



January 2026

Climate-related Financial Risk Report

Aligned with the requirements of California Health and Safety Code Section 38533 and the 2017 Annex for implementing the recommended disclosures of the Task Force on Climate-related Financial Disclosures (TCFD).

This report covers the global operations of Graphic Packaging International.



Table of Contents

About This Report	3
Forward-Looking Statement	4
Governance	5
Board Oversight	5
Management's Role	6
Improving Governance	8
Risk Management	9
Risk Identification and Assessment Processes	9
Prioritizing Climate-related Risks	11
Managing Climate-related Risks	12
Strategy	14
Better, Every Day	14
Climate Scenario Analysis	14
Identified Risks and Opportunities and Mitigation/Adaptation Plans	15
Priority Physical Risks	16
Water Stress	26
Priority Transition Risks	26
Transition Opportunity Realization	34
Impact of Climate-related Risks and Opportunities on Business Strategy and Financial Planning	35
Resilience of Business Strategy	37
Metrics and Targets	39
Climate-related Metrics	39
Climate-related Targets	39
Climate-related Remuneration Considerations	41
Appendix	42
Scenario Analysis Parameters	42
Additional Transition Risks and Opportunities	44

About This Report

Graphic Packaging International, LLC (Graphic Packaging or the Company) understands that proactively assessing the climate-related opportunities and risks most likely to impact our Company and value chain enables us to adjust our strategy and enhance the long-term resilience of our business model. We remain focused on doing our part to limit global warming as we balance short-term shifts in local policy with the longer-term strategic actions needed to reach net zero GHG emissions by 2050.

Due to the nature of our business and operations, we recognize the impact climate change could have on our operations and communities — and the importance of being transparent and proactive to identify, assess, and manage risks and opportunities with direct impact to our business. To effectively communicate climate-related risks and opportunities to our stakeholders, we are publishing this climate-related financial risk report, aligned with the recommendations of the Task Force on Climate- related Financial Disclosures (TCFD). This report is structured into four sections: **Governance, Risk Management, Strategy, and Metrics & Targets.** These topics align to TCFD recommended disclosures and provide a summary of the ways we understand and manage impacts, risks, and opportunities associated with climate change.

The inclusion of information in this report should not be construed as a characterization regarding the financial materiality or impact of that information. For a discussion of information that is financially material to Graphic Packaging, please see our current [Annual Report on Form 10-K](#).

Forward-Looking Statement

This Climate Risk Report contains forward-looking statements within the meaning of Section 27A of the Securities Act of 1933 and Section 21E of the Securities Exchange Act of 1934, which involve risks and uncertainties. Forward-looking statements provide current expectations of future events based on certain assumptions and include any statement that does not directly relate to a historical or current fact. The words "aim," "strive," "believe," "expect," "will," "will be," "will continue," "will likely result," "anticipate," "plan," "strategy," "estimate," "target," "goal," "outlook," "seek," "project," "should," "would," and similar expressions and variations or negatives of these words or phrases, generally identify "forward-looking statements," which speak only as of the date such statements were made.

These forward-looking statements may address, among other things, business plans, prospects, targets, goals, plans, commitments, or estimates with respect to progressing environmental, social and governance (ESG) sustainability programs; capital investments, projects, and target capital expenditures; the commencement, outcome, or resolution of any regulatory inquiry, investigation, or proceeding; the outcome, or resolution of any pending or future environmental liabilities; the initiation, outcome, or settlement of any litigation; changes in environmental regulations in the U.S. or other jurisdictions that affect demand for, or adoption of, our products; anticipated future operating and financial performance for our segments individually and our Company as a whole; sufficiency or longevity of intellectual property protection; cost reductions or savings targets; plans to increase profitability and growth, and achieve anticipated synergies or cost savings; all of which are subject to substantial risks and uncertainties that could cause actual results to differ materially from those expressed or implied by such statements.

Forward-looking statements are based on certain assumptions and expectations of future events that may not be accurate or realized. These statements are not guarantees of future performance. Forward-looking statements also involve risks and uncertainties that are beyond Graphic Packaging's control. Additionally, there may be other risks and uncertainties that Graphic Packaging is unable to identify at this time or that Graphic Packaging does not currently expect to have a material impact on its business. Factors that could cause or contribute to these differences include the risks, uncertainties, and other factors discussed in our filings with the U.S. Securities and Exchange Commission (SEC), including in our [Annual Report on Form 10-K for the year ended December 31, 2024](#) and other filings with the SEC. 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 Graphic Packaging undertakes no obligation to revise or update such statements for any reason, except as may be required by law.

Governance

The paper and packaging industry plays a central role in the transition to a low-carbon economy, due to increasing demand from consumer goods companies for more sustainable and recyclable packaging that is manufactured using renewable, non-fossil-based materials and has a low-carbon footprint. Graphic Packaging sees climate action as an integral driver of risk reduction and value creation, and we are doing our part to mitigate climate change impacts while addressing the growing global demand for packaged goods. The Company is committed to operating responsibly, reducing the environmental impact of our operations, and accelerating product innovation that drives packaging circularity.

Our actions are guided by our [Code of Conduct](#) (Code), [Sustainability Policy](#), [Health, Safety, and Environment Policy](#), and our commitment to the [United Nations Global Compact](#). Sustainability matters inform decisions about how Graphic Packaging operates and grows our business, supports employees, and protects the environment.

In recognition of the importance of sustainability and climate-related matters to the Company, we believe involving the Company's Board of Directors (Board) and executive leadership team (ELT) provides the best oversight structure for considering sustainability and climate-related impacts, risks and opportunities (IROs) in our overall business strategy. This structure also helps us act nimbly to meet the changing demands of our stakeholders, including stockholders, customers, employees, and communities.



Board Oversight

As set forth in our [Corporate Governance Guidelines](#), the Board is responsible for reviewing, approving and monitoring the Company's business strategies and financial performance, and ensuring appropriate oversight and management is in place. The Board fulfills these responsibilities through a number of practices, including approval of our annual operating and strategic long-range plans, review of results against such plans, review and approval of significant corporate actions, and review of Company financial and sustainability performance.

The Board's oversight of broad corporate policy and the Company's strategic direction includes the integration of environmental, social, and economic IROs into the Company's strategy. Oversight of specific sustainability policies, standards, impacts, goals, and performance is shared by the Board and its applicable committees.

Board committees with responsibility for oversight of climate-related IROs include:

- **Nominating and Corporate Governance Committee (NCGC):** The NCGC considers sustainability matters as a standard meeting agenda item, during which it considers current and emerging social and environmental trends, major legislative and regulatory developments, and other public policy issues that may impact our business operations or stakeholders. The NCGC reviews our internal sustainability strategy, policies and practices for consistency with our sustainability and climate commitments — including goals, metrics, mitigation plans, voluntary and statutory external reporting, as well as the Company's vetting of current and emerging sustainability and climate-related matters. The NCGC makes recommendations to the Board and management, as appropriate, on the Company's sustainability agenda.
- **Audit Committee:** The Audit Committee oversees governance matters such as financial matters, legal and regulatory matters, oversight of controls and procedures related to the reporting of financial and sustainability data, and other compliance matters. The Audit Committee also oversees the Company's enterprise risk management (ERM) program, which is designed to identify, prioritize, manage, monitor and communicate our top enterprise risks — including climate-related risks.
- **Compensation and Management Development Committee (CMDC):** The CMDC oversees a wide range of human capital and social matters, such as compensation and succession planning, and employee attraction, development, and engagement — which may be impacted by our approach to sustainability matters. The CMDC is responsible for assessing leadership compensation, and the incorporation of sustainability and/or climate-related factors, as appropriate, in compensation programs.

At least quarterly, senior management — including our Executive Vice President, General Counsel and Secretary (EVPGC), Chief Sustainability Officer (CSO), Chief Audit, Risk, and Compliance Officer (CARCO), and others — provides updates to the ELT, the Board, and its committees on potential environmental, social, and economic IROs. Topics include: climate change; water; health, safety and environment (HSE); human capital; regulatory actions; and other sustainability matters.

Board oversight responsibilities are outlined in the charters of the [Nominating and Corporate Governance Committee](#), [Audit Committee](#), and the [Compensation and Management Development Committee](#).

Management's Role

The Board delegates authority to the CEO and ELT for day-to-day management of environmental, social and economic IROs. The CEO serves as the Company's chief executive sponsor for sustainability, and the ELT serves as our sustainability steering team, providing governance and direction for addressing climate and other sustainability matters. Together, the CEO and ELT are responsible for embedding consideration of sustainability IROs into our business strategy, plans, budgets, targets, and merger and acquisition decisions — and for achieving our Better, Every Day 2030 sustainability goals.

The ELT operationalizes the governance of sustainability matters through the CSO. The CSO works with the ELT and senior leaders from each of the Company's business segments and major corporate functions to advance initiatives and progress toward our sustainability goals. The CSO reports to the EVPGC. Together, they are accountable for aligning the ELT and other Company leaders on strategic sustainability decisions, such as mitigating climate-related risks, maximizing climate-related opportunities, enhancing the Company's sustainability reputation, and positioning the Company for future success. They also provide regular updates to the ELT and Board regarding external trends, climate-related IROs, progress advancing initiatives, and needed resources.

Each of our sustainability goals has an ELT sponsor accountable for strategy, execution, and resource allocation; a goal leader responsible for achieving the goal; and a team of cross-functional subject matter experts. Goal leaders and their teams are responsible for developing enterprise-wide plans to achieve their respective goal — establishing performance metrics, tracking and reporting progress to the CSO and ELT, and working with business segments to identify and pursue short- and medium-term opportunities in pursuit of each goal. Business unit and function leadership, with assistance from the goal leaders, are accountable for working with their teams to establish and successfully execute plans to meet business-level annual sustainability performance targets.

Several subject matter expert (SME) teams work with the goal leaders and their teams to address climate-related matters and achieve targeted greenhouse gas (GHG) emissions reductions:

- **Paperboard Center of Excellence (COE):** A team of paperboard manufacturing technical experts who develop and implement technology solutions to reduce GHG emissions, identify energy efficiency opportunities, and seek beneficial reuse options for process wastes. The team is also responsible for exploring new technologies, such as carbon capture and storage, to address hard-to-abate fossil fuel energy emissions like natural gas use in our recycled paperboard manufacturing facilities.
- **Operations sustainability team:** Operations experts who work with our manufacturing network to conduct energy audits, identify energy efficiency opportunities, increase use of renewable energy, and leverage cross-facility best practices to reduce GHG emissions.
- **Continuous improvement team:** Operations experts who train and work with paperboard manufacturing facility and packaging plant continuous improvement resources to reduce the use of energy and consumables, as well as chemical costs and waste — driving reductions for both operating expenses and GHG emissions.

The CSO, with the Executive Vice President, Paperboard Manufacturing (EVPPM) and global packaging operations Vice Presidents, provides direction and oversight to the COE and region operations sustainability team, who develop enterprise-wide metrics that track performance toward our climate goals. Each of our paperboard and packaging manufacturing facilities is accountable for the successful execution of sustainability programs and for delivering energy and GHG emissions reductions.

In addition to our manufacturing and packaging operations, our supply chain and innovation teams also work with the CSO and their ELT sponsors to advance sustainability and emissions-related priorities:

- **Supply chain team:** Procurement experts who manage energy and fuel contracts with our service providers, explore opportunities to source renewable power, optimize logistics to reduce transportation and warehousing emissions, and engage suppliers to source lower carbon raw materials and renewable/recycled raw materials.
- **Product innovation team:** Packaging design experts who employ Design for Environment (DfE) principles to improve package circularity and reduce product carbon footprint through renewable materials selection, designing for recyclability and/or compostability at end-of-life, and designing to minimize material use and waste.

Ultimately, all Graphic Packaging employees impact our sustainability efforts and progress through their daily decisions and work. Employee sustainability responsibilities are outlined in the Company's [Code of Conduct](#), [Sustainability Policy](#), and [HSE Policy](#).

Improving Governance

We recognize the importance of effectively managing climate-related risks and opportunities and have embedded consideration of such matters into the Company's existing processes and decision making. That is why we are committed to strengthening our existing Board-level oversight and governance structures with regard to climate. This includes clarifying lines of communication between management and the Board on climate- and sustainability-related issues, creating frequent lines of communication on sustainability and climate-related issues across the Company, and continuing to elevate the transparency of our sustainability disclosures. It also includes keeping Graphic Packaging leadership up to date on climate-related matters. For example, during a recent senior leadership forum, our CSO led a panel discussion with global commercial leaders on key customer sustainability expectations, including product carbon footprint and packaging end-of-life expectations.

Risk Management

Graphic Packaging recognizes that climate change risk is a global issue that may impact how we run our business, both today and in the future. We are working to improve our understanding of both physical and transition climate-related risks, integrate climate risk variables into our overall risk management process, and establish formal multi-disciplinary processes that engage both our Board and management team.

Our shareholders expect transparency about the risks climate change poses to our business and expect us to manage the risks and realize associated market opportunities. Proactively assessing and managing the climate-related risks and opportunities most likely to impact our Company and value chain enables us to adjust our business strategy to enhance the long-term resilience of our business model.

Risk Identification and Assessment Processes

Climate risks can be both short- and long-term in nature. For this reason, we have processes that allow us to proactively identify, assess, and prepare for transition and physical climate risks that may occur over different time spans. Our sustainability team, led by our CSO, works with the global compliance team to actively monitor evolving climate-related policies and regulatory developments and engage the relevant internal department(s) to ensure compliance and appropriate action or disclosure. In addition, we use physical risk screening models (including water stress models) to help understand the potential impacts on our operating facilities and engage with facilities to identify appropriate adaptation measures.

The Company's risk identification and assessment processes are comprehensive and include:

- A formalized ERM program that is based on the COSO Enterprise Risk Management Framework,
- An annual ESG topic prioritization assessment (also known as a sustainability materiality assessment), and
- A dedicated climate risk/opportunity assessment.

Enterprise Risk Management

Graphic Packaging follows a comprehensive ERM program with a formal governance process and defined expectations regarding risk management and oversight. Our program ensures effective, systematic identification, analysis, prioritization, and management of risks, including climate-related risks, that have the potential to affect the Company on a short-, medium-, and long-term basis — and provides necessary input to inform our strategic planning and business improvement goals.

Time Horizons

The time horizons considered in the annual ERM process (shown in [Table A](#) below) are applied for assessing and managing climate-related IROs, recognizing that many climate-related IROs may manifest during longer-term timeframes. Graphic Packaging does this to ensure climate-related risks are integrated into our business strategy and planning processes.

Table A: ERM Time Horizons for Climate-related Risk

Time Horizon	Definition	How this time horizon is linked to strategic and/or financial planning
Short-term	0-1 years	The annual planning cycle guides performance objectives, budgeting, and risk management. Climate-related decisions are made in real time, with risks identified and managed using various tools and processes.

Medium-term	1-3 years	Three-year planning horizon informs investor commitments, R&D, budgeting, and risk assessments. Climate risks and opportunities are integrated through strategic risk assessments, sustainability materiality reviews, and long-range planning. Material issues are incorporated into plans with mitigation, monitoring, and reporting.
Long-term	3+ years	Long-range planning considers risks and opportunities beyond three years (which includes many climate-related IROs), especially for capital investments, compliance with anticipated regulations, and R&D investments. Major decisions (e.g., investments, acquisitions) are evaluated against numerous long-term trends, such as climate, regulations, resources, consumer demand, and others.

Our corporate risk management (CRM) team conducts an annual risk analysis process to validate existing, known risks and identify new and emerging IROs facing the Company — including both physical and transition IROs related to climate change. The IRO analysis process considers input from the Board and ELT, as well as input collected from business and function leaders through surveys and interviews to identify risks and develop an enterprise-wide view. The process also considers inputs collected through the strategy, budgeting, and ESG topic assessment processes and from the 2024 climate scenario analysis, as we work to formally integrate climate considerations into our existing risk assessment framework.

Potential IROs may also be identified through external inputs such as professional and trade business associations, professional services firms, industry alerts, government agency communications, our Company Alertline, and various conferences or industry round tables. Active programs are in place to monitor the Company's customer base and end-consumer sentiment for potential downstream IROs.

ESG Topic Assessment

Our annual ESG topic assessment, also known as a sustainability materiality assessment, helps Graphic Packaging recognize and assess the sustainability matters that influence the judgment and decisions of, or have an impact on, our internal and external stakeholders. We use the results of our assessment as critical input for our sustainable growth strategy, and to identify and manage the IROs aligned with the issues most important to our stakeholders and our Company's success. The process considers sustainability topics publicly reported by our peers and customers, topics included in major sustainability reporting and third-party rating frameworks, topics included in the UN Sustainable Development Goals (UN SDGs), topics trending with our external stakeholders, and input from our business leaders.

We worked with third-party experts to conduct our first formal ESG topic assessment in 2021. Each year since, we have refreshed our analysis using a business intelligence tool and feedback from ongoing stakeholder engagements, to remain aligned with dynamic stakeholder priorities. Climate-related topics are evaluated as part of the broader set of sustainability topics by considering both the potential impact on stakeholder decisions and the impact on our Company. The process incorporates internal and external stakeholder feedback with an analysis from a third-party business intelligence platform that harvests information from various public information sources, including annual financial reports, sustainability reports, SEC filings, regulatory initiatives, and accredited media.

We use the business intelligence tool to provide an objective, data-driven view of external stakeholder priorities and potential impacts, and we validate this data using informal stakeholder feedback. This approach helps us monitor temporal changes in perceived external stakeholder IRO importance and

adjust our strategy and reporting, if necessary. Outcomes from the ESG topic assessment are confirmed by our ELT and shared with the CRM team for inclusion in the risk inventory and ERM process.

Read more about our annual ESG topic assessment in our annual [Impact Report](#).

Climate Scenario Analysis

In 2024, we completed a climate scenario analysis to better understand potential exposure to physical and transition climate-related IROs. The process started with updating our 2019 climate risk analysis by qualitatively reviewing physical and transition climate risks and opportunities disclosed by industry peers. We next engaged internal stakeholders from across the Company to gather input and observations of realized and potential climate-related transition and physical IROs.

During the climate scenario analysis, we considered longer time horizons (compared to the time scale we use in the ERM process) in alignment with climate science (see [Table B](#) below). This distinction reflects the structure of climate models, which are designed to provide insights into the likelihood and intensity of risks over extended periods — typically by short-term (2030), medium-term (2050), and long-term (2100) as defined by the Intergovernmental Panel on Climate Change (IPCC). As such, our assessment approach aligns with these scientific frameworks to ensure that exposure trends — often more visible over longer timeframes — are adequately captured.

Once an exhaustive list of risks was developed, Graphic Packaging further engaged internal stakeholders to rank the compiled list of potential risks based on likelihood (probability), severity (magnitude), and velocity (speed of impact onset) using the same scales the Company uses in the ERM process (see [Prioritizing Climate-related Risks](#) below). Prioritized outcomes from the climate scenario analysis were confirmed by our ELT and identified risks were added to the risk inventory and included in the ERM process. By integrating learnings from the climate risk assessment into existing risk management and strategy processes, we are ensuring climate-related IROs are managed holistically as part of Graphic Packaging's overall business strategy. See the [Strategy](#) section of this report for more about our climate scenario analysis.

Table B: ERM and Climate Scenario Analysis Time Horizon Mapping

ERM Time Horizons	Climate Scenario Time Horizons	Time Period
Short-term to Medium-term	2030 Short-term	2030 (2021-2040)
Long-term	2050 Medium-term	2050 (2041-2060)
Long-term	2100 Long-term	2100 (2061-2100)

Prioritizing Climate-related Risks

Priority enterprise risks are defined as those with high potential for direct and immediate substantive financial or reputational impact on the Company. Graphic Packaging defines substantive effects as events that could impact our business and require management attention to either mitigate risk or capitalize on new opportunities (including but not limited to a loss of key suppliers or customers, sustained serious loss in market share or Company value, customer market disintegration, catastrophic business continuity exposure or serious breaches of legal and regulatory compliance). Potential impacts considered include those related to our direct operations, supply chain, ability to meet customer commitments, or impacts to our customers' operations or consumers.

Graphic Packaging considers both qualitative and quantitative factors together when evaluating whether a specific risk would have a substantive effect on the Company. Quantitative measures evaluated

include potential impacts to revenue, earnings, and our operating facilities and assets. Qualitative measures considered include, but are not limited to, impacts to employee/community safety, regulatory requirements, our reputation, business continuity, trends in the underlying business, and suppliers and customers.

Factors are weighed against: (a) the proportion of business units affected; (b) the size of impact on those business units or facilities, and (c) the potential for shareholder, customer or other stakeholder concern. A potential substantive effect could occur due to a large change in one of these aspects, or small changes in multiple aspects combining to create a larger impact. However, magnitude of the issue, by itself, without regard to the nature of the risk/opportunity and the circumstances, will not generally be a sufficient basis for the judgment.

During the ERM and climate scenario analysis processes, each identified risk is reviewed, evaluated, and prioritized using a scaled, weighted approach that considers the potential likelihood the risk will occur, the velocity or speed of impact, and the magnitude or severity of potential impact. The assessments are conducted by internal subject matter experts working with the ERM and climate teams. Results from the climate scenario analysis are incorporated into the ERM process, and the resulting prioritized risk inventory is reviewed with the ELT, and then the Board Audit Committee. Any significant new or emerging risks that arise throughout the year are analyzed, prioritized, and added to the risk inventory.

Managing Climate-related Risks

The ERM program is designed to provide visibility to the Board and ELT regarding priority risks and risk mitigation strategies along with oversight to better align risk management with business strategy. Responsibility for managing prioritized risks rests with the CEO and ELT. Company function or business leaders are appointed as risk owners and sponsors for each major risk. Risk mitigation plans are developed and implemented by the risk owner, with support from their respective team and risk sponsor. The risk owner develops and monitors key risk indicators to track progress managing the risk and determines if/when intervention or corrective action is needed.

Risk management progress is periodically communicated to the ELT, with a formal, annual review with the Board of Directors and the Audit Committee. Additionally, priority risks may be included, as appropriate, in Board and Committee discussion topics throughout the year. All risks are reviewed and reassessed on at least a semi-annual basis, to identify changes in the internal or external environment which may cause certain risks to recede and/or others to appear.

We recognize that while climate-related IROs are inherently linked, each requires a tailored management approach (e.g., our approach for managing physical resilience will differ from that used to manage transition risk created by new regulations or policies). Because of this interconnection, one-off management of climate-related risks is not enough. We have established several enterprise-wide processes that help us review and manage climate and other business risks from the top down, including our business continuity process and HSE Excellence System. See the *Strategy* section of this report for more about our Better, Every Day sustainability program and approaches for managing specific climate risks and opportunities.

Business Continuity

Our business continuity process focuses on business preparedness to identify, assess, and develop plans to mitigate impacts from natural and man-made events around the globe that could adversely affect our business operations, including disruptions created by acute climate-related physical risks. Our sites develop local emergency response plans that address climate and other risks specific to their individual locations, such as extreme weather, floods, fire, natural disasters, medical events, security

incidents, workplace violence, and other locally relevant risks. Site leadership is accountable for implementing and the success of each site's emergency response program. The sites may conduct table-top exercises or drills to help build their response capability. Where applicable, drills could involve local off-site responders to help build strong relationships with local resources. The knowledge shared during these activities helps the Company and our surrounding communities be better prepared for any situation that may arise.

Building resiliency into our day-to-day operations allows us to develop strategies that address various risks and improve business continuity, including:

- Proactive planning for a variety of hazards to provide an immediate response to incidents
- Response and recovery guidance, direction, and oversight
- Communications with internal and external stakeholders
- Recovering critical processes and resources (i.e., people, technology, physical assets, and relationships)
- Restoring operations quickly and safely following an event
- Recovering critical information technology (IT) infrastructure, applications, and data
- Management of financial matters and control of the environment

Our approach helps us keep our employees safe, while maintaining continuity of operations. In addition to developing preparedness plans, the Company carries insurance coverage to mitigate losses from physical damages and business interruptions.

Health, Safety, and Environment Management System

Our HSE philosophy aligns with our business values and is founded in our belief that all injuries and incidents are preventable, HSE is everyone's responsibility, and preventing injuries and incidents is good business. We aim to create a safe, healthy, and environmentally responsible culture that promotes better physical well-being for everyone, every day.

Our [HSE Policy](#) governs how we operate safely and establishes our expectations and aspirations to protect people and the environment. Our HSE Excellence System (an HSE management system) defines how we operationalize HSE and drive our policy commitments. HSE Standards define minimum technical requirements to consistently address common risks, including climate-related risks, globally across our operations. HSE program templates enable our operations to individualize site-specific operating procedures required to comply with regulations and company/stakeholder requirements, keep our employees safe, and protect our environment.

We focus on preventing and mitigating risks that could impact people, the environment, and our business. Our sites conduct assessments to identify, evaluate, and eliminate or mitigate HSE risks. And our Hazard Mitigation program drives floor-based actions to proactively identify and mitigate hazards, like heat stress, in our operations. We review routine and nonroutine operations hazards and risks to improve site operating procedures and processes.

Strategy

Graphic Packaging's Vision 2030 business strategy outlines how the Company is investing in innovative paperboard consumer packaging, supporting a safe and engaged culture, acting as stewards of our planet, and delivering value to all stakeholders. Vision 2030 informs all aspects of our work, including our Better, Every Day sustainability strategy, and accelerates our ambition toward global leadership in sustainable consumer packaging.

Better, Every Day

Our Better, Every Day sustainability promise builds on our longstanding history of operating responsibly and with integrity, by guiding our actions across three strategic focus areas: creating Better Packaging, doing Better for People, and shaping a Better Future for our planet. With these tenets in mind, our strategy is focused on innovating our packaging and operations to fuel a circular economy; promoting safety, creating opportunities for our workforce; engaging our communities; and reducing our climate impact while sustaining local forests.

Graphic Packaging's Better Future climate strategy is built on a comprehensive approach to address the risks and opportunities of climate change while advancing the transition to a low-carbon, circular economy. Our climate action framework is centered on four key pillars:

1. Assessing and managing climate risk,
2. Innovating solutions to enable decarbonization,
3. Reducing Scope 1 and 2 emissions from our operations, and
4. Collaborating across our value chain to reduce Scope 3 emissions.

Collectively, these actions will reduce our exposure to potential future risks such as rising fossil fuel energy prices, carbon pricing mechanisms, packaging and waste regulations, and other regulatory requirements — while seizing opportunities to grow market share through innovating better packaging that is more circular, more functional, more convenient, and is made using sustainably sourced wood fiber.

In early 2024, we launched our Better by 2030 sustainability goals that are embedded within our Vision 2030 business strategy and objectives. Better by 2030 focuses on making lasting, positive impacts on people and the planet, and outlines the climate actions Graphic Packaging is taking to address climate-related risks and opportunities. See our [sustainability website](#) and annual [Impact Report](#) for more information on our Better, Every Day sustainability promise and climate actions.

Climate Scenario Analysis

The TCFD and other proponents of climate impact scenario planning have highlighted the importance of using standardized third-party future climate scenarios developed by an independent, recognized organization. The scenarios should represent possible economic growth and policy changes as well as global GHG emissions trajectories and resulting changes in the climate in order for investors to compare climate resilience across companies and should include a scenario where the world is able to limit global temperature increase to 1.5-2°C above pre-industrial levels.

Our analysis applied publicly available scenarios developed by the Intergovernmental Panel on Climate Change (IPCC) — including a low carbon scenario (Representative Concentration Pathway (RCP 2.6) and a high carbon scenario (RCP 8.5) — and considered potential impact across the 2030 short-, 2050 medium- and 2100 long-term time horizons as defined in the [Risk Management](#) section of this report. The scenario analysis will help the Company better understand potential future changes in weather and climate-related physical impacts to our operations to minimize disruptions to operations and ensure

customers receive the consumer packaging solutions they need for their products, regardless of weather conditions. Further, transition risks were considered in the context of scenarios from the International Energy Agency (IEA) World Energy Outlook (WEO) and the IPCC SSPs to help us better understand potential socioeconomic and policy impacts on our business. With these sources, we developed low-carbon and high-carbon scenarios narratives to guide the assessment of material climate-related risks under these different potential futures.

Low-Carbon Scenario

The low carbon scenario (RCP 2.6) is characterized by an economy that reaches net-zero by 2050. Decarbonization is led by the power generation and transportation sectors — each decarbonizes rapidly, primarily through renewables and electrification. By 2030, industries are expected to increase investments in energy efficiency by nearly 75%, reflecting a strong commitment to decarbonization. This momentum continues into 2050, where carbon capture technologies are projected to remove approximately 6,000 metric megatons of CO₂ annually. This transition creates widespread opportunities for companies providing low-carbon goods & services, as customer demand soars. Public investment in the transition also increases, while investors look for safe places to put their money. Even in this scenario, global emissions drive up mean air temperatures by 0.9 to 2.4°C at the end of the century. This increases physical climate risks such as heatwaves, hurricanes, and extreme precipitation — but to a less extreme degree than in a High-Carbon world. There is also an increase in the adoption and stringency of climate-related policies and regulations.

High-Carbon Scenario

The high carbon scenario (RCP 8.5) is characterized by an economy that largely fails to decarbonize — emissions reductions are offset by an increasing population and GDP. Global emissions will double by 2050. Emissions drive up mean air temperatures by 3.2 to 5.4°C at the end of the century, exacerbating extreme weather events such as hurricanes and heatwaves, causing increasingly worse physical risk impacts in the high-carbon scenario compared to the low-carbon scenario. Governments fail to take meaningful climate action, so some transition risks like carbon pricing are muted. However, this also means there's less investment in innovation and slower development of low-carbon technologies.

We chose these two scenarios to illustrate a range of emissions and global warming scenarios that could impact our operations and supply chain, with the low-carbon scenario closely aligned with our transition risk analysis. Graphic Packaging has not developed an independent view as to the likelihood of the assumptions in the chosen scenarios or the relative likelihood of these scenarios as compared to other widely-used scenarios.

For the complete parameters of our identified climate scenarios, see [Appendix Table A](#).

Identified Risks and Opportunities and Mitigation/Adaptation Plans

Climate change presents both challenges and opportunities for Graphic Packaging and its communities. Climate-related risks are likely to be driven by changes in the physical climate where our facilities are located, as well as by changes in laws and regulations, including restrictions on greenhouse gas (GHG) emissions, cap and trade systems, and taxes on GHG emissions, fuel, and energy. Climate change also presents opportunities for Graphic Packaging as it drives growth in demand for circular, lower-carbon footprint products that are made using renewable materials and are recyclable and/or compostable.

In the sections that follow, we identify the prioritized climate-related IROs with potential impact to our business and our strategies to manage and mitigate each. Our risks and opportunities are categorized into two categories as outlined by the TCFD:

- (1) Physical risks created from a changing climate, particularly in the absence of carbon policy measures, and
- (2) Transition risks and opportunities created by the world's transition to a low-carbon economy and associated carbon policy changes.

Priority Physical Risks

Physical risks were modeled for the low-carbon and high carbon-scenarios using a third-party proprietary tool to measure site-level hazard exposure to 28 different acute and chronic physical hazards (shown in [Table C](#) below), based on IPCC Representative Concentration Pathways (RCPs) and the IPCC accompanying Shared Socioeconomic Platforms (SSPs). The climate scenario analysis examined our global operations footprint, a sample of upstream supply chain assets identified to be critical to our operations, and focused on 2030 short-term impacts, as well as 2050 medium-term and 2100 long-term projections.

Table C: Potential Acute and Chronic Physical Hazards Considered in Scenario Analysis

Acute Physical Risks	Chronic Physical Risks
<ul style="list-style-type: none"> • Heat Wave • Cold Wave/frost • Cyclone/hurricane/typhoon • Drought • Avalanche • Storm (blizzards/dust/sandstorms) • Heavy precipitation • Landslide • Flood • Subsidence • Tornado • Wildfire • Glacial lake outburst 	<ul style="list-style-type: none"> • Changing precipitation • Changing temperatures • Changing wind patterns • Coastal erosion • Heat stress • Ocean acidification • Permafrost thawing • Precipitation/hydrological variability • Saline intrusion • Sea level rise • Soil degradation • Soil erosion • Solifluction • Temperature variability • Water stress

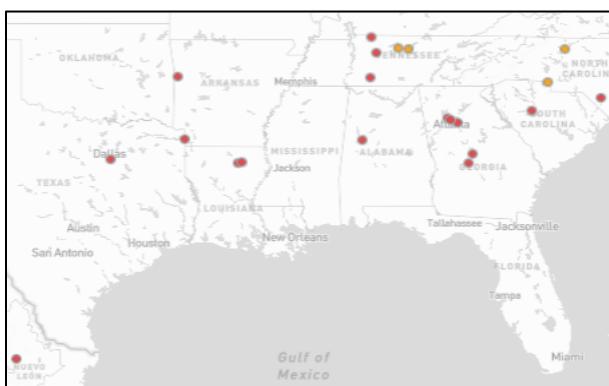
To assess change in the intensity and frequency of climate-related physical hazards, exposure scores were developed for each location based on the selected future climate scenario (i.e., low-carbon and high-carbon). Each location's exposure to climate-related physical hazards (exposure rating) was assessed using a comprehensive set of over 40 climate indicators, and exposure scores were assigned by indicator based on projected intensity and frequency. Exposure scores were calculated on a scale of 1–100 and then calibrated to a narrative scale ranging from "Low" to "Extreme," for absolute exposure scores, and from "Low to High" for the relative exposure scores — as indicated in the following detailed physical risk discussions. It is important to note these potential physical risks represent simulated possibilities of future risk and are not forecasts of expected risks.

Graphic Packaging faces several prioritized physical climate risks, including heat stress, heavy precipitation, cold waves and frost, and tornadoes/wind. The following pages describe the current and anticipated impacts of these potential material hazards, along with planned mitigation and adaptation measures. When describing business impacts, the provided range for net financial impacts is backward looking, based on single, historic events at specific locations, and is not necessarily representative of forward looking annual financial impacts. Net financial exposure to future events could be higher if multiple facilities should be affected during a given weather event or calendar year or if the frequency and/or severity of weather events increases over time.

The results presented highlight the climate-related physical hazards with the greatest exposure and the regions most affected. We compare the baseline intensity and frequency of key hazards (reference period: 1971–2000) with projected changes for 2030 and 2050, providing a clear view of how climate risks evolve over time. The most significant changes in physical hazard exposure and potential risk occur under the high-carbon scenario, by 2050 and beyond. While risk changes are also projected under the low-carbon scenario, the impacts are smaller because this scenario assumes more effective global climate policies that reduce emissions and limit the most extreme climate shifts.

HEAT (Chronic and Acute)

North America



PacRim



Heat wave exposure (RCP8.5 – 2030)

Relative Level of Exposure



Definition(s):

Chronic heat: Sustained increase in annual average daily maximum temperatures and prolonged periods of elevated temperature.

Acute heat: Prolonged period of abnormal high temperatures defined by a Heat Index >106°F.

Climate Scenario Time Frame(s):

2030 Short-term; 2050 Medium-term;
2100 Long-term

Business Impact(s):

Heat has already led to business interruptions when the Heat Index threshold is exceeded, raising concerns around worker health and safety (e.g., fatigue, heat stroke, etc.), especially in regions unaccustomed to elevated temperatures. This may result in reduced productivity, increased downtime, and revenue loss. Certain types of production equipment can also be negatively affected by sustained exposure to high ambient temperatures.

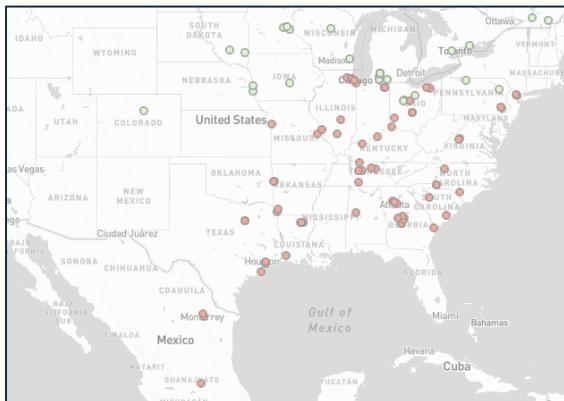
Anticipated Effects (2030 – 2050):

Graphic Packaging is expected to face increasing physical risks from heat, particularly in regions with higher relative exposure, such as the Southern U.S., Central and South America, Sub-Saharan Africa, and Asia. By 2030, under both scenarios, two facilities could experience 200+ days per year with a Heat Index above 106°F (compared to 160 days in the reference period 1971-2000). The number of days exceeding the threshold is projected to further increase by 2050.

By 2030, under a high-carbon scenario, all our facilities would be highly exposed to chronic heat stress and up to 20 sites may experience high to extreme exposure to heat waves. The number is projected to rise to 27 facilities by 2050. Our scenario analysis also revealed that 37% of our contribution margin, and 47% of our assets (at replacement value), would be highly exposed to heat waves in 2030.

HEAVY PRECIPITATION (Acute)

North America



Latin America and Africa



PacRim



Heavy precipitation exposure (RCP8.5 - 2030)

Absolute Level of Exposure



Definition(s):

Intense precipitation (in millimeters (mm)/day) with possible flooding that occurs during the wettest days of the year (defined by the 99th percentile of daily precipitation: the value of rainfall that is exceeded on only 1% of all days during the year).

Climate Scenario Time Frame(s):

2030 Short-term; 2050 Medium-term;
2100 Long-term

Business Impact(s):

Heavy precipitation has already led to flooding events at Graphic Packaging facilities, in both the U.S. and Europe, disrupting sites and logistics. Net financial impacts from those events ranged from \$4M to \$24M. Other anticipated impacts include operational shutdowns to protect employees; damages to company assets (equipment and inventory) leading to downtime or site closure; electricity outages, causing operational delays, transport disruptions; increased operational costs, and revenue loss.

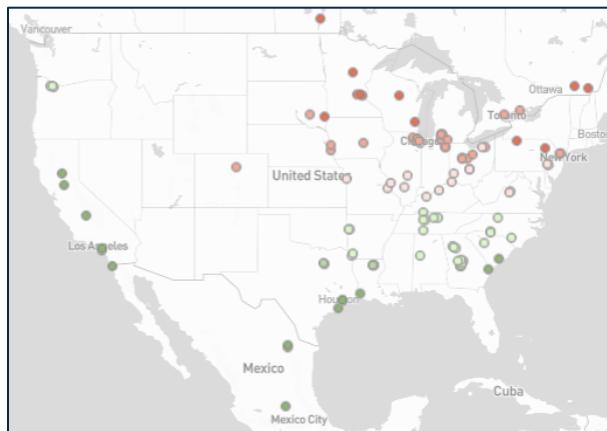
Anticipated Effects (2030 – 2050):

Graphic Packaging's exposure to heavy precipitation is projected to increase by 2050 under both low-carbon and high-carbon scenarios. As of 2030, 50% of our contribution margin, and 57% of our assets (at replacement value) are highly exposed to heavy precipitation. By 2050, these figures are expected to increase to 57% and 63%, respectively.

The most exposed regions include the southern U.S., Brazil, Nigeria, Indonesia, and Australia. Under both the low-carbon and high-carbon scenarios, approximately one third of our sites are highly exposed to heavy rainfall events. The most exposed sites could experience 70+ mm (~2.75 inches) of rainfall in a single day. The intensity of these events is projected to increase over time, particularly under the high-carbon scenario.

COLD WAVE/FROST (Acute)

North America



Europe



Frost days exposure (RCP8.5 – 2030)

Absolute Level of Exposure



Definition(s):

Unusual cold weather, defined as prolonged period of cold weather with temperatures below the freezing point (32°F), sudden drops in temperatures and/or temperature levels recorded on the coldest days of the year.

Climate Scenario Time Frame(s):

2030 Short-term; 2050 Medium-term;
2100 Long-term

Business Impact(s):

Potential impacts of cold waves and frost include operational shutdowns to ensure safety, damage to equipment and infrastructure due to fluid solidification, ice formation, or brittle fracture, electricity supply disruptions caused by damage to energy infrastructure, transport delays or restrictions, affecting logistics and site accessibility. Historically, widespread winter freezing events in Texas have disrupted operations and the supply chain. Graphic Packaging experienced cold waves and freezes that affected our operating sites during the 2020-2021 and 2022-2023 winters, with a financial impact range from \$2M to \$29M from those events.

Anticipated Effects (2030 – 2050):

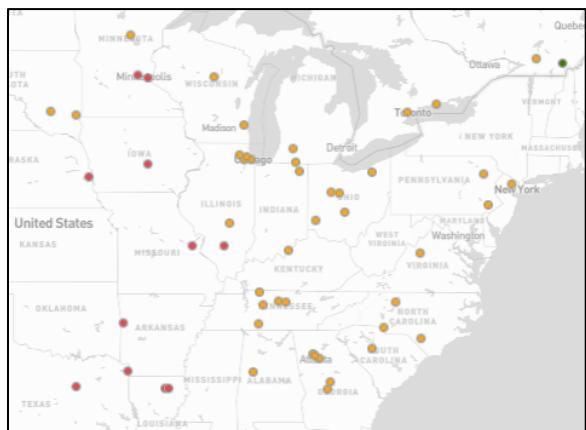
Under both a low-carbon and a high-carbon scenario, Graphic Packaging's exposure to cold waves is projected to decrease over time, in line with global temperature increases. Cold extremes have already become less frequent and less severe compared to the reference period 1971-2000, and the trend is expected to continue through 2050.

Under the high-carbon scenario, by 2050 48% of Graphic Packaging's contribution margin and 41% of our assets (at replacement value) are anticipated to be highly exposed to cold waves—representing a decrease of 9% and 8%, respectively, compared to the reference period 1971-2000. Sites with the highest relative exposure are in Canada, the northern U.S., Sweden, and Finland.

Under the high-carbon scenario, in 2030, the most exposed sites may experience temperature below 32°F for over a third of the year, with minimum temperatures reaching approximately -13.7°F, compared to -20.2°F during the reference period 1971-2000.

TORNADOES/WIND (Acute)

North America



Tornado exposure (RCP8.5 – Historical)



Definition(s):

Acute wind hazards are severe and short-term events that include intense windstorms like hurricanes (tropical cyclones), tornadoes, and derechos (widespread, long-lived windstorms associated with thunderstorms). These events are defined by high-speed winds and gusts (often exceeding 58 mph or more) that can cause immediate, significant damage. Tornadoes are defined by a rapidly rotating column of air, characterized by wind speeds which can exceed 200 mph in the most severe cases.

Climate Scenario Time Frame(s):

2030 Short-term; 2050 Medium-term;
2100 Long-term

Business Impact(s):

Tornadoes and wind-related hazards can lead to operational shutdowns to ensure safety, damage to equipment and infrastructure, electricity supply disruptions caused by downed trees or damage to energy infrastructure, transport delays or restrictions, affecting logistics and site accessibility. Indirect or direct impacts to operating facilities include building roof damage or total replacement, along with possible water damage and loss of production equipment and inventory. Tornadoes, hail, and windstorms in the U.S. have led to downtime for health and safety reasons as well as damage to facilities, with a financial impact range from \$1M to \$24M resulting from those events.

Anticipated Effects (2030 – 2050):

The analysis relied on historical exposure data. Key findings include that over half of Graphic Packaging's sites, including 79% of Graphic Packaging's contribution margin and 83% of our assets (at replacement value), are highly exposed to tornadoes. Nearly all sites with high exposure are in the U.S., with the most exposed sites located in the central U.S. There are 19 sites with an exposure score of 100, the maximum possible score.

Research suggests that conditions conducive to severe thunderstorms, and therefore tornado formation, may become more likely as the world warms. Future exposure to severe thunderstorms is predicted to increase in both intensity and frequency in both the low-carbon and high-carbon scenarios, which could lead to increased exposure to tornadoes and other wind hazards. Climate change may also shift the seasonality and geographic distribution of tornado-prone regions.

Acute Physical Risks Impact, Adaptation, and Mitigation

Acute Physical Risk: Extreme Weather (Heavy Precipitation/Flooding, Heatwaves and Cold Waves/Frost)

Description

According to the IPCC, in a high-carbon world where carbon policies fail to mitigate global average temperature increases, the frequency and severity of acute weather events will be more drastic than today. In a low-carbon world, these changes will be felt to a lesser extent.

Impact to the Business

Climate scenario time horizon(s): 2030 Short-term; 2050 Medium-term; 2100 Long-term

Region(s): Global

Impact(s): Increased operational costs; Revenue loss

Current and future physical risks from increased extreme and severe weather could disrupt our supply chain or business operations, damage facilities, impact employees' ability to reach work locations, and impede ability to serve our customers in a timely manner.

Our business is dependent on the protection of our employees, critical business processes, and structural facilities. More frequent and severe weather could pose a threat to these assets, our ability to secure adequate insurance coverage for our assets or may adversely affect our earnings depending upon the duration of the disruption and our ability to shift business to other facilities or find other sources of raw materials or energy.

Severe weather-related losses may not be covered by our existing insurance policies and/or may be subject to significant deductibles. Insurance premiums have and may continue to increase, along with the level of deductibles.

Based on a framework of historical events and property insurance policies, a damaging weather event can have a financial impact ranging from \$1M to \$29M, depending upon factors such as the type and intensity of the event, which facilities are affected, etc.

Mitigation Strategy

Graphic Packaging takes action to prepare locations to minimize financial impact and maintain business continuity during extreme weather events. These measures have historically been in place, and such activities and associated costs are driven by normal operational preparedness. Actions include:

- Preparedness plans have been developed for facilities vulnerable to physical climate-related risks and detail the actions needed to respond during a weather-related emergency or other unforeseen events (see the [Business Continuity](#) section of this report).
- Multiple sites are qualified to produce the same products, providing manufacturing redundancy to ensure supply continuity and customer orders are met should a location become inoperable.
- Multiple suppliers and/or supplier locations are qualified for critical raw materials to provide redundancy and stability in our supply chain.

Acute Physical Risk: Extreme Weather (Heavy Precipitation/Flooding, Heatwaves and Cold Waves/Frost)

Mitigation Strategy (continued)

ERM works with the financial risk management team to ensure insurance policies are in place to mitigate financial losses from physical damage and business interruptions. The risk owner performs an annual insurance review and purchases additional insurance coverage, as needed, for our facilities to maintain adequate coverage levels.

Chronic Physical Risks Impact, Adaptation, and Mitigation

Physical Risks: Long-term Changes in Climate and Weather Patterns (e.g., Precipitation and Mean Temperatures)

Description

According to the IPCC, in a high-carbon world where carbon policy fails to mitigate global average temperature increases, the severity of changes in overarching climate patterns will be much more intense than today, including a reduction in worldwide productivity and GDP growth. In a 2°C world, we expect the increase in chronic impacts to occur over a much longer timescale and to be more limited.

Impact to the Business

Climate scenario time horizon(s): 2050 Medium-term; 2100 Long-term

Region(s): Global

Impact(s): Increased operational costs; Revenue loss

Our operational costs may increase as a result of shifts in climate patterns, and the threat of these issues may impact current and future business decisions related to our facilities. For example, operational costs could be impacted through increased energy usage and spend due to our cooling infrastructure running more frequently, which could in turn present an additional burden to local power and water resources. These impacts could also result in drops in productivity or increased operational costs for our suppliers that would be passed on to Graphic Packaging.

Increased risk of flooding to low-lying facilities and infrastructure due to longer-term increases in precipitation patterns and intensity could increase operating costs to maintain and/or repair facilities and network equipment or relocate manufacturing operations.

Wood supplies approximately 80% (on a dry basis) of the raw materials Graphic Packaging uses to make paperboard for our consumer packaging solutions. Climate-related physical impacts may potentially impact wood availability in our wood supply regions, which could increase costs for purchasing wood and our ability to operate the wood-based paperboard manufacturing facilities.

In both the low- and high-carbon scenarios, climate related hazards our U.S. wood sourcing regions may experience include increased temperatures, more frequent heavy thunderstorms, flooding, increased numbers or severity of tornados, possible water stress which can all impact tree viability

Physical Risks: Long-term Changes in Climate and Weather Patterns (e.g., Precipitation and Mean Temperatures)

Impact to the Business (continued)

and/or harvestability. Milder, rainier winters make harvesting conditions more difficult due to wet and soft soil in the forests. This may cause the need to 1) increase wood stock levels during the winter months to ensure wood availability (causing additional capital costs), 2) supply wood from new forest areas (additional costs in the form of extra transportation costs) or 3) in the worst scenario, curtail pulp and paperboard production due to temporary shortage of wood raw material.

Mitigation and Adaptation Strategy

As part of our business planning processes, we assess and optimize our manufacturing footprint and may choose to move production to other facilities as part of optimizing our supply chain and managing exposure to chronic physical risks.

For facilities exposed to rising and extreme temperatures, efforts are being made to reduce the energy load required to cool these facilities. Programs include optimizing energy use by upgrading to more efficient equipment, improving building insulation, applying light colored paint to exterior walls and roofing, using artificial intelligence in managing our cooling systems, etc. These programs are supported by our near-term science-based climate goals as we work toward net zero by 2050. See the [Metrics and Targets](#) section of this report to learn more.

Many of the actions we've taken to manage acute weather impacts (e.g., raising equipment or staging portable dams in flood-prone facilities) have contributed to our ability to manage chronic climate-related precipitation risks. See the [Acute Physical Risk](#) section of this report for more on how we manage these risks.

Graphic Packaging monitors conditions in our wood supply regions and plans to complete wood specific scenario analyses to further assess climate-related physical risks that may impact wood availability in our sourcing regions.

In addition to preparedness plans and insurance coverage, the Company has implemented concrete adaptation actions in response to material physical risks. [Table D](#) below highlights examples of mitigation and adaptation efforts implemented to date. Graphic Packaging continues to engage sites to establish appropriate risk mitigation and adaptation measures and leverage industry best practices learned in response to actual events.

Table D: Mitigation and Adaptation Actions to Address Material Physical Risks

Physical Risk	Adaptation Strategy
Heat Stress	Numerous measures have been put in place by HSE leaders to mitigate heat impacts on people in our facilities, such as increasing the frequency of mandatory rest breaks for workers during high-temperature days, installing temperature monitors in high-risk areas, placing cooling stations in higher-risk facilities, providing water and cold refreshments throughout our facilities during warmer seasons, installing fans and roof ventilation to increase air circulation, etc. Other facilities may even limit the number of working hours to

Physical Risk	Adaptation Strategy
	avoid heat stress (which could lower production during those times). In some of our facilities, Graphic Packaging also uses chillers to regulate the temperature and protect certain equipment from overheating.
Cold Wave/Frost	Robust winterization plans have been developed and implemented to protect against a range of cold temperature risks to our facilities. Plans include installing heat trace and insulation on piping; installing windbreaks, enclosures, and space heating to protect equipment; preparing temporary power generation as a backup if utilities are disrupted; implementing de-icing solutions for outdoor equipment; increasing the frequency for inspecting our facilities and piping for damage during freeze events; and other measures. Teams also establish specific procedures for snow and ice removal on walkways, loading docks, and other exterior locations.
Heavy Precipitation/ Flood	<p>Operations teams work to identify and consider appropriate protective measures to secure the most sensitive equipment / flyaway equipment. We work with local utility providers to ensure trees adjacent to aerial power lines feeding into our facilities are trimmed and poles are inspected to prevent downed lines from windstorms.</p> <p>Reliability experts and maintenance personnel are trained and ready to respond following an event, and critical parts are maintained in inventory to ensure production is restored as quickly as possible. Back-up plans are in place if resources cannot get to the worksite.</p>
	We perform an annual insurance review that is reported to the Audit Committee and purchase flood insurance coverage as needed for our facilities. Proactive site protection actions have been taken to minimize potential flood-related impacts to facilities and inventory, including purchasing temporary barriers (AquaDams) to deploy and create an artificial levee/dam around a facility to prevent floodwater intrusion. Pumps are stored and ready when needed to reduce the impact of rising floodwater. Preparedness plans include actions like elevating equipment and inventory to minimize water damage and moving production to another facility to minimize customer impact.
	<p>Roof inspections are done frequently, and facility staff routinely monitor building interiors for roof leaks during and after significant rainfall. In some of our paperboard manufacturing facilities, we are upgrading the pumps for our wastewater treatment plants to manage higher water flows during periods of heavy rain or flooding.</p> <p>Reliability experts and maintenance personnel are trained and ready to respond following an event, and critical parts are maintained in inventory to ensure production is restored as quickly as possible. Back-up plans are in place if resources cannot get to the worksite.</p>
	We proactively maintain and repair draining systems regularly to ensure rainfall is routed away from process areas. Proactive actions are also taken to protect

Physical Risk	Adaptation Strategy
	materials, products, and equipment stored outdoors in advance of impending severe weather events.
	Operations teams work to identify and consider appropriate protective measures to secure the most sensitive equipment / flyaway equipment. We work with local utility providers to ensure trees adjacent to aerial power lines feeding into our facilities are trimmed and poles are inspected to prevent downed lines from windstorms.
Tornado/Wind	Reliability experts and maintenance personnel are trained and ready to respond following an event, and critical parts are maintained in inventory to ensure production is restored as quickly as possible. Back-up plans are in place if resources cannot get to the worksite.

Water Stress

While not a prioritized chronic physical risk, water stress and availability of water for our operations is closely monitored. We use screening models, such as the World Resources Institute (WRI) Aqueduct (version 4.0) tool, to help understand the potential for local baseline water stress conditions and potential impacts on our operating facilities. Our 2024 analysis identified 29 packaging plant locations in watersheds with either high or extremely high predicted baseline stress levels. These facilities account for approximately 0.25% of Graphic Packaging's total water withdrawals and 0.6% of total consumptive water use.

Operations sustainability managers work with the packaging plants in predicted stressed watersheds to better understand individual plant risk and develop contingency plans, as warranted. Between 2023-2024, total water withdrawals from predicted water stress areas decreased ~20%, driven by the closures of two sites in water stressed areas and reclassifying water stress at one site to a lower level. Only one packaging plant (located in California) is currently under local water use restrictions and is following the local requirements to limit lawn watering between March and November. The site is exploring replacing its lawn with native desert landscaping to further reduce water usage. At this time there is no indication that the potable water supplies needed to support packaging plant operations in predicted stressed watersheds are at risk.

No paperboard manufacturing facilities are currently located in watersheds with either high or extremely high predicted baseline stress levels. The risk of loss of influent water is extremely low, because most of our influent water supply is surface water from tributaries with ample water flow to meet local water needs.

See the [Risk Management](#) section of this report for more information about our risk management efforts, including how we identify, assess, and prioritize physical climate risks. In short, we have tools and processes in place to monitor and manage longer-term climate-related risks.

Priority Transition Risks

Transition risks and opportunities were primarily considered in the context of the low carbon scenario, which contemplates how our operating costs and revenues may be impacted by a range of low-carbon economy drivers, such as increased climate regulations, demand for low-carbon products, carbon

prices, energy prices, and technology evolution. The analysis focused on 2030 short-term impacts and included projections to 2050 medium-term impacts.

Graphic Packaging's identified material transition risks include carbon pricing mechanisms, enhanced emissions-reporting obligations, mandates on and regulation of existing products and services, and costs to transition to lower emissions technology. In addition to these prioritized risks, additional lower-priority transition risks and opportunities are listed in [Appendix tables B and C](#).

Transition Risk Impact, Mitigation, and Adaptation

Policy and Legal Risk: Carbon Pricing Mechanisms	
Description	
<p>Due to the nature of our operations, we are subject to regulatory developments related to climate change and energy-specific regulations at the local, state, and federal level, as well as in foreign jurisdictions where we have operations. Examples include regulation of GHG emissions, carbon pricing, fuel mix, and energy and fuel cost.</p> <p>A carbon price, implemented through various mechanisms, is a cost premium attached to one metric ton CO₂e that gets released into the atmosphere and is increasingly recognized as an essential policy mechanism to cost-effectively drive the transition to a low-carbon society. As of April 2024, there were over 75 active carbon pricing schemes covering over 24% of the world's emissions.</p>	
Impact to the Business	
<p>Climate scenario time horizon(s): 2030 Short-term; 2050 Medium-term; 2100 Long-term</p> <p>Region(s): Global</p> <p>Impact(s): Increased costs</p> <p>Our costs for complying with complex environmental laws and regulations are significant and will continue to be significant for the foreseeable future.</p> <p>Carbon pricing mechanisms could increase Graphic Packaging's direct costs associated with production and high energy consumption, as well as indirect costs from transporting our material due to carry-over from third parties' exposure to carbon pricing and taxes or exposure to higher fuel costs. It could also yield higher capital costs to replace machinery or install other/new technological implementations required to reduce emissions.</p> <p>Carbon pricing has historically affected one Graphic Packaging site in Canada, subject to the Quebec ETS. To date, Graphic Packaging has had limited financial exposure under this cap-and-trade program, due to receipt of sufficient allowances to cover site emissions, limiting financial exposure.</p> <p>The most significant future carbon pricing pressures are expected in Europe, driven by regulatory mechanisms such as the EU Emissions Trading System (ETS) and the Carbon Border Adjustment Mechanism (CBAM). Imported U.S. paperboard is not currently covered by the CBAM; however, this could change in the future and impact Graphic Packaging's European packaging business.</p> <p>In a low-carbon scenario, carbon prices are expected to be significantly higher, reflecting stronger climate action. By 2030, prices may reach \$175 per ton in advanced economies. By 2050, carbon</p>	

Policy and Legal Risk: Carbon Pricing Mechanisms

Impact to the Business (continued)

pricing mechanisms are projected to be widespread and integral to achieving net-zero targets, with prices estimated at \$250 per ton in advanced economies and \$200 per ton in emerging and developing markets.

In a high-carbon scenario, average carbon prices are projected to reach \$126–\$140 per ton in Canada and the EU by 2030, increasing to \$126–\$158 per ton by 2050. It is assumed that the United States—where Graphic Packaging's core operations are based—will not implement carbon pricing mechanisms by 2050.

Mitigation and Adaptation Strategy

Graphic Packaging follows a multi-pronged approach to manage and mitigate the impacts from potential carbon pricing mechanisms and other emissions/energy regulations.

Monitoring policy and regulatory developments

We monitor policy and regulatory developments related to climate change and the environment at the local, state and federal level, as well as in foreign jurisdictions where we have operations, and create a course of action specific to the area(s) affected, as appropriate.

Reducing carbon emissions in our operations

We are committed to reducing our environmental footprint through a variety of climate-related goals. Most notably, in 2024 we formalized our aspiration to reach net zero emissions by 2050 and have set validated near-term (2032) science-based emissions reduction targets. See the [Metrics and Targets](#) section of this report for the full list.

Increasing renewable energy use

As part of our Better by 2030 and Vision 2030 climate actions, we are investing to upgrade boilers at two wood-based paperboard manufacturing facilities to increase use of renewable biomass fuel from 75% to 90%+, which would significantly reduce Scope 1 greenhouse gas emissions and direct exposure to future carbon pricing mechanisms.

We have also set a goal to source renewable electricity equivalent to 50% of our annual electricity purchases by 2032. Our efforts support bringing additional renewable electricity to the grids by entering into VPPAs to support renewable power generation capacity development. These agreements enable the Company to claim renewable electricity use and can reduce our long-term exposure to energy price volatility and carbon pricing mechanisms.

Improving energy efficiency

We are reducing energy intensity in recycled paperboard manufacturing operations by moving from older manufacturing technologies to newer, more energy-efficient ones. This includes approximately \$2 billion in capital investments across Kalamazoo, MI and Waco, TX to install new, highly efficient production lines, delivering ~10% reduction in greenhouse gas emissions and energy use intensity, as well as an approximate 40% reduction in water use intensity. We've also begun deploying advanced energy management systems at our wood-based paperboard manufacturing facilities to improve biomass fuel efficiency and reduce reliance on grid electricity.

Policy and Legal Risk: Carbon Pricing Mechanisms

Mitigation and Adaptation Strategy (continued)

At packaging plants, we are installing energy-efficient systems and employing energy management best practices. Facility improvements include mechanical and whole-building control systems, LED lighting, high-efficiency manufacturing equipment, upgraded HVAC systems, etc.

Actively managing energy use through targeted efficiency programs reduces exposure to energy price volatility and carbon pricing mechanisms. In 2024, global efficiency projects helped us save nearly 25,000 megawatt-hours (MWh) of energy.

Reducing supply chain carbon emissions

Working with our suppliers to decarbonize their operations reduces our exposure to indirect carbon pricing impacts embedded in the cost of these materials.

Transitioning truck shipments to intermodal and rail transportation modes, shifting to electric vehicles and/or biofuel powered vehicles, and practicing load optimization will reduce transportation-related emissions and associated indirect costs from carbon pricing mechanisms.

We are also executing capital projects to automate and internalize certain parts of our warehousing needs, which will reduce our logistical emissions related to our inventory.

Policy and Legal Risk: Mandates on and Regulation of Existing Products and Services

Description

Policy and legal transition risks that arise when governments or regulatory bodies introduce new laws, standards, or restrictions aimed at reducing greenhouse gas (GHG) emissions and promoting sustainability. Examples may include regulations on product recyclability/compostability, extended producer responsibility (EPR), packaging bans, etc.

Impact to the Business

Climate scenario time horizon(s): 2030 Short-term; 2050 Medium-term; 2100 Long-term

Region(s): Global

Impact(s): Reduced revenues; Increased costs

Graphic Packaging is currently facing increased regulatory mandates regarding product recyclability, product composition, product labeling, etc. which may limit market access for some products and impact business revenues. Key frameworks in the U.S. include a patchwork of state-level EPR laws in states like California, Oregon, Colorado, and Washington and recyclability labeling laws like California SB 353. Frameworks in the EU include the Packaging and Packaging Waste Regulation (PPWR), Single Use Plastics Directive (SUP), EU Deforestation Regulation (EUDR), various country level EPR and labeling frameworks, and other regulations).

Policy and Legal Risk: Mandates on and Regulation of Existing Products and Services

Impact to the Business (continued)

Additionally, significant national or state differences in the imposition and enforcement of such laws and regulations could present competitive challenges in a global marketplace.

In a low-carbon future, regulatory pressures are expected to intensify beyond current requirements as governments accelerate decarbonization and resource circularity efforts. Enhanced access to robust environmental data is enabling regulators to implement more targeted and stringent mandates, particularly in areas such as product lifecycle impacts and product end-of-life.

As a result, Graphic Packaging could experience reduced revenues due to market bans on some products (e.g., single-use packaging regulations in the U.S. could impact the Company's Foodservice business which represented 21% of the Company's 2024 revenue). The Company may also experience increased R&D expenses to innovate more sustainable products, increased advocacy costs, mandated reporting costs, and infrastructure investments to improve recovery of packaging materials for recycling.

Mitigation and Adaptation Strategy

Graphic Packaging works to maintain market access through product innovation; the introduction of new, more sustainable consumer packaging products; and by engaging with industry associations and elected officials on advocacy to increase the recycling access and recovery of paperboard packaging. Rising concerns around recycling, deforestation, and product sustainability are shaping both short- and long-term business decisions.

More circular, more functional and more convenient packaging

We are making our packaging and operations better every day by using more renewable raw materials, driving out waste, and recycling more materials — all to fuel a circular economy. We work closely with our customers to understand their business needs, and to develop more circular, more functional, and more convenient packaging solutions that help them achieve their sustainability goals while aligning with evolving regulations and consumer expectations. By integrating our Design for Environment (DfE) methodology into our product innovation process, we can ensure our design decisions optimize circularity at each point in the packaging lifecycle, reduce our packaging's environmental impacts, and reduce regulatory exposure to EPR fees or market restrictions.

Increasing access for recycling

Our strategy also focuses on increasing product circularity through partnerships that expand community recycling access, enabling greater recovery and reuse of packaging materials. By working with external partners, we support the development of new material sorting technologies to enable separation and recovery of more types of consumer packaging for recycling versus landfilling, which will lead to increased access and recovery of our packaging products.

In addition, we are working with value chain partners to increase community acceptance and recovery of more types of paperboard packaging, such as paper cups, in community recycling streams, which will accelerate customer adoption of new packaging innovations. Recent progress includes doubling U.S. community access for paper cup recycling over the past 10 years, the Recycled Materials Association (ReMA) updating its ISRI Specifications to include paper cups in the allowable paper commodities for both the Inbound Residential Single Stream and Inbound

Policy and Legal Risk: Mandates on and Regulation of Existing Products and Services

Mitigation and Adaptation Strategy (continued)

Residential Dual Stream recovered material specifications, and a major U.S. waste management company announcing it will now accept paper cups in its curbside recycling programs.

Managing deforestation concerns

As part of our new 2030 Sustaining Forests goal, we are implementing consistent, sustainable sourcing practices for all forest-derived products, including externally purchased paperboard and secondary packaging. This enhances supply chain transparency and supports our commitment to a zero-deforestation supply chain. We are also investing in IT systems to support forest material traceability and compliance with EUDR requirements.

Setting climate goals and an aspiration to achieve net zero emissions in our operations

We are working toward a low-carbon future and are committed to reducing our environmental footprint and product carbon footprint through a variety of climate-related goals. Reducing our greenhouse gas emissions reduces our product carbon footprint, providing competitive advantages and reducing exposure to carbon pricing mechanisms. See the [Metrics and Targets](#) section of this report for the full list.

Policy and Legal Risk: Enhanced Climate Reporting Obligations

Description

Due to the nature of our operations, we are subject to regulatory developments related to climate change and energy-specific regulations at the local, state, and federal level, as well as in foreign jurisdictions where we have operations. An evolving area across multiple jurisdictions is exposure to a growing variety of climate reporting and disclosure frameworks, standards, and regulations.

Impact to the Business

Climate scenario time horizon(s): 2030 Short-term; 2050 Medium-term; 2100 Long-term

Region(s): Global

Impact(s): Increased costs

Our costs for reporting against complex voluntary certification and disclosure programs have increased significantly over the past five years and will continue to grow for the foreseeable future as new regulatory reporting regulations come into force.

Enhanced emissions reporting obligations require additional staffing to manage compliance, additional external consulting support, and investments in IT and reporting systems. Reporting obligations may also necessitate operational adjustments to align with evolving regulations, potentially increasing both administrative and strategic costs.

In addition to increased reporting costs, the company may be exposed to penalties and fines if we are unable to comply with reporting timelines, have a differing interpretation of regulatory reporting

Policy and Legal Risk: Enhanced Climate Reporting Obligations

Impact to the Business (continued)

requirements, or publish misleading or inaccurate communications on sustainability matters. Fines can be substantial, often calculated as a percentage of global revenue. Penalties for non-compliance can also include legal action, operational restrictions, reputational damage, or civil liability for harm.

In a low carbon world, by 2030, climate reporting obligations are being widely adopted and by 2050 are expected to become significantly more stringent, driven by a growing demand for more comprehensive and transparent disclosures.

Mitigation and Adaptation Strategy

Climate reporting, both voluntary and regulatory, is currently impacting Graphic Packaging operations. Key frameworks include the EU's Corporate Sustainability Reporting Directive (CSRD) and Corporate Sustainability Due Diligence Directive (CSDDD), the UK's Streamlined Energy and Carbon Reporting (SECR), California's SB 219, and various country frameworks aligning with the International Financial Reporting Standards (IFRS) S2 standards and/or the EU Non-Financial Reporting Directive (NFRD).

We are upgrading our internal disclosure governance processes to centralize and standardized content review and approval processes. We are investing in platforms and services to enhance the efficiency and accuracy of our voluntary and statutory sustainability reporting obligations.

Investments in upgraded IT and reporting systems will streamline the process to collect and verify reported information and drive consistency in reported content across multiple jurisdictions. The addition of global and regional sustainability data controllers provides an additional level of data quality oversight to ensure successful third-party assurance of reported information required by certain jurisdictions.

The result from these investments will be improved resiliency to efficiently respond to and comply with future regulatory reporting requirements leading to lower administrative costs, reduced resource time, and improved report accuracy and consistency across different global jurisdictions.

Policy and Legal Risk: Transition to Lower Emissions Technology

Description

Financial and operational risks that organizations face as economies shift toward low-carbon technologies manufacturing and practices. This includes the substitution of existing carbon-intensive processes, products, and services with low-carbon alternatives—such as electric vehicles, renewable energy, energy efficiency solutions, and carbon capture and storage.

Impact to the Business

Climate scenario time horizon(s): 2050 Medium-term; 2100 Long-term

Region(s): Global

Impact(s): Increased costs; Delayed revenue

Policy and Legal Risk: Transition to Lower Emissions Technology

Impact to the Business (continued)

Although a relatively small number of large competitors hold a significant portion of the paperboard packaging market, our business is subject to strong competition. If we do not invest resources to upgrade or replace aging equipment to ensure we're using the most efficient, low emissions technologies to manufacture our products, we could experience decreased cost competitiveness and potential deselection by customers seeking low-carbon footprint materials.

Compliance with emissions regulations will increasingly depend on the deployment of cleaner, more efficient advanced technologies. Companies will be expected to collaborate more deeply across the value chain to meet ambitious climate targets. As a result, Graphic Packaging could face mounting pressure to adopt low-carbon technologies quickly and at scale.

Across both low-carbon and high-scenarios, Graphic Packaging could incur increased capital spending and operating costs for new technologies and infrastructure to reduce carbon emissions. The speed of the transition could lead to asset replacement ahead of standard asset retirement schedules. Additionally, the adoption of unfamiliar or evolving technologies may lead to higher implementation costs, operational delays, and transition risks, particularly in navigating compliance, integration, and performance challenges.

Mitigation and Adaptation Strategy

To support the transition to lower-emissions technologies and products, Graphic Packaging has adopted a climate transition plan aligned with its near-term science-based targets (SBTs) and longer-term ambition to achieve net zero emissions by 2050. Key near-term actions include increasing renewable biofuel use to 90% in wood-based paperboard manufacturing facilities, sourcing 50% of purchased electricity from renewable sources, engaging suppliers to reduce emissions from purchased materials, lowering transportation-related emissions, and improving the recyclability and compostability of packaging at end-of-life. See the [Metrics and Targets](#) section of this report for the full list.

We are reducing energy intensity in recycled paperboard manufacturing operations by moving from older manufacturing technologies to newer, more energy-efficient ones. This includes approximately \$2 billion in capital investments across Kalamazoo, MI and Waco, TX to transition recycled paperboard manufacturing operations to new, highly efficient production lines, delivering ~10% improvement in greenhouse gas intensity and ~40% improvement in water intensity.

Our paperboard manufacturing operations center of excellence (COE) team is currently advancing the design of biomass boiler capital projects, which are expected to deliver both near-term emissions reductions and cost savings. The COE team is also exploring new technology options like anaerobic digestors for generating renewable gas and carbon capture technologies for boiler stack emissions to enable further decarbonization of the paperboard manufacturing processes.

Additionally, new technology investments at several packaging plants have enabled more efficient packaging production with lower energy and emission intensity and reduced waste.

Longer-term, achieving net zero emissions by 2050 assumes commercially viable renewable electricity projects will be available, suppliers will collaborate on emissions reductions, and advocacy efforts will enhance access to recycling and recovery of paperboard materials. The plan relies on technology developments to enable scalable, cost-effective low emissions manufacturing

Policy and Legal Risk: Transition to Lower Emissions Technology**Mitigation and Adaptation Strategy (continued)**

process equipment, zero emissions transportation, renewable fuel availability, and carbon capture and storage technologies to permanently remove hard-to-abate emissions.

Transition Opportunity Realization

Graphic Packaging is well-positioned to take advantage of climate-related opportunities that may arise from increased consumer demand for and/or legislation mandating or incentivizing the use of products and technologies necessary to achieve a lower-carbon, lower-waste economy. Circular economy business models and packaging waste reduction represent one of the strongest climate-related opportunities in the packaging industry.

Transition Opportunity: Development of New Products or Services**Description**

Developing new packaging solutions that provide an alternative to plastic, have a lower carbon footprint, use renewable and/or recycled raw materials, and are lightweight, recyclable, compostable, or reusable can help customers meet their sustainability goals, and grow Graphic Packaging's market share.

Impact to the Business

Climate scenario time horizon(s): 2030 Short-term; 2050 Medium-term; 2100 Long-term

Region(s): Global

Impact(s): Increased revenues

The opportunity has already had a substantive effect on our organization, providing \$870M in organic revenue growth over the past 5 years.

As consumer goods companies continue to work to progress their sustainable packaging goals and comply with emerging packaging and carbon reduction regulations, there are increasing opportunities to increase revenues by growing market share for our more circular, more functional, and more convenient packaging solutions. These new innovations also better position us and our customers to comply with evolving regulations and reduce potential exposure to regulatory fees.

Strategy to Realize the Opportunity

The Company is well-positioned to benefit from growing consumer demand and evolving legislation that supports a lower-carbon, lower-waste economy. Our paperboard packaging solutions offer greater circularity than many existing alternatives, aligning with these trends. Graphic Packaging works to increase market share and profitability through innovating and bringing new, more sustainable consumer packaging products to market.

Transition Opportunity: Development of New Products or Services

Strategy to Realize the Opportunity (continued)

More circular, more functional and more convenient packaging

We are committed to making our packaging more circular by integrating more renewable, recycled, and sustainably-sourced raw materials into our products; designing products so they are resource efficient and can be recycled or composted at end-of life; and optimizing our manufacturing processes so they use renewable energy, reduce waste, and embrace circular principles. Together, these actions ensure the carbon footprint of our packaging is as low as possible.

Our innovation roadmap follows a stage gate framework allowing us to verify that new packaging solutions are strategically aligned with business growth objectives and support our sustainability goals. At each gate review, applicable market, circularity, regulatory requirements, package total cost of ownership, and consumer awareness deliverables are evaluated to determine whether the product meets circularity, functionality, and convenience criteria necessary for market success.

By integrating these criteria into our product innovation process, we can ensure our design decisions optimize circularity at each point in the packaging lifecycle, reduce our packaging's environmental impacts, improve end-of-life fate, and reduce regulatory exposure to EPR fees or market restrictions. We work closely with our customers to understand their business needs, and to develop packaging solutions that help them achieve their sustainability goals while aligning with evolving regulations and consumer expectations.

From a product technology perspective, we are strategically focused on five innovation platforms (trays and bowls, cups and containers, multipacks, paperboard canisters, and strength packaging) where we can make a substantial impact on driving packaging circularity, reducing waste, and promoting sustainability. Within each of these platforms, we have built a multigenerational innovation strategy and product portfolio that we continue to expand every year. This ongoing expansion allows us to bring more circularity, functionality, and convenience to consumers. Our commitment to innovation ensures that we are at the forefront of developing solutions that meet the evolving needs of our customers and the environment, with more than 80% of our current innovations supporting replacing/reducing plastic content in packaging.

Read more about our packaging innovation progress in our annual [Impact Report](#).

Setting climate goals and an aspiration to achieve net zero emissions in our operations

We are working toward a low-carbon future and are committed to reducing our environmental footprint and product carbon footprint through a variety of climate-related goals. Reducing our greenhouse gas emissions reduces our product carbon footprint, providing competitive advantage and reducing exposure to carbon pricing mechanisms. See the [Metrics and Targets](#) section of this report for the full list.

Impact of Climate-related Risks and Opportunities on Business Strategy and Financial Planning

Outcomes from our 2024 climate scenario risk analysis reaffirm our Vision 2030 business strategy and Better by 2030 sustainability goals are the appropriate goals to address priority climate-related risks and opportunities. By integrating learnings from our climate risk assessment into our existing risk

management and strategy processes, we are ensuring climate risks and opportunities are managed holistically as part of Graphic Packaging's overall business strategy and investment choices.

Impact on Business and Strategy

Graphic Packaging designs, manufactures, and sells recyclable paperboard packaging that is made primarily with renewable wood-fiber materials. As customers increasingly prioritize sustainability—seeking recyclable packaging formats, higher recycled content, reduced plastic content, reduced carbon footprints, and deforestation-free supply chains—we respond by embedding sustainability into our product innovation efforts using a Design for the Environment (DfE) approach. This life cycle thinking informs our strategy, guiding growth, risk mitigation, and opportunity realization.

Our business and innovation strategy considers how to mitigate climate risks throughout a package's entire life-cycle through:

- Using more renewable or recycled raw materials and lower carbon footprint raw materials in our products and manufacturing processes,
- Improving the efficiency of our manufacturing process,
- Decreasing manufacturing operations greenhouse gas emissions by increasing our use of renewable energy,
- Designing packaging to be recyclable or compostable,
- Industry advocacy efforts to increase access to recycle and/or compost our products at the package's end-of-life, and
- Reducing transportation emissions throughout the life-cycle.

Our packaging solutions enhance circularity and can reduce potential exposure to carbon taxes, EPR fees, or other packaging regulations. These innovation efforts support customer goals and market trends, such as shelf-life extension, cost reduction, and improved packaging strength and aesthetics. In 2024, we replaced over 1 billion plastic packages with more circular, paperboard-based alternatives, patented more than 130 new package innovations, and generated approximately \$200 million in revenue from new product innovations featuring improved recyclability, reduced LDPE usage, and enhanced performance. Over the past five years, our innovations have generated \$870 million in organic revenue growth in line with our annual target to generate approximately 2% organic revenue growth from new product innovations

Operationally, we address climate-related risks through planned capital investments to upgrade the paperboard manufacturing facilities, investments in energy efficiency and resource optimization in the packaging plants, and investments to upgrade the resilience of our facilities to avoid disruptions related to extreme weather. Regional sustainability managers identify and implement improvements using engineering software and equipment upgrades, helping mitigate risks like rising energy costs and carbon pricing. Supply chain teams also work to address supplier emissions and supplier resilience strategies to maintain business continuity during extreme weather events at supplier facilities.

Impact on Financial Planning

Graphic Packaging evaluates how revenues, costs, and investment needs are impacted by climate-related risks and opportunities in relation to our organization's business, strategy, and financial planning. For example, our Company's R&D team works directly with sales, marketing, and consumer insights to understand long-term consumer and retailer trends to target R&D investments to support bringing relevant new packaging innovations to market. And investments to upgrade manufacturing facilities to reduce emissions, improve efficiency, or improve physical resilience are incorporated into the long-range capital allocation and planning process, with most investments delivering a positive

return on investment. We manage our capital spend as a percentage of Company revenue, with all investments, including climate related investments, scheduled within this budget.

At this time, Graphic Packaging is not materially exposed to carbon pricing mechanisms and therefore does not use an internal carbon tax in its financial modeling and planning processes. The Company monitors evolving carbon pricing regulations in the countries where it operates and the need to include an internal carbon price in its financial planning processes.

Resilience of Business Strategy

Graphic Packaging is strengthening the resilience of its business strategy through a comprehensive climate transition plan, circular economy initiatives, and targeted adaptation and opportunity actions. These efforts are informed by scenario analyses aligned with a 2°C or lower transition pathway and scenarios reflecting heightened physical climate risks. For more details on the climate-related scenarios and associated time horizons considered, see the *Climate Scenario Analysis* section of this report.

Our integrated climate strategy approach supports our operational efficiency goals, 2032 science-based targets, and our ambition to reach net-zero emissions by 2050. Our Better by 2030 sustainability goals further enhance resilience by:

- Advancing more circular, more functional, and more convenient packaging solutions
- Increasing biofuel use to 90% in wood-based paperboard manufacturing facilities
- Achieving 50% purchased renewable electricity across operations
- Expanding use of renewable/recycled raw materials
- Improving product recyclability and compostability
- Ensuring 100% sustainable sourcing of forest products
- Engaging suppliers to reduce emissions from purchased materials
- Lowering transportation-related emissions.

These initiatives position Graphic Packaging to adapt to climate-related risks, capitalize on emerging opportunities, and maintain long-term business resilience in a low-carbon economy.

Physical Risk Resilience

Overall, our climate scenario analysis found that the geographic distribution of our business operations limits the concentration of risk from any single climate peril. Predictably, risk levels generally increase in future time periods under the climate scenarios we modelled. Our sites are taking action to upgrade and harden facilities to protect against growing acute and chronic physical risks, and production optimization efforts evaluate and address exposures to chronic physical risks. In 2024, we successfully responded to natural gas curtailments, wintery weather, and small fires with no large production impacts. We also experienced several brief power outages and one freeze event, with no significant disruption to operations. These results, coupled with our risk mitigation and adaptation strategies, help support the conclusion that our management of weather impacts on our operations is currently sufficient. We will review our resiliency strategy on a regular basis to maintain a proactive approach to managing future climate-related risks. We will expand our physical risk scenario analysis to cover a broader set of suppliers, key logistics locations, and key raw material sources, to better understand, anticipate, and manage potential disruptions in the supply chain.

Transition Risk Resilience

Our Better, Every Day sustainability strategy to address climate- and forest-related risks comes to life through investments to innovate better packaging, modernize recycled paperboard manufacturing,

reduce our reliance on fossil fuels, drive energy efficiency in our operations, and optimize our use of forest resources. We accomplish this by:

- Tracking and taking action to reduce our GHG emissions and energy use through focused GHG management efforts and efficiency programs that will decrease the potential future impact of carbon pricing mechanisms and maintain a competitive position for our products in the marketplace.
- Continuing to invest in developing more circular, more functional, and more convenient product innovations to reduce negative exposure to regulations and provide new market opportunities to further grow revenue. Such innovations have delivered approximately \$870 million in organic revenue growth from 2020 through 2024.
- Investing in internal reporting systems and resources to position the Company to efficiently monitor and comply with evolving statutory reporting requirements and minimize risks of fines and penalties.

The Company believes its management of transition-related risks is currently sufficient to comply with and reduce exposure to future regulatory risks, comply with evolving reporting regulations, and advantage our products in the marketplace. We will continue to review progress as part of our strategic planning processes, to ensure climate-related risks are adequately managed.

Metrics and Targets

A foundation of Graphic Packaging's climate strategy is our aspiration to achieve net zero GHG emissions by 2050. This is a testament to our proactive approach to manage climate-related risks, such as climate regulations, energy costs, and supply chain disruptions.

Our Better by 2030 goals outline the near-term actions we are taking as part of our net zero emissions journey. These actions include targets to increase our use of renewable fuel and purchased electricity; validated, 1.5°C aligned 2032 science-based targets (SBTs) to reduce GHG emissions across our operations and value chain; sustainably source forest products; and innovate more circular, more functional, and more convenient packaging.

Climate-related Metrics

Graphic Packaging tracks a variety of climate-related metrics across our operations and value chain, including.

- Scope 1, 2 and 3 GHG emissions (absolute and intensity; location- and market-based)¹
- Total (and renewable) energy use (absolute and intensity)
- Total (and renewable) electricity use
- Total water withdrawal and consumption (absolute and intensity)
- Facilities in water stressed areas
- Waste management (hazardous, non-hazardous, recovery, and diversion)
- Forest products sustainably sourced
- Product circularity (recyclability, functionality, and convenience)

We use these metrics to manage performance against our Better by 2030 sustainability goals and to monitor current and future climate-related risks and opportunities. We believe our goals demonstrate to our stakeholders that we are committed to reducing our environmental impact, while also reducing our exposure to modeled transition risks. For our complete, multi-year compilation of sustainability metrics and a discussion of our progress, see our annual [Impact Report](#).

Climate-related Targets

We track our progress toward multiple goals designed to address climate impacts, risks and opportunities, and seek to:

- Reduce Scope 1 & 2 GHG emissions 50.4% by 2032,
- Reduce Scope 3 Category 1,3,4,5,10, and 12 GHG emissions 30% by 2032,
- Increase renewable fuel use in paperboard manufacturing facilities to 90% by 2032,
- Increase purchased renewable electricity across all operations to 50% by 2032,
- Sustainably source 100% purchased forest products, and
- Develop packaging that is more circular, more functional, and more convenient than existing alternatives.

Our Scope 1 and 2 operations emissions target is consistent with reductions required to keep global warming to 1.5°C, while our Scope 3 value chain target is consistent with reductions required to keep warming to well-below 2°C. These targets were calculated using methodologies approved by the

¹ Graphic Packaging follows the GHG Protocol reporting standards to calculate emissions for all locations within our operational control. We measure our Scope 3 value chain GHG inventory following the GHG Protocol's Corporate Value Chain (Scope 3) Accounting and Reporting Standard. Our reported GHG emissions are [assured](#) by a third party.

Science Based Targets initiative (SBTi) that are in line with a level of emissions reduction that science suggests is necessary to avoid the most significant impacts of climate change.

Performance Summary

Metric	Target	Target type	2024 Status ¹ (Versus 2021 baseline)
Operations			
Scope 1 and 2 emissions	50.4% reduction in Scope 1 & 2 GHG emissions by 2032	Absolute Science Based Target ²	1.9 million metric tons CO ₂ e (2% reduction)
MWh of renewable fuel	90% renewable fuel use in wood-based paperboard manufacturing facilities by 2032	Absolute	74% (no progress)
MWh of renewable electricity	50% purchased renewable electricity by 2032	Absolute	5% (6% progress)
Value Chain			
Scope 3 emissions	30% reduction in targeted Scope 3 GHG emissions by 2032 ³	Absolute Science Based Target ²	6.2 million metric tons CO ₂ e (5% reduction)
Forest Products	100% of purchased forest products sustainably sourced	Percent	89% (no progress)

1. Restated values from 2025 re-baselining analysis to adjust for the sale of the Augusta facility, other structural company changes, and inventory methodology changes.
2. These targets were calculated using methodologies approved by the SBTi that are in line with a level of emissions reduction that science suggests is necessary to avoid the most significant impacts of climate change.
3. Includes Scope 3 Category 1, 3, 4, 5, 10 and 12 emissions.

Operations Target Performance

Following the publication of our 2024 Impact Report, Graphic Packaging re-baselined GHG inventory data for the calendar years 2021 through 2024, to adjust for structural changes to the Company and changes to our inventory accounting methodology. Updated combined Scope 1 and 2 operations emissions decreased 2% in 2024 compared to our 2021 base year, largely due to recycled paperboard manufacturing modernization efforts and packaging manufacturing optimization efforts in the Americas business segment.

Renewable fuel use by wood-based paperboard manufacturing facilities measured 74% in 2024, slightly lower than the 2021 baseline, and showed no progress towards achieving our 90% target. Observed decreases in renewable fuel use at two facilities are attributed to machine downtime.

Our use of purchased renewable electricity measured approximately 5% in 2024, demonstrating 6% progress towards the 50% target. The increase is attributed to localized purchase of energy attribute certificates while the Company works towards securing longer-term VPPAs, such as the European VPPA we contracted in 2024.

The limited progress reducing operations emissions and increasing renewable fuel and electricity use is expected. Larger scale reduction initiatives will not be implemented until after the recycled paperboard manufacturing optimization work is completed. In addition, it can take several years to contract and realize emissions reduction benefits from VPPA projects.

Value Chain Target Performance

Updated Scope 3 SBT emissions show an approximate 5% decrease in 2024 compared to our 2021 baseline. The observed reduction in target emissions versus the 2021 baseline is largely due to changes in year-over-year production volumes and associated reductions in Category 1 purchased direct materials, Category 4 transportation, and Category 12 product end-of-life emissions. Similar to our expectations on timing for Scope 1 emissions impacts, we anticipate it may be several years until new projects are implemented and deliver meaningful Scope 3 emissions reductions results.

Through year-end 2024, 89% of purchased forest products qualified as sustainably sourced, with 100% of the wood and recovered fiber purchased for our paperboard manufacturing qualified as sustainably sourced. Wood and recovered fiber account for 83% of total forest products purchased and represent 94% of current sustainably sourced materials. External paperboard, fuel wood, and other secondary packaging materials comprise the remaining 17% of purchased forest products. While our overall percentage of sustainably sourced forest products did not change versus our 2023 baseline, the distribution of sustainably sourced materials did change. If we exclude wood and recovered fiber, approximately 35% of the remaining purchased forest products qualify as sustainably sourced in 2024 — a 30% increase compared to 2023.

Circularity Target Performance

In 2024, we expanded and piloted our new methodology to assess the comparative circularity, functionality, and convenience of two new packaging innovations: our ProducePack™ punnet tray and PaperSeal® Shape solutions introduced in European markets. In addition, our innovation team patented more than 130 new package innovations. Sales from new innovations contributed to more than \$200 million in revenue growth and the replacement of more than one billion plastic packages with more circular, paperboard-based options.

Climate-related Remuneration Considerations

Annual performance measures for our CSO and other VPs leading sustainability initiatives across the Company include considerations for demonstrable action toward environmental sustainability-related programs, targets and/or objectives. Based on role, these may include progress toward measuring our climate-related risks and opportunities and creating/executing associated action plans. They may also include progress toward our decarbonization goals or other environmental impact reduction or risk mitigation initiatives and goals, as well as the development and execution of plans to address regulatory compliance and accurate/transparent disclosure of our environmental sustainability metrics and efforts. Performance toward such goals and priorities is taken into account when the respective supervisor determines the individual performance ratings that inform merit salary increases, bonus awards, and/or stock awards (if eligible).

Appendix

Scenario Analysis Parameters

Appendix Table A: Scenario Analysis Parameters

Narrative Component	Physical Scenarios	Transition Scenarios	Socioeconomic Scenarios
Scenario Sources	IPCC Representative Concentration Pathways (RCPs)	International Energy Agency (IEA) World Energy Outlook (WEO)	IPCC Accompanying Shared Socioeconomic Platforms (SSPs)
Low-Carbon Scenario	RCP 2.6 The RCP2.6 scenario applied to high-resolution regional climate models, which corresponds to the SSP1-2.6 scenario (0.9 to 2.4°C increase from pre-industrial levels and an average global mean sea level rise of approximately 0.4 meters at the end of the century).	Net Zero Emissions (NZE) 2050 A scenario that sets out a pathway for the global energy sector to achieve net-zero CO ₂ emissions by 2050. It does not rely on emissions reductions from outside the energy sector to achieve its goals. Universal access to electricity and clean cooking is achieved by 2030. The scenario was updated with the latest available data in 2024.	SSP 1 This future poses low challenges to mitigation and adaptation: <ul style="list-style-type: none"> • Global population peaks mid-century • Emphasis on human well-being • Environmentally friendly technologies and renewable energy • Strong and flexible institutions at global, regional, and national levels.
High-Carbon Scenario	RCP 8.5 The RCP8.5 scenario applied to high-resolution regional climate models, which corresponds to the SSP5-8.5 scenario (3.2 to 5.4°C increase from pre-industrial levels and an average global mean sea level rise of approximately 1.0 meters at the end of the century).	Stated Policies Scenarios (STEPS) A scenario which reflects current policy settings based on a sector-by-sector and country-by-country assessment of the energy-related policies that are in place as of the end of August 2024, as well as those that are under development. The scenario also considers currently planned manufacturing capacities for clean energy technologies.	SSP 5 This future poses high challenges to mitigation and low challenges to adaptation: <ul style="list-style-type: none"> • Global population peaks mid-century • Emphasis on economic growth and technological progress • Global adoption of resource and energy-intensive lifestyles • Lack of environmental awareness

Narrative Component	Physical Scenarios	Transition Scenarios	Socioeconomic Scenarios
Scenarios Focus	Looking at the future projections for climate weather, namely time series of emissions and concentrations of the full suite of greenhouse gases (GHGs) and aerosols, and chemically active gases.	Looking at systemic, operational, and policy changes related to energy supply and demand needed to achieve a certain emissions trajectory.	Provide plausible scenarios for how the world evolves in areas such as population, economic growth, education, level of globalization, level of urbanization, and the rate of technological development.
Scenario Data Points	<ul style="list-style-type: none"> • Global temperature change • Global land precipitation change • September Arctic Sea ice area • Global mean sea level change • Annual mean surface temperature anomalies • Atmospheric CO₂ concentration • Carbon flux 	<ul style="list-style-type: none"> • Energy supply • Renewable energy supply • Oil production and demand • Natural gas production and demand • Coal production and demand • Electricity and renewables generation • Industry energy consumption 	<ul style="list-style-type: none"> • Gross Domestic Product (GDP) • Economic consumption (household expenditure) • Air pollution • Energy consumption • Land cover and deforestation • Agricultural demand and production • Global collaboration
Key Inputs	<ul style="list-style-type: none"> • Priority physical risks • Physical Exposure Results • Identified adaptation actions 	<ul style="list-style-type: none"> • Priority transition risks • Identified mitigation actions 	<ul style="list-style-type: none"> • Priority transition risks • Identified mitigation actions

Additional Transition Risks and Opportunities

Appendix Table B: Additional Transition Risks

Market Risk: Increased Raw Materials Costs	
Description	
<p>Under the climate scenarios, costs are expected to increase for energy and raw materials due to regulations, material scarcity, and shifts in market preference, which may increase our costs.</p> <p>As a paperboard manufacturer, we use 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. For example, fossil-based resins and films used for windows and barriers in consumer packaging could experience increased price or reduced availability in response to changing fossil fuel markets and regulation.</p>	
Impact to the Business	
<p>Climate scenario time horizon(s): 2030 Short-term; 2050 Medium-term; 2100 Long-term</p> <p>Region(s): Global</p> <p>Impact(s): Increased costs</p>	
Mitigation and Adaptation Strategy	
<p>In the U.S., we procure recycled fiber from external suppliers and internal packaging operations. The market price of each of the various recycled fiber grades fluctuates with supply and demand. Our internal recycled fiber procurement function enables us to pay lower prices for its recycled fiber needs given our highly fragmented supplier base.</p> <p>We use productivity improvements and other initiatives to reduce costs, offset inflation and maintain adequate raw material supplies. These actions include global continuous improvement initiatives that use best-in-class industry methodologies and statistical process control to help design and manage many types of activities, including planning, procurement, production and maintenance. These efforts result not only in cost reductions, but also build resilience in the overall supply chain.</p> <p>Graphic Packaging's innovation team is developing new packaging designs that use less material (e.g., by using lower caliper paperboard or other materials, through material improvements, by using open/wrap package designs, etc.) to deliver the same performance and is exploring renewable and/or recycled alternatives to replace virgin fossil-based resins and films.</p> <p>Each business unit conducts impact assessments of raw material pricing and availability along with market trends, integrates the findings into business strategy development, and reports impacts to the ERM team for consideration in the ERM process.</p>	

Regulation/Market Risk: Increased Energy Costs

Description

Energy, including natural gas, fuel, oil and electricity, represents a significant portion of our manufacturing and distribution costs. As an energy intensive company, Graphic Packaging may be subject to current and emerging regulations targeting energy use and efficiency as well as reduction of emissions. These laws and regulations are evolving and expected to become more stringent over time, which could result in significant increased costs of purchased energy, other raw materials, additional compliance costs, increased transportation costs, or other additional direct costs.

Impact to the Business

Climate scenario time horizon(s): 2030 Short-term; 2050 Medium-term; 2100 Long-term

Region(s): Global

Impact(s): Increased costs

Mitigation and Adaptation Strategy

We have entered into contracts designed to manage risks associated with future variability in cash flows and price risk related to future energy cost increases for a portion of the natural gas requirements at our U.S. paperboard manufacturing facilities. Manufacturing sites are also working on increasing the energy efficiency of our operations, which will reduce exposure to increasing energy prices.

Graphic Packaging includes emerging regulation risks related to climate change and energy in our risk assessments and continues to evaluate these risks through ongoing informal reviews that occur as part of normal business practices. The government affairs and sustainability teams follow changes in relevant regulations, laws and commitments that may impact our business. Changes are reported/informed to all relevant personnel and included in the company's enterprise risk management process for further analysis and action as needed.

Market Risk: Reputation Risk

Description

Increased stakeholder concern or negative stakeholder feedback shifts in consumer preferences, or stigmatization of the sector may impact our reputation.

In addition, our stakeholders expect Graphic Packaging to operate responsibly and act proactively on the challenges of climate change and climate-related nature impacts. If major investors or sustainability-oriented customers perceive Graphic Packaging business activities to be misaligned with the growing global momentum to act against climate change and stop deforestation, this could pose a reputational risk to the company that could lead to customer deselection, and ultimately to lower sales and a reduced market valuation. This aspect of our reputation could also be significant from an employer branding perspective, impacting our ability to attract and retain new talent.

Market Risk: Reputation Risk**Impact to the Business**

Climate scenario time horizon(s): 2030 Short-term; 2050 Medium-term; 2100 Long-term

Region(s): Global

Impact(s): Reduced revenue

Mitigation and Adaptation Strategy

Consumer concern regarding growing plastic packaging and single-use packaging waste represents one of the strongest trends in the packaging industry.

Brands are increasingly looking to improve the circularity and carbon footprint of their products and packaging, and our paperboard packaging is fundamental in helping them meet such goals.

Our work to promote the circular economy has led to groundbreaking consumer paperboard packaging solutions that reduce dependency on single-use plastics, are designed to be recovered and recycled, and enhance product functionality and the consumer experience.

Graphic Packaging's recent actions to set climate goals in-line with science-based targets combined with its planned actions to mitigate the company's contributions to climate change and sustainably source all purchased forest products help reduce associated reputational risks. All wood raw materials purchased for the three wood-based paperboard manufacturing facilities are sourced in the southern U.S., typically from within a 60-mile radius of our facilities. This region is currently low risk for deforestation. Sourced wood meets the criteria for at least SFI™ Sustainable Sourcing, PEFC™ Controlled Sources, and FSC® Controlled Wood.

Graphic Packaging has processes in place through our Investor Relations, HSE, Marketing, Product Innovation, and Talent Acquisition teams to collect external stakeholder feedback and provide input to assess potential risk.

*Appendix Table C: Additional Transition Opportunities***Market Opportunity: Changing Consumer Behavior, Substitution of Existing Products with Low-Emissions Alternatives, and Shifts in Consumer Preferences****Description**

In recent years, customer behavior regarding sustainability has been fluctuating, with international clients becoming increasingly aware and demanding. Consumers increasingly prefer paperboard packaging over plastic due to their belief that paperboard is more environmentally friendly.

We may benefit by demonstrating the ability to diversify business activities, develop and/or expand low-emission goods and services, utilize climate adaptation, resilience/insurance risk solutions, and develop new products through R&D/innovation to adapt to shifts in customer and/or consumer preference.

Impact to the Business

Climate scenario time horizon(s): 2030 Short-term; 2050 Medium-term; 2100 Long-term

Region(s): Global

Impact(s): Increased revenues

Mitigation and Adaptation Strategy

The Company works to increase market share and profitability through product innovation and the introduction of new paperboard packaging products that are designed to be recycled. The convenience criteria in our 2030 Better Packaging goal for every new innovation to be more circular, more functional, and more convenient than existing alternatives specifically addresses consumer preferences and interactions with the packaging.

We believe we are well-positioned to take advantage of opportunities that may arise from increased consumer and customer demand for and/or legislation mandating or incentivizing the use of products and technologies necessary to achieve a lower-carbon, lower-waste economy. This includes innovation investments and bringing to market paperboard packaging products that are more circular, more functional, and more convenient than existing alternatives.

Market Opportunity: Energy Sources/ Resilience**Description**

We may benefit by participating in low-emissions energy sources, renewable energy programs, adopting energy-efficiency measures and diversifying or identifying resource substitutes.

Impact to the Business

Climate scenario time horizon(s): 2030 Short-term; 2050 Medium-term; 2100 Long-term

Region(s): Global

Impact(s): Reduced costs

Market Opportunity: Energy Sources/ Resilience

Mitigation and Adaptation Strategy

We have 2030 goals to convert 50% or more purchased electricity to renewable/zero carbon electricity, and to increase renewable fuel use to 90% in our wood-based paperboard manufacturing facilities.

In 2024, we established an internal steering team to develop our renewable electricity purchasing strategy, and we named a Vice President, Global Supply Chain Sustainability responsible for efforts to reduce value chain emissions and increase our purchases of renewable electricity. We executed our first virtual power purchase agreement in Europe in mid 2024. And our Jundiai, Brazil packaging plant signed a five-year contract to procure renewable electricity equivalent to 100% of purchased power. In early 2025, we joined the Clean Energy Buyers Association (CEBA) to accelerate our purchased renewable electricity program.

Opportunity: Resource Efficiency

Description

We may benefit by moving to more efficient buildings and/or retrofitting existing buildings, reducing water usage and consumption, using more efficient transportation modes, enhancing the efficiency of our production and distribution processes, and increasing recycling efforts.

Impact to the Business

Climate scenario time horizon(s): 2030 Short-term; 2050 Medium-term; 2100 Long-term

Region(s): Global

Impact(s): Reduced costs

Mitigation and Adaptation Strategy

We are establishing dedicated sustainability teams across selected sites to integrate sustainability into daily operations.

Our operations sustainability managers leverage collective learning and best practices across regions to accelerate energy and material efficiency improvements throughout our global packaging plant network. Planned initiatives include driving further infrastructure improvements by targeting essential operations systems, such as compressed air and heating and cooling systems, to eliminate air leaks and improve insulation. Additionally, sites will evaluate current equipment to determine whether to invest in upgrades or replacements, to maximize energy efficiency.

We are reducing energy intensity in recycled paperboard manufacturing operations by moving from older manufacturing technologies to newer, more energy-efficient ones. This includes approximately \$2 billion in capital investments across Kalamazoo, MI and Waco, TX to install new, highly efficient production lines, delivering ~10% reduction in greenhouse gas emissions and energy use intensity as well as an approximate 40% reduction in water use intensity. We've also begun deploying advanced energy management systems at our wood-based paperboard manufacturing facilities to improve biomass fuel efficiency and reduce reliance on grid electricity. And across our packaging operations,

Opportunity: Resource Efficiency

Mitigation and Adaptation Strategy (continued)

we completed electricity and natural gas efficiency projects in 2024 that yielded savings of nearly 25,000 MWh.

