



2023 CLIMATE REPORT

Aligned with the recommendations of the Task Force on Climate-related
Financial Disclosures

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1. About this report

In our [2021 Sustainability Report](#), we committed to releasing a comprehensive standalone report of our climate-related disclosures in line with the recommendations of the Taskforce on Climate-related Financial Disclosures (TCFD) in 2024. This Climate Report satisfies that commitment. Our 2021 Sustainability Report also included our [Sustainability Action Plan](#) and our first greenhouse gas (GHG) reduction target: an absolute reduction in our scope 1 and 2 emissions by 15% by 2030 from a 2021 base year. At the time that we set that target, we stated that we would continue to assess our GHG reduction target and ultimately establish a new target that aligns with the goals of the Paris Agreement.

This year we have increased our GHG emissions reduction target to a 30% absolute reduction in scope 1 and 2 emissions by 2030 from a 2021 base year. This Climate Report describes the approach we used to derive our increased target level by aligning with the following science-aligned pathways: the Global Methane Assessment (GMA), the Science Based Target initiative (SBTi), and the International Energy Agency's (IEA) pathway to Net Zero.

We are the first in our industry to adopt this hybrid approach to setting targets and we believe that this is the best approach to ensure that our target is both achievable and consistent with the goals of the Paris Agreement. We intend to work with a third party to confirm our alignment with the Paris Agreement in the coming months.

Our climate governance, risk-related processes and systems and Sustainability Action Plan are key parts of implementing our business strategy. Through the climate scenario analyses that we performed and documented in this report, we confirmed that they also help us address and mitigate climate-related risks to our business. We recognize that building and maintaining climate resilience in our business is an ongoing and evolving effort. For that reason, we will continue to update our climate scenario analysis and be transparent on our efforts through continued disclosure and periodic updates to this standalone report.

Unless otherwise noted, data and metrics are for the reporting period of GFL Environmental Inc. and those entities within its operational control (in this report "GFL", the "Company", "we", "our") between January 1st, 2023 and December 31st, 2023. All financial information presented in this report, consistent with GFL's financial reporting, is in Canadian dollars.

Forward looking statements

This report includes certain "forward-looking statements" and "forward looking information" (collectively, "forward-looking information") within the meaning of applicable U.S. and Canadian securities laws, respectively. These include, but are not limited to, statements regarding our sustainability goals, including reductions in greenhouse gas emissions, use of renewable energy, biogas recovery, leachate management and recycling.

Statements containing forward-looking information are not historical facts nor assurances of future performance but instead represent management's expectations, estimates and projections regarding future events or circumstances. Forward-looking information is based on our opinions, estimates and assumptions that we considered appropriate and reasonable as of the date such information is stated and is subject to known and unknown risks, uncertainties, assumptions and other important factors that may cause the actual results, level of activity, performance or achievements to be materially different from those expressed or implied by such forward-looking information. Important factors that could cause actual results to differ, possibly materially, from those indicated by the forward-looking information include, but are not limited to, markets for renewable energy products, our operations, including organic growth in our recycling business, our ability to invest in landfill gas projects, our ability to invest in alternative fuel vehicles and the other factors described in the "Risk Factors" section of GFL's annual information form for the 2023 fiscal year filed on Form 40-F and GFL's other periodic filings with the U.S. Securities and Exchange Commission and the securities commissions or similar regulatory authorities in Canada.

There can be no assurance that the underlying opinions, estimates and assumptions will prove to be correct. Although we have attempted to identify important risk factors that could cause actual results to differ materially from those contained in forward-looking information, there may be other factors not currently known to us or that we currently believe are not material that could also cause actual results or future events to differ materially from those expressed in such forward-looking information.

The forward-looking information contained in this report represents our expectations as of the date of this report (or as the date it is otherwise stated to be made) and is subject to change after such date. However, we disclaim any intention or obligation or undertaking to update or revise any forward-looking information whether as a result of new information, future events or otherwise, except as required under applicable securities laws.

2. Climate strategy

At GFL, our vision is to be Green For Life. This vision is at the core of our business strategy and central to the services we provide to our customers. We implement our vision by providing accessible, cost-effective, and sustainable environmental solutions to our customers and the communities we serve. This includes the environmental solutions that we offer that help our customers achieve their sustainability goals.

Our Sustainability Action Plan supports our vision and also builds on the important and unique role that our industry plays in supporting our customers in reducing their carbon footprint and enhancing their climate resilience. It is also an important part of our climate strategy that focuses on:

- Providing sustainable solutions to our customers that enable them to increase avoided GHG emissions within their own footprint. These solutions include resource recovery through the materials recovery and recycling services we provide and the beneficial use of landfill gas as a source of renewable energy.
- Reducing direct GHG emissions from our operations, primarily through increased gas capture at our landfills, the use of alternative fuel vehicles in our fleet and the use of renewable electricity at our own facilities.
- Increasing the sustainability innovations that come from within our business by continuing to invest in our employees and our entrepreneurial and innovative culture.

We believe that our employees play an integral role in implementing our climate strategy. As part of our award-winning Environmental Innovation Program¹ (EIP), our Greenlight Innovation Workshop actively engages and enables our employees to convert their ideas into workable solutions which we believe will enhance our ability to meet our evolving customers' needs for accessible and cost-effective sustainable solutions. We call these solutions our next generation and incubator Sustainability Value Initiatives (SVIs). These SVIs are the initiatives we will focus on in the short-term so we have solutions that can be implemented at scale in the medium- and long-term. Our next-generation and incubator SVIs that are climate-related include:

- Implementing technological improvements at our material recovery facilities (MRFs) to increase rates of recovery and types of materials that can be recovered.
- Increasing the organics recycling solutions we offer our customers.
- Conducting customer sustainability pilots to collect data to enhance our customers' understanding of their scope 3 emissions and the services GFL offers to help reduce those emissions.
- Fugitive emissions and energy resource management at our landfills including the testing and use of next generation surface emissions monitoring (e.g. satellites, aircraft, drones and fixed sensors) and data management systems
- Piloting/Using zero emissions vehicles.

Our climate strategy includes our Sustainability Action Plan, climate-related governance, and risk-related processes and systems. Implementing this climate strategy is a key part of our business strategy and also helps us address and mitigate climate-related risks to our business, making it more resilient to the potential impacts of climate change.

3. Governance

As part of our climate strategy, we have implemented a multi-layered governance structure (**Figure 1**) that incorporates input and action from all parts of GFL, including our frontline and operations managers, employees through participation in our Environmental Innovation Program, business managers and executive leadership and Board of Directors. We believe that this top-down and bottom-up approach will provide the appropriate oversight and guidance for the implementation of our climate strategy and help us achieve the climate-related goals, targets and commitments in our Sustainability Action Plan.

3.1. Board oversight of climate-related risks and opportunities

3.1.1. Board of Directors

Our Board of Directors is responsible for providing oversight of and guidance on our strategic direction. As part of this oversight, the Board is responsible for monitoring the identification and management of material risks to our business and opportunities being pursued by the business, including risks and opportunities that are climate-related.

The Board of Directors meets on a quarterly basis with additional meetings called periodically as required to address specific issues as they arise. On a quarterly basis, the Board reviews our strategy, budgets, and business plans. Climate-related risks that may impact our ability to implement our business plans and opportunities that are incorporated into our business plans are brought to the attention of the Board during these reviews. The Board’s oversight of climate-related issues includes major capital expenditures for acquisitions and investments in infrastructure that will help us achieve our climate-related Sustainability Action Plan goals, targets and commitments and implement our business strategy.

Examples of such investments include replacing our diesel solid waste collection vehicles with compressed natural gas (CNG) or other alternative fuel vehicles, developing renewable energy facilities at our landfills, development of new material recovery facilities, investments in new technologies at our existing material recovery facilities to increase our recovery rates and investments in organics processing facilities that provide alternatives to traditional landfill disposal. In 2023, the Board met seven times.

3.1.2. Audit Committee

The Audit Committee oversees GFL’s financial risk management, including financial risks related to climate change. This includes oversight over GFL’s enterprise risk management process to identify and manage the key business risks and opportunities that could potentially have significant financial or social impacts on our business, including those that are climate-related.

The members of GFL’s Audit Committee bring a diverse range of financial and risk-related experience having served as executive level management for national and international businesses that include large financial institutions, major retail chains and technology firms.

GFL’s Risk Management Steering Committee (RMSC) oversees the implementation and management of our enterprise risk management process and reports to the Audit Committee.

The Audit Committee meets quarterly at a minimum and more frequently as required. In 2023, the Audit Committee met five times.

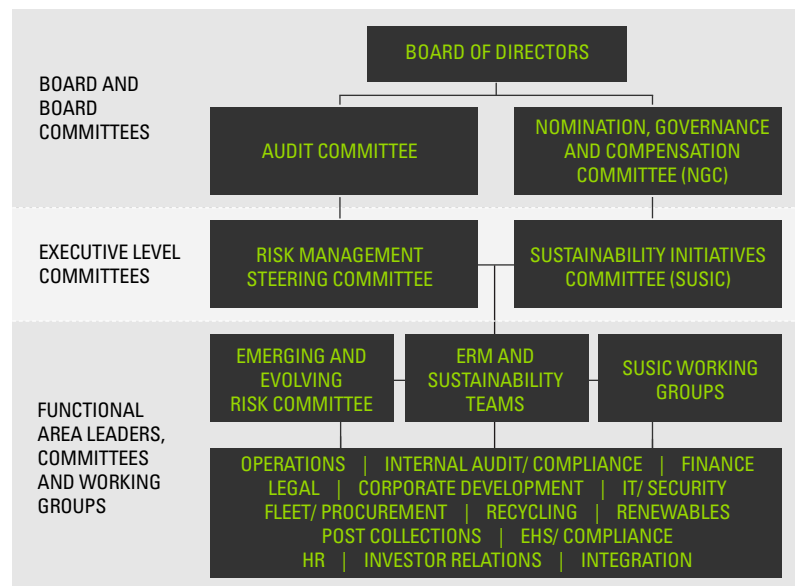


Figure 1: GFL governance structure

3.1.3. Nomination, Governance and Compensation Committee

The Nomination, Governance and Compensation (NGC) Committee is responsible for overseeing the implementation of our Sustainability Action Plan and our progress towards achieving the goals, targets, and commitments included in our Plan in the time frames in which they are to be achieved. Our Sustainability Initiatives Committee (SUSIC) provides recommendations to the NGC Committee on the sustainability-related key performance indicators to ensure accountability for achieving our Sustainability Action Plan goals and commitments.

As part of its annual review of the short-term incentive compensation to be awarded to our five most senior executive officers, the NGC Committee assesses the performance of those officers against the achievement of certain goals, targets, and commitments that form part of our Sustainability Action Plan. In 2023, the NGC Committee met seven times.

3.2. Management's role in assessing and managing climate-related risks and opportunities

GFL's Founder and Chief Executive Officer (CEO) is ultimately responsible for our approach to sustainability and the implementation of our Sustainability Action Plan as part of our climate strategy. The CEO fulfills this management responsibility with support from GFL's executive management team and select committees. GFL executive management team members that are primarily involved in the management of sustainability-related issues are the: Chief Financial Officer (CFO), Chief Legal Officer (CLO), Chief Operating Officer Solid Waste (COO SW), Chief Operating Officer Environmental Services (COO ES), Executive Vice President Strategic Initiatives (EVP SI), and Chief Human Resources Officer (CHRO). Some of the key responsibilities in managing climate-related risks and opportunities include: managing public policy engagement, directing the assessment of climate-related dependencies, impacts, risks and opportunities including through scenario analysis, implementing GFL's business and climate strategy identifying and managing the completion of acquisitions, mergers, and divestitures and the integration of completed acquisitions, managing major capital and/or operational expenditures to ensure their alignment with our business and climate strategy, setting corporate targets and measuring progress towards achievement of those targets and setting employee incentives related to performance.

The executive-led RMSC and SUSIC committees bring together key functional area and business leaders to review and advise the executive management team, including the CEO, on key climate-related risks and opportunities. GFL's Sustainability team and Enterprise Risk Management (ERM) team lead internal and external engagement to identify, assess and track the management of our climate-related risks and opportunities. These two teams report to the EVP SI and CFO, respectively.

Tying Performance to Executive Compensation

As part of our commitment to our sustainability performance, commencing in 2020 the NGC Committee tied 20% of the award of non-equity incentives for our five named executive officers to the achievement of sustainability-related accomplishments. Commencing with fiscal 2022, the year we first adopted our Sustainability Action Plan, this 20% includes achieving certain goals, targets, and commitments set out in our Sustainability Action Plan within the time frames set out in the Plan.

Each year, the NGC Committee sets the performance targets for the coming year including non-financial metrics. In fiscal 2023, non-financial metrics (with a total weighting of 20%) included achieving progress on the climate-related goals (as well as other non-climate-related goals) in our Sustainability Action Plan and implementing emissions reduction initiatives that lowered our scope 2 emissions. In fiscal year 2023, GFL achieved all non-financial goals.

3.2.1. Risk Management Steering Committee

The RMSC is responsible for defining and managing our risk tolerance. It oversees the implementation of our enterprise risk management process to assess and mitigate operational, financial, strategic, reputational, employee, health and safety, legal and regulatory, information technology and climate-related risks and opportunities. The RMSC is composed of our senior executives including our CEO, CFO (committee chair), COO SW, COO ES, CLO and EVP SI as well as other corporate Vice Presidents, including the Vice President, Risk Management.

Meetings of the RMSC are scheduled as necessary. In 2023, the RMSC met twice and reported to the Audit Committee on the implementation and management of our enterprise risk management process once.

3.2.2. Sustainability Initiatives Committee

GFL's SUSIC is composed of our CEO (committee chair), CFO, COO SW, COO ES, CLO, CHRO, EVP SI and other corporate Vice Presidents, including the Vice President, Environmental Responsibility and Sustainability.

The SUSIC is responsible for identifying our sustainability goals and strategies to ensure that sustainability continues to be integrated across our operations. The Committee and its members also define key performance indicators to ensure accountability, at an operational level, for meeting the goals, targets and commitments that are included in our Sustainability Action Plan.

In 2023, the SUSIC met on a quarterly basis and provided two semi-annual reports to the NGC Committee on the progress made towards implementing our goals, targets, and commitments in our Sustainability Action Plan.

3.2.3. Risk integration within functional areas and business operations

Day-to-day business operations are managed at the local or asset level. With the support of functional areas (like Environmental Health and Safety and Compliance), local managers continuously assess risks and opportunities impacting their businesses, including potential acquisition opportunities, competitive pressures, organic growth plans, market dynamics and pricing, and the potential impact of existing and proposed legislation.

The local assessment of risks and opportunities is reviewed annually at the corporate level through our annual budget process. Quarterly operational and strategic business reviews are also held between executive and senior operations management to review and discuss our business strategy and identify trends impacting the business as a whole and specific to the various regions in which we operate. Strategies to address identified market risks or pursue identified opportunities are also reviewed and discussed.

GFL's Sustainability team and ERM team play an important role in identifying, assessing and highlighting climate-related risks and opportunities to functional area leaders and local and senior managers in advance of these strategic reviews. The Sustainability team also works to identify and implement steps required to progress our Sustainability Action Plan, including, for example, recommending or creating cross-functional working groups, like our Landfill Gas Working Group, which includes a cross-section of employees from our sustainability, landfill management, renewable natural gas development, health and safety, and environmental compliance teams that work together to implement best practices for landfill gas management at our landfills.



4. Evaluating our climate resilience

To evaluate our resilience to potential climate-related business risks, we conducted a screening level climate scenario analysis of both physical and transition risks and opportunities. The information from this screening level analysis was further evaluated by conducting a more detailed climate scenario analysis of certain risks and opportunities to determine their incremental potential impact on our business over various time horizons. Both the screening level and more detailed climate scenario analyses were performed by a third-party climate consultant.

This section of our Climate Report reviews the potential climate-related risks and opportunities that have or could have an impact on our business, strategy and financial planning. For those climate risks where we performed more detailed analysis, we provide additional discussion and GFL's response to these risks. This section also summarizes the climate-related growth opportunities that we are pursuing.

4.1. Time horizons and climate scenarios

For consistency in our analyses of risks and opportunities, we have established and defined the following time horizons:

- **Short-term (ST) 0 to 3 years:** Our short-term time horizon is aligned with broader operational, financial and strategic planning timeframes.
- **Medium-term (MT) 3 to 10 years:** Our medium-term horizon is aligned with capital decisions such as those related to our fleet.
- **Long-term (LT) 10 to 30 years:** Our long-term time horizon is aligned with larger infrastructure capital decisions including the development and construction of material recovery facilities, organics processing facilities, landfills, and landfill renewable energy facilities.

The specific time horizons considered in our climate scenario analysis of our risks included 2030 and 2050, which fit into our medium and long-term time horizons respectively. These dates were selected as they are key target dates for addressing climate change as noted by the Intergovernmental Panel on Climate Change (IPCC) to limit global warming to 1.5°C².

The climate scenarios we considered along with their defined global temperature rise and the risks they were used to assess are as follows:

- IPCC Representative Concentration Pathways (RCPs)
 - Acute Physical Risks: RCP4.5 (2°C), RCP8.5 (4°C)
 - Chronic Physical Risks: SSP2-4.5 (2.7°C), SSP5-8.5 (4.4°C)
- Network for Greening the Financial System (NGFS)
 - Transition Risks: Nationally Determined Contributions (~2.5°C)
 - Transitions Risks: Net Zero 2050 (1.5°C)
- IEA
 - Transition Risks: Stated Policies (~2.5°C)
 - Transition Risks: NZE 2050 (1.5°C)

Detailed information on these climate scenarios is provided in **Appendix A**.

4.2. Summary of potential climate-related risks and opportunities

In our [annual financial reporting](#) we identify risks and opportunities that have the potential to impact our business including key climate-related risks and opportunities. The information in **Table 1** on the following pages broadly summarizes these climate-related risks and opportunities including a brief description of how they have the potential to impact our business operations and their expected impact on our company strategy and financial planning. The most likely time horizon(s) in which the risk impact may apply and location in our Annual Report (AR) is also identified.

Table 1: Potential climate-related physical and transition risks and opportunities to GFL

Risk Type(s)	Time Horizon(s)	Description of Risk and Potential Impact to GFL (Business, Company Strategy, and Financial Planning)	AR (Page ref.)
Acute	ST MT LT	<p>We face a variety of acute physical climate hazards to our operations and capital investments as well as environmental, health and safety risks to our employees, customers and the communities in which we operate. Using predictive climate models, we assessed which of our assets/locations are exposed or vulnerable to acute hazards like tropic cyclones (hurricanes), extreme precipitation, ice days, heavy snowfall, drought, extreme heat, and wildfires using three time horizons (short-, medium- and long-term). Our analyses indicate that relative to current climate conditions there is a low likelihood of a change in the risk level to our business from acute physical hazards. A more detailed discussion of potential impacts is provided in Table 2, Risk 1.</p> <p>The services provided by GFL are essential to assisting our customers and communities to recover from the impacts of severe weather events. Our solid waste operations provide critical post-event collection, recycling, and disposal of storm debris. Our environmental services division offers emergency response services and site remediation services that can be mobilized quickly to clean up potential chemical spills or toxic releases resulting from extreme weather events thereby limiting their impacts on soil and groundwater and helping communities to return to normal faster.</p>	16
Chronic	MT LT	<p>Chronic physical hazards like heat stress on our employees from operating in hotter temperatures, heavy rainfall, sea level rise, and water stress may pose a risk to the effectiveness of our operating procedures. Our operations are currently most exposed to heat stress, given that most of our collection operations occur outdoors or in areas with limited climate control options. To respond to these risks, we have developed policies and procedures for employees and managers to mitigate the risks of heat (and cold) stress during periods of extreme temperatures. For example, these policies provide instruction on the frequency and duration of hydration breaks as temperatures increase. We continue to evaluate how chronic hazards may impact the performance of our facilities and the health and safety of our employees and adopt or adapt appropriate policies and procedures to mitigate the impacts of new and changing hazards. We have also started and plan to continue to conduct scenario analysis on our key operations that are vulnerable to chronic physical risks to estimate any incremental capital and operating cost impact to our various lines of business. Examples of this analysis are provided later in Table 2, Risk 2.</p>	16
Market	ST MT LT	<p>A transition to a low-carbon economy may have a significant impact on current supply/demand mechanisms for many commodities, favouring a circular economy model and boosting the demand for recycled materials. In our recycling business GFL recovers, purchases and sells recyclable materials, some of which are priced on a commodity basis. As a result, our results of operations are and will continue to be affected by changes in commodity prices including those reflecting market demand for certain recyclable materials and the quality required of those materials. To reduce our exposure to commodity price risk with respect to recycled materials, we have adopted a pricing strategy of charging collection and processing fees for recycling volume collected from third parties where possible. We estimate that a $\pm 10\%$ change in the average of recycled commodity prices from the average prices that were in effect as of December 31, 2023 and December 31, 2022 respectively, would have had a $\pm \\$10.7$ million and $\pm \\$14.9$ million impact on revenues for the year ended December 31, 2023, and December 31, 2022, respectively.</p> <p>Government entities in jurisdictions in Canada and the United States in which we operate may also implement requirements to divert certain waste materials that are currently accepted at landfills such as through the implementation of organics bans to encourage composting of food and yard waste and recyclables bans to encourage diversion of otherwise recyclable materials such as wood waste from landfill disposal. GFL's recycling and organics collection and processing networks and existing relationships position us well to be awarded contracts to build and operate the infrastructure needed to facilitate this greater circularity. An example of our ability to adapt to such a risk is the role we are playing in Canada in the implementation of recently enacted Extended Producer Responsibility (EPR) legislation. This legislation influences market conditions where we operate by shifting the responsibility for collection and processing of recyclables from municipalities to the producers of the recyclable materials and mandating higher recovery rates. We are currently leveraging being the first waste industry participant in North America to operate under an EPR regime (GFL is the sole contractor to Recycle B.C., which is the producer-led EPR system currently operating in British Columbia, Canada) to secure other EPR contracts in Ontario and Quebec, Canada where new EPR regimes are being implemented. We also see additional new opportunities in other Canadian jurisdictions which are looking to implement EPR programs including the Atlantic provinces, Alberta, Saskatchewan and Manitoba, Canada and continue to monitor legislative developments in U.S. jurisdictions where we have operations.</p>	9-12, 14, 22
Technology	MT LT	<p>Waste management and materials handling technologies are continuously evolving and may impact the demand for our services and our ability to deliver them. This, in turn, may impact our ability to address our climate-related impacts and support a low carbon transition. For example, new technology may emerge that increases recovery rates at our resource recovery facilities (organics composting or material recovery facilities) which may reduce the volume of products that enter the waste stream. The inability to adopt or implement materials handling technologies at the right time and scale may create competitive disadvantages in those markets that are demanding services to be low carbon and circular. Our dependence on technology in our operations could also, if any of our key technology fails or is unavailable, negatively impact our business. Similarly, we are increasingly reliant on information management systems to support our business decisions, improve efficiency and services to our customers and manage our workforce. Failure or interruption of these systems could also disrupt and negatively impact our business.</p> <p>In response to these potential risks, among other strategies, we developed our award-winning Environmental Innovation Program (EIP). The EIP takes employee-identified technologies and evaluates their potential impact on our business and plans their integration to help us achieve our circular economy and climate leadership goals, targets and commitments. The EIP focuses us on investing not only in the solutions that we know can work today (core SVIs) but also in those that will be required in the future (our next generation and incubator SVIs). An example of this is our focus on identifying and implementing technological improvements (e.g. new recycling technology) at our material recovery facilities to increase rates of recovery and types of materials that can be recovered.</p>	15, 17

Table 1: Potential climate-related physical and transition risks and opportunities to GFL (continued)

Risk Type(s)	Time Horizon(s)	Description of Risk and Potential Impact to GFL (Business, Company Strategy, and Financial Planning)	AR (Page ref.)
Policy and Legal	MT LT	<p>We are subject to substantial government regulation that may increase or change over time. Regulations may impose restrictions on our business or how we manage our assets including the need to obtain and comply with new or existing permits and licenses and potentially more stringent terms and conditions for existing permits and licenses for certain parts of our operations such as our collections, recycling and disposal facilities and fleet. Examples of regulations that we included in our climate risk assessments are landfill air emission requirements, carbon pricing regulations and renewable fuel standards that impact the price of fuel used in our operations or the market for and pricing of renewable natural gas (RNG).</p> <p>We also recognize that GHG emissions from our landfills could be vulnerable to new and evolving policies or regulations imposed by governments to address climate change, including a price on carbon.</p> <p>As the core of our climate strategy is to continue to be a circular economy and climate leader, we have increased our GHG emissions reduction target to 30% of our 2021 base year by 2030, so that it is aligned with science. More information on our increased scope 1 and 2 emissions reduction target is provided in Section 6 of this Climate Report. As part of our internal scenario analysis, we examined actions we would need to take if policies that have been currently stated were implemented. In this scenario, we determined that the GHG reduction levels that we would be required to achieve if these regulatory actions were implemented would be less than our new 30% reduction target. Implementing these actions would also not exceed our threshold of substantive climate-related financial impacts (see Section 4.3).</p> <p>New or evolving carbon pricing policy also has the potential to impact the cost of fuel that we use in our operations primarily to fuel our fleet. The analysis that we conducted indicates that implementing the goal in our Sustainability Action Plan to convert a portion of our fleet from diesel to CNG powered vehicles, would significantly reduce the potential financial impact of the implementation of these carbon pricing policies, and may present a positive opportunity, taking into account the incremental positive return on investments from revenue generated on RNG that we produce and dispense from our own landfills and convert to CNG to fuel our own vehicles, as well as any applicable credit value for such RNG. Table 2, Risk 3 provides more details on the risk scenario analysis we performed.</p> <p>Increased focus by regulatory agencies, investors, lenders and civil society more broadly may result in expanded mandatory reporting, diligence and disclosure on topics such as climate change and other environmental and social risk issues. If we do not comply with these requirements, our reputation could be materially and adversely affected or we may be subject to legal claims or regulatory actions, any of which may have a material adverse effect on us. To manage this risk, GFL has established governance mechanisms to provide oversight over our regulatory obligations, including subject matter experts within our Environmental Management System, and internal working groups which actively monitor and advise our operations on the potential impact to our business of evolving environmental and climate reporting regulations. GFL is also an active stakeholder through the National Waste and Recycling Association (NWRA) and the Environmental Research and Education Foundation (EREF) in working, along with other member companies and stakeholders, to provide our industry perspective on the potential financial and operational impact of such new climate legislation.</p>	8-11, 13-15, 19-20, 22
Reputation	MT LT	<p>Climate change reputational risk is always included in our analysis due to the risk of changing customer or community perceptions of an organization's contribution to or detracting from the transition to a low-carbon economy. Increasing environmental concerns and demand for more stringent regulations on emissions could negatively affect the reputation of organizations like GFL operating within the environmental services industry. Given our focus on providing environmental solutions that mitigate the impacts of climate change and improve material circularity (such as through landfill gas to renewable energy projects and expanding our recycling and composting operations) we believe that GFL is well positioned to strengthen our customer's perception of our brand because of our positive contribution to the active management of environmental issues and providing solutions that address climate change concerns.</p>	16-19, 22

4.3. Climate resiliency

Table 2 provides a more detailed discussion on specific risks and opportunities and their potential impacts to our business strategy as well as our management response.

At an individual risk or opportunity level, we consider climate-related financial impacts associated with revenue, direct and indirect operating costs, asset value, and capital expenditures to be substantive if they are greater than \$40M in a fiscal year. In addition, depending upon the severity of the impact, any of the impacts described in the next paragraph alone or in combination could have a substantive financial or strategic impact on our business.

Strategic impacts and indirect financial impacts that we assessed included: 1) reputational impacts affecting stakeholder relationships, 2) operational impacts affecting business processes, systems, health and safety, or resulting in unplanned downtime, 3) people impacts related to employee engagement, productivity, and displacement, 4) strategic impacts related to the impact on transaction outcomes and customer satisfaction and 5) legal impacts related to damages or regulatory consequences such as fines or suspension or curtailment of operations.

Table 2: Specific climate-related risks and opportunities, potential impacts and management responses

Risk Type	Potential Impacts to Business	Management Response
<p>Risk 1: Extreme weather events (Physical, Acute) Primary analysis focused on our facilities along the east coast of Canada and the United States due to the potential impacts from tropical cyclones.</p>	<p>Our solid waste and environmental services operations can be adversely affected by inclement or severe weather, which could impact our ability to collect, process and dispose of waste materials in a timely manner (or at all), reduce the volume of waste materials delivered to our disposal sites or delay construction activities at our facilities. Severe weather events may also cause us to incur incremental labour, maintenance and equipment costs and penalties (related to delays in providing our services), some or all of which we may not be able to recover from our customers. These events could also increase the costs of insuring our assets against the risk of loss or result in the inability to secure insurance coverage or adequate insurance coverage at a reasonable price. Our facilities located in the Southeastern and Southern Coastal U.S. are particularly susceptible to tropical cyclones and storms and we have seen an increase in frequency and severity of weather-related incidents in the past several years.</p> <p>In addition, other events like winter storms or climate extremes resulting from climate change also force us to temporarily suspend some of our operations and, as a result, affect our operating results in the affected regions or markets. When these events occur, our services are also key to supporting our customers and communities with their resilience through post-event recovery, cleanup and preventing additional environmental damage and contamination.</p> <p>The analysis of the potential financial impacts considered direct costs due to damage to our facilities as well as indirect costs due to loss of revenue relative to the current exposure/risk levels. Using both 2°C and 4°C-aligned climate scenarios (RCP4.5 and RCP8.5) the analysis focused on GFL locations along the Southeastern and Southern Coastal U.S. as well as coastal locations in eastern Canada. Appendix A provides further information on how this analysis was conducted.</p> <p>Looking at 2030 and 2050 timeframes, our analyses determined the incremental direct (damage) and indirect (loss of revenue) financial impacts from these types of events to be low to moderate and well below our definition of substantive financial impacts.</p>	<p>Risks and opportunities related to severe weather events are included in our capital planning, Environmental Management Systems and our Safe For Life program, as well as our business impact analysis, budget reviews and quarterly operating reviews.</p> <p>GFL also reviews physical risks as part of annual capital planning, where risks to assets are identified, prioritized, and budgets are allocated to address both risks and opportunities. Quarterly operating reviews report on effectiveness of risk mitigating efforts including near-misses, losses and lessons learned from severe weather events. Severe weather is monitored, and regional business leaders convene to plan for all upcoming events including putting clean-up equipment and back-up generators on stand-by for quick mobilization.</p> <p>Our environmental and health and safety management systems require the development of and training on emergency response plans including tropical cyclone response plans for specific facilities in at-risk regions.</p>

Table 2: Specific climate-related risks and opportunities, potential impacts and management responses (continued)

Risk Type	Potential Impacts to Business	Management Response
<p>Risk 2: Increased seasonal precipitation (Physical, Chronic)</p> <p>Our analysis focused on potential impacts from increased leachate production at our landfills.</p>	<p>Significant and sustained increases in leachate from our landfills due to increasing precipitation could cause us to incur additional capital expenditures related to increasing the capacity of our leachate handling and treatment facilities and increased operating costs for discharging leachate into sewer systems and trucking excess leachate offsite to third party facilities. Given the number of landfills that we operate, we prioritized the analysis of potential impacts from increased leachate production.</p> <p>Financial impacts from increased leachate production due to increased precipitation, particularly in winter and spring, were estimated using SSP2-4.5 (2.7°C) and SSP5-8.5 (4.4°C) climate scenarios for 2030 and 2050 time-horizons and were determined to be well below our definition of substantive climate-related financial impacts.</p>	<p>We look to use the latest landfill capping technologies and techniques to minimize leachate production whenever possible.</p> <p>We estimate the total costs associated with developing each landfill site to its final permitted capacity. Landfill development costs include capital expenditures associated with land acquisition, construction associated with excavation, liners, site berms, groundwater monitoring wells, gas recovery systems and leachate collection and management systems.</p>
<p>Risk 3: Increases in fuel costs resulting from policy-related impacts on market prices, including a price on carbon. (Transition, Policy, and Legal)</p>	<p>GFL uses vehicles in the conduct of its operations which, as of December 31, 2023, included over 7,800 solid waste collection vehicles across Canada and the United States. Many of these vehicles use diesel fuel and the price and supply of diesel fuel can fluctuate significantly based on international, political, and economic circumstances, as well as other factors outside of our control, including the implementation by governments of carbon pricing systems.</p> <p>GFL implements a surcharge pricing strategy across our business to recover fuel and other environmental compliance costs and allow us to manage our fuel costs in areas with existing or anticipated carbon tax systems. However, if there is significant increase in the price of fuel that we are unable to pass along to our customers through our surcharge pricing strategies, this could increase our operating costs and reduce our operating margins. GFL has already been operating with a carbon tax pricing regime in effect across Canada for more than 5 years, which has not had a significant negative financial impact on our financial results.</p> <p>Other strategies that we use to manage this risk include periodically entering into fuel hedging agreements, and fixed-price fuel purchase contracts as part of our fuel costs management strategy.</p> <p>The climate scenario analysis we performed for this risk included evaluating both carbon and fuel pricing scenarios published by the IEA and the NGFS. This analysis quantified the potential increase in our fleet fuel costs resulting from the transition to a low-carbon economy. We considered two climate scenarios: the 1.5°C 'Net Zero' scenario from both the IEA and NGFS, and the 2.5°C 'Stated Policies' scenario from the IEA, along with the Nationally Determined Contributions scenario from the NGFS.</p> <p>The analysis also considered GFL's ability to mitigate this risk by comparing costs under two business scenarios: a low-mitigation, 'business as usual' scenario, which assumes no progress toward our goals of converting a portion of our fleet to CNG and using RNG to fuel a portion of our fleet, and a high mitigation scenario aligned with GFL's Sustainability Action Plan, where we meet the goals we have set for fleet conversion to CNG or alternative fuel vehicles. The goals set out in our Sustainability Action Plan related to fleet conversion are: 50% of our annual solid waste vehicle replacements be with CNG or alternative fuel vehicles and powering 85% of our U.S. fleet with RNG.</p> <p>Using this methodology, our analysis estimated a potential annual fuel cost increase ranging from 6% to 17% by 2030, compared to 2023 levels (under the 2.5°C and 1.5°C scenarios, respectively) if we maintain our current level of alternative fuel vehicles within our solid waste collection fleet (i.e. the business-as-usual scenario). However, if we implement fleet conversion in line with our Sustainability Action Plan and account for additional positive return on investments from the revenue portion of RNG that we produce and dispense as well as applicable credit value, the financial impact is significantly reduced (1% in the 1.5°C scenario) or could present an opportunity for GFL under the 2.5°C scenario.</p>	<p>Our analysis indicates that using lower carbon fuels will help mitigate compliance costs in jurisdictions that apply a carbon tax on fuels used in the transportation sector. Implementing our fleet-related goals outlined in our Sustainability Action Plan is therefore an important response to this risk.</p> <p>To meet these fleet-related goals, we expect to incur capital costs to replace diesel vehicles and retrofit maintenance shops to support the operation of CNG vehicles. Our capital planning already includes replacing older fleet with new vehicles but the initial capital cost of CNG or alternative fuel vehicles may be higher than that of replacement diesel powered vehicles and may also be negatively impacted by increasing demand for CNG or alternative fuel vehicles. We estimate the financial implication of responding to this risk to be approximately \$113M of incremental capital allocated to purchase 1,500 CNG vehicles and upgrade approximately 20 truck maintenance shops to service CNG vehicles between 2022 and 2030 (an 8-year period).</p> <p>The positive return on investment (ROI) from this fleet transition effort is estimated to be approximately \$340M over the 8-year period using 2023 inputs. The positive ROI calculated assumes the following components: fuel cost savings from using CNG fuel versus diesel fuel³, revenue from the portion of RNG that is used in the fleet that is produced by GFL⁴ and credit value from dispensing CNG and RNG and the US Federal Fuel Tax Credit.</p> <p>Also included in our Sustainability Action Plan is a commitment as part of our EIP to continue to pilot the latest advancements in electric and hydrogen-powered vehicles and develop a longer-term roadmap to a zero emissions fleet. We will continue to monitor emerging environmental and climate legislation that drives our transition to alternative fuel vehicles. Through our membership in organizations like the NWWA and national trucking associations, we also comment on evolving legislation to communicate the perspective of the environmental services sector.</p>

Table 2: Specific climate-related risks and opportunities, potential impacts and management responses (continued)

Risk Type	Potential Impacts to Business	Management Response
<p>Opportunities: Growth in recycling services and producing RNG at our landfills</p> <p>(Resource Efficiency, Energy Source, Products and Services, Markets, Resilience)</p>	<p>In the transition to a low-carbon economy, there will be increasing demand for products and fuels that have a lower overall carbon footprint. We provide our customers with waste diversion and reuse services and products like recycling, material recovery, composting, and landfill gas capture and utilization which directly support the transition from a ‘take-make-waste’ extractive economy to a more circular one. Not only do these services allow us to be a meaningful participant in the circular economy by providing recyclable raw materials that reduce our customers’ need for virgin materials, they also help our customers reduce their GHG emissions.</p> <p>The impact on our business from investments in recycling and facilities that convert landfill gas to energy will generate incremental revenue, EBITDA and free cash flow.</p>	<p>In 2024 we allocated up to \$300 million to investments related to RNG projects and investments in material recovery facilities and other infrastructure primarily related to opportunities arising under EPR legislation. This capital allocation was for 2024 and represents a portion of what is needed to realize the overall opportunity. The financial effects for the recycling- and RNG-related investment are expected to be between \$250 and \$350 million of incremental Adjusted EBITDA.</p> <p>Our strategy related to realizing opportunities in recycling and producing renewable energy is reflected in our recycling services and beneficial use of biogas targets in our Sustainability Action Plan.</p> <p>The pathway to meeting our goal of increasing our recyclables recovered at our own material recovery facilities (MRFs) by 40% by 2030 is through increasing the volume of recyclables received, continuing to make investments in sophisticated sorting technologies, and expanding our sorting capacity at our MRFs to meet increasing customer demand. The EPR opportunity described here will also help us in achieving our recycling goal. We are currently leveraging being the first waste industry participant in North America to operate under an EPR regime (GFL is the sole contractor to Recycle B.C., which is the producer-led EPR system currently operating in British Columbia, Canada) to secure other EPR contracts in Ontario and Quebec, Canada. We also see additional new opportunities in other Canadian jurisdictions which are looking to implement EPR programs including the Atlantic provinces, Alberta, Saskatchewan and Manitoba, Canada.</p> <p>Our goal to double the beneficial use of biogas from our landfills will be achieved through the development of landfill gas to energy facilities at eligible landfills across our footprint. In 2023, we commissioned the first and largest of our currently planned RNG projects and we expect another 3 projects to come online by the end of 2024. We have other RNG projects that are at various stages of engineering, feasibility and evaluation that we expect will generate, with the facilities constructed in 2023 and 2024, \$175 million in incremental EBITDA when completed and online.</p>

The opportunities presented in **Table 2** are expected to have a positive financial impact in the short- and medium-term and are an important part of GFL's overall business strategy to drive organic growth, while at the same time building our resilience to climate-related impacts to our business operations and finances.

Table 3 identifies the Sustainability Action Plan targets that we have set that relate to these opportunities and shows how they align with the types of climate-related transition opportunities that TCFD identifies in their recommendations. Such close alignment underscores our confidence in advancing these initiatives.

Related GFL Sustainability Action Plan Target		Summary of Opportunity	Types of Opportunities Identified by TCFD				
			Resource Efficiency	Energy Source	Products/ Services	Markets	Resilience
 <p>Increase recyclables recovered at GFL MRFs by 40% by 2030</p>	<ul style="list-style-type: none"> • Use of recycling • Access to new markets • Resource substitutes/ diversification 	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
 <p>Increase beneficial use of biogas from landfills 2x by 2030</p>	<ul style="list-style-type: none"> • Use of new technologies • Participation in carbon markets • Development of climate adaptation solutions • Access to new markets • Reduced GHG emissions from operations 	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	



5. Risk management

GFL identifies, assesses, and responds to climate-related risks and opportunities through both specific climate-related and integrated risk management processes. These two processes and how they align with our enterprise risk management (ERM) process are described below.

5.1. Identification and assessment of risk – specific processes

GFL's Sustainability team conducts periodic reviews of the functional areas of the business listed below, to identify potential climate-related risks and opportunities based on emerging science, policy and regulations, macro trends and peer benchmarking. These reviews also include tracking our operations, GHG emissions and preparing forecasts of our pathways to achieving our GHG reduction targets that are part of our Sustainability Action Plan and other metrics we track to ensure appropriate mitigation of our climate-related risks.

The Sustainability team also tracks progress toward our targets for climate-related growth opportunities (**Table 3**). These are the resource recovery services and renewable energy products that we provide that help our customers avoid GHG emissions in their operations. When needed, our Sustainability team also works directly with our operations, functional area and executive leaders to support them in achieving progress towards our targets. The team has a broad range of expertise in the areas of sustainability project management, engineering, GHG accounting, environmental analysis, risk management and business-case analysis.

The functional areas where climate is considered are Fleet & Procurement (fleet type, fuel and electricity use), Recycling (material recovery facilities), Post Collections Support (landfills and transfer stations), Renewables (landfill gas to energy facilities), Environmental Services (liquid waste and soil remediation services), Environment, Health & Safety and Compliance, Corporate Development, Legal, Insurance and Operations.

GFL also engaged a third-party climate consulting firm to conduct climate risk scenario analysis that focused on the physical risks to GFL's assets and business operations in the short-, medium-, and long-term.

Risks identified and analyzed as part of our climate scenario analysis are integrated into our ERM program. This process is described below.

5.2. Identification and assessment of risk – integrated processes

Addressing climate-related risks and opportunities is part of the following functional areas, programs, processes and systems: capital planning for landfills, fleet, and other facilities, our environmental management system, Safe For Life program, quarterly operating and strategic business reviews, annual budget reviews, our EIP, and supply chain management.

For example, risks and opportunities related to severe weather events are included in our annual capital planning, our Environmental Management System, our Safe For Life program, as well as our budget reviews, and quarterly and annual operating and strategic business reviews.

Addressing seasonal changes in our operations

The following provides an example of how our operations develop and implement processes to manage risk arising from seasonal weather conditions and their potential impacts on our employees and our operations.

Each season brings changes that lead to unique safety challenges. Heavy precipitation and flooding in the spring, potentially extreme heat in the summer, reduced daylight starting in the fall and snow and ice in the winter are just a few examples of the changing conditions our drivers face as they perform their duties throughout the year.

Our Seasonal Safety Campaign was created to help our teams address these challenges. Each campaign provides employees with seasonal information including a single page of topics that address or highlight specific safety concerns and mitigation procedures for the particular season along with a season preparation checklist. While many of these topics are already part of our annual training, our seasonal campaigns help increase awareness through a more consistent thread and theme with a focus on improving and further strengthening our safety program using situational awareness concepts.



GFL's day-to-day business operations are managed at the local or asset level. As part of their focus on strategic and business planning, our local managers continuously assess the risks and opportunities impacting their local business, including potential acquisition opportunities, competitive pressures, organic growth plans such as recycling or compost diversion opportunities, market dynamics and pricing and the potential impact of existing and proposed legislation and regulatory changes (like the introduction of EPR regimes that encourage greater materials recycling). The local assessment of these risks and opportunities is reviewed annually at the corporate level through our annual budgeting process. Our executive and senior management teams that are responsible for both our corporate as well as our field level assets also meet regularly and at minimum in our quarterly operating reviews. At these meetings they review our business strategy and identify trends impacting our business as a whole and in our individual business regions, as well as best practices to address those risks and opportunities, including risks to be addressed or opportunities to be pursued by us that are climate-related.

Our Sustainability team along with our ERM team play an important role in these discussions with local operations and corporate functional areas.

5.3. Climate risk assessment and our ERM program

To enhance our ability to identify and manage risks locally, through our ERM program, we created an Emerging and Evolving Risk Committee (EERC). The EERC consists of a select group of senior leaders from all parts of the business. The focus of the EERC is to drive better risk management through meaningful discussions and help create greater understanding of the benefits of proactive risk management processes across our operations and with our functional business leaders.

On the topic of climate, the ERM team works with the Sustainability team to:

- Provide input on climate risk identification and assessment processes, to ensure alignment with the ERM program.
- Ensure that the key risks identified through climate-related risk analyses are brought forward to the EERC and incorporated into our ERM as appropriate.
- Jointly identify and highlight to our local and senior managers the climate-related risks and opportunities that are relevant to their local operations and corporate functions.

6. Metrics and targets

6.1. Increase of our scope 1 and 2 emissions reduction target

This year, we increased our GHG emissions reduction target to a 30% absolute reduction in total scope 1 and 2 GHG emissions from a 2021 base year. The approach we used to identify our increased target is derived from the separate science-aligned pathways for the different types of emissions that are generated in our operations. The corresponding pillars of our target are:

- A reduction in landfill methane emissions at a level aligned with the Global Methane Assessment.
- A reduction in fleet emissions at a level aligned with the SBTi.
- 100% renewable electricity consumption in our operations⁵ aligned with the IEA's pathway to Net Zero.

We believe this medium-term emissions reduction target is consistent with the goals of the Paris Agreement to limit the increase in the average global temperature to 1.5°C above pre-industrial levels. We intend to work with a third party to confirm that alignment in the coming months.

6.2. Setting a science-aligned GHG emissions reduction target

Since setting our original GHG reduction target over two years ago and through our SVIs, we have increased our knowledge of and insight into the sources of our GHG emissions, the methodologies available to quantify our emissions, and the technologies that are available to measure, monitor, and mitigate emissions. This additional work, as well as our discussions with other industry participants, gave us further insight into the available science-based assessments and their application to our landfill emissions and resulted in the increase update to our emissions reductions target.

Our increased GHG emissions reduction target is derived from science-aligned pathways that address methane emissions from our landfills, and our carbon dioxide-related emissions from our fleet and electricity consumption separately. This hybrid approach is a **first for the industry** and consistent with the recommendations of the IPCC⁶ and UN High-Level Expert Group on the Net Zero Emissions Commitments of Non-State Entities⁷.

6.2.1. Methane emissions

Over 80% of our 2021 scope 1 and 2 emissions are from fugitive methane emissions from landfills. Reducing methane emissions is widely regarded as the single most effective strategy to keep the goal of limiting warming to 1.5°C within reach as more than half of global methane emissions stem from human activities in three sectors: agriculture (40%), fossil fuels (35%) and waste (20%)⁸.

To determine how best to align our updated GHG emissions reduction target to a level consistent with 1.5°C pathways, we reviewed literature published by the IPCC^{9,10}, the SBTi, and the Global Methane Pledge (GMP).

In the IPCC reports, the circular economy is highlighted as an increasingly important mitigation approach that can help deliver human well-being by minimizing the waste of energy and resources. Beyond this, however, the IPCC does not provide sector-specific pathways for emissions sources relevant to the environmental services industry, such as methane from landfilled waste. The SBTi and GMP translate the IPCC model pathways that limit global warming to 1.5°C with no or limited overshoot to sector-specific emission reduction pathways.

SBTi is a corporate climate action organization that develops standards, tools, and guidance to support companies in setting GHG emission reduction targets. The SBTi offers both sector-specific pathways (e.g. for aviation, land transport, cement, and steel sectors) and a cross-sector pathway which covers the main GHG emissions from energy supply, transport, industry, and buildings. While the SBTi recommends that companies with emissions from landfill waste use the cross-sector pathway to set absolute targets, they also state that methane emissions from landfills are excluded from the SBTi cross-sector pathway calculations due to a lack of data¹¹.

The GMP stems from the 2021 Global Methane Assessment¹² published by the Climate and Clean Air Coalition (CCAC) and United Nations Environment Programme (UNEP). The findings in the GMA are the result of modeling that uses global composition-climate models to evaluate changes in the Earth's climate system and surface ozone concentrations from reductions in methane emissions. The GMA focuses on scenarios consistent with the 1.5°C target as assessed in the 2018 IPCC Special Report on Global Warming of 1.5°C.

Following the GMA, the GMP¹³ was launched at the November 2021 Conference of the Parties (COP26) in Glasgow, Scotland. Over 150 countries have committed to the GMP, including Canada and the United States, agreeing to take voluntary actions to contribute to a collective effort to reduce global anthropogenic methane emissions by at least 30% from 2020 levels by 2030.

In reviewing both approaches from the SBTi and Global Methane Pledge to reducing GHG emissions relevant to our industry, we believe that a target aligned with the methane emissions reduction pathway scenarios consistent with 1.5°C of warming from the GMA and aligning with the Global Methane Pledge, is the most appropriate approach for us to address methane emissions from our landfills.

Our new target, which is a **30% reduction in methane emissions from our landfills by 2030** from a 2021 base year is equivalent to the avoidance of more than 1 million tonnes of carbon dioxide¹⁴. It is more ambitious than the 15% methane emissions reduction commitment to come from the solid waste sector that was made by the Canadian and US governments in January 2023 at the North American Leaders' Summit.^{15,16}

6.2.2. Carbon dioxide emissions

Fleet fuel emissions account for over 15% of our 2021 base year scope 1 and 2 emissions. Upstream generation emissions associated with purchased electricity account for all our scope 2 emissions. These emission sources are included in the carbon dioxide emissions portion of our updated target.

We are setting a **fleet emissions reduction target of 42% by 2030 from a 2021 base year, aligned with the SBTi**.

The Transport Science-Based Target Setting Guidance from SBTi, and associated tool, guide how to set targets for transport emissions across different emissions scopes and for different tool end-users based on data from the IEA's Mobility Model using a well-to-wheel emissions accounting approach and intensity-based targets. Based on the SBTi absolute contraction approach for Transport, the target reduction of emissions in 2030 is 42% relative to 2021 for companies operating fleet vehicles.

In the IEA's pathway to net zero¹⁷, almost 90% of global electricity generation in 2050 comes from renewable sources. The IEA emphasizes that renewable energy technologies like solar and wind are the key to reducing emissions in the electricity sector, which is today the single largest source of carbon dioxide emissions. In support of the transition to renewable electricity, and consistent with our current target for electricity, we will continue to work towards our goal of **100% of electricity demand in our operations to be from renewable sources by 2030**.

6.3. Progress on our scope 1 and 2 emission reduction target

Our GHG reduction target covers all scope 1 and market-based scope 2 emissions within our GHG inventory¹⁸. In our 2023 disclosures, in accordance with the GHG Protocol, our base year (2021) scope 1 emissions were recalculated to ensure consistency between the most current reporting year and the base year, reflecting structural changes for acquisitions and divestitures that we completed between 2021 and 2023, methodology changes in the modeling of landfill gas emissions, updates to activity data and correction of discovered errors. Our GHG accounting approach is described in **Appendix B**.

In accordance with The GHG Protocol, we report our actual emissions for a specific reporting year and as a result, the 2023 scope 1 and 2 emissions reported for our 2023 FY are 9% lower than our base year emissions. After accounting for acquisitions and divestitures and other adjustments as described above, our 2023 scope 1 and 2 emissions are 5% lower than our 2021 base year emissions, putting us ahead of our anticipated reduction of 1-2% for 2023. A 5% reduction from our 2021 base year emissions represents progress of approximately 17% of our updated target. **Figure 2** shows our reported progress toward achieving our scope 1 and 2 emissions reduction target.

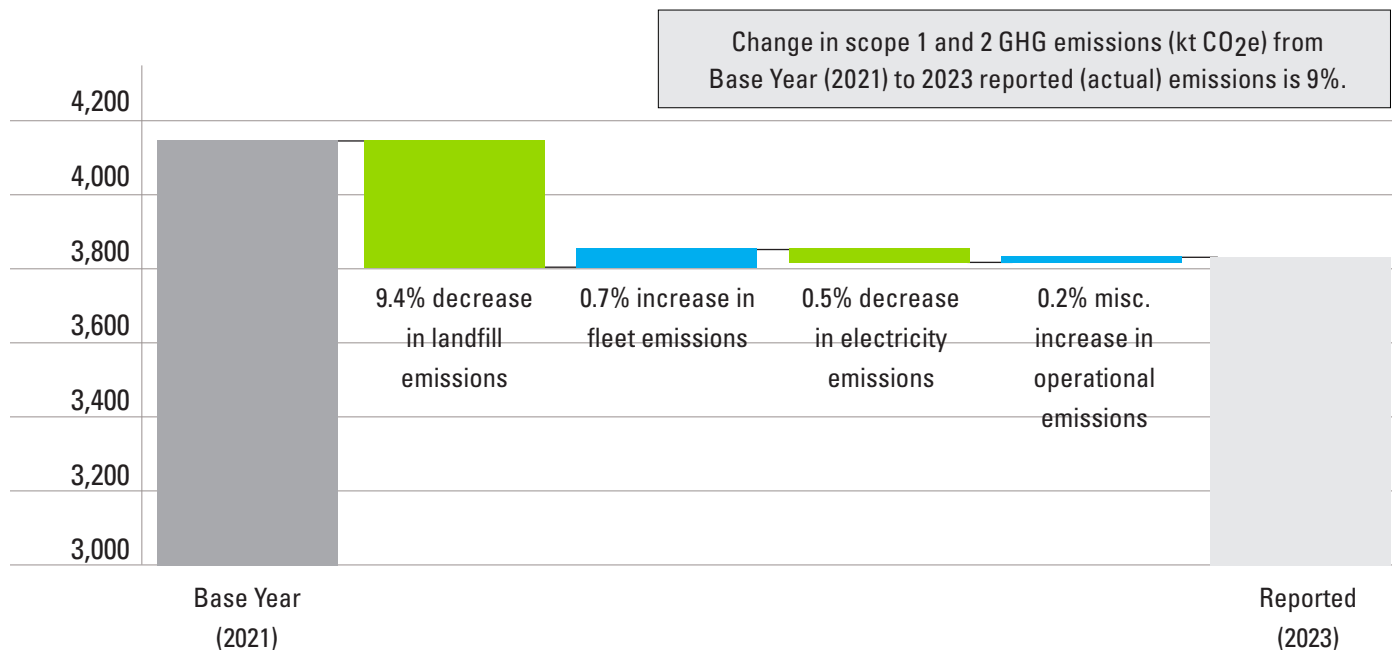


Figure 2: Progress towards scope 1 and 2 emissions target¹⁹

Actions taken to achieve our progress to-date towards the reduction of our GHG emissions include:

- Reducing fugitive landfill methane emissions through improvements to gas capture systems at our landfills and investments related to the development of RNG facilities at certain landfills.
- Meeting our goal to have at least 50% of our annual solid waste collection fleet replacements be CNG or alternative fuel vehicles.
- Using RNG to fuel 60% of our U.S. CNG fleet in 2023.
- Purchasing renewable energy (through the purchase of renewable energy certificates or RECs) to offset our total electricity consumption in the U.S.

Continuous improvement on measuring our emissions

We continue to work on improving the quality and accuracy of our landfill emissions quantification through a range of initiatives, many of which have advanced through our Environmental Innovation Program. These initiatives include piloting various technologies at our landfills and collaborating with our peers to investigate direct measurement of fugitive emissions. Various technologies considered include fixed sensors, drones, planes and satellites. We are also collaborating with industry and academia on improving methane emissions modeling which has, for example, resulted in updates to the Solid Waste Industry for Climate Solutions (SWICS) model.

6.4. Metrics and targets used to assess climate-related risks and opportunities

We use a variety of metrics to assess, measure, and manage our climate-related risks and opportunities.

With the release of our Sustainability Action Plan in our 2021 Sustainability Report, we greatly increased our disclosures to include over 100 environmental, social, and governance data points that we publish separately in annual data summaries available on our website. We will continue to add to our disclosures, as appropriate, to ensure that we remain transparent about our progress and the identification and management of our climate-related risks and opportunities.

Table 4 identifies key metrics that we track related to our climate-related risks and opportunities. The table also identifies the targets we have established to address these risks and opportunities.

For our latest sustainability data and performance relative to our targets please see our [2023 Sustainability Data Summary Table](#) and our [2023 Sustainability Report](#).

Table 4: Key climate-related risks and opportunities - associated metrics and targets		
Risk and Opportunities	Key Metrics	Established Targets Related to Risk or Opportunity
Risks	<ul style="list-style-type: none"> • Extreme weather events (Risk 1): <ul style="list-style-type: none"> ◦ Insurance claims and incidents ◦ TRIR 	<ul style="list-style-type: none"> • TRIR of 2.0 or less
	<ul style="list-style-type: none"> • Increase in seasonal precipitation (Risk 2): <ul style="list-style-type: none"> ◦ Leachate production and associated costs 	<ul style="list-style-type: none"> • Not disclosed
	<ul style="list-style-type: none"> • Increase in fuel costs (Risk 3): <ul style="list-style-type: none"> ◦ Scope 1 emissions (tonnes CO2e) related to fuel use ◦ GHG emissions avoided (tonnes CO2e) ◦ Fleet fuel consumed (all types) ◦ Percentage of alternative fuel vehicles in fleet ◦ Scope 3 emissions, fuel and energy related activities category ◦ Credit value per DGE CNG or RNG used (\$/DGE) 	<ul style="list-style-type: none"> • 42% reduction in scope 1 emissions from fleet fuel use • 50% of annual solid waste fleet replacements to be CNG or alternative fuel vehicles • 85% of our U.S. CNG fleet to be powered by RNG by 2030
	<ul style="list-style-type: none"> • Fluctuations in commodity prices (Risk 4): <ul style="list-style-type: none"> ◦ Recyclable materials recovered at GFL MRFs (tonnes) ◦ Commodity pricing and revenue 	<ul style="list-style-type: none"> • Not disclosed
Opportunities	<ul style="list-style-type: none"> • Growth in recycling services: <ul style="list-style-type: none"> ◦ Recyclable materials recovered at GFL MRFs (tonnes) ◦ Commodity pricing and revenue ◦ Avoided GHG emissions – from recycling activity • Growth in producing RNG at our landfills: <ul style="list-style-type: none"> ◦ Landfill gas recovered for beneficial use (% captured MMBtu) ◦ Scope 1 emissions (tonnes CO2e) and methane from landfills ◦ Avoided GHG emissions (tonnes CO2e) – from the production of renewable energy at landfills 	<ul style="list-style-type: none"> • Increase recyclables recovered at GFL MRFs by 40% by 2030 • Increase beneficial use of biogas from landfills 2x by 2030 • 30% reduction in scope 1 emissions (methane) from our landfills

A breakdown of our scope 1, 2 and 3 emissions and avoided GHG emissions from 2021 to 2023 is provided in **Appendix B**.

Appendix A: Additional climate scenario and assessment information

A.1. Risk assessment framework

Our physical and transition risk assessments were conducted using a standard risk assessment framework (Figure A1) that determined potential impact (the extent to which the risk affects us after consideration of risk mitigation measures) from assessing the three factors identified in the graphic below:

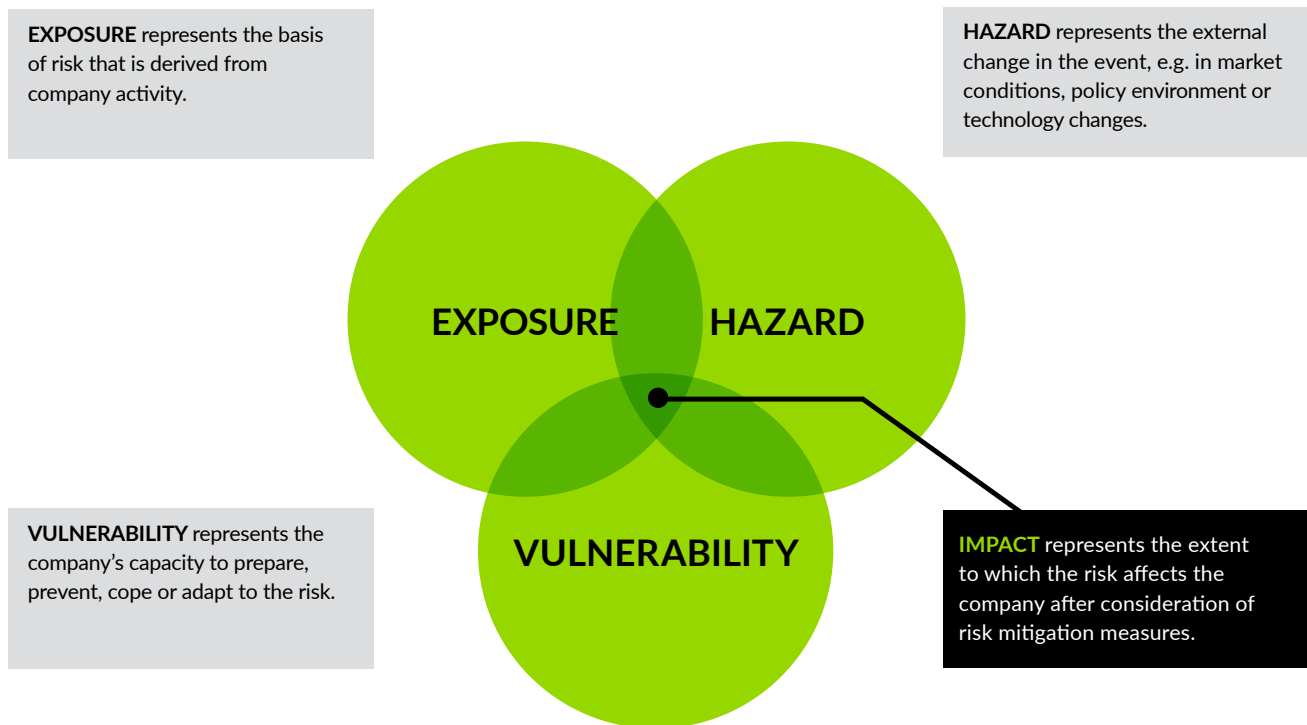


Figure A1: Risk Framework

A.2. Climate scenarios used

Table A1 on the following page describes the climate scenarios we used in preparing the information provided in this report along with assumptions made and rationale for their selection. Following the table, we provide an example of how we used the climate scenarios.

Table A1: Climate scenarios used in the assessment of risks and opportunities

<p>Climate Scenario and Description</p> <p>NGFS - Nationally Determined Contributions (NDCs).</p> <p>The NDCs scenario assumes that all pledged unconditional NDCs by governments are implemented, and energy and climate targets are achieved in all countries up to 2030, however it also assumes climate policies are insufficient to meet the Paris Agreement goals and global warming increases to around + 2.5°C.</p>	<p>Assumptions</p> <p>This scenario was used in assessing potential impacts on GFL's fuel procurement costs due to changes in market and policy conditions arising from the low carbon transition. The NDC scenario assumes that all NDC pledges are met even if they are not implemented yet. Transition risks are relatively low. Global warming is assumed to increase to around 2.5°C. Assumptions were made on the annual growth of GFL's fleet as well as fuel procurement volumes. The decarbonization of GFL's fleet was based on our target of 50% of annual fleet replacements with CNG or alternative fuel vehicles being met and our goal of using more RNG in our CNG vehicles. Scenario-based fuel price data was sourced from the NGFS.</p> <p>Rationale for Choice of Scenario</p> <p>This scenario was used as a low-transition risk scenario. It is representative of a future in which transition risk is lower due to the low ambition of climate policies and otherwise slow changes in market and technology environments.</p>
<p>Climate Scenario and Description</p> <p>NGFS - Net Zero 2050.</p> <p>The Net Zero 2050 scenario is the most ambitious scenario, which is fully aligned with the Paris Agreement's goal to limit global warming to +1.5°C. This scenario assumes strong climate policies are implemented to significantly reduce global emissions.</p>	<p>Assumptions</p> <p>This scenario was used in assessing potential impacts on GFL's fuel procurement costs due to changes in market and policy conditions arising from the low carbon transition. The NDC scenario assumes that all NDC pledges are met even if they are not implemented yet. Transition risks are relatively low. Global warming is assumed to increase to around 2.5°C. Assumptions were made on the annual growth of GFL's fleet as well as fuel procurement volumes. The decarbonization of GFL's fleet was based on our target of 50% of annual fleet replacements with CNG or alternative fuel vehicles being met and our goal of using more RNG in our CNG vehicles. Scenario-based fuel price data was sourced from the NGFS.</p> <p>Rationale for Choice of Scenario</p> <p>This scenario was used as a low-transition risk scenario. It is representative of a future in which transition risk is lower due to the low ambition of climate policies and otherwise slow changes in market and technology environments.</p>
<p>Climate Scenario and Description</p> <p>IEA - Stated Policies (STEPS).</p> <p>The STEPS scenario is a conservative climate scenario, assuming that not all announced and scheduled policies will be implemented.</p>	<p>Assumptions</p> <p>In addition to analyzing impacts on fuel procurement costs due to changes in market and policy conditions, GFL assessed changes to fuel costs also due to carbon pricing policy instruments that put a price on carbon to incentivize less carbon-intensive practices. The STEPS scenario is a conservative climate scenario, assuming that not all announced and scheduled policies will be implemented. Other assumptions included that all carbon costs are passed through by suppliers which aligns with the literature reviews showing that the majority of carbon costs related to transport fuels are passed through to customers. Present and future scenario-based carbon prices from government sources or the IEA were used. Assumptions were made on the annual growth of GFL's fleet and the growth (or decrease) in fleet-related GHG emissions and fuel procurement volumes. RNG and electric vehicles were assumed to have zero emissions. The decarbonization of GFL's fleet was based on our target of 50% of annual fleet replacements with CNG or alternative fuel vehicles being met and our goal of using more RNG in our CNG vehicles.</p> <p>Rationale for Choice of Scenario</p> <p>The STEPS scenario was used as a best-case (low transition risk) scenario for carbon pricing. The STEPS is representative of a future in which transition risk is relatively low due to fewer market, technological, and policy changes. The STEPS scenario represents the best-case scenario in terms of carbon pricing since it is assumed that the price of carbon does not need to increase as significantly as it does under a Net Zero scenario.</p>

Table A1: Climate scenarios used in the assessment of risks and opportunities (continued)

<p>Climate Scenario and Description</p> <p>IEA - Net Zero Emissions (NZE).</p> <p>The Net Zero Emissions (NZE) scenario is fully aligned with the Paris Agreement's goal to limit global warming to +1.5°C. It is similar to the NGFS Net Zero 2050 scenario.</p>	<p>Assumptions</p> <p>In addition to analyzing impacts on fuel procurement costs due to changes in market and policy conditions, GFL assessed changes to fuel costs also due to carbon pricing policy instruments that put a price on carbon to incentivize less carbon-intensive practices. The Net Zero Emissions (NZE) scenario is fully aligned with the Paris Agreement's goal to limit global warming to 1.5°C. Present and future carbon prices from government sources or the IEA were used. Assumptions were made on the annual growth of GFL's fleet and the growth (or decrease) in fleet-related GHG emissions and fuel procurement volumes. RNG and electric vehicles were assumed to have zero emissions. The decarbonization of GFL's fleet was based on our target of 50% of annual fleet replacements with CNG or alternative fuel vehicles being met and our goal of using more RNG in our CNG vehicles.</p> <p>Rationale for Choice of Scenario</p> <p>Similar to the NGFS Net Zero 2050 scenario, the NZE scenario is representative of a future in which transition risk is highest due to the significant market, technological, and policy changes needed to achieve the transition. The NZE scenario consequently represents the 'worst-case' scenario in terms of carbon pricing since it is assumed that the price of carbon increases to incentivize further emissions reductions.</p>
<p>Climate Scenario and Description</p> <p>IPCC - RCPs</p> <p>RCPs are scenarios used to predict future greenhouse gas concentrations and used in the assessment of physical risks. They were first used by the IPCC in their 5th Assessment Report. RCP 4.5 represents a moderate or middle-of-the-road scenario where emissions continue to moderately rise until about 2080 before stabilizing to 2100. While thought to be unlikely, RCP 8.5 represents a worst-case scenario where emissions rise significantly and continuously to 2100.</p> <p>These scenarios were used on their own and also in conjunction with a corresponding Shared Socio-economic Pathways (SSPs) as described.</p>	<p>Assumptions</p> <p>RCP 4.5 and 8.5 were used to assess the impacts of tropical cyclones on GFL's operations. GFL operations in coastal regions along the southeast United States and Canada are particularly at risk from tropical cyclones. Direct hurricane impact on facilities could result in significant repair or replacement costs for high value assets. Uncertainty exists on future changes of tropical cyclone activities, and therefore the assessment reviewed average annual revenue losses over a long period of time as well as extreme events (1-100 and 1-1000 year events). Exposure and vulnerability analyses were used to refine a list of potentially impacted sites to the south and southeast U.S. and the east coast of Canada and relied upon historical events, scientific literature, and the Saffir-Simpson Scale Hurricane Wind Scale among other assessment tools.</p> <p>SSP2-4.5 and SSP5-8.5 were used to assess impacts from changing precipitation patterns on GFL's landfill operations. Uncertainties include any inherent uncertainties and limitations with CMIP6 daily precipitation data used for the analysis. Change in precipitation is computed between the modelled historical and projected future values to get a percentage change of seasonal precipitation. A 1:1 increase in precipitation and leachate production was used (e.g. a 5% increase in precipitation leads to a 5% increase in leachate produced). 2023 costs for the processing of leachate were used to estimate additional future costs.</p> <p>Rationale for Choice of Scenario</p> <p>RCP4.5 is a 2°C aligned scenario. It represents a "middle of the road" or "stabilization" scenario with moderate efforts to reduce emissions including the implementation of some policies and lower emissions technologies. RCP4.5 aligns well with GFL's current strategy to reduce GHG emissions as well as the current mix of emissions reduction technologies available and current climate change regulations in the markets in which we operate. RCP8.5 is a 4 degree Celsius aligned scenario that represents a "business-as-usual" scenario with high fossil fuel use and minimal efforts to mitigate climate change. It was used to assess risks to GFL under worst case climate conditions.</p> <p>SSP2-4.5 is a +2°C aligned scenario. It represents a "middle of the road" or "stabilization" scenario with moderate efforts to reduce emissions including the implementation of some policies and lower emissions technologies. SSP2-4.5 aligns well with GFL's current strategy to reduce GHG emissions as well as the current mix of emissions reduction technologies available and current climate change regulations in the markets in which we operate. SSP5-8.5 is a 4 degree Celsius aligned scenario represents a "high impact" scenario with development mainly driven by the use of fossil fuels with minimal efforts to mitigate climate change. It was used to assess risks to GFL under worst case climate conditions.</p>

A.3. Example of how climate scenarios were used in our analysis

Identifying assets at risk of tropical cyclones across GFL's North American portfolio, including solid waste management, liquid waste management, and soil remediation facilities, followed a two-step process:

- **Step 1:** Prioritization of sites historically impacted by coastal tropical cyclones (category one or higher on the Saffir-Simpson scale). These locations are shown in **Figure A2**.
- **Step 2:** Refinement of list created in Step 1 further based on tropical cyclone intensity and insurance value, focusing on high-value sites affected by lower-category cyclones and lower-value sites impacted by more severe storms.

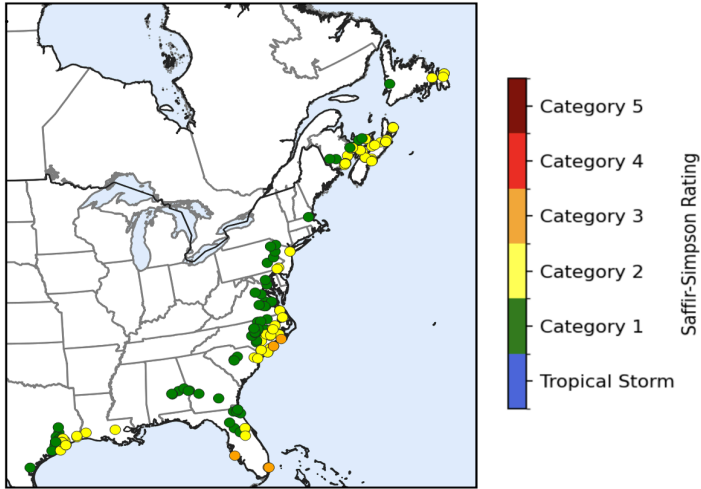


Figure A2: Prioritized sites historically impacted by tropical cyclones

Appendix B: GHG emissions and accounting approach

B.1. GHG emissions

A breakdown of our scope 1, 2 and 3 emissions and other relevant metrics from 2021 to 2023 is provided in **Table B1**.

Table B1: GHG emissions and other relevant metrics			
Parameter	2021	2022	2023
Total Scope 1 Emissions	4,146,677	4,142,262	3,792,071
Landfill	3,449,924	3,380,828	3,057,176
Composting	28,879	32,034	30,915
Fossil Fuel Combustion – Mobile Sources ²⁰	644,167	692,696	671,918
Other Energy Use	23,707	25,947	32,062
Total Scope 2 Emissions²¹	33,703	30,802	14,095
Scope 2 Emissions (Location-Based)	33,703	30,802	34,417
Scope 2 Emissions (Market-Based)	Not Reported	Not Reported	14,095
Total Scope 3 Emissions²²	903,049	870,359	1,027,811
Purchased Goods and Services	337,570	251,791	303,490
Capital Goods	116,119	145,107	222,760
Fuel and Energy-Related Activities	103,674	112,210	105,079
Transportation and Distribution	274,749	310,456	325,075
Waste Generated in Operations	682	1,242	1,213
Employee Commuting ²³	69,155	34,358	34,226
Business Travel	1,100	3,184	3,318
Use of Sold Products ²⁴	Not reported	12,010	32,650
Avoided GHG Emissions			
Total GHG Emissions Avoided & Sequestered	12,129,770	11,971,563	11,944,670
Recyclables, Organics, and Other Recyclable Waste Streams	7,776,179	7,690,866	8,171,989
Renewable Energy Generation from Landfill Gas	279,443	201,303	233,508
Carbon Sequestered	3,943,262	4,079,394	3,539,174
Carbon Intensity			
Avoided GHG Emissions (tonnes CO ₂ e) per Million Dollars of Sales	1,482	1,167	1,118
Scope 1 emissions (tonnes CO ₂ e) per Million Dollars of Sales	714	616	505
Scope 1 and 2 emissions (tonnes CO ₂ e) per Million Dollars of Sales	720	617	506

B.2. GFL's GHG accounting approach

The calculation of our GHG emissions inventory is based on the GHG Protocol Corporate Accounting and Reporting Standard²⁵, the Sustainability Accounting Standards Board (SASB) Sustainability Accounting Standard for Waste Management²⁶, the Protocol for the Quantification of Greenhouse Gas Emissions from Waste Management Activities²⁷, and the SWICS documentation related to landfill gas emissions accounting.

GFL uses the operational control approach to define its organizational boundary. Under the operational control approach, GFL accounts for 100% of the GHG emissions from operations over which it can introduce operating decisions.

The categories of sources that generate scope 1 GHG emissions from GFL's operations include:

- Landfills, including construction and demolition (C&D) landfills and municipal solid waste (MSW) landfills that are active, closed, and inactive landfills. The emissions originate from fugitive methane emissions released from the surface of the landfill and combustion emissions released from landfill gas collection and control systems that combust the gas in a flare, and/or beneficially use the gas for electricity, heat or steam generation.
- Fuel combustion from on-road fleet, off-road fleet, and stationary combustion equipment (comfort heating and process-related).
- Aerobic composting facilities.

The categories of sources that generate scope 2 GHG emissions from GFL's operations include:

- Electricity use for office-related activities.
- Electricity use for facility operation- or process-related activities.

It is common in the waste sector for a landfill site to be controlled by multiple companies. In instances where GFL is in the role of service provider, where we are contracted by the landfill site owner to perform only specific tasks, such as waste placement and application of daily cover, or where GFL does not control the operation of the wellfield at the landfill; these sites are considered outside of our operational control from a GHG emissions inventory and management perspective

Our GHG emissions calculations are based on company operating data collected from across the business including operations, legal, and accounting records. Emissions factors and methodology sources are selected based on their relevance and representativeness to the activity data. Sources include those from the US EPA, Environment and Climate Change Canada, and SWICS.

GFL, along with other public and private owners and operators of landfills, funded the development of the SWICS protocol for modeling landfill methane emissions and associated Landfill Emissions Model (LEM). The model is based on existing U.S. EPA methodologies and peer-reviewed, published research to model fugitive methane emissions from landfills using measured data inputs. The SWICS protocol and LEM is used to quantify emissions associated with fugitive landfill methane emissions reported under our scope 1 emissions inventory.

According to SASB and the GHG Protocol, GHG sources within the operational boundary should include (where applicable) the seven GHGs covered under the Kyoto Protocol: carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), sulfur hexafluoride (SF₆), and nitrogen trifluoride (NF₃). GFL currently includes the following emissions related to energy consumption in scope 1 and scope 2 emissions: CO₂, CH₄, and N₂O.

No activities have been identified within GFL's boundary that result in material emissions from SF₆, HFCs, PFCs, or NF₃. Biogenic CO₂ is accounted for separately from scope 1 and 2 emissions.

According to SASB, emissions of all GHGs shall be consolidated and disclosed in metric tonnes of carbon dioxide equivalents (tCO₂e) and calculated in accordance with published 100-year time horizon global warming potential (GWP) values. GWP is a ratio of the time-integrated radiative forcing from the instantaneous release of one kilogram of a trace substance relative to that of one kilogram of a reference gas (i.e. CO₂). For consistency with EPA GHG reporting requirements²⁸, GFL's 2019 to 2023 GHG inventories use the IPCC AR-4 GWP values.

We maintain an annual GHG Inventory Management Plan (IMP) to document the boundaries, methods, findings, management, auditing and verification, and key references used to develop GFL's scope 1 and 2 GHG emissions, and related information. Related information includes non-GHG related air emissions, and energy (including fuel) production and usage. The GHG IMP is a living document that evolves alongside GFL's inventory process and internal governance and controls documents.

Our GHG emissions are verified annually by an accredited third-party auditor and our emissions are disclosed publicly on our website and through multiple ESG-platforms. Verifications are conducted in accordance with ISO 14064-3:2006 specification with guidance for validation and verification of GHG assertions to provide limited assurance on our annual scope 1, 2, and 3 GHG inventory.

B.2.1. Base Year and Recalculation Methodology

A base year is a reference point in the past with which current emissions can be compared. GFL's GHG emissions reduction targets use a fixed 2021 base year. When our GHG targets were first announced as part of our Sustainability Action Plan in our 2021 Sustainability Report, 2021 was established as the base year being the most recent year with emissions data that is reliable and verifiable.

In accordance with The GHG Protocol²⁹, base year recalculation and reporting will be triggered by significant changes to quantification methodologies, structural changes, or other material impacts. Where the base year recalculation indicates that the material difference of any individual activity or change, or cumulative changes, is equal to or less than 5%, we may not report an update to our base year emissions. As a growth-focused company, significant structural changes, such as mergers, acquisitions, and divestments, could occur on an annual basis.

Our GHG emissions reduction target is based on a fixed base year, and after recalculations under the fixed base year approach, emissions sources from an acquired company are included both with their emissions in the base year (when we did not control these sources yet) and in the current reporting year. Similarly, emissions from divested facilities are excluded with their emissions both in the base year (when they were still controlled by GFL) and the reporting year in which the divestiture occurred. The "all-year" option for recalculating emissions is used for structural changes. Base year emissions are recalculated for the entire year, rather than only for the remainder of the reporting period after the structural change occurred (the pro-rata option). As such, the base year inventory includes emissions from all facilities from January to December.

Appendix C: Report alignment with TCFD Recommendations

The following is a quick reference table showing the page numbers where information relevant to each of the recommendations of the TCFD can be found in this report. Other relevant GFL disclosures are also listed.

Table C1: Report alignment with TCFD Recommendations	
Core Elements and Recommendations	Additional GFL Disclosures
<p>Governance</p> <p>a. Describe the board’s oversight of climate-related risks and opportunities. (pg. 5-6)</p> <p>b. Describe management’s role in assessing and managing climate-related risks and opportunities. (pg. 6-7)</p>	<ul style="list-style-type: none"> • 2024 Proxy Circular • 2024 CDP Response, Section C4 - Governance
<p>Strategy</p> <p>a. Describe the climate-related risks and opportunities the organization has identified over the short, medium, and long term. (pg. 8-14)</p> <p>b. Describe the impact of climate-related risks and opportunities on the organization’s businesses, strategy, and financial planning. (pg. 8-14)</p> <p>c. Describe the resilience of the organization’s strategy, taking into consideration different climate-related scenarios, including a 2°C or lower scenario. (pg. 4, 11-14)</p>	<ul style="list-style-type: none"> • 2023 Sustainability Report • 2024 CDP Response, Section C3 - Risks and Opportunities and C5 - Business Strategy
<p>Risk Management</p> <p>a. Describe the organization’s processes for identifying and assessing climate-related risks. (pg. 15)</p> <p>b. Describe the organization’s processes for managing climate-related risks. (pg. 15-16)</p> <p>c. Describe how processes for identifying, assessing, and managing climate-related risks are integrated into the organization’s overall risk management. (pg. 15-16)</p>	<ul style="list-style-type: none"> • 2023 Annual Report • 2024 CDP Response, Section C2 - Identification, assessment, and management of dependencies, impacts, risks, and opportunities
<p>Metrics and Targets</p> <p>a. Disclose the metrics used by the organization to assess climate-related risks and opportunities in line with its strategy and risk management process. (pg. 17-20, Appendix B)</p> <p>b. Disclose Scope 1, Scope 2 and, if appropriate, Scope 3 greenhouse gas (GHG) emissions and the related risks. (pg. 18, Appendix B)</p> <p>c. Describe the targets used by the organization to manage climate-related risks and opportunities and performance against targets. (pg. 14, 17-20)</p>	<ul style="list-style-type: none"> • 2023 Data Summary • 2024 CDP Response, Section C7 - Environmental Performance

Endnotes

1. <https://gflenv.com/news-media-events-detail/gfl-awarded-seal-award/>, p4.
2. Global Warming of 1.5°C. An IPCC Special Report on the impacts of global warming of 1.5°C above pre-industrial levels and related global greenhouse gas emission pathways, in the context of strengthening the global response to the threat of climate change, sustainable development, and efforts to eradicate poverty <https://www.ipcc.ch/sr15>, p8.
3. Fuel price difference assumes the fuel price difference remains the same as it was in 2023, p12.
4. Revenue and credit value for producing RNG in the US assumes a \$2.50 USD RIN, p12.
5. GFL has based our 100% renewable energy strategy and accounting approach on the GHG Protocol and Renewable Energy 100 (RE100) technical guidance, p17.
6. In the IPCC Special Report, GHG emissions are described as falling into two broad categories in terms of their impact on global temperature: long-lived GHGs, such as carbon dioxide, whose warming impact depends primarily on the total cumulative amount emitted over the past century or the entire industrial epoch; and short-lived climate forcers (SLCFs), such as methane, whose warming impact depends primarily on current and recent annual emission rates. These different dependencies affect the emissions reductions required of individual forcers to limit warming to 1.5°C or any other level. <https://www.ipcc.ch/sr15/cross-chapter-boxes/>, p17.
7. The Report from the UN High-Level Expert Group on the Net Zero Emissions Commitments of Non-State Entities Integrity Matters: Net Zero Commitments by Businesses, Financial Institutions, Cities and Regions recommends that targets must account for all GHG emissions and include separate targets for material non-CO2 greenhouse gas emissions such as methane (Recommendation 2). https://www.un.org/sites/un2.un.org/files/high-level_expert_group_n7b.pdf, p17.
8. <https://www.globalmethanepledge.org/>, p17.
9. IPCC, 2018: Global Warming of 1.5°C. An IPCC Special Report on the impacts of global warming of 1.5°C above pre-industrial levels and related global greenhouse gas emission pathways, in the context of strengthening the global response to the threat of climate change, sustainable development, and efforts to eradicate poverty [Masson-Delmotte, V., P. Zhai, H.-O. Pörtner, D. Roberts, J. Skea, P.R. Shukla, A. Pirani, W. Moufouma-Okia, C. Péan, R. Pidcock, S. Connors, J.B.R. Matthews, Y. Chen, X. Zhou, M.I. Gomis, E. Lonnoy, T. Maycock, M. Tignor, and T. Waterfield (eds.)]. Cambridge University Press, Cambridge, UK and New York, NY, USA, 616 pp. <https://doi.org/10.1017/9781009157940>, p17.
10. IPCC, 2023: Climate Change 2023: Synthesis Report. Contribution of Working Groups I, II and III to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change [Core Writing Team, H. Lee and J. Romero (eds.)]. IPCC, Geneva, Switzerland, 184 pp., doi: 10.59327/IPCC/AR6-9789291691647, p17.
11. SBTi, October 2021. Pathways to Net-Zero, SBTi Technical Summary, version 1.0. <https://sciencebasedtargets.org/resources/files/Pathway-to-Net-Zero.pdf>, p17.
12. United Nations Environment Programme and Climate and Clean Air Coalition, 2021. Global Methane Assessment: Benefits and Costs of Mitigating Methane Emissions. Nairobi: United Nations Environment Programme. <https://www.unep.org/resources/report/global-methane-assessment-benefits-and-costs-mitigating-methane-emissions>, p18.
13. <https://www.globalmethanepledge.org/>, p18.
14. Based on the IPCC AR-4100-year global warming potential for methane, p18.
15. FACT SHEET: Key Deliverables for the 2023 North American Leaders' Summit | The White House. <https://www.whitehouse.gov/briefing-room/statements-releases/2023/01/10/fact-sheet-key-deliverables-for-the-2023-north-american-leaders-summit/>, p18.
16. FACT SHEET: Key Deliverables for the 2023 North American Leaders' Summit. <https://www.pm.gc.ca/en/news/backgrounders/2023/01/10/fact-sheet-key-deliverables-2023-north-american-leaders-summit>, p18.
17. IEA (2021), Net Zero by 2050, IEA, Paris <https://www.iea.org/reports/net-zero-by-2050>, Licence: CC BY 4.0, p18.
18. All emission sources within our operational control boundary are included with a goal of an absolute 30% reduction in GHG emissions across scope 1 and 2 emissions sources. On an emission source category basis, it is anticipated that some source categories like fugitive emissions from landfills will decrease; while other source categories such as those that are aligned with our anticipated growth in services aligned with supporting our customers in achieving their sustainability goals are likely to increase over the target period due to organic growth in these services, p18.
19. In accordance with The GHG Protocol, we report our actual emissions for a specific reporting year and as a result, the 2023 scope 1 and 2 emissions reported for our 2023 FY are 9% lower than our base year emissions, p19.
20. Mobile sources include vehicles from GFL's solid waste and environmental services divisions, p25.
21. In accordance with The GHG Protocol, location-based emissions represent the use of regional grid-sourced electricity at GFL-owned facilities. Market-based emissions represent grid-sourced electricity at GFL-owned facilities bundled with regional renewable energy certificates (RECs), p25.
22. Scope 3 emissions associated with purchased goods and services and capital goods are calculated using the spend-based method as outlined in The GHG Protocol's Technical Guidance for Calculating Scope 3 Emissions. 2023 spend data was influenced by inflationary impacts, p25.
23. In 2021 this estimate for emissions was based on limited data available at the time. We believe that the estimates for 2022 and 2023, that were based on more comprehensive data, are more reflective of our emissions from this source, p25.
24. Scope 3 emissions estimates for this category relates to our UMO business, p25.
25. The Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard (GHG Protocol), Revised Edition, March 2004, published by the World Resources Institute and the World Business Council on Sustainable Development (WRI/WBCSD). <https://ghgprotocol.org/corporate-standard>, p26.
26. SASB Standards (Now part of IFRS Foundation). Waste Management Sustainability Accounting Standard. Infrastructure Sector, Sustainable Industry Classification System (SICS) IF-WM. Version 2023-12, p26.
27. Protocol for the quantification of greenhouse gas emissions from waste management activities published by Entreprises pour l'Environnement (EpE), p26.
28. Environmental Protection Agency. 40CFR Part 98 – Mandatory Greenhouse Gas Reporting. Table A-1 to Subpart A of Part 98 – Global Warming Potentials, p26.
29. Base year recalculation methodologies for structural changes, Appendix E to the GHG Protocol Corporate Accounting and Reporting Standard – Revised Edition. Version January 2005. Published by the World Business Council for Sustainable Development and the World Resources Institute (WRI/WBCSD), p27.



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