) Provide details for the person that has signed off (approved) your CDP climate change response.

	Job title	Corresponding job category
Row 1	Executive Vice President, General Counsel and Secretary	Other C-Suite Officer

SC. Supply chain module

SC0.0

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

Graphic Packaging Holding Company (together with its subsidiaries, “Graphic Packaging” or the “Company”) is committed to providing consumer packaging that makes a world of difference. The Company is a leading provider of paper-based packaging solutions for a wide variety of products to food, beverage, food service and other consumer products companies. The Company operates on a global basis, is one of the largest producers of folding cartons in the United States ("U.S.") and holds leading market positions in coated unbleached kraft paperboard (“CUK”), coated-recycled paperboard (“CRB”) and solid bleached sulfate paperboard ("SBS"). The Company’s customers include many of the world’s most widely recognized companies and brands with prominent market positions in beverage, food, food service and other consumer products. The Company strives to provide its customers with packaging solutions designed to deliver marketing and performance benefits at a competitive cost by capitalizing on its low-cost paperboard mills and carton manufacturing plants, its proprietary carton, container and packaging designs, and its commitment to quality and service.

SC0.1

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

	Annual Revenue
Row 1	6160100000

SC0.2

(SC0.2) Do you have an ISIN for your company that you would be willing to share with CDP?

Yes

SC0.2a

(SC0.2a) Please use the table below to share your ISIN.

	ISIN country code (2 letters)	ISIN numeric identifier and single check digit (10 numbers overall)
Row 1	US	3886891015

SC1.1

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

Requesting member
Anheuser Busch InBev

Scope of emissions
Scope 1

Allocation level
Company wide

Allocation level detail
<Not Applicable>

Emissions in metric tonnes of CO2e
44431.56

Uncertainty (±%)
5

Major sources of emissions
Natural Gas

Verified
No

Allocation method
Allocation based on the market value of products purchased

Please explain how you have identified the GHG source, including major limitations to this process and assumptions made
The GHG Source was identified by reviewing invoices of energy purchases.

Requesting member
Anheuser Busch InBev

Scope of emissions
Scope 2

Allocation level

Company wide

Allocation level detail
<Not Applicable>

Emissions in metric tonnes of CO2e
27767.64

Uncertainty (±%)
5

Major sources of emissions
Electric Power

Verified
No

Allocation method
Allocation based on the market value of products purchased

Please explain how you have identified the GHG source, including major limitations to this process and assumptions made
The GHG Source was identified by reviewing invoices of energy purchases.

Requesting member
Grupo Bimbo, S.A.B. de C.V.

Scope of emissions
Scope 1

Allocation level
Company wide

Allocation level detail
<Not Applicable>

Emissions in metric tonnes of CO2e
8684.67

Uncertainty (±%)
5

Major sources of emissions
Natural Gas

Verified
No

Allocation method
Allocation based on the market value of products purchased

Please explain how you have identified the GHG source, including major limitations to this process and assumptions made
The GHG Source was identified by reviewing invoices of energy purchases.

Requesting member
Grupo Bimbo, S.A.B. de C.V.

Scope of emissions
Scope 2

Allocation level
Company wide

Allocation level detail
<Not Applicable>

Emissions in metric tonnes of CO2e
5427.51

Uncertainty (±%)
5

Major sources of emissions
Electric Power

Verified
No

Allocation method
Allocation based on the market value of products purchased

Please explain how you have identified the GHG source, including major limitations to this process and assumptions made
The GHG Source was identified by reviewing invoices of energy purchases.

Requesting member
Diageo Plc

Scope of emissions
Scope 1

Allocation level

Company wide

Allocation level detail
<Not Applicable>

Emissions in metric tonnes of CO2e
1219.09

Uncertainty (±%)
5

Major sources of emissions
Natural Gas

Verified
No

Allocation method
Allocation based on the market value of products purchased

Please explain how you have identified the GHG source, including major limitations to this process and assumptions made
The GHG Source was identified by reviewing invoices of energy purchases.

Requesting member
Diageo Plc

Scope of emissions
Scope 2

Allocation level
Company wide

Allocation level detail
<Not Applicable>

Emissions in metric tonnes of CO2e
761.88

Uncertainty (±%)
5

Major sources of emissions
Electric Power

Verified
No

Allocation method
Allocation based on the market value of products purchased

Please explain how you have identified the GHG source, including major limitations to this process and assumptions made
The GHG Source was identified by reviewing invoices of energy purchases.

Requesting member
Kellogg Company

Scope of emissions
Scope 1

Allocation level
Company wide

Allocation level detail
<Not Applicable>

Emissions in metric tonnes of CO2e
42841.84

Uncertainty (±%)
5

Major sources of emissions
Natural Gas

Verified
No

Allocation method
Allocation based on the market value of products purchased

Please explain how you have identified the GHG source, including major limitations to this process and assumptions made
The GHG Source was identified by reviewing invoices of energy purchases.

Requesting member
Kellogg Company

Scope of emissions
Scope 2

Allocation level

Company wide

Allocation level detail
<Not Applicable>

Emissions in metric tonnes of CO2e
26774.14

Uncertainty (±%)
5

Major sources of emissions
Electric Power

Verified
No

Allocation method
Allocation based on the market value of products purchased

Please explain how you have identified the GHG source, including major limitations to this process and assumptions made
The GHG Source was identified by reviewing invoices of energy purchases.

Requesting member
Koninklijke Philips NV

Scope of emissions
Scope 1

Allocation level
Company wide

Allocation level detail
<Not Applicable>

Emissions in metric tonnes of CO2e
59.37

Uncertainty (±%)
5

Major sources of emissions
Natural Gas

Verified
No

Allocation method
Allocation based on the market value of products purchased

Please explain how you have identified the GHG source, including major limitations to this process and assumptions made
The GHG Source was identified by reviewing invoices of energy purchases.

Requesting member
Please select

Scope of emissions
Scope 2

Allocation level
Company wide

Allocation level detail
<Not Applicable>

Emissions in metric tonnes of CO2e
37.1

Uncertainty (±%)
5

Major sources of emissions
Electric Power

Verified
No

Allocation method
Allocation based on the market value of products purchased

Please explain how you have identified the GHG source, including major limitations to this process and assumptions made
The GHG Source was identified by reviewing invoices of energy purchases.

Requesting member
Lego Group

Scope of emissions
Scope 1

Allocation level

Company wide

Allocation level detail
<Not Applicable>

Emissions in metric tonnes of CO2e
3153.26

Uncertainty (±%)
5

Major sources of emissions
Natural Gas

Verified
No

Allocation method
Allocation based on the market value of products purchased

Please explain how you have identified the GHG source, including major limitations to this process and assumptions made
The GHG Source was identified by reviewing invoices of energy purchases.

Requesting member
Lego Group

Scope of emissions
Scope 2

Allocation level
Company wide

Allocation level detail
<Not Applicable>

Emissions in metric tonnes of CO2e
1970.64

Uncertainty (±%)
5

Major sources of emissions
Electric Power

Verified
No

Allocation method
Allocation based on the market value of products purchased

Please explain how you have identified the GHG source, including major limitations to this process and assumptions made
The GHG Source was identified by reviewing invoices of energy purchases.

Requesting member
McDonald's Corporation

Scope of emissions
Scope 1

Allocation level
Company wide

Allocation level detail
<Not Applicable>

Emissions in metric tonnes of CO2e
50815.81

Uncertainty (±%)
5

Major sources of emissions
Natural Gas

Verified
No

Allocation method
Allocation based on the market value of products purchased

Please explain how you have identified the GHG source, including major limitations to this process and assumptions made
The GHG Source was identified by reviewing invoices of energy purchases.

Requesting member
McDonald's Corporation

Scope of emissions
Scope 2

Allocation level

Company wide

Allocation level detail
<Not Applicable>

Emissions in metric tonnes of CO2e
31757.5

Uncertainty (±%)
5

Major sources of emissions
Electric Power

Verified
No

Allocation method
Allocation based on the market value of products purchased

Please explain how you have identified the GHG source, including major limitations to this process and assumptions made
The GHG Source was identified by reviewing invoices of energy purchases.

Requesting member
PepsiCo, Inc.

Scope of emissions
Scope 1

Allocation level
Company wide

Allocation level detail
<Not Applicable>

Emissions in metric tonnes of CO2e
54270.88

Uncertainty (±%)
5

Major sources of emissions
Natural Gas

Verified
No

Allocation method
Allocation based on the market value of products purchased

Please explain how you have identified the GHG source, including major limitations to this process and assumptions made
The GHG Source was identified by reviewing invoices of energy purchases.

Requesting member
PepsiCo, Inc.

Scope of emissions
Scope 2

Allocation level
Company wide

Allocation level detail
<Not Applicable>

Emissions in metric tonnes of CO2e
33916.75

Uncertainty (±%)
5

Major sources of emissions
Electric Power

Verified
No

Allocation method
Please select

Please explain how you have identified the GHG source, including major limitations to this process and assumptions made
The GHG Source was identified by reviewing invoices of energy purchases.

Requesting member
The Coca-Cola Company

Scope of emissions
Scope 1

Allocation level

Company wide

Allocation level detail
<Not Applicable>

Emissions in metric tonnes of CO2e
28873.02

Uncertainty (±%)
5

Major sources of emissions
Natural Gas

Verified
No

Allocation method
Allocation based on the market value of products purchased

Please explain how you have identified the GHG source, including major limitations to this process and assumptions made
The GHG Source was identified by reviewing invoices of energy purchases.

Requesting member
The Coca-Cola Company

Scope of emissions
Scope 2

Allocation level
Company wide

Allocation level detail
<Not Applicable>

Emissions in metric tonnes of CO2e
18044.28

Uncertainty (±%)
5

Major sources of emissions
Electric Power

Verified
No

Allocation method
Allocation based on the market value of products purchased

Please explain how you have identified the GHG source, including major limitations to this process and assumptions made
The GHG Source was identified by reviewing invoices of energy purchases.

Requesting member
Unilever plc

Scope of emissions
Scope 1

Allocation level
Company wide

Allocation level detail
<Not Applicable>

Emissions in metric tonnes of CO2e
2787.82

Uncertainty (±%)
5

Major sources of emissions
Natural Gas

Verified
No

Allocation method
Allocation based on the market value of products purchased

Please explain how you have identified the GHG source, including major limitations to this process and assumptions made
The GHG Source was identified by reviewing invoices of energy purchases.

Requesting member
Unilever plc

Scope of emissions
Scope 2

Allocation level

Company wide

Allocation level detail
<Not Applicable>

Emissions in metric tonnes of CO2e
1742.25

Uncertainty (±%)
5

Major sources of emissions
Electric Power

Verified
No

Allocation method
Allocation based on the market value of products purchased

Please explain how you have identified the GHG source, including major limitations to this process and assumptions made
The GHG Source was identified by reviewing invoices of energy purchases.

Requesting member
Walmart, Inc.

Scope of emissions
Scope 1

Allocation level
Company wide

Allocation level detail
<Not Applicable>

Emissions in metric tonnes of CO2e
4600.49

Uncertainty (±%)
5

Major sources of emissions
Natural Gas

Verified
No

Allocation method
Allocation based on the market value of products purchased

Please explain how you have identified the GHG source, including major limitations to this process and assumptions made
The GHG Source was identified by reviewing invoices of energy purchases.

Requesting member
Walmart, Inc.

Scope of emissions
Scope 2

Allocation level
Company wide

Allocation level detail
<Not Applicable>

Emissions in metric tonnes of CO2e
2875.09

Uncertainty (±%)
5

Major sources of emissions
Electric Power

Verified
No

Allocation method
Allocation based on the market value of products purchased

Please explain how you have identified the GHG source, including major limitations to this process and assumptions made
The GHG Source was identified by reviewing invoices of energy purchases.

Requesting member
Restaurant Brands International

Scope of emissions
Scope 1

Allocation level

Company wide

Allocation level detail
<Not Applicable>

Emissions in metric tonnes of CO2e
7904

Uncertainty (±%)
5

Major sources of emissions
Natural Gas

Verified
No

Allocation method
Allocation based on the market value of products purchased

Please explain how you have identified the GHG source, including major limitations to this process and assumptions made
The GHG Source was identified by reviewing invoices of energy purchases.

Requesting member
Restaurant Brands International

Scope of emissions
Scope 2

Allocation level
Company wide

Allocation level detail
<Not Applicable>

Emissions in metric tonnes of CO2e
4939.63

Uncertainty (±%)
5

Major sources of emissions
Electric Power

Verified
No

Allocation method
Allocation based on the market value of products purchased

Please explain how you have identified the GHG source, including major limitations to this process and assumptions made
The GHG Source was identified by reviewing invoices of energy purchases.

Requesting member
S.C. Johnson & Son, Inc.

Scope of emissions
Scope 1

Allocation level
Company wide

Allocation level detail
<Not Applicable>

Emissions in metric tonnes of CO2e
4766.03

Uncertainty (±%)
5

Major sources of emissions
Natural Gas

Verified
No

Allocation method
Allocation based on the market value of products purchased

Please explain how you have identified the GHG source, including major limitations to this process and assumptions made
The GHG Source was identified by reviewing invoices of energy purchases.

Requesting member
S.C. Johnson & Son, Inc.

Scope of emissions
Scope 2

Allocation level

Company wide

Allocation level detail
<Not Applicable>

Emissions in metric tonnes of CO2e
2978.54

Uncertainty (±%)
5

Major sources of emissions
Electric Power

Verified
No

Allocation method
Allocation based on the market value of products purchased

Please explain how you have identified the GHG source, including major limitations to this process and assumptions made
The GHG Source was identified by reviewing invoices of energy purchases.

SC1.2

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

SC1.3

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

Allocation challenges	Please explain what would help you overcome these challenges
We face no challenges	At this time there are only a few customers requesting allocation. Using global sales to each requesting customer streamlines the process.

SC1.4

(SC1.4) Do you plan to develop your capabilities to allocate emissions to your customers in the future?
No

SC1.4b

(SC1.4b) Explain why you do not plan to develop capabilities to allocate emissions to your customers.

Using the current method of global sales for a customer provides a good estimate of the GHG for our customers.

SC2.1

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

Requesting member
The Coca-Cola Company

Group type of project
New product or service

Type of project
New product or service that has a lower upstream emissions footprint

Emissions targeted
Actions that would reduce both our own and our customers' emissions

Estimated timeframe for carbon reductions to be realized
1-3 years

Estimated lifetime CO2e savings
1000

Estimated payback
1-3 years

Details of proposal
Explore innovative structural design and board thickness options which will reduce the amount of paperboard for the package.

Requesting member
Lego Group

Group type of project
New product or service

Type of project
New product or service that has a lower upstream emissions footprint

Emissions targeted
Actions that would reduce both our own and our customers' emissions

Estimated timeframe for carbon reductions to be realized
1-3 years

Estimated lifetime CO2e savings
300

Estimated payback
1-3 years

Details of proposal
Explore innovative structural design and board thickness options which will reduce the amount of paperboard for the package.

Requesting member
Kellogg Company

Group type of project
New product or service

Type of project
New product or service that has a lower upstream emissions footprint

Emissions targeted
Actions that would reduce both our own and our customers' emissions

Estimated timeframe for carbon reductions to be realized
1-3 years

Estimated lifetime CO2e savings
1000

Estimated payback
1-3 years

Details of proposal
Explore innovative structural design and board thickness options which will reduce the amount of paperboard for the package.

Requesting member
Diageo Plc

Group type of project
New product or service

Type of project
New product or service that has a lower upstream emissions footprint

Emissions targeted
Actions that would reduce both our own and our customers' emissions

Estimated timeframe for carbon reductions to be realized
1-3 years

Estimated lifetime CO2e savings
20

Estimated payback
1-3 years

Details of proposal
Explore innovative structural design and board thickness options which will reduce the amount of paperboard for the package.

SC2.2

(SC2.2) Have requests or initiatives by CDP Supply Chain members prompted your organization to take organizational-level emissions reduction initiatives?
No

SC3.1

(SC3.1) Do you want to enroll in the 2020-2021 CDP Action Exchange initiative?
No

SC3.2

(SC3.2) Is your company a participating supplier in CDP's 2019-2020 Action Exchange initiative?

No

SC4.1

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

No, I am not providing data

Submit your response

In which language are you submitting your response?

English

Please confirm how your response should be handled by CDP

	I am submitting to	Public or Non-Public Submission	Are you ready to submit the additional Supply Chain Questions?
I am submitting my response	Investors Customers	Public	Yes, submit Supply Chain Questions now

Please confirm below

I have read and accept the applicable Terms