

C0. Introduction

C0.1

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

Founded in 1975 with a single truck, Casella Waste Systems, Inc. is a regional, vertically integrated solid waste services company. We provide resource management expertise and services to residential, commercial, municipal and industrial customers, primarily in the areas of solid waste collection and disposal, transfer, recycling and organics services. We provide integrated solid waste services in six states: Vermont, New Hampshire, New York, Massachusetts, Maine and Pennsylvania, with our headquarters located in Rutland, Vermont. As of January 31, 2020, we owned and/or operated 43 solid waste collection operations, 58 transfer stations, 20 recycling facilities, eight Subtitle D landfills, four landfill gas-to-energy facilities and one landfill permitted to accept construction and demolition ("C&D") materials.

Greenhouse Gas Emissions Inventory: In 2019, Casella's Scope 1 and 2 GHG emissions were 715,229 metric tons CO<sub>2</sub>e. Of this total, landfill emissions accounted for 89%, fleet fuel accounted for 10%, and facility heating and electricity accounted for 1%.

Climate Leadership: Casella was the only waste and recycling company among the founding members of the U.S. Environmental Protection Agency (EPA) Climate Leaders program. Under that program, the company began voluntarily measuring and disclosing its company-wide greenhouse gas emissions well before mandated. From 2005 to 2010, we reduced our total Scope 1 and 2 greenhouse gas emissions by 45%, exceeding our first reduction target. In January 2012, Casella was recognized by the EPA, the Association of Climate Change Officers (ACCO), the Center for Climate and Energy Solutions (C2ES), and The Climate Registry (TCR) with a Climate Leadership Award for Excellence in GHG Management.

Net Climate Benefit: Our work benefits the climate. For every ton of GHG we generate managing our customers' and communities' waste and recyclables, 2.9 tons of carbon are eliminated elsewhere in the economy through recycling, energy production, and carbon sequestration. We calculate this Net Climate Benefit Factor using EPA factors and tools. Specifically, the calculation adds the emission benefits of our recycling, renewable energy, and sequestration activities and then divides this number by our total Scope 1 and 2 emissions.

Short-term GHG strategy (2030): Building upon the 45% reduction we already achieved from 2005 to 2010, we have **set a new target to reduce our total Scope 1 and 2 greenhouse gas emissions to 40% below 2010 levels by 2030**. We will achieve this through further investments in landfill gas infrastructure and fleet efficiency programs. For a business like ours, rising to the climate challenge means we cannot simply *emit less*; we must also *do more*. We must develop and grow the waste and recycling services that will be required in a low-carbon circular economy future. We have **set a target to increase our Net Climate Benefit Factor to 5x by 2030**. This factor is explained in section 9.

Long-term GHG strategy (2050): By 2050, we believe that the work we do will be understood in terms of the embodied carbon in reused and recycled materials, and the carbon sequestration potential of organics management. Decisions will be made in part based upon the amount of value that can be wrung from a unit of carbon. The emphasis will have shifted from reducing emissions to maximizing the closed loop cycling of carbon and optimizing carbon sequestration.

C0.2

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

	Start date	End date	Indicate if you are providing emissions data for past reporting years	Select the number of past reporting years you will be providing emissions data for
Reporting year	January 1 2019	December 31 2019	No	<Not Applicable>

C0.3

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

United States of America

C0.4

**(C0.4) Select the currency used for all financial information disclosed throughout your response.**

USD

C0.5

**(C0.5) Select the option that describes the reporting boundary for which climate-related impacts on your business are being reported. Note that this option should align with your chosen approach for consolidating your GHG inventory.**

Operational control

C1. Governance

C1.1

**(C1.1) Is there board-level oversight of climate-related issues within your organization?**

Yes

C1.1a

**(C1.1a) Identify the position(s) (do not include any names) of the individual(s) on the board with responsibility for climate-related issues.**

Position of individual(s)	Please explain
Chief Executive Officer (CEO)	The CEO, who also serves as Chairman of our Board of Directors, is responsible for monitoring climate-related information and adapting the company's strategy, as needed, based on that information.
Board-level committee	The Audit Committee of our Board of Directors monitors the Company's guidelines and policies governing exposure to risk. The Company has in place an Enterprise Risk Management process that involves systematic risk identification and mitigation covering the categories of strategic, financial, operational, and compliance risk.

C1.1b

**(C1.1b) Provide further details on the board's oversight of climate-related issues.**

Frequency with which climate-related issues are a scheduled agenda item	Governance mechanisms into which climate-related issues are integrated	Scope of board-level oversight	Please explain
Sporadic - as important matters arise	Reviewing and guiding risk management policies	<Not Applicable>	

C1.2

**(C1.2) Provide the highest management-level position(s) or committee(s) with responsibility for climate-related issues.**

Name of the position(s) and/or committee(s)	Reporting line	Responsibility	Coverage of responsibility	Frequency of reporting to the board on climate-related issues
Chief Executive Officer (CEO)	<Not Applicable>	Both assessing and managing climate-related risks and opportunities	<Not Applicable>	As important matters arise
Chief Financial Officer (CFO)	<Not Applicable>	Both assessing and managing climate-related risks and opportunities	<Not Applicable>	As important matters arise
Chief Operating Officer (COO)	<Not Applicable>	Both assessing and managing climate-related risks and opportunities	<Not Applicable>	As important matters arise
Risk committee	<Not Applicable>	Assessing climate-related risks and opportunities	<Not Applicable>	Annually
Other, please specify (SVP of Sustainable Growth)	<Not Applicable>	Both assessing and managing climate-related risks and opportunities	<Not Applicable>	More frequently than quarterly
Other, please specify (VP of Engineering and Compliance)	<Not Applicable>	Both assessing and managing climate-related risks and opportunities	<Not Applicable>	More frequently than quarterly

C1.2a

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

The SVP of Sustainable Growth and the VP of Engineering & Compliance are responsible for monitoring, assessing, and managing climate-related risks and opportunities. They receive and review reports from various internal departments (including sustainability, compliance, and government affairs) and external groups (lobbyists, regulators, legislators, trade organizations, and others). They communicate important risks and opportunities, as they arise, to the CEO and CFO. They also introduce and update climate-related risks - including policy risks, perception risks, and physical risks - to the company's Enterprise Risk Management (ERM) process.

The Company's Enterprise Risk Management process, overseen by the CFO, involves systematic risk identification and mitigation covering the categories of strategic, financial, operational, and compliance risk. The ERM committee maintains a list of current risks and meets regularly to discuss risk mitigation actions and plans. Climate-related risks are evaluated and are included on the company's active ERM list when they meet the thresholds for inclusion.

The CEO and CFO review climate-related risks and opportunities and communicate them to the Board of Directors as financially-material matters arise.

**C1.3**

**(C1.3) Do you provide incentives for the management of climate-related issues, including the attainment of targets?**

	Provide incentives for the management of climate-related issues	Comment
Row 1	Yes	Casella employees in various roles are eligible for monetary and/or non-monetary incentives relating to operational efficiency, environmental compliance, and the growth of our emission-reducing lines of business. These incentives will be described in a future disclosure.

**C1.3a**

**(C1.3a) Provide further details on the incentives provided for the management of climate-related issues (do not include the names of individuals).**

Entitled to incentive	Type of incentive	Activity incentivized	Comment
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**C2. Risks and opportunities**

**C2.1**

**(C2.1) Does your organization have a process for identifying, assessing, and responding to climate-related risks and opportunities?**

Yes

**C2.1a**

**(C2.1a) How does your organization define short-, medium- and long-term time horizons?**

	From (years)	To (years)	Comment
Short-term	0	5	This aligns with our annual budgeting and enterprise risk management activities.
Medium-term	5	10	This aligns with our strategic planning timelines and our capital investment decisions related to fleet vehicles.
Long-term	10	30	This aligns with our capital investment decisions related to large infrastructure such as material recovery facilities and landfills.

**C2.1b**

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

The company monitors and considers climate risks in terms of regulatory, reputational, and physical climate factors.

**C2.2**

**(C2.2) Describe your process(es) for identifying, assessing and responding to climate-related risks and opportunities.**

**Value chain stage(s) covered**

Direct operations

**Risk management process**

Integrated into multi-disciplinary company-wide risk management process

**Frequency of assessment**

Annually

**Time horizon(s) covered**

Short-term

Medium-term

Long-term

**Description of process**

The Company's Enterprise Risk Management process involves systematic risk identification and mitigation covering the categories of strategic, financial, operational, and compliance risk. The ERM committee maintains a list of current risks and meets regularly to discuss risk mitigation actions and plans. Climate-related risks are evaluated and are included on the company's active ERM list if/when they meet the thresholds for inclusion.

**C2.2a**

**(C2.2a) Which risk types are considered in your organization's climate-related risk assessments?**

	Relevance & inclusion	Please explain
Current regulation	Relevant, always included	We consider current regulations in our monitoring of climate-related risks. Our industry is subject to strict environmental regulations, which include climate-related requirements. An example is the Massachusetts Environmental Policy Act (MEPA) GHG Policy requirement that large development projects assess and mitigate greenhouse gas impacts.
Emerging regulation	Relevant, always included	We consider emerging regulations in our monitoring of climate-related risks. Our industry is likely to see more climate-related regulation in the coming years, as more states adopt more stringent programs. Examples include the possible replication of the above-described Massachusetts program in other states, Vermont's Global Warming Solutions Act which could substantially increase the price of diesel fuel in that state, and others.
Technology	Relevant, always included	We consider technologies in our monitoring of climate-related risks. New technologies that are less carbon-intensive (or are simply perceived to be less carbon-intensive) than the services we offer could disrupt our business. An example is the current pervasive belief that waste-to-energy incinerators are less carbon-intensive than modern landfills. This claim is not supported by recent data but is nonetheless believed by many and presents an ongoing business challenge. It is important that we understand the true climate impacts of emerging technologies, and work to adopt those technologies with a demonstrated climate benefit.
Legal	Relevant, always included	We consider legal factors in our monitoring of climate-related risks. We are beginning to monitor for climate-related litigation that would impact our business or like businesses. To date, we have not identified any specific relevant examples.
Market	Relevant, always included	We consider market factors in our monitoring of climate-related risks. Market factors related to climate may include demand for recycled commodities, demand for renewable energy, and customer waste reduction or zero waste goals. The impacts of these market factors may be mixed. For example, customer zero waste goals may reduce tonnage going into our landfills but increase demand for our recycling and waste reduction services.
Reputation	Relevant, always included	We consider reputation factors in our monitoring of climate-related risks. This includes the possibility that our operations, services, and products may not be perceived as carbon-reducing or consistent with waste reduction initiatives. For example, public confusion around the carbon benefits of our recycling and low emission landfill services could diminish our brand or impede our infrastructure permitting efforts.
Acute physical	Relevant, always included	We consider acute physical risks in our monitoring of climate-related risks. This includes potential impacts to our business continuity or operating costs related to increases in the frequency and severity of storms in our region. An example of this is Hurricane Irene in 2011 which washed out roads and bridges, impeding our immediate ability to service customers, but also produced clean-up debris which increased demand for our services after the storm.
Chronic physical	Relevant, always included	We consider chronic physical risks in our monitoring of climate-related risks. This includes potential impacts to our operating costs related to shifts in average temperature and precipitation patterns in our region. Examples of this include the need to design, construct, and maintain larger stormwater management systems, and the need to manage longer and more intense periods of wet season maintenance at our landfills.

**C2.3**

**(C2.3) Have you identified any inherent climate-related risks with the potential to have a substantive financial or strategic impact on your business?**

Yes

**C2.3a**

**(C2.3a) Provide details of risks identified with the potential to have a substantive financial or strategic impact on your business.**

**Identifier**

Risk 1

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

Direct operations

**Risk type & Primary climate-related risk driver**

Emerging regulation	Mandates on and regulation of existing products and services
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**Primary potential financial impact**

Increased direct costs

**Climate risk type mapped to traditional financial services industry risk classification**

<Not Applicable>

**Company-specific description**

Our business could be impacted by a wide variety of climate-related environmental laws or regulations. These might take the form of regulations requiring our facilities to meet emission reduction targets, mandates to use prescribed technologies, or carbon taxes on non-renewable sources of energy. One example is the Massachusetts requirement - during the MEPA environmental review process for major development projects - to quantify GHG emissions and identify measures to avoid, minimize, and mitigate such emissions.

**Time horizon**

Medium-term

**Likelihood**

Likely

**Magnitude of impact**

Medium-high

**Are you able to provide a potential financial impact figure?**

Please select

**Potential financial impact figure (currency)**

<Not Applicable>

**Potential financial impact figure – minimum (currency)**

<Not Applicable>

**Potential financial impact figure – maximum (currency)**

<Not Applicable>

**Explanation of financial impact figure**

**Cost of response to risk**

**Description of response and explanation of cost calculation**

We manage this regulatory risk by proactively identifying and evaluating carbon-reducing and renewable energy technologies and voluntarily deploying them when feasible, in partnership with qualified developers. We seek opportunities within engineering designs and environmental programs to incorporate appropriate mitigation measures, energy reduction strategies, or emission controls.

**Comment**

**Identifier**

Risk 2

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

Downstream

**Risk type & Primary climate-related risk driver**

Reputation	Increased stakeholder concern or negative stakeholder feedback
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**Primary potential financial impact**

Decreased revenues due to reduced demand for products and services

**Climate risk type mapped to traditional financial services industry risk classification**

<Not Applicable>

**Company-specific description**

Our business success relies upon the goodwill and trust of our customers, communities, and other stakeholders. Reduced stakeholder confidence in our ability and commitment to protect the environment could reduce demand for our products and services or prevent us from renewing or securing facility permits. Climate is an increasingly important consideration of our stakeholders in the Northeastern U.S., where many customers and communities rely on revenue from seasonal recreation such as skiing and tourism. For example, a growing number of customers may begin selecting competing services with better climate impacts (actual or perceived).

**Time horizon**

Medium-term

**Likelihood**

Likely

**Magnitude of impact**

Medium-high

**Are you able to provide a potential financial impact figure?**

Please select

**Potential financial impact figure (currency)**

<Not Applicable>

**Potential financial impact figure – minimum (currency)**

<Not Applicable>

**Potential financial impact figure – maximum (currency)**

<Not Applicable>

**Explanation of financial impact figure**

**Cost of response to risk**

**Description of response and explanation of cost calculation**

We manage this risk by measuring and reporting our emissions, investing in design and operating best practices (beyond regulatory requirements) to minimize emissions and maximize reductions, modernizing our fleet to reduce the carbon-intensity of our operations, and effectively communicating these measures with key stakeholder groups.

**Comment**

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**Identifier**

Risk 3

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

Direct operations

**Risk type & Primary climate-related risk driver**

Chronic physical	Changes in precipitation patterns and extreme variability in weather patterns
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**Primary potential financial impact**

Increased indirect (operating) costs

**Climate risk type mapped to traditional financial services industry risk classification**

<Not Applicable>

**Company-specific description**

Our field operations are influenced by climate factors such as the size and frequency of rain events and the timing and frequency of freeze/thaw cycles. Shifts in these factors can result in engineering requirements for larger stormwater management systems, longer and more intense periods of wet season maintenance at landfills, and additional restrictions to seasonal construction.

**Time horizon**

Short-term

**Likelihood**

Likely

**Magnitude of impact**

Medium

**Are you able to provide a potential financial impact figure?**

Please select

**Potential financial impact figure (currency)**

<Not Applicable>

**Potential financial impact figure – minimum (currency)**

<Not Applicable>

**Potential financial impact figure – maximum (currency)**

<Not Applicable>

**Explanation of financial impact figure**

**Cost of response to risk**

**Description of response and explanation of cost calculation**

Our response to this risk is shaped by regulatory input and engineering best practices, and may include measures such as updating our facility designs and construction schedules to address potential impacts from climate factors, and reflecting these changes in our cost models and pricing.

**Comment**

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## C2.4

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**(C2.4) Have you identified any climate-related opportunities with the potential to have a substantive financial or strategic impact on your business?**

Yes

### C2.4a

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**(C2.4a) Provide details of opportunities identified with the potential to have a substantive financial or strategic impact on your business.**

**Identifier**

Opp1

**Where in the value chain does the opportunity occur?**

Direct operations

**Opportunity type**

Products and services

**Primary climate-related opportunity driver**

Development and/or expansion of low emission goods and services

**Primary potential financial impact**

Increased revenues resulting from increased demand for products and services

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**Company-specific description**

An increased focus on meeting carbon and sustainability goals could increase demand for our Resource Solutions (recycling, organics, reuse, waste reduction) services and our renewable energy production, including associated environmental attributes (RECs, RINs, and/or carbon credits).

**Time horizon**

Medium-term

**Likelihood**

Likely

**Magnitude of impact**

Medium

**Are you able to provide a potential financial impact figure?**

Please select

**Potential financial impact figure (currency)**

<Not Applicable>

**Potential financial impact figure – minimum (currency)**

<Not Applicable>

**Potential financial impact figure – maximum (currency)**

<Not Applicable>

**Explanation of financial impact figure****Cost to realize opportunity****Strategy to realize opportunity and explanation of cost calculation**

We aim to significantly grow our Resource Solutions lines of business - including recycling, organics, and customer solutions activities - with a goal to be recovering 2 million tons per year by 2030.

**Comment**

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**Identifier**

Opp2

**Where in the value chain does the opportunity occur?**

Downstream

**Opportunity type**

Products and services

**Primary climate-related opportunity driver**

Shift in consumer preferences

**Primary potential financial impact**

Increased revenues resulting from increased demand for products and services

**Company-specific description**

A combination of carbon legislation and circular economy goals could increase demand for recycled commodities and increase recycled commodity pricing.

**Time horizon**

Medium-term

**Likelihood**

About as likely as not

**Magnitude of impact**

Medium-low

**Are you able to provide a potential financial impact figure?**

Please select

**Potential financial impact figure (currency)**

<Not Applicable>

**Potential financial impact figure – minimum (currency)**

<Not Applicable>

**Potential financial impact figure – maximum (currency)**

<Not Applicable>

**Explanation of financial impact figure****Cost to realize opportunity****Strategy to realize opportunity and explanation of cost calculation**

We invest in infrastructure and process changes to improve the quality and value of our outbound recycled commodities. We invest time and resources in education around the carbon benefit and circular economy benefits of recycling. We advocate – directly and via trade organizations – for the strengthening of recycling markets through policy mechanisms such as minimum recycled content requirements.

**Comment**

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**Identifier**

Opp3

**Where in the value chain does the opportunity occur?**

Direct operations

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**Opportunity type**

Products and services

**Primary climate-related opportunity driver**

Development of climate adaptation, resilience and insurance risk solutions

**Primary potential financial impact**

Increased revenues resulting from increased demand for products and services

**Company-specific description**

Casella is in the business of protecting public health and the environment, and our services are needed following extreme weather events. As the strength and severity of storm events increases, we anticipate increased demand for our cleanup and disposal services. Our responsibility is to plan and prepare in ways that will minimize storm-related disruption to our business so we can promptly and safely attend to the needs of our communities and customers.

**Time horizon**

Short-term

**Likelihood**

Very likely

**Magnitude of impact**

Medium-low

**Are you able to provide a potential financial impact figure?**

Please select

**Potential financial impact figure (currency)**

<Not Applicable>

**Potential financial impact figure – minimum (currency)**

<Not Applicable>

**Potential financial impact figure – maximum (currency)**

<Not Applicable>

**Explanation of financial impact figure**

**Cost to realize opportunity**

**Strategy to realize opportunity and explanation of cost calculation**

To ensure that we can continue to meet the service needs of our customers and communities during major storm events, our facilities maintain priority response plans and natural disaster guidance in their Operations and Maintenance plans. This includes planning for rapid deployment of workers and equipment to affected areas as well as operational, communication, and safety best practices.

**Comment**

C3. Business Strategy

C3.1

**(C3.1) Have climate-related risks and opportunities influenced your organization's strategy and/or financial planning?**

Yes

C3.1a

**(C3.1a) Does your organization use climate-related scenario analysis to inform its strategy?**

No, and we do not anticipate doing so in the next two years

C3.1c

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

C3.1d

**(C3.1d) Describe where and how climate-related risks and opportunities have influenced your strategy.**

	Have climate-related risks and opportunities influenced your strategy in this area?	Description of influence
Products and services	Yes	Climate factors influence our strategic approach to developing and investing in our Resource Solutions activities. Resource Solutions encompasses recycling, organics, and customer solutions, including waste reduction and reuse services.
Supply chain and/or value chain	Evaluation in progress	
Investment in R&D	Evaluation in progress	
Operations	Yes	Climate factors influence our approach to building and operating our landfills to optimize landfill gas capture and beneficial use. Climate factors also influence our commitment to operational targets such as fuel efficiency and alternative fuel vehicles.

**C3.1e**

**(C3.1e) Describe where and how climate-related risks and opportunities have influenced your financial planning.**

	Financial planning elements that have been influenced	Description of influence
Row 1	Revenues Indirect costs Capital expenditures Capital allocation	Our risk mitigating fee programs are mechanisms that enable us to mitigate volatility in recycling commodity values and fuel prices by passing the financial impact of movements in commodity pricing and values back to our customers. This enables our financial planning process and actual performance to be more predictable and better insulated from these external risks. Our Sustainability Recycling Adjustment ("SRA") program makes recycling a more sustainable and viable option for our customers and society as it allows the Company to generate appropriate levels of returns during recycling market downturns so that the Company may continue to invest in recycling infrastructure and resources. The SRA floats up or down on a monthly basis on select customer's invoices based on the average value of our recycling commodity volumes. Similarly, our Energy & Environment (E&E) fee helps to offset changes in fuel prices. The Energy component of the E&E fee floats up or down on a monthly basis on select customer's invoices based on regional fuel prices.

**C3.1f**

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

**C4. Targets and performance**

**C4.1**

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

Please select

**C4.2**

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

Please select

**C4.3**

**(C4.3) Did you have emissions reduction initiatives that were active within the reporting year? Note that this can include those in the planning and/or implementation phases.**

**C4.5**

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

Yes

**C4.5a**

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

**Level of aggregation**

Group of products

**Description of product/Group of products**

Resource Solutions - Casella's recycling, organics recovery, and resource management consulting services enable customers and communities to achieve their waste and recycling goals and reduce their Scope 3 carbon footprint.

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

Avoided emissions

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

Other, please specify (The EPA Waste Reduction Model (WARM) tool is used to quantify the emission avoidance associated with recycling and waste reduction services.)

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

24

**% of total portfolio value**

<Not Applicable>

**Asset classes/ product types**

<Not Applicable>

**Comment**

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**Level of aggregation**

Group of products

**Description of product/Group of products**

Low Emission Landfill services - Our modern landfills employ landfill gas collection and capture systems and have a lower carbon footprint than competing disposal technologies, thus helping the customers who direct their waste to these facilities reduce their Scope 3 carbon footprint. Although it is not reflected in the 40 CFR Part 98 methodology listed below, landfills also have a carbon sequestration benefit.

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

Avoided emissions

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

Other, please specify (Data reported to the EPA through the 40 CFR Part 98 GHG Reporting program documents the emission performance of our regulated disposal facilities.)

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

**% of total portfolio value**

<Not Applicable>

**Asset classes/ product types**

<Not Applicable>

**Comment**

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**Level of aggregation**

Product

**Description of product/Group of products**

Renewable energy - The energy produced at Casella's landfill gas to energy facilities derives from biogenic feedstock and is a low-carbon form of energy.

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

Low-carbon product

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

Other, please specify (The carbon benefits of energy from landfill gas are calculated using EPA emission factors.)

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

**% of total portfolio value**

<Not Applicable>

**Asset classes/ product types**

<Not Applicable>

**Comment**

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**C5. Emissions methodology**

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**C5.1**

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

**Scope 1**

**Base year start**

January 1 2010

**Base year end**

December 31 2010

**Base year emissions (metric tons CO2e)**

1060810

**Comment**

**Scope 2 (location-based)**

**Base year start**

January 1 2010

**Base year end**

December 31 2010

**Base year emissions (metric tons CO2e)**

5946

**Comment**

**Scope 2 (market-based)**

**Base year start**

**Base year end**

**Base year emissions (metric tons CO2e)**

**Comment**

**C5.2**

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**(C5.2) Select the name of the standard, protocol, or methodology you have used to collect activity data and calculate emissions.**

The Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard (Revised Edition)

US EPA Center for Corporate Climate Leadership: Indirect Emissions From Purchased Electricity

US EPA Center for Corporate Climate Leadership: Direct Emissions from Stationary Combustion Sources

US EPA Center for Corporate Climate Leadership: Direct Emissions from Mobile Combustion Sources

US EPA Mandatory Greenhouse Gas Reporting Rule

US EPA Emissions & Generation Resource Integrated Database (eGRID)

**C6. Emissions data**

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**C6.1**

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

**Reporting year**

**Gross global Scope 1 emissions (metric tons CO2e)**

710667

**Start date**

<Not Applicable>

**End date**

<Not Applicable>

**Comment**

**C6.2**

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**(C6.2) Describe your organization's approach to reporting Scope 2 emissions.**

**Row 1**

**Scope 2, location-based**

We are reporting a Scope 2, location-based figure

**Scope 2, market-based**

We have no operations where we are able to access electricity supplier emission factors or residual emissions factors and are unable to report a Scope 2, market-based figure

**Comment**

C6.3

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

**Reporting year**

**Scope 2, location-based**

4562

**Scope 2, market-based (if applicable)**

<Not Applicable>

**Start date**

<Not Applicable>

**End date**

<Not Applicable>

**Comment**

C6.4

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

Yes

C6.4a

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

**Source**

Emissions from employee vehicle travel (e.g., sales and management vehicles)

**Relevance of Scope 1 emissions from this source**

Emissions are relevant but not yet calculated

**Relevance of location-based Scope 2 emissions from this source**

No emissions from this source

**Relevance of market-based Scope 2 emissions from this source (if applicable)**

No emissions excluded

**Explain why this source is excluded**

Travel mileage and fuel are tracked in multiple systems across the company and are not yet aggregated for emission calculations purposes. These emissions are believed to be minimal as compared to our broader landfill and diesel fleet emissions.

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C6.5

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

**Purchased goods and services**

**Evaluation status**

Not evaluated

**Metric tonnes CO2e**

<Not Applicable>

**Emissions calculation methodology**

<Not Applicable>

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

<Not Applicable>

**Please explain**

**Capital goods**

**Evaluation status**  
Not evaluated

**Metric tonnes CO2e**  
<Not Applicable>

**Emissions calculation methodology**  
<Not Applicable>

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

**Please explain**

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

**Evaluation status**  
Not evaluated

**Metric tonnes CO2e**  
<Not Applicable>

**Emissions calculation methodology**  
<Not Applicable>

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

**Please explain**

**Upstream transportation and distribution**

**Evaluation status**  
Not evaluated

**Metric tonnes CO2e**  
<Not Applicable>

**Emissions calculation methodology**  
<Not Applicable>

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

**Please explain**

**Waste generated in operations**

**Evaluation status**  
Not evaluated

**Metric tonnes CO2e**  
<Not Applicable>

**Emissions calculation methodology**  
<Not Applicable>

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

**Please explain**

**Business travel**

**Evaluation status**  
Not evaluated

**Metric tonnes CO2e**  
<Not Applicable>

**Emissions calculation methodology**  
<Not Applicable>

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

**Please explain**

**Employee commuting**

**Evaluation status**

Not evaluated

**Metric tonnes CO2e**

<Not Applicable>

**Emissions calculation methodology**

<Not Applicable>

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

<Not Applicable>

**Please explain**

**Upstream leased assets**

**Evaluation status**

Not evaluated

**Metric tonnes CO2e**

<Not Applicable>

**Emissions calculation methodology**

<Not Applicable>

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

<Not Applicable>

**Please explain**

**Downstream transportation and distribution**

**Evaluation status**

Not evaluated

**Metric tonnes CO2e**

<Not Applicable>

**Emissions calculation methodology**

<Not Applicable>

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

<Not Applicable>

**Please explain**

**Processing of sold products**

**Evaluation status**

Not evaluated

**Metric tonnes CO2e**

<Not Applicable>

**Emissions calculation methodology**

<Not Applicable>

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

<Not Applicable>

**Please explain**

**Use of sold products**

**Evaluation status**

Not evaluated

**Metric tonnes CO2e**

<Not Applicable>

**Emissions calculation methodology**

<Not Applicable>

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

<Not Applicable>

**Please explain**

**End of life treatment of sold products**

**Evaluation status**

Not evaluated

**Metric tonnes CO2e**

<Not Applicable>

**Emissions calculation methodology**

<Not Applicable>

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

<Not Applicable>

**Please explain**

**Downstream leased assets**

**Evaluation status**

Not evaluated

**Metric tonnes CO2e**

<Not Applicable>

**Emissions calculation methodology**

<Not Applicable>

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

<Not Applicable>

**Please explain**

**Franchises**

**Evaluation status**

Not evaluated

**Metric tonnes CO2e**

<Not Applicable>

**Emissions calculation methodology**

<Not Applicable>

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

<Not Applicable>

**Please explain**

**Investments**

**Evaluation status**

Not evaluated

**Metric tonnes CO2e**

<Not Applicable>

**Emissions calculation methodology**

<Not Applicable>

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

<Not Applicable>

**Please explain**

**Other (upstream)**

**Evaluation status**

Not evaluated

**Metric tonnes CO2e**

<Not Applicable>

**Emissions calculation methodology**

<Not Applicable>

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

<Not Applicable>

**Please explain**

**Other (downstream)**

**Evaluation status**

Not evaluated

**Metric tonnes CO2e**

<Not Applicable>

**Emissions calculation methodology**

<Not Applicable>

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

<Not Applicable>

**Please explain**

C6.7

**(C6.7) Are carbon dioxide emissions from biogenic carbon relevant to your organization?**

Yes

C6.7a

**(C6.7a) Provide the emissions from biogenic carbon relevant to your organization in metric tons CO2.**

	CO2 emissions from biogenic carbon (metric tons CO2)	Comment
Row 1		Due to variation in the accounting of biogenic CO2 between various state and federal reporting programs, we intend to revisit this topic in a future disclosure.

C6.10

**(C6.10) Describe your gross global combined Scope 1 and 2 emissions for the reporting year in metric tons CO2e per unit currency total revenue and provide any additional intensity metrics that are appropriate to your business operations.**

**Intensity figure**

0.000962

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

715229

**Metric denominator**

unit total revenue

**Metric denominator: Unit total**

743290000

**Scope 2 figure used**

Location-based

**% change from previous year**

**Direction of change**

<Not Applicable>

**Reason for change**

**Intensity figure**

0.112812

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

715229

**Metric denominator**

Other, please specify (Metric ton managed)

**Metric denominator: Unit total**

6340000

**Scope 2 figure used**

Location-based

**% change from previous year**

**Direction of change**

<Not Applicable>

**Reason for change**

## C7. Emissions breakdowns

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### C7.1

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**(C7.1) Does your organization break down its Scope 1 emissions by greenhouse gas type?**  
Please select

### C7.2

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

Country/Region	Scope 1 emissions (metric tons CO2e)
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### C7.3

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**(C7.3) Indicate which gross global Scope 1 emissions breakdowns you are able to provide.**  
By activity

### C7.3c

---

**(C7.3c) Break down your total gross global Scope 1 emissions by business activity.**

Activity	Scope 1 emissions (metric tons CO2e)
Landfill Fugitive Emissions	636760
Mobile Combustion Emissions	69975
Stationary Combustion Emissions	3932

### C7.5

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

Country/Region	Scope 2, location-based (metric tons CO2e)	Scope 2, market-based (metric tons CO2e)	Purchased and consumed electricity, heat, steam or cooling (MWh)	Purchased and consumed low-carbon electricity, heat, steam or cooling accounted for in Scope 2 market-based approach (MWh)
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### C7.6

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**(C7.6) Indicate which gross global Scope 2 emissions breakdowns you are able to provide.**  
By activity

### C7.6c

---

**(C7.6c) Break down your total gross global Scope 2 emissions by business activity.**

Activity	Scope 2, location-based (metric tons CO2e)	Scope 2, market-based (metric tons CO2e)
Electricity Consumption Emissions	4562	

### C7.9

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**(C7.9) How do your gross global emissions (Scope 1 and 2 combined) for the reporting year compare to those of the previous reporting year?**

## C8. Energy

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C8.1

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

More than 5% but less than or equal to 10%

C8.2

(C8.2) Select which energy-related activities your organization has undertaken.

	Indicate whether your organization undertook this energy-related activity in the reporting year
Consumption of fuel (excluding feedstocks)	Please select
Consumption of purchased or acquired electricity	Please select
Consumption of purchased or acquired heat	Please select
Consumption of purchased or acquired steam	Please select
Consumption of purchased or acquired cooling	Please select
Generation of electricity, heat, steam, or cooling	Please select

C9. Additional metrics

C9.1

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

Description

Other, please specify (Net Climate Benefit Factor)

Metric value

2.9

Metric numerator

2101338

Metric denominator (intensity metric only)

715605

% change from previous year

Direction of change

<Not Applicable>

Please explain

Our Net Climate Benefit Factor is an estimation of the net emission reduction resulting from our recycling, renewable energy, and carbon sequestration activities. The factor is calculated using published factors from the federal Environmental Protection Agency (EPA). Specifically, it adds the greenhouse gas benefits of our recycling + renewable energy production + landfill carbon sequestration and divides this total by the sum of our Scope 1 and 2 emissions. We improve our Net Climate Benefit Factor by reducing our Scope 1 and 2 emissions and by increasing our recycling, renewable energy, and sequestration activities.

C10. Verification

C10.1

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

	Verification/assurance status
Scope 1	No third-party verification or assurance
Scope 2 (location-based or market-based)	No third-party verification or assurance
Scope 3	No emissions data provided

C10.2

(C10.2) Do you verify any climate-related information reported in your CDP disclosure other than the emissions figures reported in C6.1, C6.3, and C6.5?

No, but we are actively considering verifying within the next two years

## C11. Carbon pricing

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### C11.1

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**(C11.1) Are any of your operations or activities regulated by a carbon pricing system (i.e. ETS, Cap & Trade or Carbon Tax)?**

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

### C11.2

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**(C11.2) Has your organization originated or purchased any project-based carbon credits within the reporting period?**

No

### C11.3

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

No, and we do not currently anticipate doing so in the next two years

## C12. Engagement

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### C12.1

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**(C12.1) Do you engage with your value chain on climate-related issues?**

Yes, our suppliers

Yes, our customers

### C12.1a

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**(C12.1a) Provide details of your climate-related supplier engagement strategy.**

**Type of engagement**

Innovation & collaboration (changing markets)

**Details of engagement**

Other, please specify (Requests for vendors to offer or collaborate with us on low-carbon vehicles, facility designs, recycled content products, etc.)

**% of suppliers by number**

**% total procurement spend (direct and indirect)**

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

**Rationale for the coverage of your engagement**

**Impact of engagement, including measures of success**

**Comment**

---

### C12.1b

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

**Type of engagement**

Education/information sharing

**Details of engagement**

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

**% of customers by number**

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

**Portfolio coverage (total or outstanding)**

<Not Applicable>

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

We regularly work with our customers - particularly those in higher education, healthcare, and manufacturing - to evaluate alternative management scenarios for their waste and recycling. These calculations include greenhouse gas impact calculations using EPA factors. We are also hired to provide Resource Management planning services, which encompasses a wider range of waste minimization and management strategies that reduce GHG impacts.

**Impact of engagement, including measures of success**

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**C12.3**

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**(C12.3) Do you engage in activities that could either directly or indirectly influence public policy on climate-related issues through any of the following?**

- Direct engagement with policy makers
- Trade associations
- Funding research organizations
- Other

**C12.3a**

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

Focus of legislation	Corporate position	Details of engagement	Proposed legislative solution
Please select	Please select		

**C12.3b**

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

Yes

**C12.3c**

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

**C12.3d**

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

Please select

**C12.3e**

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**(C12.3e) Provide details of the other engagement activities that you undertake.**

The climate impacts of the solid waste industry are not as straight-forward as those of the energy and transportation sectors. Landfill emission calculations continue to rely on modelling that can be imprecise. The supply chain impacts of recycling and organic waste management are complex and the science is still evolving. We have cooperated with regulators and legislators to help advance the science and modelling of climate impacts in our sector. An example of this is our participation in the voluntary EPA Climate Leaders program, through which we voluntarily worked with EPA staff to calculate and disclose our company-wide greenhouse gas emissions well in advance of federal reporting requirements. We continue to meet with regulators and legislators to discuss the broad climate impacts, benefits, and future reduction opportunities related to waste management.

**C12.3f**

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

C12.4

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

C15. Signoff

C-FI

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

C15.1

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

	Job title	Corresponding job category
Row 1	Chairman and Chief Executive Officer	Board chair

Submit your response

In which language are you submitting your response?

English

Please confirm how your response should be handled by CDP

	I am submitting to	Public or Non-Public Submission
I am submitting my response	Investors	Public

Please confirm below

I have read and accept the applicable Terms