

C0. Introduction

C0.1

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

Unless the context requires otherwise, all references in this CDP response to Republic, the Company, we, us and our refer to Republic Services, Inc. and its consolidated subsidiaries. Republic is one of the largest providers of environmental services in the United States, as measured by revenue. Geographically, 99.9% of our operations by revenue are located in the United States of America and Canada, with less than 0.1% in United States Overseas Territories (Puerto Rico and United States Virgin Islands) and Mexico. As of December 31, 2022, we operated 233 transfer stations, 71 recycling centers, 206 active landfills, 3 treatment, recovery and disposal facilities, 20 treatment, storage and disposal facilities (TSDF), 6 salt water disposal wells and 7 deep injection wells. We are engaged in 73 landfill gas-to-energy and other renewable energy projects and had post-closure responsibility for 128 closed landfills. Our Scope 1 and 2 emissions include landfill methane emissions, vehicle and equipment emissions, and building electricity emissions. We have adopted an aggressive target for reducing these operational GHG emissions, approved by the Science Based Targets initiative (SBTi). Our goal is to reduce absolute Scope 1 and 2 greenhouse gas emissions 35% by 2030 (2017 baseline year), which aligns with the United Nations "Climate Action" Sustainable Development Goal, 13.2 — reduce greenhouse gas emissions. While our Scope 3 emissions are not included in our SBTi-approved goal, we publicly report them and actively engage with our value chain.

C0.2

(C0.2) State the start and end date of the year for which you are reporting data and indicate whether you will be providing emissions data for past reporting years.

Reporting year

Start date

January 1 2022

End date

December 31 2022

Indicate if you are providing emissions data for past reporting years

No

Select the number of past reporting years you will be providing Scope 1 emissions data for

<Not Applicable>

Select the number of past reporting years you will be providing Scope 2 emissions data for

<Not Applicable>

Select the number of past reporting years you will be providing Scope 3 emissions data for

<Not Applicable>

C0.3

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

- Canada
- Mexico
- Puerto Rico
- United States of America
- United States Virgin Islands

C0.4

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

USD

C0.5

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

Operational control

C0.8

(C0.8) Does your organization have an ISIN code or another unique identifier (e.g., Ticker, CUSIP, etc.)?

Indicate whether you are able to provide a unique identifier for your organization	Provide your unique identifier
Yes, a Ticker symbol	NYSE: RSG

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 or committee	Responsibilities for climate-related issues
Board-level committee	<p>Given the importance of corporate sustainability to our stakeholders, Republic created a dedicated Sustainability and Corporate Responsibility Committee (SCR) of the board in 2015. Of the 11 members of our Board, 4 sit on the SCR committee, all of whom are independent board members. The SCR has responsibility for climate-related issues. From the Committee Charter, the Committee "...is appointed by the Board of Directors (the "Board") to assist the Board in fulfilling its oversight responsibility and to act in an advisory capacity to the Company's management with respect to significant issues, strategies, goals, objectives, policies and practices that pertain to (1) Republic's sustainability performance including sustainability innovation; (2) Republic's corporate responsibilities that are of significance to the Company and its role as a socially responsible organization; and (3) risks and opportunities of the Company, including climate change, safety, environmental and reputational risks and opportunities, facing the Company and the practices by which these risks are managed and mitigated. The Committee also shall perform such other duties and responsibilities as may be delegated to it from time to time by the Board."</p> <p>One of the Board's decision-making responsibilities that directly impacts the Company's climate-related activities is the approval of our annual budget, which allocates funding for the Company's sustainability-related agenda. This includes activities such as landfill gas to energy projects, fleet electrification, recycling infrastructure, etc.</p>

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

Frequency with which climate-related issues are a scheduled agenda item	Governance mechanisms into which climate-related issues are integrated	Scope of board-level oversight	Please explain
Scheduled – all meetings	<ul style="list-style-type: none"> Reviewing and guiding annual budgets Overseeing major capital expenditures Overseeing acquisitions, mergers, and divestitures Reviewing innovation/R&D priorities Overseeing and guiding employee incentives Reviewing and guiding strategy Overseeing and guiding the development of a transition plan Monitoring the implementation of a transition plan Overseeing and guiding scenario analysis Overseeing the setting of corporate targets Monitoring progress towards corporate targets Overseeing and guiding public policy engagement Overseeing value chain engagement Reviewing and guiding the risk management process 	<Not Applicable>	<p>Our Board is actively involved in risk oversight, and we believe that Republic's environmental and sustainability initiatives require a dedicated committee due to the unique nature of these risks, which includes the time frame in which some of these risks will play out, the difficulty in quantifying the impact of these risks, the interconnected aspects of these risks and the challenges associated with managing uncertainty.</p> <p>The Sustainability and Corporate Responsibility Committee held four meetings and met regularly in executive sessions during 2022. The annual Committee calendar starts in the first quarter, meeting to review management of and progress on environmental topics, including climate related issues. In the second quarter, the results of the Enterprise Risk Management process are reviewed by the Committee. This review includes assessment, prioritization and management of risks and opportunities throughout the business, including climate-related issues. Business continuity and crisis preparedness are also discussed in this meeting, which includes severe weather, fires, and other physical impacts of climate change. At the end of the second quarter, the Committee participates in the annual sustainability reporting activities. In the third quarter, the Committee considers management and progress on social topics, such as recycling education. The calendar then culminates in the fourth quarter with the sustainability strategy and review of sustainability reporting and progress against sustainability goals, which tie together and are in response to the previous three discussions/meetings. The sustainability strategy includes our approved Science Based Target initiative Scope 1 and 2 greenhouse gas reduction goal. We also have public goals to increase biogas capture for beneficial reuse by 50% from 2017 and to increase the recovery of key materials by 40% from 2017 by the year 2030. Both of these goals positively impact our impact on GHG emissions. The company's sustainability program is considered a business development opportunity and sits under the Chief Development Officer's team. Projected initiative benefits are incorporated into budgets and pro formas that underpin Management's long-term compensation performance metrics, which are reviewed by the entire Board during the same time frame.</p>

C1.1d

(C1.1d) Does your organization have at least one board member with competence on climate-related issues?

Board member(s) have competence on climate-related issues	Criteria used to assess competence of board member(s) on climate-related issues	Primary reason for no board-level competence on climate-related issues	Explain why your organization does not have at least one board member with competence on climate-related issues and any plans to address board-level competence in the future
Row 1 Yes	We believe that each of our director nominees is highly qualified and collectively, they represent an ideal mix of experience, wisdom, integrity, and ability to advance Republic's strategy and serve the interests of all our stakeholders. When assessing skill, the Board evaluates attributes such as relevant business, industry experience, and education. We report on the skills distribution of our Board members in our Proxy, where we report that 8 of our 11 Board members possess sustainability skills. Also in our Proxy, we define sustainability skills as follows. Republic's strategy is designed to generate profitable growth by partnering with customers to create a more sustainable world. As an environmental services company, directors with expertise in evolving issues around talent, specifically inclusion and diversity, employee safety, climate leadership and community engagement provide valuable guidance and insight to the Board when providing oversight on Republic's sustainability efforts.	<Not Applicable>	<Not Applicable>

C1.2

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

Position or committee

Other C-Suite Officer, please specify (EVP, Chief Development Officer)

Climate-related responsibilities of this position

- Managing annual budgets for climate mitigation activities
- Managing major capital and/or operational expenditures related to low-carbon products or services (including R&D)
- Managing climate-related acquisitions, mergers, and divestitures
- Providing climate-related employee incentives
- Developing a climate transition plan
- Implementing a climate transition plan
- Integrating climate-related issues into the strategy
- Conducting climate-related scenario analysis
- Setting climate-related corporate targets
- Monitoring progress against climate-related corporate targets
- Managing public policy engagement that may impact the climate
- Managing value chain engagement on climate-related issues
- Assessing climate-related risks and opportunities
- Managing climate-related risks and opportunities

Coverage of responsibilities

<Not Applicable>

Reporting line

Reports to the board directly

Frequency of reporting to the board on climate-related issues via this reporting line

Quarterly

Please explain

The CDO reports to the CEO, Jon Vander Ark, for day-to-day responsibilities and regularly reports to the Board of Directors and its committees, including the Sustainability & Corporate Responsibility Committee of the Board of Directors.

C1.3

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

	Provide incentives for the management of climate-related issues	Comment
Row 1	Yes	

C1.3a

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

Entitled to incentive

Corporate executive team

Type of incentive

Monetary reward

Incentive(s)

Bonus - % of salary

Other, please specify (May be a monetary penalty, see "Further details.")

Performance indicator(s)

Progress towards a climate-related target

Achievement of a climate-related target

Incentive plan(s) this incentive is linked to

Both Short-Term and Long-Term Incentive Plan

Further details of incentive(s)

The annual incentives for senior executives are subject to adjustment up or down by up to 10% based on the Company's interim performance on safety, talent and climate leadership goals, including our Circular Economy goal to increase recovery and circularity of key materials by 40% on a combined basis by 2030 (2017 baseline year). This is described in our Proxy.

Explain how this incentive contributes to the implementation of your organization's climate commitments and/or climate transition plan

Increasing diversion of materials to recycling or organics processing, and away from our landfills, reduces fugitive landfill emissions, which represent the vast majority of our GHG inventory. By feeding the circular economy, we are displacing raw material extraction and processing of virgin materials, enabling extensive emissions avoidance across our value chain.

Entitled to incentive

Management group

Type of incentive

Monetary reward

Incentive(s)

Bonus - % of salary

Performance indicator(s)

Progress towards a climate-related target

Achievement of a climate-related target

Implementation of an emissions reduction initiative

Energy efficiency improvement

Incentive plan(s) this incentive is linked to

Short-Term Incentive Plan

Further details of incentive(s)

The annual Management Incentive Plan (MIP), provides incentives for meeting certain targets and metrics related to climate change and other factors. The projects and metrics directly linked to management of climate change issues or impacts include, landfill gas collection efficiency and beneficial reuse projects, recycling efficiency, fleet productivity and conversion to clean fuel trucks.

Explain how this incentive contributes to the implementation of your organization's climate commitments and/or climate transition plan

The General Managers are rewarded in part for implementing actions that improve the effectiveness and efficiency of recycling, routing, and landfill operations. Strong performance in KPIs related to recycling (increased diversion) and landfill operations, in turn, reduce fugitive methane emissions from landfills. Strong performance in KPIs related to route effectiveness reduce miles driven and thus GHGs emissions from vehicles. These actions also support the three-year plans and budgets described in our Proxy.

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 broader operational, financial and strategic planning timeframes.
Medium-term	5	10	This timeframe aligns with capital decisions for fleet assets, which have roughly a 10-year lifetime.
Long-term	10	100	This timeframe aligns with larger infrastructure capital decisions. For example, recycling facilities are 20-30 year assets and we plan for and monitor landfill airspace for 40+ years and as much as 100 years for some sites.

C2.1b

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

Criteria used to determine what constitutes substantive financial and strategic business impacts were developed by our enterprise risk management (ERM) team with the guidance and approval of the Board and executive management. These criteria are applicable to climate risks and other corporate wide risks. The quantifiable indicators of substantive financial impact include lost operating income, which may include a loss of revenue or increase in costs above certain dollar amounts. Quantifiable indicators of substantive strategic impact may include substantial fines or suspension of operations due to legal, regulatory or compliance matters; operational challenges that result in major impacts on customer experience in multiple regions or major disruption to routine products/services; or brand/reputational impacts which result in significant national media coverage/extended image problem. Any of these impacts alone or in combination may elevate a topic to the level of being considered substantive. For example, each risk is scored by impact, resulting in a negligible, minor, moderate, major or catastrophic risk categorization. The likelihood and probability are then estimated, and the risks are plotted into a matrix that facilitates discussions about risk management. For the purposes of assessing climate-related risks, these analyses may consider financial impacts at or above \$1M.

C2.2

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

Value chain stage(s) covered

Direct operations
Upstream
Downstream

Risk management process

Integrated into multi-disciplinary company-wide risk management process

Frequency of assessment

More than once a year

Time horizon(s) covered

Short-term
Medium-term
Long-term

Description of process

Our multi-disciplinary, company-wide Enterprise Risk Management (ERM) process is designed to identify, assess, prioritize, assign risk owners, respond to and monitor risks and opportunities across the business. It is a formalized framework that is embedded into and fed by our current processes, which creates greater insight and durability. Climate-related risk management is integrated into our broader ERM process. Our ERM process applies to our direct operations, as well as upstream and downstream value chain partners. Through our ERM process, we assess risks more than once a year.

The ERM register is populated with risks and opportunities that have been identified by the following business functions and processes:

- Budget reviews
- Business impact analysis
- Area operating reviews (AORs)
- Quarterly management operating reviews (QMORs)
- Management representation process
- Individual functions
- Management Interviews

The local and operating review processes tend to focus on short term risks, within a 0- 5-year timeframe. However, when discussing long-lived assets such as a recycling facilities or landfills, medium-term and long-term issues may arise. The Corporate planning functions for fleet, recycling facilities, and landfills align with the timeframes discussed in C2.1a and can range from short-term (0-5 years), to medium term (5-10 years) to long term (10-100 years). These processes are conducted at the broad business level and at the asset level, as applicable. For example, we conducted a vulnerability assessment of our water risk at the company-wide level. Based on the results, we were then able to drill down into areas of concern to assess individual assets and their unique risk profiles.

At the local or asset level, local business leaders assess current and potential assets, competitive threats, strengths and weaknesses, risks and opportunities, growth plans, market dynamics and pricing, regulatory and legislative changes, and other key local market factors. Executive management, representing both Corporate and Field (asset) operations, meets on a quarterly basis, or more often, and discusses market trends and drivers, the business climate, innovation, risks and opportunities, regulatory and legislative changes, and other factors that influence our business strategy.

As shown above, various individual functions provide risks and opportunities to the ERM Team. Sustainability is one of these functions and has a stand-alone process for identifying risks and opportunities related to environmental, social and governance topics. This process is unique in that it recognizes short-term, which aligns with a 5-year outlook; medium term, which overlaps the 5-year outlook and spans 2020-2030; and long-term, which runs through 2050 and beyond; risks and seeks to quantify non-financial risks to help the ERM Team and the broader business understand sustainability risks in the context of the business strategy. Once the risks are identified, they are fed into the ERM risk register to enable quantifying and prioritizing these risks using the same methods/criteria as other business risks.

Risks identified through both the business processes and the sustainability function include those that are directly linked to climate change, such as fuel and electricity consumption, our recycling and composting business, emissions from our fleet, emissions from our landfills and impacts of adverse weather.

Aggregated risks and opportunities are then assessed and prioritized based on their impact to the strategy/organization by the ERM Team, which consists of the following functional representatives:

- Engineering & Environmental Compliance
- Sustainability
- Internal Audit
- Operations Support
- Finance Support
- Safety
- Information Security
- Human Resources
- Business Development
- Legal

The ERM team uses an online evaluation system and periodic meetings to conduct ongoing risk assessment. Assessment includes ranking of the likelihood that a risk will occur and ranking of the impact on the operating segment should the risk occur. Evaluation categories for both impact and likelihood are described and quantified to ensure that each team member is using the same criteria and meaning for the various categories (normalization of responses). Risk impact categories include negligible, minor, moderate, major and catastrophic. Within these categories, risks are evaluated for quantitative (financial and legal/regulatory/compliance) impact and/or qualitative (operational and brand/reputation) impact. In this way, both financial and strategic impacts and opportunities are assessed. Risk likelihood options include very low, low, moderate, high and very high. The likelihood and impact scores are then aggregated and the risks are plotted into the risk matrix. The risk matrix is then evaluated by the ERM team, reported to our ERM Council, comprised of executive officers, and further reported to the Board of Directors in the annual ERM update.

As an example of how this process was applied to our operations, we have identified the regions and situations where climate-related events that could present disruption to our business. Once adverse weather appears in the risk register, it is provided to the ERM team via the online system as one of many potential risks or opportunities to be evaluated. For example, the business sees the impact of storms and associated flooding in the day-to-day operations, as well as in the planning of infrastructure that may span 10, 20 or more years. The individual members of the ERM team assess the impacts of adverse weather for impact and likelihood. The effects from adverse weather have the potential to last several months and / or to affect several facilities. Therefore, adverse weather would be considered to have the potential for substantive impact. We have developed a business continuity plan and adopted it into our operations to mitigate the impacts of severe weather and reduce downtime in our operations. This has only resulted in minor delays in service and extremely minimal impacts to our assets and employees despite the occurrence of extreme weather events.

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

	Relevance & inclusion	Please explain
Current regulation	Relevant, always included	Our facilities and operations are subject to a variety of federal, state, provincial and local requirements that regulate, among other things, the environment, public health, safety, zoning and land use. Operating and other permits, licenses and other approvals generally are required for landfills and transfer stations, recycling centers, composting facilities, certain solid waste collection vehicles, fuel storage tanks and other equipment and facilities that we own or operate. These permits are subject to denial, revocation, modification and renewal in certain circumstances. Any revocation, modification or denial of permits could have a material adverse effect on us. Federal, state and local laws and regulations vary, but generally govern wastewater or storm water discharges, air emissions, the handling, transportation, treatment, storage and disposal of hazardous and non-hazardous waste and the remediation of contamination associated with the release or threatened release of hazardous substances. These laws and regulations provide governmental authorities with strict powers of enforcement, which include the ability to revoke or decline to renew any of our operating permits, obtain injunctions, or impose fines or penalties in the event of violations, including criminal penalties. The United States EPA and various other federal, state, provincial and local authorities administer these regulations. Regulations with respect to hazardous waste are particularly relevant for our Group 3 reportable segment that provides treatment, recycling and disposal of hazardous waste. Examples of specific regulations considered in our climate-related risk assessment are the EPA and the NHTSA regulations applicable to heavy-duty vehicles limiting greenhouse gas emissions and increasing fuel economy standards, as well as, the renewable fuel standards that the EPA sets annually, which affect the type of fuel our motor vehicle fleet uses.
Emerging regulation	Relevant, always included	<p>Efforts to curtail the emission of greenhouse gases and to ameliorate the effects of climate change continue to progress. Landfills emit anthropogenic methane and our vehicle fleet emits carbon dioxide and other greenhouse gases. While passage of comprehensive, federal climate change legislation appears unlikely in the near term, such legislation, if enacted, would potentially impose material costs on our operations.</p> <p>With regard to greenhouse gas emissions from our landfills, on July 14, 2016, the EPA issued amendments to its regulations that require large landfills that commenced construction, reconstruction or modification on or after July 17, 2014, to capture additional landfill gas to reduce emissions of methane and certain non-methane gases, which are recognized as greenhouse gases. In a separate action finalized that same day, the EPA issued updates to its 1996 Emission Guidelines to reduce emissions of landfill gas from existing active landfills. As part of the Biden Administration focus on climate change, the EPA has taken further steps to implement these regulations. These or amended regulations may require our landfills to deploy more stringent emission controls and monitoring systems, with resulting capital or operating costs. The application of these or other greenhouse gas regulations to our landfills could have a material adverse effect on our landfill operations and on our consolidated financial condition, results of operations and cash flows. While we await the final SEC Climate Disclosure rules, the draft rules imply that our current practices leave us well-positioned to comply.</p> <p>Each state in which we operate has its own laws and regulations governing solid waste disposal, water and air pollution, and, in most cases, releases and cleanup of hazardous substances and liabilities for such matters. States also have adopted regulations governing the design, operation, maintenance and closure of landfills and transfer stations. Some counties, municipalities and other local governments have adopted similar laws and regulations. In addition, our operations may be affected by the trend in many states toward requiring solid waste reduction and recycling programs. These regulations may present new opportunities to offer sustainable environmental services to our customers but may require investment of time, effort and money to be able to offer these solutions.</p>
Technology	Relevant, always included	<p>Our operations are increasingly dependent on technology. Our information technology systems are critical to our ability to drive profitable growth through differentiation, continue the implementation of standardized processes and deliver a consistent customer experience. One of our three differentiating capabilities is to enable our customers to do business with us through more channels and with better access to information and, accordingly, we have made substantial investment in our e-commerce platform. Problems with the operation of the information or communication technology systems we use could adversely affect, or temporarily disable, all or a portion of our operations. Redundancies in all of these systems are a necessary adaptation to the vulnerability of computer systems to power fluctuations and loss from storms, flooding, fires and other weather-related phenomena, which are increasingly common in a changing climate.</p> <p>Emerging technologies, including those that are used to recycle and process waste as an alternative to disposal of waste in landfills, represent risks, as well as opportunities, to our current business model. The costs associated with developing or investing in emerging technologies could require substantial capital and adversely affect our results of operations and cash flows. Delays in the development or implementation of such emerging technologies and difficulties in marketing new products or services based on emerging technologies could have similar negative impacts. Our financial results may suffer if we are not able to develop or license emerging technologies, or if a competitor obtains exclusive rights to an emerging technology that disrupts the current methods used in the environmental services industry.</p>
Legal	Relevant, always included	<p>Republic's ability to comply with existing and future legal and regulatory requirements is included in the scope of our climate-related risk assessments. For example, several states have enacted laws that require counties or municipalities to adopt comprehensive plans to reduce, through solid waste planning, composting, recycling or other programs, the volume of solid waste deposited in landfills. Additionally, laws and regulations restricting the disposal of certain waste in solid waste landfills, including yard waste, food waste, newspapers, beverage containers, unshredded tires, lead-acid batteries, electronic wastes and household appliances, have been adopted in several states and are being considered in others. Some jurisdictions have enacted or are considering enacting "extended producer responsibility" regulations, which are designed to obligate producers to fund the post-use life cycle of their products by providing recycling programs for their products. State and municipal governments may also enact "organic diversion" regulations that require food waste to be managed separately from the other waste streams, similar to the rules recently enacted in California. Several states have also enacted or are considering "minimum recycled content" regulations mandating certain minimum post-consumer recycled content in certain types of packaging, including California. Legislative and regulatory measures to mandate or encourage waste reduction and recycling also have been considered, or are under consideration by, the U.S. Congress and the EPA. These regulations may present new opportunities to offer sustainable environmental services to our customers but may require investment of time, effort and money to be able to offer these new solutions and expose us to additional regulatory requirements and competition from others offering these services.</p>
Market	Relevant, always included	<p>Most of the states in which we operate landfills require counties and municipalities to formulate comprehensive plans to reduce the volume of solid waste deposited in landfills through waste planning, composting, recycling or other programs. Some state and local governments mandate waste reduction at the source and prohibit the disposal of certain types of wastes, such as yard waste, at landfills. Further, many of our customers voluntarily are diverting waste to alternatives to landfill disposal, such as recycling and composting, while also working to reduce the amount of waste they generate. Many of the largest companies in the U.S. are setting zero-waste goals in which they strive to send no waste to landfills and some jurisdictions have enacted or are considering waste reduction regulations such as extended producer responsibility, organic diversion and minimum recycled content regulations. Although such actions help to protect our environment and reduce the impact of waste on climate change, they have reduced, and will in the future reduce, the volume of waste going to landfills and may affect the prices that we can charge for landfill disposal. Accordingly, we cannot assure you that we will be able to operate our landfills at their current volumes or charge current prices for landfill disposal services due to possible decreases in demand for such services. If we cannot expand our service offerings and grow lines of business to service waste streams that do not go to landfills and to provide services for customers that wish to reduce waste entirely, this could have a negative effect on our consolidated financial condition, results of operations and cash flows. Further, even if we can develop such service offerings and lines of business, disposal alternatives nonetheless could have a negative effect on our consolidated financial condition, results of operations and cash flows.</p>
Reputation	Relevant, always included	<p>Permits often take years to obtain as a result of numerous hearings and compliance requirements with regard to zoning, environmental and other regulations. These permits are also often subject to resistance from citizen or other groups and other political pressures. Local communities and citizen groups, adjacent landowners, governmental agencies and others may oppose the issuance of a permit or approval we may need, allege violations of the permits under which we currently operate or laws or regulations to which we are subject, or seek to impose liability on us for environmental damage. These risks related to our reputation which may limit our ability to do business are included in our climate-related risk assessments. Responding to these challenges has at times increased our costs and extended the time associated with establishing new landfills and transfer stations and expanding existing landfills. In addition, failure to receive regulatory and zoning approval may prohibit us from establishing new landfills or transfer stations or expanding existing landfills. Our failure to obtain the required permits to operate our landfills and transfer stations could have a material adverse effect on our consolidated financial condition, results of operations and cash flows. As an example of our actions in the event of opposition to our obtaining a permit, improved technical information as a project progresses, or changes in the anticipated economics associated with a project, we may decide to reduce the scope of, or abandon a project, which could result in an asset impairment. Our reputation and follow-through at other sites and in other communities provides a reference point to constituents of these challenging projects.</p>
Acute physical	Relevant, always included	<p>Our operations could be adversely impacted by extreme weather events, changing weather patterns, and rising mean temperature and sea levels, some of which we are already experiencing. For example, we have operations in multiple states that are affected by hurricanes and we have seen the impact of storms and associated flooding in our day-to-day operations and our infrastructure. The Intergovernmental Panel on Climate Change (IPCC), which includes more than 1,300 scientists from the United States and other countries, forecasts a temperature rise of 2.5° to 10° Fahrenheit over the next century. Changing weather patterns and rising temperatures are expected to result in more severe heat waves, fires, storms, and other extreme weather events. Any of these factors could increase the volume of material collected or processed under our existing contracts (without corresponding compensation), impede our employees' and equipment's ability to operate, disrupt our supply chain, delay the development of landfill capacity, or reduce the volume of material generated by our customers. In addition, adverse weather conditions may result in the temporary suspension of our operations, which can significantly affect our operating results in the affected regions during those periods. For example, in 2021 Republic's markets were affected by the Texas Winter Freeze, Oregon Wildfires, Hurricane Elsa (Eastern US), Tropical Storm Fred (Southern US), Hurricane Ida (Southern US), Hurricane Nicholas (TX/LA), and the Heartland Tornado Outbreak (KY). Fortunately, due to our storm preparedness plans, we are able to protect employees and assets and typically were operational within 24 hours of each storm/event. Republic incorporates both acute and chronic physical climate-related risks into its climate-related risk assessments by evaluating our portfolio of operations against current and future climate scenarios to understand how it may be impacted.</p>

	Relevance & inclusion	Please explain
Chronic physical	Relevant, always included	The above described "acute physical" risks such as inclement or severe weather can become chronic when they occur year over year. The nature of the risks to the business are no different, what is different is the degree to which they occur and our corresponding response. Republic incorporates both acute and chronic physical climate-related risks into its climate-related risk assessments by evaluating our portfolio of operations against current and future climate scenarios to understand how it may be impacted by changes to both acute and chronic physical risks. For example, although hurricanes are listed above as an example of an acute risk, the data show that they may soon transition to a chronic risk. According to the National Hurricane Center, the 2021 Atlantic hurricane season was the third-most active hurricane season on record and sixth consecutive year with above average tropical cyclone activity. With a damage total of more than \$80 billion, it was the third-costliest season on record. Like other businesses that operate in these affected areas, we have learned that we must consider the increase in severity of weather events and plan accordingly

C2.3

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

Yes

C2.3a

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

Identifier

Risk 1

Where in the value chain does the risk driver occur?

Direct operations

Risk type & Primary climate-related risk driver

Current regulation	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

Based on an industry trade publication, we operate the fifth largest vocational fleet in the United States. Fuel costs are volatile and a substantial rise or drop in fuel costs could materially affect our revenue and cost of operations, including our ability to manage increases in fuel and energy-related taxes or regulations. Increases in the cost of fuel or petrochemicals would increase our operating expenses. Historically, we have responded to unexpected increases in fuel prices by instituting fuel recovery fees for our customers. We depend on fuel purchased in the open market to operate our collection and transfer trucks and other equipment used for collection, transfer and disposal. Current regulations may result in an increased cost across our direct operations.

Regulatory monitoring is taking place to ensure our existing and planned fleet programs and assets comply with current and future fuel and fleet regulations. The renewable fuel standards that the US EPA sets annually affect the type of fuel our motor vehicle fleet uses. Pursuant to the Energy Independence and Security Act of 2007, the EPA establishes annual renewable fuel volume requirements for four different categories of renewable fuels (renewable fuel, advanced biofuel, cellulosic biofuel, and biomass-based diesel). These volume requirements set standards for the proportion of refiners' or importers' total fuel volume that must contain renewable fuels (as designated by regulation). Additionally, in California, the Advanced Clean Fleets (ACF) rule will require a percentage of vehicles in fleets to be electric vehicles (EVs) at an increasing rate over the next 20 years. Refuse trucks are considered Group 2. These regulations are one of many factors that may affect the cost of the fuel we use.

Time horizon

Short-term

Likelihood

Very likely

Magnitude of impact

Medium

Are you able to provide a potential financial impact figure?

Yes, an estimated range

Potential financial impact figure (currency)

<Not Applicable>

Potential financial impact figure – minimum (currency)

29500000

Potential financial impact figure – maximum (currency)

89050000

Explanation of financial impact figure

Our fuel costs were \$631.1 million in 2022, or 4.7% of revenue. A substantial rise or drop in fuel costs, including our ability to manage increases in fuel- and energy-related taxes or regulations, could materially affect our revenue and cost of operations. For example, at 2022 annual diesel consumption levels of 147.5M gallons, based on data available at the time of publication, a twenty-cent per gallon change in the price of diesel fuel changes our fuel costs by \$29.5 million. By implementing a fuel recovery fee, we could recover this cost.

We also assessed what the impact to our operations would be in the event that a carbon tax of \$63 per ton is implemented utilizing the Sustainable Development Scenario (SDS). We chose to use a carbon tax as an example of a regulatory device that could impact our business because it is a very specific type of policy lever that is readily modeled using scenarios to determine financial impact and demonstrate the resilience of our strategy. The estimated fleet fuel emissions cost impact is based on numerous

assumptions and estimates, is subject to numerous uncertainties, and does not necessarily reflect or predict the actual impact on the Company's fleet fuel emissions costs in the years shown. We have conducted this calculation on the basis of 2022 fuel emissions reducing at an annual rate that would match the 2030 emissions we have committed to under the SBTi. For more information on the impact a carbon tax would have on our operations and the ways we are seeking to mitigate its impact please see our TCFD response at: https://www.republicservices.com/cms/documents/sustainability_reports/2021-Republic-Services-TCFD-Report.pdf

Cost of response to risk

9000000

Description of response and explanation of cost calculation

Fuel costs represent a significant operating expense. When economically practical, we may enter new fuel hedges, renew contracts, or engage in other strategies to mitigate market risk. We had no fuel hedges in place during the reporting year. While we charge fuel recovery fees to a majority of our customers, we are unable to charge such fees to all customers.

We assess the impacts of changes in fuel costs, evaluate options to mitigate those potential impacts, and implement mitigation actions.

We have long been a leader in alternative fuel vehicles, beginning with natural gas vehicles until electric vehicles are commercially viable. Natural gas vehicles produce far fewer carbon emissions than their diesel counterparts and with the use of renewable natural gas (RNG) these vehicles are even more environmentally responsible. We have used RNG to fuel 100% of the natural gas vehicles in our collection fleet since 2020. In 2022, we announced our ambition for electric vehicles to account for 50% of our new vehicle purchases by 2028, further insulating us from fossil fuel price volatility. In 2022, approximately 20% of our 17,000-truck fleet operated on natural gas. Using alternative fuel vehicles provides us a competitive advantage in communities with strict clean emission initiatives that focus on protecting the environment. Although upfront capital costs are higher, using alternative fuels reduces our overall fleet operating costs through lower fuel expenses.

Cost of Response: The cost of management figure is based on the cost to administer fuel recovery fees, the cost of hedges and the cost of converting to CNG. For 2022, the net operating cost impact was negative given the positive operating return on converting to CNG combined with RNG tax credits. Incremental capital cost for a representative 10-year project of 100 vehicles and with 1 fueling station is approximately \$9M (See C2.4 for further details about this project and its positive ROI).

Comment

Identifier

Risk 2

Where in the value chain does the risk driver occur?

Direct operations

Risk type & Primary climate-related risk driver

Acute physical	Cyclone, hurricane, typhoon
----------------	-----------------------------

Primary potential financial impact

Increased direct costs

Climate risk type mapped to traditional financial services industry risk classification

<Not Applicable>

Company-specific description

Our operations could be adversely impacted by extended periods of inclement weather, or by increased severity of weather resulting from climate change, some of which we likely are already experiencing. For example, in 2021 we experienced significant impacts from 7 major climate events (1 fire, 1 winter storm, 1 tornado, 4 tropical storms/hurricanes). Recent studies suggest that global warming is occurring faster than previously projected, with the US EPA projecting a 3° to 12° Fahrenheit temperature increase in the United States by the end of the century. In addition to sea level rise, this temperature increase is expected to result in more severe droughts, floods, and other extreme weather events. Any of these factors could increase the volume of waste collected under our existing contracts (without corresponding compensation); interfere with collection, transfer station and landfill operations, delay the development of landfill capacity; or reduce the volume of waste generated by our customers. In addition, adverse weather conditions may result in the temporary suspension of our operations, which can affect our operating results in the affected regions during those periods. Notably, while weather events such as hurricanes may increase the amount of material that is sent to our landfills, they could negatively impact the quality of recycling materials, making those materials unsalvageable and therefore decreasing profitability.

Time horizon

Short-term

Likelihood

Very likely

Magnitude of impact

Medium-low

Are you able to provide a potential financial impact figure?

Yes, an estimated range

Potential financial impact figure (currency)

<Not Applicable>

Potential financial impact figure – minimum (currency)

476000

Potential financial impact figure – maximum (currency)

2027000

Explanation of financial impact figure

We calculated the minimum financial impact figure by taking an average of tons of commodities sold per month across various facilities in 2022 (2.4 million tons/year across 71 facilities averages more than 2,800 tons/month at one facility) multiplied by the average sale of materials (SOM) value for 2022 (\$203/ton used for this analysis). This estimates that the loss for one month of downtime at an average-sized facility caused by a weather event would be approximately \$476,000. The financial impact would be greater from multiple months of downtime at average-size facilities or closures at larger facilities, which can produce 12,000 tons per month. The financial loss from a one-month closure of one of these larger facilities would be approximately \$2,027,000. As an example, we had to shut down a large recycling facility in New Orleans for 1 month after Hurricane Katrina, which resulted in approximately \$1.5M in lost recycling revenue (inflation-adjusted to 2023 dollars).

Cost of response to risk

2500000

Description of response and explanation of cost calculation

Management action case study: Republic reviews physical risks to our business as part of a risk management process, which is ongoing, and considered more than once per. As we identify and prioritize critical risks to our physical assets, we implement the changes or management programs, where necessary, to mitigate the impacts. We have put in place and continue to update an Emergency Preparedness and Disaster Recovery Plan for Field Staff and perform local-level training on an ongoing basis. Each Area President (AP), or designee, owns this plan and its implementation for their respective region. The Plan not only prepares Republic for impact to our assets and operations, but it also ensures business continuity shortly after severe weather events, by providing field staff with guidance in preparing for an emergency or recovery from a natural disaster. Republic starts planning as soon as we learn of an impending storm. For example, in 2019, Hurricane Dorian was bearing down on the Southeast, where Republic has collection, recycling and landfill operations. The business continuity teams prepared for protection of our people and their families, our assets and our customers. We discuss and arrange shelter locations and ensure that all employees are safe and secure before the storm strikes. We also move trucks and equipment to high ground, secure recycling facilities and place landfills into safe mode. Finally, we provide guidance to our customers to prepare their carts and containers to withstand the storm and to prevent them from becoming a hazard during the storm. These actions help to minimize impact to our people and assets during the storm and ensure we can be back up and running as soon as possible after the storm passes. This plan was initially developed following the 2005 Hurricanes Katrina and Rita recovery efforts and is regularly deployed, as needed. Republic also maintains property and other forms of insurance to protect against catastrophic losses of assets.

Cost of response: Costs to manage this risk continue to be incorporated into our business-as-usual activities, but do include insurance premiums, program management costs associated with developing and maintaining the Emergency Preparedness and Disaster Recovery Plan for Field Staff, training that is done each year to make sure the local coordinator is up to speed, and cost to maintain back-up generators. In total, this cost is approximately \$2.5M.

Comment

Identifier

Risk 3

Where in the value chain does the risk driver occur?

Direct operations

Risk type & Primary climate-related risk driver

Market	Changing customer behavior
--------	----------------------------

Primary potential financial impact

Decreased revenues due to reduced demand for products and services

Climate risk type mapped to traditional financial services industry risk classification

<Not Applicable>

Company-specific description

We purchase or collect and process recyclable materials such as paper, cardboard, plastics, aluminum and other metals for sale to third parties. In 2022, recycling and organics operations accounted for 9.9% of our total revenue. Our results of operations may be affected by changing prices or market requirements for recyclable materials. The resale and purchase prices of, and market demand for, recyclable materials are volatile due to changes in economic conditions, governmental regulation, and numerous other factors beyond our control. For instance, in 2017 the Chinese government imposed strict limits on the import of recyclable materials. These limitations significantly decreased the global demand for recyclable materials and resulted in lower commodity prices. In the American context, consumer handling and sorting of recyclables is limited in magnitude and quality. Lower quality and poorly sorted recyclables incur increased handling costs and reduced commodity value. Our performance may be affected by changing prices or market requirements for recyclable materials. The resale and purchase prices of, and market demand for, recyclable materials are volatile due to changes in economic conditions, lack of market/social drivers and numerous other factors beyond our control.

Time horizon

Short-term

Likelihood

Very likely

Magnitude of impact

Medium-low

Are you able to provide a potential financial impact figure?

Yes, a single figure estimate

Potential financial impact figure (currency)

10000000

Potential financial impact figure – minimum (currency)

<Not Applicable>

Potential financial impact figure – maximum (currency)

<Not Applicable>

Explanation of financial impact figure

At 2022 volumes and mix of materials, we believe a \$10 per ton change in the price of recycled commodities has the potential to change both annual revenue and operating income by approximately \$10 million. We calculate this using several factors that impact our operating costs and revenues. We then compare the difference in costs and revenues resulting from the associated adjustments in the price of our commodities sold. The potential financial impact includes factors beyond volume and material mix, including municipal billing cycles and other factors that impact billed rates. In 2022, revenue from recycling declined due to a combination of factors, including shifts in commodity prices and volumes of various commodities managed. Consumer demand for products made from recycled inputs drives up commodity prices and consumer ability to recycle correctly drives down recycling processing costs.

Cost of response to risk

0

Description of response and explanation of cost calculation

Management action case study: In order to drive increased demand for and the value of recycling, we actively provide education in numerous communities to help consumers and businesses understand the value of recycling and the importance of proper separation of recyclables to minimize contamination. Republic's Recycling Simplified consumer education campaign won the 2019 Best Recycling Public Education Program Award from the National Waste & Recycling Association, which recognizes innovators and leaders in the industry who have made substantial contributions to American recycling through partnerships, public education and innovations in recycling facilities. Winners were selected by a panel of judges who are professionals in the waste and recycling industry as well as from other technology and education

organizations. After the 2018 launch of the Recycling Simplified initiative and a supporting national public relations campaign, we executed a \$2 million multichannel marketing campaign in 2019 in six cities to further help reduce contamination rates by focusing on what and how to recycle correctly. The local campaigns employed radio ads, billboards and social media to reach residents. In two of the markets, pre- and post-campaign audits were conducted on residential recycling routes, which found that contamination rates had decreased significantly in both communities. In addition, we are working with our customers to move to a more sustainable economic model that includes a fee for the services we provide and a more equitable commodity risk sharing arrangement. This action will reduce our risk exposure in the future.

Cost of response: The cost of management of this risk includes our community training programs and materials, and recycling contract management program. However, implementation of the training program and the contract management program result in positive benefits through cleaner recycling streams, and therefore greater revenue, that outweigh all the management costs. Therefore, this cost was negative (zero entered in the field above, as a negative number is not allowed).

Comment

C2.4

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

Yes

C2.4a

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

Identifier

Opp1

Where in the value chain does the opportunity occur?

Direct operations

Opportunity type

Energy source

Primary climate-related opportunity driver

Use of lower-emission sources of energy

Primary potential financial impact

Reduced direct costs

Company-specific description

Many municipalities and residents are concerned about greenhouse gas and air emissions from large heavy-duty truck fleets, especially from diesel-use. Some have passed regulations and/or ordinances to mitigate these impacts, for example our customer, the City of Los Angeles. Republic has responded to this concern by converting 20% of our fleet to compressed natural gas (CNG) vehicles, with fuel sourced as renewable natural gas (RNG). The use of RNG lowers our operational costs in two ways. First, any CNG use (including RNG) insulates us from price increases and fluctuations associated with diesel fuel, which is often subject to additional regulatory taxes and tariffs, e.g. at the end of 2022, diesel averaged \$4.58/gallon, \$0.82 more than CNG, which averaged \$3.76/DGE (diesel-gallon-equivalent is a normalized measure across different types of fuel). Second, RNG is priced even lower by utilizing tax and/or renewable energy credits. Pursuant to the Energy Independence and Security Act of 2007, the US EPA establishes annual renewable fuel volume requirements for four different categories of renewable fuels (renewable fuel, advanced biofuel, cellulosic biofuel, and biomass-based diesel). These volume requirements set standards for the proportion of refiners' or importers' total fuel volume that must contain renewable fuels (as designated by regulation). The total volume metrics for each year vary based upon a number of factors (e.g., the availability of such fuels), and it is difficult to predict the ultimate quantity that the US EPA will eventually mandate for future years. These regulations are one of many factors that may affect the cost of the fuel we use in operations.

In addition to the positive impacts of reduced operational costs and emissions, switching to a low-emission fuel also provides us with a competitive advantage in the marketplace that can translate into additional business.

Time horizon

Short-term

Likelihood

Virtually certain

Magnitude of impact

Medium

Are you able to provide a potential financial impact figure?

Yes, a single figure estimate

Potential financial impact figure (currency)

53000000

Potential financial impact figure – minimum (currency)

<Not Applicable>

Potential financial impact figure – maximum (currency)

<Not Applicable>

Explanation of financial impact figure

The potential financial impact represents the savings and revenue from RNG fuel usage compared to diesel over a 10-year project period for 100 CNG vehicles. These calculations use U.S. DOE Clean Cities Alternative Fuel Price Report's \$4.58/gal for diesel and \$3.67/DGE for CNG. The calculations also factor in other deployment related variables, including estimated annual revenue associated with RNG credits based on actual 2022 revenue earned by Republic. The total 10-year savings plus revenue is \$53M.

Cost to realize opportunity

9000000

Strategy to realize opportunity and explanation of cost calculation

Management action case study: Using renewable natural gas (RNG) vehicles provides us a competitive advantage in communities with strict clean emission initiatives that focus on protecting the environment. This is a two-step process which included introduction of CNG vehicles and fueling stations, which we began over 10 years ago, followed by the growing use of RNG, which began in 2016. With 20% of our fleet comprised of CNG vehicles, running on RNG, we are looking to the next step of alternative vehicle conversion. We have begun running electric vehicles in multiple markets, and over the next five years we estimate that half of our new truck purchase will be electric. In the meantime, decisions for our CNG fueling stations and fleet are based in part on municipal contracts that favor companies that can meet the strictest air emissions requirements or companies that are leading sustainability brands. These communities are prevalent on the West coast, East coast and some parts of the Midwest. Republic is able to win these contracts by demonstrating our commitment to RNG as a clean fuel.

The total additional investment required to access this opportunity was \$9M as the cost difference to replace 100 diesel trucks (at normal retirement age) with CNG trucks, the installation of a fueling station, and additional maintenance costs over a 10-year period.

Comment**Identifier**

Opp2

Where in the value chain does the opportunity occur?

Direct operations

Opportunity type

Resilience

Primary climate-related opportunity driver

Other, please specify (Essential service to aid climate related recovery)

Primary potential financial impact

Increased revenues resulting from increased demand for products and services

Company-specific description

Republic provides recycling, solid waste, and broader environmental services throughout North America, where we have seen an increase in frequency of severe weather events over the last decade. While these events can cause service disruption during the actual storms, the clean-up efforts required after an event typically result in an increase in demand for our services due to storm damage to buildings, infrastructure, trees and other natural areas that require quick, reliable transport and responsible disposal, including recycling and emergency response. We have business continuity plans in place for severe weather, natural disasters and other emergencies—hurricanes, tornadoes, flooding, winter storms, earthquakes and wildfires, among others—to help limit disruptions in our operations and help ensure the continuity of our services.

Time horizon

Short-term

Likelihood

Likely

Magnitude of impact

Medium-low

Are you able to provide a potential financial impact figure?

Yes, an estimated range

Potential financial impact figure (currency)

<Not Applicable>

Potential financial impact figure – minimum (currency)

1000000

Potential financial impact figure – maximum (currency)

10000000

Explanation of financial impact figure

Our operations can be favorably affected by severe weather, which can increase the volume of waste in situations where we are able to charge for our additional services or provide services when our competitors are not able to operate due to storm damage to their assets or operations. Republic estimates revenue from these events to range from \$1-10 million, based on the amount of incremental material created by the storm and Republic's market share in the affected areas. As an example, the Solid Waste Association of North America estimated that Hurricane Michael in 2018 resulted in 13 million tons of storm debris in two counties. Assuming 75% of storm debris is taken to landfills at an average FEMA landfill rate of \$10/ton, this would result in \$97.5M of incremental revenue opportunity. If Republic was awarded a 10% share of this business, we would receive \$9.75M in storm related revenue. This revenue can be offset or exceeded by costs for overtime, extra hauling distances, etc.

Cost to realize opportunity

2500000

Strategy to realize opportunity and explanation of cost calculation

Management action case study: In 2021, we took the opportunity to invest more capital into our Emergency Preparedness and Disaster Recovery Plans in to better position ourselves in the event of climate or natural disasters. This investment allowed us to make significant progress towards preparation plans in addition to yearly supply restocking, for example we invested in supporting electrical work to install switches so our larger generators are "plug and play" when they are needed. Our plan for field staff not only prepares us for impact to our assets, it also aims to keep our business, an essential service, up and running. The plan provides field staff with guidance in preparing for an emergency or recovery from a natural disaster. Republic starts planning as soon as we learn of an impending storm. For example, in 2019, Hurricane Dorian was bearing down on the Southeast, where Republic has significant operations. The business continuity teams planned in advance for protection of our people and their families, our assets and our customers. These actions helped minimize impact to our people and assets to ensure we were back up and running as soon as possible after the storm passed.

Republic begins operations as soon as local emergency management officials give the go ahead. We begin by ensuring that all employees are accounted for and assess damage to their personal property. We also ensure they and their families have meals, clothing and daily necessities. Our teams then resume collection of solid waste and recycling once roads are clear and we provide storm debris removal where contracted by FEMA. Our early preparation generally enables us to be one of the first service providers back on the streets, which positions us well to win storm debris removal contracts and to pick up business where our competitors are not able to resume operations as quickly. The Plan was initially developed following the 2005 Hurricanes Katrina and Rita recovery efforts and continues to be evaluated and implemented annually.

Cost calculation: Costs to manage this opportunity are incorporated into our business-as-usual planned spending activities, but do include program management costs associated with developing and maintaining the Plan document, annual training is done each year to keep the local coordinator up to speed, and cost to maintain

generators. In 2021, this cost was roughly \$2.5M incremental to the business.

Comment

There can be costs associated with the revenue opportunity due to costs for overtime, extra hauling distances, etc. caused by the amount of debris over and above typical daily collection needs of the community. These costs are not factored into the above cost to realize opportunity as they are highly variable and unpredictable.

In addition to our recycling and organics business we have heavily invested in our environmental solutions business line, including the \$2.2 billion acquisition of US Ecology in 2022, which will allow us to provide customers with environmentally responsible solutions to manage their waste needs including treatment, consolidation and disposal of solid and liquid material, field and industrial services, rental, and in-plant services, such as transportation and logistics. In 2022, approximately 9.3% of our revenue was derived from environmental solutions.

Identifier

Opp3

Where in the value chain does the opportunity occur?

Direct operations

Opportunity type

Products and services

Primary climate-related opportunity driver

Development of new products or services through R&D and innovation

Primary potential financial impact

Increased revenues resulting from increased demand for products and services

Company-specific description

Republic sees a broad societal trend toward landfill diversion, driven in part by concerns over climate change. Landfills are a known source of GHG emissions and a significant portion of Republic's footprint. We are actively looking for ways to reduce organic materials in our landfills that generate methane upon decomposition, like fiber, food, and yard waste. Recycling and composting not only removes organics from landfills, but it returns recycled materials to industries that have large carbon footprints associated with their mining and/or production, such as aluminum, plastic, metals, and fertilizers. As such we have invested \$117M into upgrading our recycling facilities, and an additional \$9.5M in organics processing infrastructure to more efficiently handle and capture materials. As of December 31, 2022, we operated 71 recycling facilities and have publicly committed to increase our recovery of key materials by 40% on a combined basis by 2030. The investment in these facilities enabled us to process 5.5 million tons and sell 2.4 million tons of key material and organics in 2022.

The listed investments include funds used toward the development of our Polymer Center network, North America's first integrated plastics recycling facility, managing recyclables from curbside collection to delivery of high-quality recycled content for consumer packaging, which will directly address increasing demand from consumer brands and packaging manufacturers for recycled plastic, enabling greater circularity. Our first Polymer Center will open in Las Vegas in 2023 and Republic anticipates opening several more centers to provide national coverage and further drive circularity.

Time horizon

Short-term

Likelihood

Very likely

Magnitude of impact

High

Are you able to provide a potential financial impact figure?

Yes, a single figure estimate

Potential financial impact figure (currency)

1334000000

Potential financial impact figure – minimum (currency)

<Not Applicable>

Potential financial impact figure – maximum (currency)

<Not Applicable>

Explanation of financial impact figure

Our 2022 recycling and organics collection, processing and commodity sales were approximately \$1.334 billion or 9.9% of our revenue. We have an opportunity to retain and/or gain business by providing alternative methods of managing waste, such as recycling and composting. In 2022, we managed 6.3M short tons (5.7M metric tons) of recycled material and 1.0M short tons (0.9M metric tons) of organic material. We are investing in innovative recycling technology and have expanded our organics operations to help customers meet their diversion goals. We are committed to increasing market demand for recycling and recycled commodities.

Cost to realize opportunity

126500000

Strategy to realize opportunity and explanation of cost calculation

Management action case study: As population increases, we expect waste generation to increase, however, there is a growing trend of waste diversion to alternative options beyond landfills, such as recycling and composting. Many of our customers voluntarily are diverting waste from landfills while also working to reduce the amount of waste they generate. Additionally, many of the largest companies in the U.S. are setting zero-waste goals in which they strive to send no waste to landfills and some jurisdictions have enacted or are considering waste reduction regulations such as extended producer responsibility, organic diversion and minimum recycled content regulations. Our strategy to capture this opportunity is to invest in recycling and composting facilities and expand our capabilities.

We continue to invest in proven technologies to control costs and to simplify and streamline recycling for our customers. For example, we use robotics and advanced sorting equipment, such as disk screens, magnets and optical sorters, to identify and separate different kinds of paper, metals, plastics and other materials increasing efficiency and maximizing our recycling volume. Many of Republic's composting facilities are technologically advanced, using mechanical aeration to speed up the biological process and reduce odors. The facility at the Otay Landfill in Chula Vista, Calif., is an innovative example – it's completely off the grid, using solar-powered fans and a cover technology that requires little energy consumption and traps odors, dust and emissions.

We will continue to look for opportunities to expand our recycling capabilities in markets where customers are demanding these services and demonstrating a willingness to pay, and we can earn an appropriate return on our investment. We were able to turn this opportunity into a profitable new line of business, with a separate business model from our core collection business which incorporated our sustainability strategy. This also allowed us to respond to our stakeholders' concerns about landfill emissions.

Cost calculation: We invested approximately \$117 and \$9.5 million of capital in 2022 to expand, refurbish, build and acquire assets in our recycling and organics businesses (respectively) for a total investment of \$126.5M.

Comment

C3. Business Strategy

C3.1

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

Row 1

Climate transition plan

No, but our strategy has been influenced by climate-related risks and opportunities, and we are developing a climate transition plan within two years

Publicly available climate transition plan

<Not Applicable>

Mechanism by which feedback is collected from shareholders on your climate transition plan

<Not Applicable>

Description of feedback mechanism

<Not Applicable>

Frequency of feedback collection

<Not Applicable>

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

<Not Applicable>

Explain why your organization does not have a climate transition plan that aligns with a 1.5°C world and any plans to develop one in the future

Our current climate transition roadmap, found on page 34 of our 2022 Sustainability Report (URL below), is aligned with our SBTi-approved, well-below 2 degrees emissions reduction target. SBTi considers our target valid until 2025. In order to maintain SBTi approval, we will need to advance our target to align with a 1.5°C world, and such advancement would be coupled with a plan to achieve that transition.

See <https://investor.republicservices.com/static-files/24010725-16c0-445f-a5d6-bab0c897a41f3page=38>

Explain why climate-related risks and opportunities have not influenced your strategy

<Not Applicable>

C3.2

(C3.2) Does your organization use climate-related scenario analysis to inform its strategy?

	Use of climate-related scenario analysis to inform strategy	Primary reason why your organization does not use climate-related scenario analysis to inform its strategy	Explain why your organization does not use climate-related scenario analysis to inform its strategy and any plans to use it in the future
Row 1	Yes, qualitative and quantitative	<Not Applicable>	<Not Applicable>

C3.2a

(C3.2a) Provide details of your organization’s use of climate-related scenario analysis.

Climate-related scenario	Scenario analysis coverage	Temperature alignment of scenario	Parameters, assumptions, analytical choices
Transition scenarios IEA SDS	Company-wide	<Not Applicable>	<p>i) Republic Services assesses climate impacts at Republic sites that may be in regions with measurable levels of water, heat or precipitation risks. To evaluate impact on our operations we considered facility size in regions moderately or highly impacted by the scenario analysis. Assumptions/estimates were used to fill gaps for missing data on square footage to create portfolio wide intensities. This method allowed a comprehensive yet efficient assessment of key risks across our portfolio of sites.</p> <p>ii) Republic’s risk assessment identifies the regions and sites which may have drought, flood, or heat risk(s) today and in the future. We used a business-as-usual stress and demand scenario in 2030, using RCP2.6, 4.5, 6.0 and 8.5 to analyze heat and precipitation. We also reviewed transition risks using SDS and STEPS. These assumptions are relevant with our corporate strategy and length of asset ownership for landfills.</p> <p>iii) The analysis includes our owned and operated sites by type and considers key factors identified by the WRI Aqueduct tool and IPCC standards to identify and characterize our operations across potential water-stressed regions, floods zones, and extreme heat impacts.</p> <p>i) Results - Based on the assessment undertaken to date, we have not directly changed our business strategy in relation to these risks caused by climate change.</p> <p>ii & iii) One of the inputs into our analysis initially considered whether these risk occurrences could have a substantive impact at any of our landfill sites, and if so, how would the business respond to both existing sites and future sites where risks may be higher based on WRI Aqueduct and RCP scenario data. As an example, while Republic did determine that 19% of our landfills (by square footage) are in watersheds with an extremely high level of flood occurrence, the actual impacts of floods on these sites are manageable, and thus would not substantively impact our business operations, community or employee health, and/ or growth strategy. Through this analysis, we are creating an open dialogue with our operations teams which has started to inform our strategic growth strategy for operational excellence, safety, compliance and efficiency performance across all of our sites.</p>

(C3.2b) Provide details of the focal questions your organization seeks to address by using climate-related scenario analysis, and summarize the results with respect to these questions.

Row 1

Focal questions

For our climate scenario analysis Republic is focusing on analyzing chronic changing temperature and precipitation patterns to build an understanding of our exposure to physical climate risks. This analysis prepares Republic to identify key locations that may need additional investment in adaptation and mitigation strategies and resources to support resiliency to climate change.

Results of the climate-related scenario analysis with respect to the focal questions

Rising Temperatures-The results for the RCP 4.5 heat assessment conducted on our 2021 operations indicate 1035 sites will have impacts of temperature increases 1.5 degrees or greater, while RCP 8.5 indicates this number to be 1116. The occupational risks of heat stress may include restricted physical functions and capabilities, work capacity, and productivity. Increasing temperatures is widely cited in literature as a primary driver of employee productivity loss. To understand potential future impacts of increasing heat, we examined the impacts of historical heat waves such as the Pacific Northwest heat wave and did not find a noticeable correlation between heat and productivity loss or employee turnover. However, Republic understands that the past exposure may not be indicative of future impacts. Compounding implications may arise from an overall increase in baseline temperatures. To address and mitigate the potential implications of extreme temperatures on our employees, Republic implemented a Summer Safety Plan including our annual '101 Days of Summer' program, which aims to educate, and set actions and expectations to ensure a safe and successful summer season. This includes protocols for ensuring truck A/Cs are properly functioning months prior to the season, employees are adequately hydrated while enroute, and specific cooling PPE is provided to outdoor workforce. A secondary impact on our operations from rising mean temperatures is increased building cooling and energy costs. As temperatures rise, demand for cooling will increase, impacting the prices and reliability of power to facilities.

Precipitation Change-The results of the RCP 4.5 assessment conducted on our 2021 operations indicate that 207 sites are expected to see impacts due to precipitation change while the results of RCP 8.5 indicate 977 sites impacted by precipitation change. We estimate that our largest business implication from increased precipitation comes from the potential for increased landfill leachate. Leachate can be costly to manage properly because of the level of treatment prior to discharge back into a water system. Some wastewater treatment plants require pretreatment or are increasing their rates for incoming leachate. In addition to leachate at landfills, a significant increase in precipitation could generate an increase in cost to stormwater management protocol. This could be in the form of upsizing existing infrastructure, increased costs related to permitting, or liabilities from unmanaged stormwater due to large storm events. The secondary driver of business implications from precipitation increase is attributed to a delay in service either through building damage or transportation infrastructure damage from flooding. For Republic, this is not likely to result in revenue loss as Republic has long-standing relationships and contracts with our customers but would rather be a delay in revenue as the service will continue once operations are running

(C3.3) Describe where and how climate-related risks and opportunities have influenced your strategy.

	Have climate-related risks and opportunities influenced your strategy in this area?	Description of influence
Products and services	Yes	<p>Recycling (C2.4a, Opp 3): Risks and opportunities related to the shifting market demand for waste solutions that result in fewer greenhouse gas emissions have influenced our municipal, commercial, and residential service offerings. Case study of substantive decisions - Republic created a strategic initiative in 2012 to provide recycling collection and processing services in markets with high demand in response to climate concerns of our customers. We partner with customers to develop new contractual arrangements that are dynamic and mutually beneficial, and incentivize improved recycling behaviors, bringing simplification to customers and the general public alike on what and how to recycle. Each year during our annual budgeting process we determine where to invest capital to expand, modernize or establish our recycling capabilities based on market demand as indicated through our annual Market Planning and Development Process. We are committed to recycling for the long term and continue to invest in technology that increases efficiencies and maximizes the recovery of higher quality recyclables. We recognize our facilities must continually evolve to address consumer trends, as well as changing package designs and unprecedented levels of contamination. In 2022, Republic invested \$117 million in technology and equipment upgrades at our recycling facilities and an additional \$9.5 million at our organics facilities. These investments enable us to provide an industry-leading recycling and composting services to our customers.</p> <p>These services are not mandated across all markets, however, in 2022, the percent of customers receiving these services by service type was as follows: Recycling Residential - 75% Commercial - 25% Industrial - 25% Organics Residential - 25% Commercial - 2% Industrial - 2%</p> <p>Our 2022 revenue from our recycling and organics business was \$1,334M. These activities improve diversion from landfills and reduce the emissions associated with organic decomposition.</p> <p>Time horizon – this opportunity spans short, medium and long-term as we are experiencing demand for recycling today and these facilities have a ten-to forty-year lifetime.</p>
Supply chain and/or value chain	Yes	<p>Lower emission fuel/energy sources (C2.4a, Opp 1): Risks and opportunities related to the market demand for lower emission fuel sources and the desire to insulate our business from potential regulations on fossil fuel have influenced our supply chain strategy with our key truck/engine suppliers.</p> <p>Case study of substantive decisions - Leveraging lower-emission fuel sources requires working with major truck/engine suppliers and developing relationships with new fuel and fueling station suppliers. As the operator of one of the largest fleets in the country, these efforts are strategic to our supply chain department. Republic has worked with key suppliers over the past several years to develop and deploy clean fuel engines (CNG), as well as, the development and installation of CNG fueling stations. Our previous investments in CNG trucks and fueling stations have made the use of RNG seamless. We have worked with suppliers to create and purchase RNG as a drop-in fuel replacement for CNG. Using trucks powered by RNG helped us meet our previous emissions goal, established in 2014, earlier than expected. Currently 100% of our collection vehicles that operate on natural gas, 20% of our total fleet, are powered by RNG.</p> <p>We are taking a leadership position in electric technology innovation for our fleet. This is a critical step toward reducing our environmental impact through lower fleet emissions and will also improve our total cost of ownership while providing competitive advantages in certain communities. We are partnering with multiple manufacturers to pilot electric-powered trucks. Our EV deployment continues with an expected 4x increase in the number of electric vehicles on the road by the end of 2023.</p> <p>Time horizon – this opportunity spans short to medium-term as we are rolling out RNG-ready trucks today. As our diesel vehicles reach the end of their 10-12-year lifetime, we have begun replacing them with electric vehicles, and our industry-leading ambition is for 50% of new vehicle purchases to be electric by 2028.</p>
Investment in R&D	No	Republic does not incur material R&D expenses, apart from those outlined previously in this report
Operations	Yes	<p>Diesel Fuel Costs (C2.3a, Risk 1): Potential and realized increases to fossil fuel costs due to regulations and taxes aimed at reducing greenhouse gas emissions related to fossil fuels have led Republic to develop a strategic program to seek alternative sources of fuel to mitigate climate change impacts for our customers and our business.</p> <p>Case study of substantive decisions – Our recycling and waste collection trucks are complex, high-performance machines designed to be safe, comfortable and efficient. As we retire and replace older trucks, we are able to take advantage of advancements in alternative fuels in addition to safety technology and other modern efficiencies. Trucks running on alternative fuels like RNG emit fewer emissions and are less carbon intensive, which is why we continue to transition our fleet toward natural gas. Our alternative fuel programs are typically executed by Corporate and rolled out to the operations teams strategically based on the age of the vehicles in each local business unit and local demand for lower emissions collection vehicles. Powering our fleet with renewable natural gas is one way we are lowering our emissions. We partner with Clean Energy Fuels to help us manage our 40 natural gas fueling stations and to deliver RNG to those stations. In 2019, we initiated three expansion projects to further our commitment to use renewable natural gas as a bridging fuel to lower fleet emissions. With one of the largest vocational fleets in the country, using innovative technology to reduce emissions is vital. As of December 31, 2021, 20% of our fleet operated on renewable natural gas. A sample project retiring 100 diesel vehicles with RNG-powered trucks would net an estimated \$44M over 10 years.</p> <p>Time horizon – this opportunity spans short to medium-term as we are purchasing RNG as a bridge fuel today and our initiative will span 5-10 more years as we continue to use RNG bridging the gap to the eventual transition to electric vehicles.</p>

C3.4

(C3.4) Describe where and how climate-related risks and opportunities have influenced your financial planning.

	Financial planning elements that have been influenced	Description of influence
Row 1	Revenues Direct costs Indirect costs Capital expenditures Capital allocation Acquisitions and divestments Access to capital	<p>Most of the states in which we operate landfills require counties and municipalities to formulate comprehensive plans to reduce the volume of solid waste deposited in landfills through waste planning, composting, recycling or other programs. In addition, many of the world's largest companies are setting zero-waste goals in which they strive to less than 10% of their waste to end-of-life. Although such actions help to protect our environment and reduce the impact of waste on climate change, they may reduce the volume of waste going to landfills which may affect the prices that we charge for landfill disposal.</p> <p>We identified a risk that we would not be able to operate our landfills at their current volumes or charge current prices for landfill disposal services due to possible decreases in demand for such services. This trend is related to the effects of the "evolving ton" which we have been tracking and managing for many years. Recycling is on the rise and the mix of materials is leaning towards lighter materials like plastic versus glass and steel. Our response in 2012 was to launch a strategic initiative to develop traditional recycling in select and prioritized markets to capitalize on this trend. This initiative primarily impacts revenue planning, because we have developed a revenue stream, and capital planning to develop the recycling infrastructure. Republic strategically built out this infrastructure and capability over the past decade. As of December 31, 2022, we had 71 recycling and 19 organics facilities across the company. We continue to invest in this initiative as shown by our \$126.5M capital investments in recycling and organics, including our initial Polymer Center - North America's first integrated plastics recycling facility - set to open in Las Vegas in 2023.</p> <p>Revenue: In 2022, our recycling and organics business brought in \$1,334M, on a top-line revenue of \$13,511M. As consumer demand for recycling services has increased, we have met that demand by expanding our recycling offerings.</p> <p>Capital expenditures and allocation: During our annual strategic planning process, we identify requirements for continued efficient capital allocation and organic growth opportunities for capital expenditures. The proportion of each is factored into our annual financial planning process to ensure that the business meets its cash flow and growth objectives. Capital allocations for our recycling strategic initiative change each year based on market dynamics. In 2022, we invested \$72M in expansions, renovations, technology, and development of recycle and organics capabilities, our extensive investments to establish our Polymer Center network and to acquire additional recycling capabilities. We continue to invest in proven technologies to control direct costs and indirect costs and to simplify and streamline recycling for our customers. For example, robotics and advanced sorting equipment, such as disk screens, magnets and optical sorters, identify and separate different kinds of paper, metals, plastics and other materials to increase efficiency and maximize our recycling efforts.</p> <p>Time horizon of influence – this opportunity spans short, medium and long-term as we are experiencing demand for recycling today and these facilities have a ten-to forty-year lifetime.</p> <p>We utilized sustainability-linked KPIs in a credit facility to further demonstrate our commitment to meeting our sustainability goals and help generate favorable financial terms for the company. We have tied factors of a credit facility to two of our sustainability goals: Incident Reduction and Renewable Energy. For each KPI, annual upper and lower thresholds were established. Positive performance will generate savings in bank fees and an improvement in our credit facility borrowing rate. Poor performance will result in financial penalties, which provides additional incentive to meet our sustainability goals</p>

C3.5

(C3.5) In your organization's financial accounting, do you identify spending/revenue that is aligned with your organization's climate transition?

	Identification of spending/revenue that is aligned with your organization's climate transition	Indicate the level at which you identify the alignment of your spending/revenue with a sustainable finance taxonomy
Row 1	Yes, we identify alignment with a sustainable finance taxonomy	At both the company and activity level

C3.5a

(C3.5a) Quantify the percentage share of your spending/revenue that is aligned with your organization's climate transition.

Financial Metric

CAPEX

Type of alignment being reported for this financial metric

Alignment with a sustainable finance taxonomy

Taxonomy under which information is being reported

Other, please specify (Republic Services classification)

Objective under which alignment is being reported

Total across all objectives

Amount of selected financial metric that is aligned in the reporting year (unit currency as selected in C0.4)

318631114

Percentage share of selected financial metric aligned in the reporting year (%)

21.9

Percentage share of selected financial metric planned to align in 2025 (%)

23.3

Percentage share of selected financial metric planned to align in 2030 (%)

25

Describe the methodology used to identify spending/revenue that is aligned

While we identified EU sustainable taxonomy activities Republic Services engages in, we did not perform an analysis to assess alignment with the criteria outlined in the EU Sustainable Taxonomy. Republic does not operate or sell products/services in the EU and is not subject to the EU Taxonomy for Sustainable Activities Taxonomy regulation. To report the CapEx (\$s) spend percentage in the reporting year, we identified the amount of spend capital that was allocated spent in the reporting year on the toward emission-reducing activities named in the EU Sustainable Taxonomy such as recycling and organics infrastructure and equipment material recovery from non-hazardous waste; , landfill gas capture and utilization collection systems and to energy projects;; sustainable vehicles and transportation infrastructure composting of biowaste;; etc. To calculate the percentage share, we compared divided by to total company capital expenditures. To calculate the percentage planned in 2025 moving forward we assumed that total capex increased by 6.54.6%, which is in line with the prior 34-year period. To calculate the percentage planned in 2030, For future spend, calculations we included both knowledge of future increases on specific emissions-reducing climate-related activities and historical averages.

C3.5b

(C3.5b) Quantify the percentage share of your spending/revenue that was associated with eligible and aligned activities under the sustainable finance taxonomy in the reporting year.

Economic activity

Landfill gas capture and utilization

Taxonomy under which information is being reported

Other, please specify (Republic Services classification)

Taxonomy Alignment

Taxonomy-eligible but not aligned

Financial metric(s)

CAPEX

Taxonomy-aligned turnover from this activity in the reporting year (unit currency as selected in C0.4)

<Not Applicable>

Taxonomy-aligned turnover from this activity as % of total turnover in the reporting year

<Not Applicable>

Taxonomy-aligned turnover from this activity that substantially contributed to climate change mitigation as a % of total turnover in the reporting year

<Not Applicable>

Taxonomy-aligned turnover from this activity that substantially contributed to climate change adaptation as a % of total turnover in the reporting year

<Not Applicable>

Taxonomy-eligible but not aligned turnover from this activity in the reporting year (unit currency as selected in C0.4)

<Not Applicable>

Taxonomy-eligible but not aligned turnover from this activity as % of total turnover in the reporting year

<Not Applicable>

Taxonomy-aligned CAPEX from this activity in the reporting year (unit currency as selected in C0.4)

<Not Applicable>

Taxonomy-aligned CAPEX from this activity as % of total CAPEX in the reporting year

<Not Applicable>

Taxonomy-aligned CAPEX from this activity that substantially contributed to climate change mitigation as a % of total CAPEX in the reporting year

<Not Applicable>

Taxonomy-aligned CAPEX from this activity that substantially contributed to climate change adaptation as a % of total CAPEX in the reporting year

<Not Applicable>

Taxonomy-eligible but not aligned CAPEX associated with this activity in the reporting year (unit currency as selected in C0.4)

81603352

Taxonomy-eligible but not aligned CAPEX associated with this activity as % of total CAPEX in the reporting year

5.6

Taxonomy-aligned OPEX from this activity in the reporting year (unit currency as selected in C0.4)

<Not Applicable>

Taxonomy-aligned OPEX from this activity as % of total OPEX in the reporting year

<Not Applicable>

Taxonomy-aligned OPEX from this activity that substantially contributed to climate change mitigation as a % of total OPEX in the reporting year

<Not Applicable>

Taxonomy-aligned OPEX from this activity that substantially contributed to climate change adaptation as a % of total OPEX in the reporting year

<Not Applicable>

Taxonomy-eligible but not aligned OPEX associated with this activity in the reporting year (unit currency as selected in C0.4)

<Not Applicable>

Taxonomy-eligible but not aligned OPEX associated with this activity as % total OPEX in the reporting year

<Not Applicable>

Type(s) of substantial contribution

<Not Applicable>

Calculation methodology and supporting information

While we identified EU sustainable taxonomy activities Republic Services engages in, we did not perform an analysis to assess alignment with the criteria outlined in the EU taxonomy. Republic does not operate or sell products/services in the EU and is not subject to the EU Taxonomy for Sustainable Activities regulation.

To report the CapEx (\$s), we identified the amount of capital that was spent in the reporting year on the applicable emission-reducing activity named in the EU Taxonomy for Sustainable Activities. To calculate the percentage share, we divided by total company capital expenditures.

Technical screening criteria met

Please select

Details of technical screening criteria analysis

Do no significant harm requirements met

Please select

Details of do no significant harm analysis

Minimum safeguards compliance requirements met

Please select

Details of minimum safeguards compliance analysis

Economic activity

Material recovery from non-hazardous waste

Taxonomy under which information is being reported

Other, please specify (Republic Services classification)

Taxonomy Alignment

Taxonomy-eligible but not aligned

Financial metric(s)

CAPEX

Taxonomy-aligned turnover from this activity in the reporting year (unit currency as selected in C0.4)

<Not Applicable>

Taxonomy-aligned turnover from this activity as % of total turnover in the reporting year

<Not Applicable>

Taxonomy-aligned turnover from this activity that substantially contributed to climate change mitigation as a % of total turnover in the reporting year

<Not Applicable>

Taxonomy-aligned turnover from this activity that substantially contributed to climate change adaptation as a % of total turnover in the reporting year

<Not Applicable>

Taxonomy-eligible but not aligned turnover from this activity in the reporting year (unit currency as selected in C0.4)

<Not Applicable>

Taxonomy-eligible but not aligned turnover from this activity as % of total turnover in the reporting year

<Not Applicable>

Taxonomy-aligned CAPEX from this activity in the reporting year (unit currency as selected in C0.4)

<Not Applicable>

Taxonomy-aligned CAPEX from this activity as % of total CAPEX in the reporting year

<Not Applicable>

Taxonomy-aligned CAPEX from this activity that substantially contributed to climate change mitigation as a % of total CAPEX in the reporting year

<Not Applicable>

Taxonomy-aligned CAPEX from this activity that substantially contributed to climate change adaptation as a % of total CAPEX in the reporting year

<Not Applicable>

Taxonomy-eligible but not aligned CAPEX associated with this activity in the reporting year (unit currency as selected in C0.4)

117000128

Taxonomy-eligible but not aligned CAPEX associated with this activity as % of total CAPEX in the reporting year

8.1

Taxonomy-aligned OPEX from this activity in the reporting year (unit currency as selected in C0.4)

<Not Applicable>

Taxonomy-aligned OPEX from this activity as % of total OPEX in the reporting year

<Not Applicable>

Taxonomy-aligned OPEX from this activity that substantially contributed to climate change mitigation as a % of total OPEX in the reporting year

<Not Applicable>

Taxonomy-aligned OPEX from this activity that substantially contributed to climate change adaptation as a % of total OPEX in the reporting year

<Not Applicable>

Taxonomy-eligible but not aligned OPEX associated with this activity in the reporting year (unit currency as selected in C0.4)

<Not Applicable>

Taxonomy-eligible but not aligned OPEX associated with this activity as % total OPEX in the reporting year

<Not Applicable>

Type(s) of substantial contribution

<Not Applicable>

Calculation methodology and supporting information

While we identified EU sustainable taxonomy activities Republic Services engages in, we did not perform an analysis to assess alignment with the criteria outlined in the EU taxonomy. Republic does not operate or sell products/services in the EU and is not subject to the EU Taxonomy for Sustainable Activities regulation.

To report the CapEx (\$s), we identified the amount of capital that was spent in the reporting year on the applicable emission-reducing activity named in the EU Taxonomy for Sustainable Activities. To calculate the percentage share, we divided by total company capital expenditures.

Technical screening criteria met

Please select

Details of technical screening criteria analysis

Do no significant harm requirements met

Please select

Details of do no significant harm analysis

Minimum safeguards compliance requirements met

Please select

Details of minimum safeguards compliance analysis

Economic activity

Collection and transport of non-hazardous waste in source segregated fractions

Taxonomy under which information is being reported

Other, please specify (Republic Services classification)

Taxonomy Alignment

Taxonomy-eligible but not aligned

Financial metric(s)

CAPEX

Taxonomy-aligned turnover from this activity in the reporting year (unit currency as selected in C0.4)

<Not Applicable>

Taxonomy-aligned turnover from this activity as % of total turnover in the reporting year

<Not Applicable>

Taxonomy-aligned turnover from this activity that substantially contributed to climate change mitigation as a % of total turnover in the reporting year

<Not Applicable>

Taxonomy-aligned turnover from this activity that substantially contributed to climate change adaptation as a % of total turnover in the reporting year

<Not Applicable>

Taxonomy-eligible but not aligned turnover from this activity in the reporting year (unit currency as selected in C0.4)

<Not Applicable>

Taxonomy-eligible but not aligned turnover from this activity as % of total turnover in the reporting year

<Not Applicable>

Taxonomy-aligned CAPEX from this activity in the reporting year (unit currency as selected in C0.4)

<Not Applicable>

Taxonomy-aligned CAPEX from this activity as % of total CAPEX in the reporting year

<Not Applicable>

Taxonomy-aligned CAPEX from this activity that substantially contributed to climate change mitigation as a % of total CAPEX in the reporting year

<Not Applicable>

Taxonomy-aligned CAPEX from this activity that substantially contributed to climate change adaptation as a % of total CAPEX in the reporting year

<Not Applicable>

Taxonomy-eligible but not aligned CAPEX associated with this activity in the reporting year (unit currency as selected in C0.4)

8772292

Taxonomy-eligible but not aligned CAPEX associated with this activity as % of total CAPEX in the reporting year

0.6

Taxonomy-aligned OPEX from this activity in the reporting year (unit currency as selected in C0.4)

<Not Applicable>

Taxonomy-aligned OPEX from this activity as % of total OPEX in the reporting year

<Not Applicable>

Taxonomy-aligned OPEX from this activity that substantially contributed to climate change mitigation as a % of total OPEX in the reporting year

<Not Applicable>

Taxonomy-aligned OPEX from this activity that substantially contributed to climate change adaptation as a % of total OPEX in the reporting year

<Not Applicable>

Taxonomy-eligible but not aligned OPEX associated with this activity in the reporting year (unit currency as selected in C0.4)

<Not Applicable>

Taxonomy-eligible but not aligned OPEX associated with this activity as % total OPEX in the reporting year

<Not Applicable>

Type(s) of substantial contribution

<Not Applicable>

Calculation methodology and supporting information

While we identified EU sustainable taxonomy activities Republic Services engages in, we did not perform an analysis to assess alignment with the criteria outlined in the EU taxonomy. Republic does not operate or sell products/services in the EU and is not subject to the EU Taxonomy for Sustainable Activities regulation.

To report the CapEx (\$), we identified the amount of capital that was spent in the reporting year on the applicable emission-reducing activity named in the EU Taxonomy for Sustainable Activities. This figure represents CapEx on recycling and organics collection vehicles only. To calculate the percentage share, we divided by total company capital expenditures.

Technical screening criteria met

Please select

Details of technical screening criteria analysis

Do no significant harm requirements met

Please select

Details of do no significant harm analysis

Minimum safeguards compliance requirements met

Please select

Details of minimum safeguards compliance analysis

Economic activity

Composting of bio-waste

Taxonomy under which information is being reported

Other, please specify (Republic Services classification)

Taxonomy Alignment

Taxonomy-eligible but not aligned

Financial metric(s)

CAPEX

Taxonomy-aligned turnover from this activity in the reporting year (unit currency as selected in C0.4)

<Not Applicable>

Taxonomy-aligned turnover from this activity as % of total turnover in the reporting year

<Not Applicable>

Taxonomy-aligned turnover from this activity that substantially contributed to climate change mitigation as a % of total turnover in the reporting year

<Not Applicable>

Taxonomy-aligned turnover from this activity that substantially contributed to climate change adaptation as a % of total turnover in the reporting year

<Not Applicable>

Taxonomy-eligible but not aligned turnover from this activity in the reporting year (unit currency as selected in C0.4)

<Not Applicable>

Taxonomy-eligible but not aligned turnover from this activity as % of total turnover in the reporting year

<Not Applicable>

Taxonomy-aligned CAPEX from this activity in the reporting year (unit currency as selected in C0.4)

<Not Applicable>

Taxonomy-aligned CAPEX from this activity as % of total CAPEX in the reporting year

<Not Applicable>

Taxonomy-aligned CAPEX from this activity that substantially contributed to climate change mitigation as a % of total CAPEX in the reporting year

<Not Applicable>

Taxonomy-aligned CAPEX from this activity that substantially contributed to climate change adaptation as a % of total CAPEX in the reporting year

<Not Applicable>

Taxonomy-eligible but not aligned CAPEX associated with this activity in the reporting year (unit currency as selected in C0.4)

9528877

Taxonomy-eligible but not aligned CAPEX associated with this activity as % of total CAPEX in the reporting year

0.7

Taxonomy-aligned OPEX from this activity in the reporting year (unit currency as selected in C0.4)

<Not Applicable>

Taxonomy-aligned OPEX from this activity as % of total OPEX in the reporting year

<Not Applicable>

Taxonomy-aligned OPEX from this activity that substantially contributed to climate change mitigation as a % of total OPEX in the reporting year

<Not Applicable>

Taxonomy-aligned OPEX from this activity that substantially contributed to climate change adaptation as a % of total OPEX in the reporting year

<Not Applicable>

Taxonomy-eligible but not aligned OPEX associated with this activity in the reporting year (unit currency as selected in C0.4)

<Not Applicable>

Taxonomy-eligible but not aligned OPEX associated with this activity as % total OPEX in the reporting year

<Not Applicable>

Type(s) of substantial contribution

<Not Applicable>

Calculation methodology and supporting information

While we identified EU sustainable taxonomy activities Republic Services engages in, we did not perform an analysis to assess alignment with the criteria outlined in the EU taxonomy. Republic does not operate or sell products/services in the EU and is not subject to the EU Taxonomy for Sustainable Activities regulation.

To report the CapEx (\$s), we identified the amount of capital that was spent in the reporting year on the applicable emission-reducing activity named in the EU Taxonomy for Sustainable Activities. To calculate the percentage share, we divided by total company capital expenditures.

Technical screening criteria met

Please select

Details of technical screening criteria analysis

Do no significant harm requirements met

Please select

Details of do no significant harm analysis

Minimum safeguards compliance requirements met

Please select

Details of minimum safeguards compliance analysis

Economic activity

Freight transport services by road

Taxonomy under which information is being reported

Other, please specify (Republic Services classification)

Taxonomy Alignment

Taxonomy-eligible but not aligned

Financial metric(s)

CAPEX

Taxonomy-aligned turnover from this activity in the reporting year (unit currency as selected in C0.4)

<Not Applicable>

Taxonomy-aligned turnover from this activity as % of total turnover in the reporting year

<Not Applicable>

Taxonomy-aligned turnover from this activity that substantially contributed to climate change mitigation as a % of total turnover in the reporting year

<Not Applicable>

Taxonomy-aligned turnover from this activity that substantially contributed to climate change adaptation as a % of total turnover in the reporting year

<Not Applicable>

Taxonomy-eligible but not aligned turnover from this activity in the reporting year (unit currency as selected in C0.4)

<Not Applicable>

Taxonomy-eligible but not aligned turnover from this activity as % of total turnover in the reporting year

<Not Applicable>

Taxonomy-aligned CAPEX from this activity in the reporting year (unit currency as selected in C0.4)

<Not Applicable>

Taxonomy-aligned CAPEX from this activity as % of total CAPEX in the reporting year

<Not Applicable>

Taxonomy-aligned CAPEX from this activity that substantially contributed to climate change mitigation as a % of total CAPEX in the reporting year

<Not Applicable>

Taxonomy-aligned CAPEX from this activity that substantially contributed to climate change adaptation as a % of total CAPEX in the reporting year

<Not Applicable>

Taxonomy-eligible but not aligned CAPEX associated with this activity in the reporting year (unit currency as selected in C0.4)

64145330

Taxonomy-eligible but not aligned CAPEX associated with this activity as % of total CAPEX in the reporting year

4.4

Taxonomy-aligned OPEX from this activity in the reporting year (unit currency as selected in C0.4)

<Not Applicable>

Taxonomy-aligned OPEX from this activity as % of total OPEX in the reporting year

<Not Applicable>

Taxonomy-aligned OPEX from this activity that substantially contributed to climate change mitigation as a % of total OPEX in the reporting year

<Not Applicable>

Taxonomy-aligned OPEX from this activity that substantially contributed to climate change adaptation as a % of total OPEX in the reporting year

<Not Applicable>

Taxonomy-eligible but not aligned OPEX associated with this activity in the reporting year (unit currency as selected in C0.4)

<Not Applicable>

Taxonomy-eligible but not aligned OPEX associated with this activity as % total OPEX in the reporting year

<Not Applicable>

Type(s) of substantial contribution

<Not Applicable>

Calculation methodology and supporting information

While we identified EU sustainable taxonomy activities Republic Services engages in, we did not perform an analysis to assess alignment with the criteria outlined in the EU taxonomy. Republic does not operate or sell products/services in the EU and is not subject to the EU Taxonomy for Sustainable Activities regulation.

To report the CapEx (\$s), we identified the amount of capital that was spent in the reporting year on the applicable emission-reducing activity named in the EU Taxonomy for Sustainable Activities. This figure represents CapEx for the purchase and refurbishment of electric vehicles; and the purchase, refurbishment, and infrastructure for our compressed natural gas vehicles fueled by renewable natural gas vehicles. To calculate the percentage share, we divided by total company capital expenditures.

Technical screening criteria met

Please select

Details of technical screening criteria analysis

Do no significant harm requirements met

Please select

Details of do no significant harm analysis

Minimum safeguards compliance requirements met

Please select

Details of minimum safeguards compliance analysis

Economic activity

Installation, maintenance and repair of charging stations for electric vehicles in buildings (and parking spaces attached to buildings)

Taxonomy under which information is being reported

Other, please specify (Republic Services classification)

Taxonomy Alignment

Taxonomy-eligible but not aligned

Financial metric(s)

CAPEX

Taxonomy-aligned turnover from this activity in the reporting year (unit currency as selected in C0.4)

<Not Applicable>

Taxonomy-aligned turnover from this activity as % of total turnover in the reporting year

<Not Applicable>

Taxonomy-aligned turnover from this activity that substantially contributed to climate change mitigation as a % of total turnover in the reporting year

<Not Applicable>

Taxonomy-aligned turnover from this activity that substantially contributed to climate change adaptation as a % of total turnover in the reporting year

<Not Applicable>

Taxonomy-eligible but not aligned turnover from this activity in the reporting year (unit currency as selected in C0.4)

<Not Applicable>

Taxonomy-eligible but not aligned turnover from this activity as % of total turnover in the reporting year

<Not Applicable>

Taxonomy-aligned CAPEX from this activity in the reporting year (unit currency as selected in C0.4)

<Not Applicable>

Taxonomy-aligned CAPEX from this activity as % of total CAPEX in the reporting year

<Not Applicable>

Taxonomy-aligned CAPEX from this activity that substantially contributed to climate change mitigation as a % of total CAPEX in the reporting year

<Not Applicable>

Taxonomy-aligned CAPEX from this activity that substantially contributed to climate change adaptation as a % of total CAPEX in the reporting year

<Not Applicable>

Taxonomy-eligible but not aligned CAPEX associated with this activity in the reporting year (unit currency as selected in C0.4)

1422257

Taxonomy-eligible but not aligned CAPEX associated with this activity as % of total CAPEX in the reporting year
0.09

Taxonomy-aligned OPEX from this activity in the reporting year (unit currency as selected in C0.4)
<Not Applicable>

Taxonomy-aligned OPEX from this activity as % of total OPEX in the reporting year
<Not Applicable>

Taxonomy-aligned OPEX from this activity that substantially contributed to climate change mitigation as a % of total OPEX in the reporting year
<Not Applicable>

Taxonomy-aligned OPEX from this activity that substantially contributed to climate change adaptation as a % of total OPEX in the reporting year
<Not Applicable>

Taxonomy-eligible but not aligned OPEX associated with this activity in the reporting year (unit currency as selected in C0.4)
<Not Applicable>

Taxonomy-eligible but not aligned OPEX associated with this activity as % total OPEX in the reporting year
<Not Applicable>

Type(s) of substantial contribution
<Not Applicable>

Calculation methodology and supporting information

Technical screening criteria met
Please select

Details of technical screening criteria analysis

While we identified EU sustainable taxonomy activities Republic Services engages in, we did not perform an analysis to assess alignment with the criteria outlined in the EU taxonomy. Republic does not operate or sell products/services in the EU and is not subject to the EU Taxonomy for Sustainable Activities regulation.

To report the CapEx (\$s), we identified the amount of capital that was spent in the reporting year on the applicable emission-reducing activity named in the EU Taxonomy for Sustainable Activities. To calculate the percentage share, we divided by total company capital expenditures.

Do no significant harm requirements met
Please select

Details of do no significant harm analysis

Minimum safeguards compliance requirements met
Please select

Details of minimum safeguards compliance analysis

Economic activity

Construction, extension and operation of waste water collection and treatment

Taxonomy under which information is being reported
Other, please specify (Republic Services classification)

Taxonomy Alignment
Taxonomy-eligible but not aligned

Financial metric(s)
CAPEX

Taxonomy-aligned turnover from this activity in the reporting year (unit currency as selected in C0.4)
<Not Applicable>

Taxonomy-aligned turnover from this activity as % of total turnover in the reporting year
<Not Applicable>

Taxonomy-aligned turnover from this activity that substantially contributed to climate change mitigation as a % of total turnover in the reporting year
<Not Applicable>

Taxonomy-aligned turnover from this activity that substantially contributed to climate change adaptation as a % of total turnover in the reporting year
<Not Applicable>

Taxonomy-eligible but not aligned turnover from this activity in the reporting year (unit currency as selected in C0.4)
<Not Applicable>

Taxonomy-eligible but not aligned turnover from this activity as % of total turnover in the reporting year
<Not Applicable>

Taxonomy-aligned CAPEX from this activity in the reporting year (unit currency as selected in C0.4)
<Not Applicable>

Taxonomy-aligned CAPEX from this activity as % of total CAPEX in the reporting year
<Not Applicable>

Taxonomy-aligned CAPEX from this activity that substantially contributed to climate change mitigation as a % of total CAPEX in the reporting year
<Not Applicable>

Taxonomy-aligned CAPEX from this activity that substantially contributed to climate change adaptation as a % of total CAPEX in the reporting year
<Not Applicable>

Taxonomy-eligible but not aligned CAPEX associated with this activity in the reporting year (unit currency as selected in C0.4)
25429851

Taxonomy-eligible but not aligned CAPEX associated with this activity as % of total CAPEX in the reporting year

18

Taxonomy-aligned OPEX from this activity in the reporting year (unit currency as selected in C0.4)

<Not Applicable>

Taxonomy-aligned OPEX from this activity as % of total OPEX in the reporting year

<Not Applicable>

Taxonomy-aligned OPEX from this activity that substantially contributed to climate change mitigation as a % of total OPEX in the reporting year

<Not Applicable>

Taxonomy-aligned OPEX from this activity that substantially contributed to climate change adaptation as a % of total OPEX in the reporting year

<Not Applicable>

Taxonomy-eligible but not aligned OPEX associated with this activity in the reporting year (unit currency as selected in C0.4)

<Not Applicable>

Taxonomy-eligible but not aligned OPEX associated with this activity as % total OPEX in the reporting year

<Not Applicable>

Type(s) of substantial contribution

<Not Applicable>

Calculation methodology and supporting information

While we identified EU sustainable taxonomy activities Republic Services engages in, we did not perform an analysis to assess alignment with the criteria outlined in the EU taxonomy. Republic does not operate or sell products/services in the EU and is not subject to the EU Taxonomy for Sustainable Activities regulation.

To report the CapEx (\$s), we identified the amount of capital that was spent in the reporting year on the applicable emission-reducing activity named in the EU Taxonomy for Sustainable Activities. To calculate the percentage share, we divided by total company capital expenditures.

Technical screening criteria met

Please select

Details of technical screening criteria analysis

Do no significant harm requirements met

Please select

Details of do no significant harm analysis

Minimum safeguards compliance requirements met

Please select

Details of minimum safeguards compliance analysis

C3.5c

(C3.5c) Provide any additional contextual and/or verification/assurance information relevant to your organization's taxonomy alignment.

Republic Services is not subject to the EU Taxonomy for Sustainable Activities and the reporting in this questionnaire represents only a partial analysis of our activities under that framework. A complete analysis may find a greater or lesser percent alignment.

Our total sustainable capital expenditure and an overview of our climate transition plan can be found in our 2022 Sustainability Report.

C4. Targets and performance

C4.1

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

Absolute target

C4.1a

(C4.1a) Provide details of your absolute emissions target(s) and progress made against those targets.

Target reference number

Abs 1

Is this a science-based target?

Yes, and this target has been approved by the Science Based Targets initiative

Target ambition

Well-below 2°C aligned

Year target was set

2018

Target coverage

Company-wide

Scope(s)

Scope 1

Scope 2

Scope 2 accounting method

Market-based

Scope 3 category(ies)

<Not Applicable>

Base year

2017

Base year Scope 1 emissions covered by target (metric tons CO2e)

15044366

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

384970

Base year Scope 3, Category 1: Purchased goods and services emissions covered by target (metric tons CO2e)

<Not Applicable>

Base year Scope 3, Category 2: Capital goods emissions covered by target (metric tons CO2e)

<Not Applicable>

Base year Scope 3, Category 3: Fuel-and-energy-related activities (not included in Scopes 1 or 2) emissions covered by target (metric tons CO2e)

<Not Applicable>

Base year Scope 3, Category 4: Upstream transportation and distribution emissions covered by target (metric tons CO2e)

<Not Applicable>

Base year Scope 3, Category 5: Waste generated in operations emissions covered by target (metric tons CO2e)

<Not Applicable>

Base year Scope 3, Category 6: Business travel emissions covered by target (metric tons CO2e)

<Not Applicable>

Base year Scope 3, Category 7: Employee commuting emissions covered by target (metric tons CO2e)

<Not Applicable>

Base year Scope 3, Category 8: Upstream leased assets emissions covered by target (metric tons CO2e)

<Not Applicable>

Base year Scope 3, Category 9: Downstream transportation and distribution emissions covered by target (metric tons CO2e)

<Not Applicable>

Base year Scope 3, Category 10: Processing of sold products emissions covered by target (metric tons CO2e)

<Not Applicable>

Base year Scope 3, Category 11: Use of sold products emissions covered by target (metric tons CO2e)

<Not Applicable>

Base year Scope 3, Category 12: End-of-life treatment of sold products emissions covered by target (metric tons CO2e)

<Not Applicable>

Base year Scope 3, Category 13: Downstream leased assets emissions covered by target (metric tons CO2e)

<Not Applicable>

Base year Scope 3, Category 14: Franchises emissions covered by target (metric tons CO2e)

<Not Applicable>

Base year Scope 3, Category 15: Investments emissions covered by target (metric tons CO2e)

<Not Applicable>

Base year Scope 3, Other (upstream) emissions covered by target (metric tons CO2e)

<Not Applicable>

Base year Scope 3, Other (downstream) emissions covered by target (metric tons CO2e)

<Not Applicable>

Base year total Scope 3 emissions covered by target (metric tons CO2e)

<Not Applicable>

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

15429337

Base year Scope 1 emissions covered by target as % of total base year emissions in Scope 1

98

Base year Scope 2 emissions covered by target as % of total base year emissions in Scope 2

2

Base year Scope 3, Category 1: Purchased goods and services emissions covered by target as % of total base year emissions in Scope 3, Category 1:**Purchased goods and services (metric tons CO2e)**

<Not Applicable>

Base year Scope 3, Category 2: Capital goods emissions covered by target as % of total base year emissions in Scope 3, Category 2: Capital goods (metric tons CO2e)

<Not Applicable>

Base year Scope 3, Category 3: Fuel-and-energy-related activities (not included in Scopes 1 or 2) emissions covered by target as % of total base year emissions in Scope 3, Category 3: Fuel-and-energy-related activities (not included in Scopes 1 or 2) (metric tons CO2e)

<Not Applicable>

Base year Scope 3, Category 4: Upstream transportation and distribution covered by target as % of total base year emissions in Scope 3, Category 4: Upstream transportation and distribution (metric tons CO2e)

<Not Applicable>

Base year Scope 3, Category 5: Waste generated in operations emissions covered by target as % of total base year emissions in Scope 3, Category 5: Waste generated in operations (metric tons CO2e)

<Not Applicable>

Base year Scope 3, Category 6: Business travel emissions covered by target as % of total base year emissions in Scope 3, Category 6: Business travel (metric tons CO2e)

<Not Applicable>

Base year Scope 3, Category 7: Employee commuting covered by target as % of total base year emissions in Scope 3, Category 7: Employee commuting (metric tons CO2e)

<Not Applicable>

Base year Scope 3, Category 8: Upstream leased assets emissions covered by target as % of total base year emissions in Scope 3, Category 8: Upstream leased assets (metric tons CO2e)

<Not Applicable>

Base year Scope 3, Category 9: Downstream transportation and distribution emissions covered by target as % of total base year emissions in Scope 3, Category 9: Downstream transportation and distribution (metric tons CO2e)

<Not Applicable>

Base year Scope 3, Category 10: Processing of sold products emissions covered by target as % of total base year emissions in Scope 3, Category 10: Processing of sold products (metric tons CO2e)

<Not Applicable>

Base year Scope 3, Category 11: Use of sold products emissions covered by target as % of total base year emissions in Scope 3, Category 11: Use of sold products (metric tons CO2e)

<Not Applicable>

Base year Scope 3, Category 12: End-of-life treatment of sold products emissions covered by target as % of total base year emissions in Scope 3, Category 12: End-of-life treatment of sold products (metric tons CO2e)

<Not Applicable>

Base year Scope 3, Category 13: Downstream leased assets emissions covered by target as % of total base year emissions in Scope 3, Category 13: Downstream leased assets (metric tons CO2e)

<Not Applicable>

Base year Scope 3, Category 14: Franchises emissions covered by target as % of total base year emissions in Scope 3, Category 14: Franchises (metric tons CO2e)

<Not Applicable>

Base year Scope 3, Category 15: Investments emissions covered by target as % of total base year emissions in Scope 3, Category 15: Investments (metric tons CO2e)

<Not Applicable>

Base year Scope 3, Other (upstream) emissions covered by target as % of total base year emissions in Scope 3, Other (upstream) (metric tons CO2e)

<Not Applicable>

Base year Scope 3, Other (downstream) emissions covered by target as % of total base year emissions in Scope 3, Other (downstream) (metric tons CO2e)

<Not Applicable>

Base year total Scope 3 emissions covered by target as % of total base year emissions in Scope 3 (in all Scope 3 categories)

<Not Applicable>

Base year emissions covered by target in all selected Scopes as % of total base year emissions in all selected Scopes

100

Target year

2030

Targeted reduction from base year (%)

35

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

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

13688116

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

304496

Scope 3, Category 1: Purchased goods and services emissions in reporting year covered by target (metric tons CO2e)

<Not Applicable>

Scope 3, Category 2: Capital goods emissions in reporting year covered by target (metric tons CO2e)

<Not Applicable>

Scope 3, Category 3: Fuel-and-energy-related activities (not included in Scopes 1 or 2) emissions in reporting year covered by target (metric tons CO2e)

<Not Applicable>

Scope 3, Category 4: Upstream transportation and distribution emissions in reporting year covered by target (metric tons CO2e)

<Not Applicable>

Scope 3, Category 5: Waste generated in operations emissions in reporting year covered by target (metric tons CO2e)

<Not Applicable>

Scope 3, Category 6: Business travel emissions in reporting year covered by target (metric tons CO2e)

<Not Applicable>

Scope 3, Category 7: Employee commuting emissions in reporting year covered by target (metric tons CO2e)

<Not Applicable>

Scope 3, Category 8: Upstream leased assets emissions in reporting year covered by target (metric tons CO2e)

<Not Applicable>

Scope 3, Category 9: Downstream transportation and distribution emissions in reporting year covered by target (metric tons CO2e)

<Not Applicable>

Scope 3, Category 10: Processing of sold products emissions in reporting year covered by target (metric tons CO2e)

<Not Applicable>

Scope 3, Category 11: Use of sold products emissions in reporting year covered by target (metric tons CO2e)

<Not Applicable>

Scope 3, Category 12: End-of-life treatment of sold products emissions in reporting year covered by target (metric tons CO2e)

<Not Applicable>

Scope 3, Category 13: Downstream leased assets emissions in reporting year covered by target (metric tons CO2e)

<Not Applicable>

Scope 3, Category 14: Franchises emissions in reporting year covered by target (metric tons CO2e)

<Not Applicable>

Scope 3, Category 15: Investments emissions in reporting year covered by target (metric tons CO2e)

<Not Applicable>

Scope 3, Other (upstream) emissions in reporting year covered by target (metric tons CO2e)

<Not Applicable>

Scope 3, Other (downstream) emissions in reporting year covered by target (metric tons CO2e)

<Not Applicable>

Total Scope 3 emissions in reporting year covered by target (metric tons CO2e)

<Not Applicable>

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

13992612

Does this target cover any land-related emissions?

No, it does not cover any land-related emissions (e.g. non-FLAG SBT)

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

Target status in reporting year

Underway

Please explain target coverage and identify any exclusions

We have adopted an aggressive target for reducing our operational GHG emissions, approved by the Science Based Targets initiative (SBTi). Goal: Reduce absolute total Scope 1 and 2 greenhouse gas emissions 35% by 2030. Scope 1 emissions include emissions from landfills and fleet that are owned, leased, or operated by Republic. From the baseline year of 2017 to 2022, Republic achieved a 17.9% reduction in Scope 1 fleet emissions and a 10% reduction in landfill emissions (See 2022 GRI topic 305-1). This results in a total Scope 1 and Scope 2 decrease of 9.3% since 2017, resulting in 26.6% of target achieved. At the end of 2022, 38% of the time to complete our goal has elapsed, with 62% still remaining. Due to some notable acquisitions, we have rebaselined our emissions from 2017 forward. Despite this updated approach we do not believe the landfill portion of the Scope 1 emissions is reflective of our performance. Landfill emissions are calculated using a modeled approach through SWICS and U.S. 40 CFR Part 98 Subpart HH, a method developed by the EPA and waste industry to characterize the contribution of landfills in relationship to the overall greenhouse gas footprint in the U.S. We continue using the federally mandated methodology to reflect our landfill emissions until we develop the means for more accurate and continuous measurement, which we have committed continue to investigate the most accurate and continuous measurement systems in support of our science-based GHG emissions target.

Plan for achieving target, and progress made to the end of the reporting year

Please see our 2022 Sustainability Report, "Our Climate Transition Roadmap".

To reach our target of 35% GHG reductions in our Scope 1 emissions Republic is actively investing in methods to increase gas collection efficiency and innovative cover systems that will reduce the amount of fugitive methane.

Republic is also investing in alternatives to landfills as demonstrated by our \$66M investment in the Republic Services Polymer Center making us the nation's first integrated plastics recycling facility. This initiative will help reduce the amount of materials in landfills and lower our Scope 1 impact. We are taking a leadership position in electric technology innovation for our fleet which is a critical step toward reducing our environmental impact through lower fleet emissions.

These initiatives as well as improved building and fleet electrification and alternative fuel usage, has been impactful as shown by the 9% reduction in emissions that we have achieved from our baseline year of 2017.

List the emissions reduction initiatives which contributed most to achieving this target

<Not Applicable>

C4.2

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

Target(s) to increase low-carbon energy consumption or production

Other climate-related target(s)

C4.2a

(C4.2a) Provide details of your target(s) to increase low-carbon energy consumption or production.

Target reference number

Low 1

Year target was set

2018

Target coverage

Company-wide

Target type: energy carrier

Other, please specify (Biogas)

Target type: activity

Production

Target type: energy source

Renewable energy source(s) only

Base year

2017

Consumption or production of selected energy carrier in base year (MWh)

58513

% share of low-carbon or renewable energy in base year

0

Target year

2030

% share of low-carbon or renewable energy in target year

100

% share of low-carbon or renewable energy in reporting year

0

% of target achieved relative to base year [auto-calculated]**Target status in reporting year**

Underway

Is this target part of an emissions target?

Yes. Increasing beneficial reuse of biogas collected at landfills results in lower greenhouse gas emissions at landfills. These emissions contribute to the Scope 1 landfill emissions that are part of the SBT described above. Our goal is to increase biogas collected for beneficial reuse by 50% from a baseline of 2017 in the year 2030.

Is this target part of an overarching initiative?

Science Based Targets initiative

Please explain target coverage and identify any exclusions

Overarching initiative: We have adopted an aggressive target for reducing our operational GHG emissions, approved by the Science Based Targets initiative (SBTI) and aligned with the UN "Climate Action" SDG 13.2 - reduce greenhouse gas emissions. Goal: Reduce absolute total Scope 1 and 2 greenhouse gas emissions 35% by 2030. Scope 1 emissions include emissions from landfills and fleet that are owned, leased, or operated by Republic. Supporting goal: Our operating strategy for managing landfill gas (LFG) emissions is to maximize LFG collected at each landfill. By safely collecting the maximum amount, we minimize any LFG escaping as fugitive emissions, particularly high GWP methane. The collected LFG is either beneficially reused as renewable energy or thermally oxidized to CO₂ in a flare. We have a distinct goal to increase biogas sent to beneficial reuse by 50% by 2030 (from a 2017 baseline), by growing our capacity of regenerative landfills. By diverting biogas to beneficial reuse, we avoid extraction and use of fossil fuels, displacing the need for environmentally damaging activities like fracking and oil sands prospecting. For the C4.2a calculation, we report % share in target year as 100%, indicating that we have fully achieved our 2030 renewable energy goal, described in this paragraph. Our % share in the reporting year represents a springboard as we prepare facilities for the transition to RNG, the most common application of LFG to energy under development. For additional information about our biogas goal (reported in standard cubic feet) please refer to our Sustainability Report at RepublicServices.com/Sustainability/Reporting.

Plan for achieving target, and progress made to the end of the reporting year

As of the date of publication, Republic Services is involved in 65 landfill gas-to-energy projects, with an additional 60 RNG projects in our development pipeline. This represents the country's largest RNG portfolio build-out to date, and will convert landfill gas into pipeline-quality RNG that can be used for a variety of applications to displace gas from fossil fuels. The initiative is expected to generate substantial progress towards Republic's long-term sustainability goal to beneficially reuse 50% more biogas by 2030.

List the actions which contributed most to achieving this target

<Not Applicable>

C4.2b

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

Target reference number

Oth 1

Year target was set

2023

Target coverage

Company-wide

Target type: absolute or intensity

Intensity

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

Low-carbon vehicles	Other, please specify (Percentage of new vehicle purchases)
---------------------	---

Target denominator (intensity targets only)

Other, please specify (Republic Services' expectation is for 50% of new vehicle purchases to be EVs by 2028)

Base year

2023

Figure or percentage in base year

0.03

Target year

2028

Figure or percentage in target year

50

Figure or percentage in reporting year

0.03

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

Target status in reporting year

New

Is this target part of an emissions target?

Yes - electric vehicles will reduce the emissions from our fleet, supporting our SBTi-approved goal.

Is this target part of an overarching initiative?

Science Based targets initiative - other

Please explain target coverage and identify any exclusions

Target coverage is 100% of operations.

Plan for achieving target, and progress made to the end of the reporting year

Republic Services estimates that EVs will represent half of its new truck purchases by 2028. In 2022, Republic Services has 5 EVs in operation.

List the actions which contributed most to achieving this target

<Not Applicable>

Target reference number

Oth 2

Year target was set

2017

Target coverage

Company-wide

Target type: absolute or intensity

Intensity

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

Waste management	Other, please specify (Percent of Key Materials Recovered)
------------------	--

Target denominator (intensity targets only)

metric ton of waste

Base year

2017

Figure or percentage in base year

2.4

Target year

2030

Figure or percentage in target year

3.1

Figure or percentage in reporting year

2.4

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

Target status in reporting year

Underway

Is this target part of an emissions target?

Yes - increased diversion of waste will reduce the emissions from our landfills, supporting our SBTi-approved goal.

Is this target part of an overarching initiative?

Science Based targets initiative - other

Please explain target coverage and identify any exclusions

Target coverage is 100% of operations.

Plan for achieving target, and progress made to the end of the reporting year

Our Polymer Centers will produce high-quality, color-sorted recycled PET, HDPE and Polypropylene ready for use in consumer packaging. We expect that each Polymer Center will produce over 100M pounds of recycled plastic annually.

List the actions which contributed most to achieving this target

<Not Applicable>

C4.3

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

Yes

C4.3a

(C4.3a) Identify the total number of initiatives at each stage of development, and for those in the implementation stages, the estimated CO2e savings.

	Number of initiatives	Total estimated annual CO2e savings in metric tonnes CO2e (only for rows marked *)
Under investigation	4	
To be implemented*	3	48969954
Implementation commenced*	0	0
Implemented*	5	11280586
Not to be implemented	2	

C4.3b

(C4.3b) Provide details on the initiatives implemented in the reporting year in the table below.

Initiative category & Initiative type

Low-carbon energy consumption	Biogas
-------------------------------	--------

Estimated annual CO2e savings (metric tonnes CO2e)

297134

Scope(s) or Scope 3 category(ies) where emissions savings occur

Scope 1

Voluntary/Mandatory

Voluntary

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

5302222

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

73589000

Payback period

1-3 years

Estimated lifetime of the initiative

11-15 years

Comment

Republic has a number of initiatives in progress to reduce the amount, as well as the carbon intensity of fuel that we use, and therefore, our GHG emissions from our fleet. Since 2016, Republic has been purchasing renewable natural gas (RNG) to replace its usage of diesel in our collection vehicles. This has resulted in a decrease in the total amount of diesel purchased and consumed by our fleet and yields a corresponding GHG emissions reduction. We expect to continue the consumption of RNG as an alternative fuel. The savings for these projects fluctuates with the RIN price and the volume of RNG fuel used each year. The savings represents the savings and revenue from RNG fuel usage compared to diesel over an annual project period for 100 CNG vehicles. These calculations use U.S. DOE Clean Cities Alternative Fuel Price Report's \$4.58/gal for diesel and \$3.67/DGE for CNG. The calculations also factor in other deployment related variables, including estimated annual revenue associated with RNG credits based on actual 2022 revenue earned by Republic. The lifetime investment figure is calculated by including only the infrastructure setup as price fluctuations in fuel create yearly variances for the investment figure.

Initiative category & Initiative type

Waste reduction and material circularity	Waste reduction
--	-----------------

Estimated annual CO2e savings (metric tonnes CO2e)

9063275

Scope(s) or Scope 3 category(ies) where emissions savings occur

Scope 1

Voluntary/Mandatory

Voluntary

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

1334216635

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

63638968

Payback period

<1 year

Estimated lifetime of the initiative

16-20 years

Comment

Annual monetary savings is revenue generated from recycling and organics facilities in 2022. Investment varies by year, amount shown reflects 2022 capital investment. Emission reductions are calculated using the EPA WARM v15 model to determine the alternative disposal methods impact on material breakdown. The significant change from our previous years' recycling avoided emissions is attributed to our estimation methodology which previously used tons managed and did not reduce tons for customer contamination. We reviewed both diversion of recycled and organic material for this assessment.

Initiative category & Initiative type

Low-carbon energy consumption	Biogas
-------------------------------	--------

Estimated annual CO2e savings (metric tonnes CO2e)

1864726

Scope(s) or Scope 3 category(ies) where emissions savings occur

Scope 1

Scope 2 (location-based)

Scope 2 (market-based)

Voluntary/Mandatory

Voluntary

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

61377633

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

81603352

Payback period

1-3 years

Estimated lifetime of the initiative

21-30 years

Comment

Republic Services has invested in the expansion of our landfill gas to energy systems. These systems are designed to capture landfill gas and process it for use as renewable energy. Through our efforts and the efforts of our partners we collected and beneficially reused an estimated 35 million MMBtu of this gas for energy. One example of how Republic Services enables facilities to convert landfill gas to energy is RNG, which is used as a replacement for natural gas; this energy is sent to the grid to be utilized by consumers. This action is voluntary and contributes numerous benefits to Republic Services and the communities we serve. Emissions reductions are calculated by replacing traditional fossil natural gas with the RNG that is sourced from our landfills. The annual monetary savings is revenue generated from the gas that we sell for energy production. Investment varies by year, amount shown reflects 2022 capital investment. We have planned to increase these activities through further partnerships and projects.

Initiative category & Initiative type

Transportation	Company fleet vehicle replacement
----------------	-----------------------------------

Estimated annual CO2e savings (metric tonnes CO2e)

55211

Scope(s) or Scope 3 category(ies) where emissions savings occur

Scope 1

Voluntary/Mandatory

Voluntary

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

2211432

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

4150000

Payback period

1-3 years

Estimated lifetime of the initiative

11-15 years

Comment

Republic Services has invested in the development of EV's which have begun running routes in multiple states. These 5 vehicles drove over 14,500 miles in 2022. The emissions reductions for these vehicles is calculated by the amount of diesel fuel displaced with electricity and applying the US eGRID factor for the regions where these vehicles are operating. We anticipate expanding our EV operations to 3500 vehicles in 2028, which will further decrease emissions associated with our fleet operations through a fuel to GHG emissions calculator. The annual savings for this project was calculated by determining the amount of revenue generated from operations of the EV vehicles during the calendar year. We believe that the revenue opportunity from adding electric vehicles to our fleet far exceeds the savings from substitution of fuel type and fuel economy compared to conventional vehicles. For example, our ability to win our contract with Boise, Idaho was unlocked by including a handful of EVs in a pilot program with the city. As a proxy for the value of such opportunities, rather than calculating fuel savings, we use the revenue generated from each EV in operation, which we believe to be a small fraction of the total value to Republic Services unlocked by the use of each EV. The lifetime investment figure is an estimate that takes into account local, state, and federal grants and incentives for establishing our entire EV infrastructure.

Initiative category & Initiative type

Low-carbon energy generation	Solar PV
------------------------------	----------

Estimated annual CO2e savings (metric tonnes CO2e)

239

Scope(s) or Scope 3 category(ies) where emissions savings occur

Scope 2 (location-based)

Scope 2 (market-based)

Voluntary/Mandatory

Voluntary

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

84089

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

0

Payback period

<1 year

Estimated lifetime of the initiative

21-30 years

Comment

We have partnered with solar developers at 8 Republic facilities to generate solar energy. Of these facilities, Republic consumes and generates electricity at three and leases the land to the solar developer at the remaining five. Republic Services calculates the emission reductions for the generation of energy at our 3 solar projects compared to the US eGRID factor for the various regions they are located.

C4.3c

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

Method	Comment
Compliance with regulatory requirements/standards	Our facilities and operations are subject to a variety of federal, state and local requirements that regulate, among other things, the environment, public health, safety, zoning and land use. In order to comply with regulations such as EPA landfill gas collection standards, California SB 1383 and organics diversion mandates, and the California low carbon fuel standard we have invested in infrastructure to meet or exceed the regulatory standards. These laws and regulations provide governmental authorities with strict powers of enforcement, which include the ability to revoke or decline to renew any of our operating permits, obtain injunctions, or impose fines or penalties in the event of violations, including criminal penalties.
Financial optimization calculations	In some cases, as indicated in the answers to question 4.3b above, we exceed regulatory requirements/standards and/or undertake projects to drive environmental improvements that are not contemplated by regulatory agencies. Investments in these projects are driven by a positive return on investment that often includes other factors, such as impact on our brand or license to operate.

C4.5

(C4.5) Do you classify any of your existing goods and/or services as low-carbon products?

Yes

C4.5a

(C4.5a) Provide details of your products and/or services that you classify as low-carbon products.

Level of aggregation

Product or service

Taxonomy used to classify product(s) or service(s) as low-carbon

Climate Bonds Taxonomy

Type of product(s) or service(s)

Road	Compressed biogas engines
------	---------------------------

Description of product(s) or service(s)

Republic has been investing in compressed natural gas (CNG) collection vehicles for over 15 years. In 2022, 18% of our fleet fuel consumption was natural gas, which is 100% sourced by RNG. We estimate RNG to produce 70% fewer emissions than diesel, the lowest carbon intensity of any commercially available fuel today, according to the California Air Resources Board (CARB). Today, our use of RNG is a bridge fuel towards scaling of our electric vehicles. Use of these trucks to provide collection services to our customers can be classified as a low-carbon service offering because their use results in lower emissions for Republic as we deliver our service.

Have you estimated the avoided emissions of this low-carbon product(s) or service(s)

Yes

Methodology used to calculate avoided emissions

Estimating and Reporting the Comparative Emissions Impacts of Products (WRI)

Life cycle stage(s) covered for the low-carbon product(s) or services(s)

Use stage

Functional unit used

Diesel Gallon Equivalents (DGE)

Reference product/service or baseline scenario used

Gallons of diesel used in our fleet.

Life cycle stage(s) covered for the reference product/service or baseline scenario

Use stage

Estimated avoided emissions (metric tons CO2e per functional unit) compared to reference product/service or baseline scenario

297134

Explain your calculation of avoided emissions, including any assumptions

To calculate avoided emissions, the actual amount of biomethane (RNG) fuel was converted to Diesel Gallon Equivalent (DGE). The DGE of fuel was then calculated to metric tons of CO2e using the EPA emissions factor for diesel. The second step is to take the actual emissions from the RNG fuel and subtracting that value from the calculated diesel value.

$$(RNG\ DGE * Diesel\ Emission\ Factor) - (RNG\ DGE * RNG\ Emission\ Factor) = \text{Avoided Emissions from RNG use}$$

Revenue generated from low-carbon product(s) or service(s) as % of total revenue in the reporting year

14

Level of aggregation

Group of products or services

Taxonomy used to classify product(s) or service(s) as low-carbon

Climate Bonds Taxonomy

Type of product(s) or service(s)

Other	Other, please specify (Landfill Diversion)
-------	--

Description of product(s) or service(s)

Republic offers a number of products and services today that enable our customers to avoid emissions. These products include landfill gas for renewable energy; recycling of residential and commercial commodities, food waste and green waste; universal recycling (batteries, light bulbs, etc.); and electronic recycling (mobile devices, televisions, etc.).

Have you estimated the avoided emissions of this low-carbon product(s) or service(s)

Yes

Methodology used to calculate avoided emissions

Estimating and Reporting the Comparative Emissions Impacts of Products (WRI)

Life cycle stage(s) covered for the low-carbon product(s) or services(s)

End-of-life stage

Functional unit used

Short Tons

Reference product/service or baseline scenario used

Short tons of material landfilled.

Life cycle stage(s) covered for the reference product/service or baseline scenario

End-of-life stage

Estimated avoided emissions (metric tons CO2e per functional unit) compared to reference product/service or baseline scenario

9063275

Explain your calculation of avoided emissions, including any assumptions

Using the EPA WARM model we input the short tons of material that was recycled and composted and entered those tons as tons landfilled. The EPA WARM model provides emissions rates for mixed recyclables and mixed organics which were utilized as the alternative disposal scenario. The difference between landfilled short tons and recycled and composted short tons is the emissions avoided number.

$$((\text{Short tons recycled} + \text{Short tons organics}) * \text{EPA landfill emission factor}) - (\text{Short tons recycled} * \text{EPA mixed recycled factor}) + (\text{Short tons organics} * \text{EPA mixed organics factor}).$$

Revenue generated from low-carbon product(s) or service(s) as % of total revenue in the reporting year

10

C5. Emissions methodology

C5.1

(C5.1) Is this your first year of reporting emissions data to CDP?

No

C5.1a

(C5.1a) Has your organization undergone any structural changes in the reporting year, or are any previous structural changes being accounted for in this disclosure of emissions data?

Row 1

Has there been a structural change?

- Yes, an acquisition
- Yes, a divestment

Name of organization(s) acquired, divested from, or merged with

US Ecology was acquired in May 2022
Miscellaneous smaller acquisitions and divestitures occurred throughout 2022.

Details of structural change(s), including completion dates

In 2022, Republic Services had acquisitions, consolidations, and divestitures from our portfolio, most notably our acquisitions of US Ecology. Due to the nature of growth in our industry, we frequently acquire and divest from assets.

C5.1b

(C5.1b) Has your emissions accounting methodology, boundary, and/or reporting year definition changed in the reporting year?

	Change(s) in methodology, boundary, and/or reporting year definition?	Details of methodology, boundary, and/or reporting year definition change(s)
Row 1	Yes, a change in methodology Yes, a change in boundary	We have restated our annual emissions back to the baseline year (2017) to account for our acquisitions, divestitures, and methodology enhancements, aligning with our inventory management plan (IMP). Our methodology and boundary improvements include: • Our fleet fuel usage methodology is more closely linked to our activities; • We improved the methodology used to calculate scope 3 category 1 Purchased Goods and Services; and •We improved the methodology used to calculate scope 3 category 5 Waste Generated in Operations. These revisions ensure that our goal to reduce scope 1 and 2 GHG emissions 35% below our 2017 baseline by 2030, approved by the Science Based Target initiative (SBTi) compares like-for-like assets across our reporting years. • Our fleet fuel usage methodology is more closely linked to our activities; • We improved the methodology used to calculate scope 3 category 1 Purchased Goods and Services; and •We improved the methodology used to calculate scope 3 category 5 Waste Generated in Operations. These revisions ensure that our goal to reduce scope 1 and 2 GHG emissions 35% below our 2017 baseline by 2030, approved by the Science Based Target initiative (SBTi) compares like-for-like assets across our reporting years.

C5.1c

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

	Base year recalculation	Scope(s) recalculated	Base year emissions recalculation policy, including significance threshold	Past years' recalculation
Row 1	Yes	Scope 1 Scope 2, location-based Scope 2, market-based Scope 3	Our recalculation policy, as outlined in our IMP, is defined as an activity, such as an adjustment to our methodology or boundary, that results in a 1% or greater change to our emissions inventory. In accordance with this policy our acquisitions and methodology improvements in 2022 triggered a recalculation and we have recalculated all emissions from 2017-2022.	Please select

C5.2

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

Scope 1

Base year start

January 1 2017

Base year end

December 31 2017

Base year emissions (metric tons CO2e)

15044366

Comment

This base year is the first year that Republic began calculating and reporting a greenhouse gas inventory for emissions reductions. It is the same base year as our current SBT GHG reduction goal. Our base year emissions are restated when we make adjustments due to methodology or boundary changes.

Scope 2 (location-based)

Base year start

January 1 2017

Base year end

December 31 2017

Base year emissions (metric tons CO2e)

390833

Comment

This base year is the first year that Republic began calculating and reporting a greenhouse gas inventory for emissions reductions. It is not the same base year as our current SBT GHG reduction goal. Our base year emissions are restated when we make adjustments due to methodology or boundary changes.

Scope 2 (market-based)

Base year start

January 1 2017

Base year end

December 31 2017

Base year emissions (metric tons CO2e)

384970

Comment

This base year is the first year that Republic began calculating and reporting a greenhouse gas inventory for emissions reductions. It is not the same base year as our current SBT GHG reduction goal. Our base year emissions are restated when we make adjustments due to methodology or boundary changes.

Scope 3 category 1: Purchased goods and services

Base year start

January 1 2017

Base year end

December 31 2017

Base year emissions (metric tons CO2e)

698525

Comment

This base year is the first year that Republic began calculating and reporting a greenhouse gas inventory for emissions reductions. It is not the same base year as our current SBT GHG reduction goal. Our base year emissions are restated when we make adjustments due to methodology or boundary changes.

Scope 3 category 2: Capital goods

Base year start

January 1 2017

Base year end

December 31 2017

Base year emissions (metric tons CO2e)

460136

Comment

This base year is the first year that Republic began calculating and reporting a greenhouse gas inventory for emissions reductions. It is not the same base year as our current SBT GHG reduction goal. Our base year emissions are restated when we make adjustments due to methodology or boundary changes.

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

Base year start

January 1 2017

Base year end

December 31 2017

Base year emissions (metric tons CO2e)

519980

Comment

This base year is the first year that Republic began calculating and reporting a greenhouse gas inventory for emissions reductions. It is not the same base year as our current SBT GHG reduction goal. Our base year emissions are restated when we make adjustments due to methodology or boundary changes.

Scope 3 category 4: Upstream transportation and distribution

Base year start

January 1 2017

Base year end

December 31 2017

Base year emissions (metric tons CO2e)

341807

Comment

This base year is the first year that Republic began calculating and reporting a greenhouse gas inventory for emissions reductions. It is not the same base year as our current SBT GHG reduction goal. Our base year emissions are restated when we make adjustments due to methodology or boundary changes.

Scope 3 category 5: Waste generated in operations

Base year start

January 1 2017

Base year end

December 31 2017

Base year emissions (metric tons CO2e)

17989

Comment

This base year is the first year that Republic began calculating and reporting a greenhouse gas inventory for emissions reductions. It is not the same base year as our current SBT GHG reduction goal. Our base year emissions are restated when we make adjustments due to methodology or boundary changes.

Scope 3 category 6: Business travel

Base year start

January 1 2017

Base year end

December 31 2017

Base year emissions (metric tons CO2e)

11825

Comment

This base year is the first year that Republic began calculating and reporting a greenhouse gas inventory for emissions reductions. It is not the same base year as our current SBT GHG reduction goal. Our base year emissions are restated when we make adjustments due to methodology or boundary changes.

Scope 3 category 7: Employee commuting

Base year start

January 1 2017

Base year end

December 31 2017

Base year emissions (metric tons CO2e)

181353

Comment

This base year is the first year that Republic began calculating and reporting a greenhouse gas inventory for emissions reductions. It is not the same base year as our current SBT GHG reduction goal. Our base year emissions are restated when we make adjustments due to methodology or boundary changes.

Scope 3 category 8: Upstream leased assets

Base year start

January 1 2017

Base year end

December 31 2017

Base year emissions (metric tons CO2e)

134

Comment

This base year is the first year that Republic began calculating and reporting a greenhouse gas inventory for emissions reductions. It is not the same base year as our current SBT GHG reduction goal. Our base year emissions are restated when we make adjustments due to methodology or boundary changes.

Scope 3 category 9: Downstream transportation and distribution

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment

Impacts and emissions for any downstream transportation and distribution have been incorporated as appropriate into the Waste Generated in Operations and/or Upstream Transportation & Distribution scope 3 GHG categories.

Scope 3 category 10: Processing of sold products

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment

The scope 3 emissions impacts from downstream processing of commodities we recover, process and sell are included in the estimation of full lifecycle emissions impacts from our sold products, as reported in the "Explanation" column of the "Use of sold products" category.

Scope 3 category 11: Use of sold products

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment

We have estimated the full lifecycle emissions impacts from our sold products, mainly recycled commodities. Total lifecycle emissions impacts, result in a negative emissions figure, which we are not accounting for in our total Scope 3 emissions figure. Lifecycle emissions include upstream mining, processing and transportation of materials that enter the waste stream, transportation and recovery/processing of commodities/compost by companies like Republic, as well as, downstream processing, transportation, and re-manufacturing where applicable. Emissions from recycled materials and compost sold are calculated using methodologies and emission factors from the U.S. EPA's Waste Reduction Model (WARM). For more information about emissions avoided from recycling and organics, please see C4.3.

Scope 3 category 12: End of life treatment of sold products

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment

As Republic does not purchase its "raw materials" used to create its products sold (i.e. recycled materials and compost) but rather receives these raw material inputs through its primary services of waste management collection, the emissions impacts are not captured in our Purchased Goods and Services category. These raw material inputs would, instead, be quantified as a separate upstream activity. Due to the complexity of this upstream value chain, the emissions associated with any raw material inputs are incorporated into our "Use of sold products" lifecycle calculation in Category 11, above, per the EPA WARM model.

Scope 3 category 13: Downstream leased assets

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment

Republic has not identified downstream leased assets in the completion of this questionnaire and has therefore determined that this Scope 3 category is not relevant to our business. All leased assets are included in the upstream leased assets category.

Scope 3 category 14: Franchises

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment

Not relevant to our operations, Republic does not have any franchises.

Scope 3 category 15: Investments

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment

Not relevant to our operations, we do not have emissions-bearing investments in our boundary.

Scope 3: Other (upstream)

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment

Not relevant to our operations, all of Republic's Scope 3 emissions are in the defined categories.

Scope 3: Other (downstream)

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment

Not relevant to our operations, all of Republic's Scope 3 emissions are in the defined categories.

C5.3

(C5.3) 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)

The Greenhouse Gas Protocol: Scope 2 Guidance

C6. Emissions data

C6.1

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

Reporting year

Gross global Scope 1 emissions (metric tons CO2e)

13688116

Start date

<Not Applicable>

End date

<Not Applicable>

Comment

Scope 1 emission activities include emissions from landfills, fleet and heavy equipment fuel usage, and our facilities.

C6.2

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

Row 1

Scope 2, location-based

We are reporting a Scope 2, location-based figure

Scope 2, market-based

We are reporting a Scope 2, market-based figure

Comment

C6.3

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

Reporting year

Scope 2, location-based

300782

Scope 2, market-based (if applicable)

304496

Start date

<Not Applicable>

End date

<Not Applicable>

Comment

C6.4

(C6.4) Are there any sources (e.g. facilities, specific GHGs, activities, geographies, etc.) of Scope 1, Scope 2 or Scope 3 emissions that are within your selected reporting boundary which are not included in your disclosure?

No

C6.5

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

Purchased goods and services

Evaluation status

Relevant, calculated

Emissions in reporting year (metric tons CO2e)

656385

Emissions calculation methodology

Spend-based method

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

1

Please explain

Outside of direct data collection from suppliers on their proportional emissions associated with delivery of purchased goods and services procured by Republic, the use of EEIO emissions factors offers an efficient and directional methodology to estimate the impacts associated with our spend in this category.

Capital goods

Evaluation status

Relevant, calculated

Emissions in reporting year (metric tons CO2e)

203995

Emissions calculation methodology

Spend-based method

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

1

Please explain

Outside of direct data collection from suppliers on their proportional emissions associated with delivery of capital goods procured by Republic, the use of EEIO emissions factors offers an efficient and directional methodology to estimate the impacts associated with our spend in this category.

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

Evaluation status

Relevant, calculated

Emissions in reporting year (metric tons CO2e)

554664

Emissions calculation methodology

Supplier-specific method

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

100

Please explain

Fuel and electricity data is supplied from utility companies. Emissions are then calculated for fuel-and-energy-related activities (not included in Scope 1 or 2) by totaling activity data for each Scope 1 fuel type and Scope 2 electricity consumption by country. These totals were multiplied by their relevant specific emission factors from UK Defra / DECC 2019 Conversion Factors for Company Reporting; except in the case of electricity Transmission and Distribution Loss emission factors, for which emission factors from USEPA 2021 were used.

Upstream transportation and distribution

Evaluation status

Relevant, calculated

Emissions in reporting year (metric tons CO2e)

313376

Emissions calculation methodology

Supplier-specific method

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

100

Please explain

Republic maintains detailed cost data for third-party hauler and subcontract collection services that it uses to support its collection services.

Waste generated in operations

Evaluation status

Relevant, calculated

Emissions in reporting year (metric tons CO₂e)

17989

Emissions calculation methodology

Waste-type-specific method

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

0

Please explain

Republic Services has two main sources of waste generated from operations. We use a life-cycle assessment method to calculate emissions from leachate and an extrapolation methodology to aggregate company-wide emissions from other operational waste. For our MSW generated in operations, we excluded the percentage that is taken to Republic-owned or -operated landfills as that is included in our Scope 1 emissions inventory.

Business travel

Evaluation status

Relevant, calculated

Emissions in reporting year (metric tons CO₂e)

7211

Emissions calculation methodology

Supplier-specific method

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

100

Please explain

Annual data for air travel, rail travel, and rental car travel is provided by Republic's travel agency. Air travel data is broken out by each flight leg and the distances, which is used to calculate total short, medium and long-haul miles (Short flights (<300 mi), Med. flights (300-2300 mi), Long flights (>2300 mi). Republic's travel agency was able to provide miles by cabin class. UK DEFRA 2020 emissions factors with radiative forcing are used to calculate the air travel GHG emissions, based on distance threshold and cabin class. Rail travel data was provided in terms of distance traveled. U.S. EPA Climate Leaders: Emission Factors for Greenhouse Gas Inventories, 2020 were used to calculate the emissions from the rail travel mileage. The rental car report in 2022 provided fuel volumes. U.S. EPA Climate Leaders: Emission Factors for Greenhouse Gas Inventories, 2020 were used to calculate the emissions from the rental car gasoline.

Employee commuting

Evaluation status

Relevant, calculated

Emissions in reporting year (metric tons CO₂e)

155334

Emissions calculation methodology

Distance-based method

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

0

Please explain

Republic Services calculates employee commuting based on a US EPA assumption of 41 miles round trip per eligible employee driven in a passenger car. For 2022, we implemented a hybrid work from home policy for many of our employees for the duration of the year, which we accounted for in our determination of number of employees commuting each day. We used the number of employee commuting days to calculate total mileage. We then applied EPA Table 10 Emission Factor to total mileage.

Upstream leased assets

Evaluation status

Relevant, calculated

Emissions in reporting year (metric tons CO₂e)

186

Emissions calculation methodology

Spend-based method

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

100

Please explain

Our upstream leased assets include data centers that have some predetermined agreements in place to avoid emissions. For example, our Switch data center is powered by 100% renewable energy. We apply an emissions factor of 0 for renewable energy. For non-renewable energy, we apply the applicable EPA eGrid factor based on facility location.

Downstream transportation and distribution

Evaluation status

Not relevant, explanation provided

Emissions in reporting year (metric tons CO2e)

<Not Applicable>

Emissions calculation methodology

<Not Applicable>

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

<Not Applicable>

Please explain

Impacts and emissions for any downstream transportation and distribution have been incorporated as appropriate into the Waste Generated in Operations and/or Upstream Transportation & Distribution scope 3 GHG categories. We have no downstream transportation and distribution impacts.

Processing of sold products

Evaluation status

Not relevant, explanation provided

Emissions in reporting year (metric tons CO2e)

<Not Applicable>

Emissions calculation methodology

<Not Applicable>

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

<Not Applicable>

Please explain

We are unable to separately estimate scope 3 emissions impacts from downstream processing of commodities we recover, process and sell. Instead, we have estimated the full lifecycle emissions impacts from our sold products, as reported in the "Explanation" column of the "Use of sold products" category.

Use of sold products

Evaluation status

Not relevant, explanation provided

Emissions in reporting year (metric tons CO2e)

<Not Applicable>

Emissions calculation methodology

<Not Applicable>

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

<Not Applicable>

Please explain

We have estimated the full lifecycle emissions impacts from our sold products, mainly recycled commodities (2.4M tons sold in 2022, including 342k tons of compost), as negative, and therefore incompatible with current, normative GHG reporting. Lifecycle avoided emissions include the displacement of upstream mining, processing and transportation of materials that enter the waste stream, transportation and recovery/processing of commodities/compost by companies like Republic, as well as, downstream processing, transportation, and re-manufacturing where applicable. We calculate avoided emissions from recycled materials and compost we sell using methodologies and emission factors from the U.S. EPA's Waste Reduction Model (WARM), version 15, which can be found in C4.3b.

End of life treatment of sold products

Evaluation status

Not relevant, explanation provided

Emissions in reporting year (metric tons CO2e)

<Not Applicable>

Emissions calculation methodology

<Not Applicable>

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

<Not Applicable>

Please explain

As Republic does not purchase its "raw materials" used to create its products sold (i.e. recycled materials and compost) but rather receives these raw material inputs through its primary services of solid waste collection, the upstream emissions occur outside of our boundary and are not captured in our Purchased Goods and Services category. The materials are quantified as a separate upstream activity, the emissions of which are attributable to our customers. primary services of waste management collection, the emissions impacts are not captured in our Purchased Goods and Services category. They would rather be quantified as a separate upstream activity. Due to the complexity of this upstream value chain, we are not able to estimate the emissions associated with any raw material inputs, however, they are incorporated into our "Use of sold products" lifecycle calculation above, as per the EPA WARM model.

Downstream leased assets

Evaluation status

Not relevant, explanation provided

Emissions in reporting year (metric tons CO2e)

<Not Applicable>

Emissions calculation methodology

<Not Applicable>

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

<Not Applicable>

Please explain

Republic has determined that this Scope 3 category is not relevant to our business. All leased assets are included in the upstream leased assets category.

Franchises

Evaluation status

Not relevant, explanation provided

Emissions in reporting year (metric tons CO2e)

<Not Applicable>

Emissions calculation methodology

<Not Applicable>

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

<Not Applicable>

Please explain

Not relevant to our operations, Republic does not have any franchises

Investments

Evaluation status

Not relevant, explanation provided

Emissions in reporting year (metric tons CO2e)

<Not Applicable>

Emissions calculation methodology

<Not Applicable>

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

<Not Applicable>

Please explain

Republic does not have any investments that are relevant to Scope 3 emissions reporting.

Other (upstream)

Evaluation status

Not relevant, explanation provided

Emissions in reporting year (metric tons CO2e)

<Not Applicable>

Emissions calculation methodology

<Not Applicable>

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

<Not Applicable>

Please explain

Not relevant to our operations, all of Republic's Scope 3 emissions are in the defined categories

Other (downstream)

Evaluation status

Not relevant, explanation provided

Emissions in reporting year (metric tons CO2e)

<Not Applicable>

Emissions calculation methodology

<Not Applicable>

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

<Not Applicable>

Please explain

Not relevant to our operations, all of Republic's Scope 3 emissions are in the defined categories

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	6692685	<p>There are five sources of biogenic carbon emissions that are relevant to Republic Services: CO2 from the combustion of landfill gas via flares, CO2 passing through on-site combustion devices, fugitive CO2 generated from the biological decomposition of waste in landfills, CO2 as a product of CH4 oxidation in the landfill cap, mobile combustion of biodiesel and biomethane. Biogenic emissions are treated separately from scope 1 in accordance with the GHG Protocol. Republic follows guidance from U.S. EPA on determining emissions of these sources of solid, gaseous, liquid and biomass fuels from: Mandatory Reporting of Greenhouse Gases Final Rule, 74 Fed. Reg. 56260 (Oct. 30, 2009); Tables C1 and C2 at 56409 and 56410. Republic also follows guidance from U.S. EPA on revised emission factors for selected fuels from: Mandatory Reporting of Greenhouse Gases Final Rule, 75 Fed. Reg. 79091 (Dec. 17, 2010).</p> <p>Sequestered Carbon Landfills act as a carbon sink, permanently, biologically sequestering carbon from municipal solid waste and removing it from the carbon cycle. Since the Greenhouse Gas Protocol does not currently allow for the accounting of avoided emissions, this total is not represented in our inventory. In 2022, Republic sequestered 27.42 MMTCO2e, as calculated using a 2008 U.S. EPA waste characterization study.</p>

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

0.001036

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

13992612

Metric denominator

unit total revenue

Metric denominator: Unit total

13511300000

Scope 2 figure used

Market-based

% change from previous year

16.9

Direction of change

Decreased

Reason(s) for change

Other emissions reduction activities

Please explain

Annual emissions have been restated to account for subsequent acquisitions, while revenue has not and represents what was reported on Form 10-K of the listed year. Therefore, annual emissions intensity reported here is not like-for-like and may not be a representative metric. See GRI 2-4 for more information regarding restatements.

C7. Emissions breakdowns

C7.1

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

Yes

C7.1a

(C7.1a) Break down your total gross global Scope 1 emissions by greenhouse gas type and provide the source of each used greenhouse warming potential (GWP).

Greenhouse gas	Scope 1 emissions (metric tons of CO2e)	GWP Reference
CH4	11885985	IPCC Fourth Assessment Report (AR4 - 100 year)
CO2	1797653	IPCC Fourth Assessment Report (AR4 - 100 year)
N2O	4479	IPCC Fourth Assessment Report (AR4 - 100 year)

C7.2

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

Country/area/region	Scope 1 emissions (metric tons CO2e)
North America	13688116

C7.3

(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)
Landfills	11895920
Fleet (vehicles and heavy equipment)	1533239
Buildings	258957

C7.5

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

Country/area/region	Scope 2, location-based (metric tons CO2e)	Scope 2, market-based (metric tons CO2e)
North America <i>See C0.3 for more details on our geographic footprint.</i>	300782	304496

C7.6

(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	200642	204356
Heat	100141	100141

C7.7

(C7.7) Is your organization able to break down your emissions data for any of the subsidiaries included in your CDP response?

No

C7.9

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

Decreased

C7.9a

(C7.9a) Identify the reasons for any change in your gross global emissions (Scope 1 and 2 combined), and for each of them specify how your emissions compare to the previous year.

	Change in emissions (metric tons CO2e)	Direction of change in emissions	Emissions value (percentage)	Please explain calculation
Change in renewable energy consumption	0	No change	0	For the several sites that consume energy from on-site renewables, there is no impact on year-over-year emissions.
Other emissions reduction activities	27715	Decreased	0.2	Efficiency improvements across the organization, including low-efficiency appliances and more efficient fleet routing. Our rebaselined Scope 1 and Scope 2 emissions in 2021 were 13,992,612 metric tons of carbon. Therefore we arrived at -0.2% through $(-27,715/13,992,612) * 100 = 0.2\%$ (i.e. a 0.2% decrease in emissions).
Divestment	0	No change	0	We rebaselined our emissions and in doing so, the current and historic emissions included in our 2022 sustainability reporting are like-for-like. Year-over-year changes are noted in the relevant rows of this table.
Acquisitions	0	No change	0	We rebaselined our emissions and in doing so, the current and historic emissions included in our 2022 sustainability reporting are like-for-like. Year-over-year changes are noted in the relevant rows of this table.
Mergers	0	No change	0	We rebaselined our emissions and in doing so, the current and historic emissions included in our 2022 sustainability reporting are like-for-like. Year-over-year changes are noted in the relevant rows of this table.
Change in output	48905	Decreased	0.35	With our increased efforts to improve cover systems and biogas collection efficiency we saw a year-over-year decrease of 0.35% in our landfill emissions. Our rebaselined Scope 1 and Scope 2 emissions in 2021 were 13,992,612 metric tons of carbon. Therefore we arrived at -0.35% through $(-48,905/13,992,612) * 100 = 0.35\%$ (i.e. a 0.35% decrease in emissions). We expect the continued expansion of biogas collection and the maximization of our collection efficiency to further reduce our landfill emissions which account for 75% of our scope 1, 2, and 3 emissions.
Change in methodology	0	No change	0	We rebaselined our emissions and in doing so, the current and historic emissions included in our 2022 sustainability reporting are like-for-like. Year-over-year changes are noted in the relevant rows of this table.
Change in boundary	0	No change	0	We rebaselined our emissions and in doing so, the current and historic emissions included in our 2022 sustainability reporting are like-for-like. Year-over-year changes are noted in the relevant rows of this table.
Change in physical operating conditions	0	No change	0	We rebaselined our emissions and in doing so, the current and historic emissions included in our 2022 sustainability reporting are like-for-like. Year-over-year changes are noted in the relevant rows of this table.
Unidentified	0	No change	0	
Other	0	No change	0	

C7.9b

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

Market-based

C8. Energy

C8.1

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

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

C8.2

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

	Indicate whether your organization undertook this energy-related activity in the reporting year
Consumption of fuel (excluding feedstocks)	Yes
Consumption of purchased or acquired electricity	Yes
Consumption of purchased or acquired heat	Yes
Consumption of purchased or acquired steam	No
Consumption of purchased or acquired cooling	No
Generation of electricity, heat, steam, or cooling	Yes

C8.2a

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

	Heating value	MWh from renewable sources	MWh from non-renewable sources	Total (renewable and non-renewable) MWh
Consumption of fuel (excluding feedstock)	HHV (higher heating value)	1221915	6053488	7275403
Consumption of purchased or acquired electricity	<Not Applicable>	0	512049	512049
Consumption of purchased or acquired heat	<Not Applicable>	0	1980916	1980916
Consumption of purchased or acquired steam	<Not Applicable>	<Not Applicable>	<Not Applicable>	<Not Applicable>
Consumption of purchased or acquired cooling	<Not Applicable>	<Not Applicable>	<Not Applicable>	<Not Applicable>
Consumption of self-generated non-fuel renewable energy	<Not Applicable>	847	<Not Applicable>	847
Total energy consumption	<Not Applicable>	1222762	8546453	9769215

C8.2b

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

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

C8.2c

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

Sustainable biomass

Heating value

HHV

Total fuel MWh consumed by the organization

1221915

MWh fuel consumed for self-generation of electricity

<Not Applicable>

MWh fuel consumed for self-generation of heat

<Not Applicable>

MWh fuel consumed for self-generation of steam

<Not Applicable>

MWh fuel consumed for self-generation of cooling

<Not Applicable>

MWh fuel consumed for self- cogeneration or self-trigeneration

<Not Applicable>

Comment

Consumption of biodiesel and biomethane for fleet operations.

Other biomass

Heating value

HHV

Total fuel MWh consumed by the organization

0

MWh fuel consumed for self-generation of electricity

<Not Applicable>

MWh fuel consumed for self-generation of heat

<Not Applicable>

MWh fuel consumed for self-generation of steam

<Not Applicable>

MWh fuel consumed for self-generation of cooling

<Not Applicable>

MWh fuel consumed for self- cogeneration or self-trigeneration

<Not Applicable>

Comment

Other renewable fuels (e.g. renewable hydrogen)

Heating value

HHV

Total fuel MWh consumed by the organization

0

MWh fuel consumed for self-generation of electricity

<Not Applicable>

MWh fuel consumed for self-generation of heat

<Not Applicable>

MWh fuel consumed for self-generation of steam

<Not Applicable>

MWh fuel consumed for self-generation of cooling

<Not Applicable>

MWh fuel consumed for self- cogeneration or self-trigeneration

<Not Applicable>

Comment

Coal

Heating value

HHV

Total fuel MWh consumed by the organization

0

MWh fuel consumed for self-generation of electricity

<Not Applicable>

MWh fuel consumed for self-generation of heat

<Not Applicable>

MWh fuel consumed for self-generation of steam

<Not Applicable>

MWh fuel consumed for self-generation of cooling

<Not Applicable>

MWh fuel consumed for self- cogeneration or self-trigeneration

<Not Applicable>

Comment

Oil

Heating value

HHV

Total fuel MWh consumed by the organization

6051510

MWh fuel consumed for self-generation of electricity

<Not Applicable>

MWh fuel consumed for self-generation of heat

<Not Applicable>

MWh fuel consumed for self-generation of steam

<Not Applicable>

MWh fuel consumed for self-generation of cooling

<Not Applicable>

MWh fuel consumed for self- cogeneration or self-trigeneration

<Not Applicable>

Comment

Diesel, jet fuel, unleaded gasoline, and heavy equipment operations.

Gas

Heating value

HHV

Total fuel MWh consumed by the organization

1982894

MWh fuel consumed for self-generation of electricity

<Not Applicable>

MWh fuel consumed for self-generation of heat

<Not Applicable>

MWh fuel consumed for self-generation of steam

<Not Applicable>

MWh fuel consumed for self-generation of cooling

<Not Applicable>

MWh fuel consumed for self- cogeneration or self-trigeneration

<Not Applicable>

Comment

Propane and natural gas used for fleet, heavy equipment, and facility operations.

Other non-renewable fuels (e.g. non-renewable hydrogen)

Heating value

Unable to confirm heating value

Total fuel MWh consumed by the organization

0

MWh fuel consumed for self-generation of electricity

<Not Applicable>

MWh fuel consumed for self-generation of heat

<Not Applicable>

MWh fuel consumed for self-generation of steam

<Not Applicable>

MWh fuel consumed for self-generation of cooling

<Not Applicable>

MWh fuel consumed for self- cogeneration or self-trigeneration

<Not Applicable>

Comment

Total fuel

Heating value

HHV

Total fuel MWh consumed by the organization

9256320

MWh fuel consumed for self-generation of electricity

<Not Applicable>

MWh fuel consumed for self-generation of heat

<Not Applicable>

MWh fuel consumed for self-generation of steam

<Not Applicable>

MWh fuel consumed for self-generation of cooling

<Not Applicable>

MWh fuel consumed for self- cogeneration or self-trigeneration

<Not Applicable>

Comment

C8.2d

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

	Total Gross generation (MWh)	Generation that is consumed by the organization (MWh)	Gross generation from renewable sources (MWh)	Generation from renewable sources that is consumed by the organization (MWh)
Electricity	847	847	847	847
Heat	93282	0	93282	0
Steam	0	0	0	0
Cooling	0	0	0	0

C8.2e

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

Country/area of low-carbon energy consumption

United States of America

Sourcing method

Financial (virtual) power purchase agreement (VPPA)

Energy carrier

Electricity

Low-carbon technology type

Solar

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

830

Tracking instrument used

I-REC

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

United States of America

Are you able to report the commissioning or re-powering year of the energy generation facility?

No

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

<Not Applicable>

Comment

One of Republic's colocation data centers, Switch, uses 100% renewable energy to power its facilities. Republic receives an annual sustainability certificate demonstrating the amount of Solar Renewable Energy Credits that Switch retired on behalf of Republic Services that year. Per Republic's sustainability certificate for 2022, Republic's 2022 renewable energy credits were generated by Nevada solar farms during 2022.

C8.2g

(C8.2g) Provide a breakdown by country/area of your non-fuel energy consumption in the reporting year.

Country/area

Other, please specify (North America)

Consumption of purchased electricity (MWh)

511990

Consumption of self-generated electricity (MWh)

847

Is this electricity consumption excluded from your RE100 commitment?

<Not Applicable>

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

0

Consumption of self-generated heat, steam, and cooling (MWh)

0

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

C9. Additional metrics

C9.1

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

Description

Waste

Metric value

46.1

Metric numerator

Percent

Metric denominator (intensity metric only)

% change from previous year

111

Direction of change

Increased

Please explain

46.1% is the diversion rate for both facility and equipment waste combined. It represents the percentage of our waste material that was diverted from landfill/incineration in the reporting year. Increase over prior year is due to the inclusion of the recycling/reuse of equipment and containers, which was not estimated in prior years.

Description

Waste

Metric value

7149

Metric numerator

Tonnes

Metric denominator (intensity metric only)

% change from previous year

209

Direction of change

Increased

Please explain

This figure represents facility recycling only and does not account for equipment and container waste. Increase accounts for improvements in data collection methodology and better diversion management.

C10. Verification

C10.1

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

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

C10.1a

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

Verification or assurance cycle in place

Annual process

Status in the current reporting year

Complete

Type of verification or assurance

Limited assurance

Attach the statement

2022 Republic Services Sustainability Assurance Statement.pdf

Page/ section reference

1-2

Relevant standard

ISO14064-3

Proportion of reported emissions verified (%)

100

C10.1b

(C10.1b) Provide further details of the verification/assurance undertaken for your Scope 2 emissions and attach the relevant statements.

Scope 2 approach

Scope 2 location-based

Verification or assurance cycle in place

Annual process

Status in the current reporting year

Complete

Type of verification or assurance

Limited assurance

Attach the statement

2022 Republic Services Sustainability Assurance Statement.pdf

Page/ section reference

1-2

Relevant standard

ISO14064-3

Proportion of reported emissions verified (%)

100

Scope 2 approach

Scope 2 market-based

Verification or assurance cycle in place

Annual process

Status in the current reporting year

Complete

Type of verification or assurance

Limited assurance

Attach the statement

2022 Republic Services Sustainability Assurance Statement.pdf

Page/ section reference

1-2

Relevant standard

ISO14064-3

Proportion of reported emissions verified (%)

100

C10.1c

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

Scope 3 category

- Scope 3: Purchased goods and services
- Scope 3: Capital goods
- Scope 3: Fuel and energy-related activities (not included in Scopes 1 or 2)
- Scope 3: Upstream transportation and distribution
- Scope 3: Waste generated in operations
- Scope 3: Business travel
- Scope 3: Employee commuting
- Scope 3: Upstream leased assets

Verification or assurance cycle in place

Annual process

Status in the current reporting year

Complete

Type of verification or assurance

Limited assurance

Attach the statement

2022 Republic Services Sustainability Assurance Statement.pdf

Page/section reference

1-2

Relevant standard

ISO14064-3

Proportion of reported emissions verified (%)

100

C10.2

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

Yes

C10.2a

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

Disclosure module verification relates to	Data verified	Verification standard	Please explain
C4. Targets and performance	Renewable energy products	ISO 14064-3	We have chosen to verify this additional data point as it is related to the annual verification of our organization-wide biogas collection goal. This goal is described in C4.2a and has direct impacts on emissions from landfill activities. 2022 Republic Services Sustainability Assurance Statement.pdf
C9. Additional metrics	Waste data	ISO 14064-3	We have chosen to verify our facility recycling tonnage as it is core to our industry and impacts our emissions inventory. Diversion tonnage metrics are reported in question C9.1 and emissions in Scope 3, Category 5. 2022 Republic Services Sustainability Assurance Statement.pdf

2022 Republic Services Sustainability Assurance Statement.pdf

C11. Carbon pricing

C11.1

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

No, but we anticipate being regulated in the next three years

C11.1d

(C11.1d) What is your strategy for complying with the systems you are regulated by or anticipate being regulated by?

Our 2030 sustainability goals address the risks and opportunities surrounding critical, sustainability-related macro trends most relevant to our business, including climate change. Given our position, regulatory and market developments related to climate change present us with the potential for strategic business opportunities. Offsetting operational GHG emissions is not enough. We are taking a bold position to leverage innovation and lead the industry in combating climate change. Landfill methane emissions, vehicle and equipment emissions, and our buildings' electricity and natural gas consumption all contribute to climate change. These activities all have varying potential for regulation by a carbon pricing system in the future and are being regulated in some countries already. That is why we have adopted an aggressive target for reducing our operational GHG emissions well below 2°C, approved by the Science Based Targets initiative (SBTi). Our goal is to reduce absolute Scope 1 and 2 greenhouse gas emissions 35% by 2030, from a 2017 baseline year. We have also set an interim target to reduce absolute Scope 1 and 2 emissions 10% by 2025. These goals support the United Nations "Climate Action" Sustainable Development Goal, 13.2 – reduce greenhouse gas emissions. We will accomplish these goals through:

1. Landfill innovation (e.g., monitoring and measurement, gas collection and control systems, landfill gas-to-energy)
2. Diversion from landfill (e.g., organics processing / composting, recycling)
3. Fleet emissions reductions (e.g., electrification, route optimization, changes in driver behavior)
4. Emissions reductions when we build (e.g., site selection, building materials and insulation, energy efficiency measures)

Proactive reduction of greenhouse gas emissions in these four areas reduces our risk from future regulation. Efforts to curtail the emission of greenhouse gases and to ameliorate the effects of climate change continue to progress. Passage of comprehensive, federal climate change legislation is unlikely in the current political climate. Nonetheless, should comprehensive federal climate change legislation be enacted, we expect it to impose costs on our operations, the materiality of which we cannot predict. We do not anticipate being regulated by an emissions trading scheme in the next three years, however, it is possible that a carbon tax could be enacted at the state or federal level in the next two to three years. Based on current carbon tax or cap-and-trade programs implemented in other countries, these policies typically do not directly levy a carbon tax at landfills. Policies are most often targeted on upstream waste generators. This approach is seen in several U.S. states today as a landfill diversion target that applies a fee to customers (businesses and/or municipalities) that do not meet diversion mandates. We anticipate this type of policy as opposed to a direct landfill carbon tax. A key element of our operating strategy for managing landfill emissions is to maximize the amount of gas collected at each site. By safely collecting the maximum amount, we minimize gas escaping as fugitive emissions. The collected landfill gas is either utilized for renewable energy or combusted in a flare. Republic is engaged in a large and rapidly growing number of landfill gas-to-energy projects that convert collected biogas for beneficial reuse. Additionally, consumer demand for recycling services has increased in an effort to divert emissions-generating materials away from the landfill, and we have responded by integrating recycling components into our collection service offerings. Our goal is to provide a complete suite of environmental services to our customers in a vertically integrated, environmentally sustainable way. Reducing emissions from our fleet reduces our risk in a scenario in which governments enact carbon-reduction policies. At current consumption levels, the addition of a \$63/ton carbon tax, corresponding to the 2025 SDS scenario, would result in an increase in our fuel expenses, which we would expect to offset through a fuel recovery fee of approximately \$89 million. We are lowering our emissions in the short-term is by using renewable natural gas (RNG) as a bridge technology to electric vehicles. With one of the largest vocational fleets in the country, using innovative technology to reduce emissions is vital. Between RNG-powered trucks, electric vehicles, and others, we have 1,000s of alternative fuel vehicles in our fleet. For more information about our GHG emissions goal, our progress and related initiatives, please refer to the Climate Leadership section of our 2022 Sustainability Report, our 2022 GRI Report (Standard 305), and our TCFD Report. These reports are available at RepublicServices.com/Sustainability/Reporting

C11.2

(C11.2) Has your organization canceled any project-based carbon credits within the reporting year?

No

C11.3

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

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

C12. Engagement

C12.1

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

- Yes, our suppliers
- Yes, our customers/clients
- Yes, other partners in the value chain

C12.1a

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

Type of engagement

Innovation & collaboration (changing markets)

Details of engagement

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

% of suppliers by number

0.2

% total procurement spend (direct and indirect)

19

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

19

Rationale for the coverage of your engagement

Our engagement is focused on our SBTi approved goal to reduce GHG emissions from our operations. Our 2018 Sustainability Report announced our SBTi approved goal, with a target of reducing absolute total Scope 1 and 2 GHG emissions by 35% by 2030. The goal includes efforts to reduce landfill emissions, fleet emissions and building emissions. This response is focused on those suppliers that provide products or services that help Republic reduce our operational emissions. The percent of suppliers represents suppliers involved in any aspect of this initiative.

Impact of engagement, including measures of success

Our measure of success for these initiatives is achievement of our GHG reduction goal. We must pursue tangible actions to collaborate with suppliers in pursuit of making progress toward the GHG reduction goal. We strive to maximize the collection of gas within the landfill to minimize potential fugitive emissions and maintain landfill health. This part of the engagement includes working with suppliers that can provide landfill gas collection equipment, help us develop landfill gas to energy projects, provide products and services that help us divert materials from landfills that create methane while decomposing and invest in new technologies to improve our landfill emissions controls. As an example, in 2019 we increased the amount of landfill gas recovered from our landfills by 3.12%. One contributor to this progress was Morrow Renewables, a recognized leader among renewable natural gas developers. Morrow Renewables built and operates the upgrades to the landfill gas to energy project at Blue Ridge Landfill in Texas. Morrow partners with Republic on three renewable energy projects in Texas. In addition, we work together with a number of suppliers to develop engines, equipment and fuel that improve our fuel efficiency and fleet carbon footprint, thereby reducing the climate impact of our services. Initiatives include CNG engines, CNG fueling stations, RNG fuel supply and purchase, and electric vehicles. We have been ramping up our use of alternative fuel vehicles since 2016, working with project developers, RNG suppliers, and electric vehicle manufacturers. In 2022, approximately 20% of our fleet operated on alternative fuel. Through these activities we were able to reduce our use of diesel fuel, resulting in a reduction in GHG emissions of over 293,000 MTCO_{2e}. Finally, our new building construction and retrofits adhere to the U.S. Green Building Council's Leadership in Energy and Environmental Design (LEED) standards. This includes using products and services that help us achieve energy reduction, water conservation measures and the use of sustainable materials and design principles that enhance comfort.

Comment

Type of engagement

Information collection (understanding supplier behavior)

Details of engagement

Collect GHG emissions data at least annually from suppliers

Collect targets information at least annually from suppliers

Collect climate-related risk and opportunity information at least annually from suppliers

% of suppliers by number

0.2

% total procurement spend (direct and indirect)

13

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

16

Rationale for the coverage of your engagement

We targeted the top quartile of suppliers by spend, which corresponded to the top quartile by EEIO-calculated emissions. This was a pilot engagement to understand how our suppliers respond to such requests and their current maturity on GHG and climate.

Impact of engagement, including measures of success

We received our first supplier-provided data for inclusion in our GHG inventory. Several suppliers responded with thoughtful questions and follow-up and a similar number made us of the opportunity to showcase their own sustainability programs.

Comment

We plan to continue conducting annual supplier outreach surveys as a means of setting the expectation for our supplier to be reporting on their GHG inventory.

C12.1b

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

Type of engagement & Details of engagement

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

% of customers by number

74

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

1

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

As reported in our 2022 SASB response, the percentage of customers receiving recycling services by service type is: residential - 74% small container - 26% large container - 26%. We selected customers who receive recycling services because of the significant impact that recycling has on emission avoidance and recycling education helps us achieve our circular economy goal. We have estimated the full lifecycle emissions impacts from our diversion activities, as shown in C4.3b. Emissions from recycled materials and compost are calculated using methodologies and emission factors from the U.S. EPA's Waste Reduction Model (WARM), version 15. We offer numerous sources of recycling education to our customers including informational flyers with their invoices, our mobile app, as well as our recycling education campaign, Recycling Simplified program (<https://recyclingsimplified.com>), is available to our customers and the broader community. These campaigns are designed to inform our customers and the general public about the value of recycling and how to recycle correctly. Education helps reduce contamination in the recycle stream which improves the sustainability of recycling as an offering. In addition to lifecycle GHG reductions, successful recycling improves the financial returns to both our company and the customer, while improving the quality of recovered materials that are sold to downstream re-processors.

Impact of engagement, including measures of success

There are two measures of success for this initiative. One is a benefit for our customers and includes reduction of waste sent to landfills (pounds or tons). A second measure of success is our ability to return more recycled commodities to the economy. We have a goal related to Circular Economy, which is to increase recovery of key materials by 40% on a combined basis by 2030 (from a 2017 baseline). This public goal is achieved in part by educating customers on what materials to recycle. Education reduces contamination in the recycle stream which helps us recover more and provide higher quality commodities to re-processors. Recycling education provides benefits to both Republic, our customers and communities. Republic received and processed over 5 million metric tons of recycled material in our facilities in 2022. Every percentage of contamination represents increased cost to process, handle, re-process and dispose of non-recyclable material. Education can not only increase the amount of recyclables collected, but also decrease the amount of contamination. While benefits to our customers vary, as of 2021 we had eliminated close to 22 million pounds of landfilled waste over a four-year period in the US, working with a \$13.5B food producer. Financial benefits to our customers from recycling include a reduction in their trash hauling service and lower landfill disposal charges. These benefits lead to lower GHG emissions in a variety of ways – reduced transportation, reduced emissions from landfills and reduced need for virgin materials (plastic, cardboard, etc.).

C12.1d

(C12.1d) Give details of your climate-related engagement strategy with other partners in the value chain.

Services providers in our industry all rely on each other to conduct their services, e.g. collecting materials that are sent to a peer for post-collection or subcontracting hauling services for materials that arrive at a company's own post-collection site. Due to this dynamic relationship, it is imperative for the companies to collaborate with one another. Through an initiative that originated with Republic Services, our industry organization, the National Waste & Recycling Association (NWRA), now regularly convenes sustainability-focused and -adjacent professionals from the major public and private companies that operate in this sector. This regular convening allows member organizations to align on our approaches to measuring, monitoring, and reporting on GHG emissions and climate-related risks and opportunities.

C12.2

(C12.2) Do your suppliers have to meet climate-related requirements as part of your organization's purchasing process?

Yes, climate-related requirements are included in our supplier contracts

C12.2a

(C12.2a) Provide details of the climate-related requirements that suppliers have to meet as part of your organization's purchasing process and the compliance mechanisms in place.

Climate-related requirement

Complying with regulatory requirements

Description of this climate related requirement

We continue to make progress toward our ambitious sustainability goals, which are designed to significantly benefit the environment and society while enhancing the foundation and profitability of our business for the long term. Republic is committed to doing our part to create a cleaner, safer, and healthier world where people thrive – not just for today, but for generations to come. As part of this commitment, we expect our Suppliers to responsibly manage their impact on the environment and our communities by operating efficiently and minimizing adverse impacts while complying with all applicable federal, state, and local environmental laws and regulations. We also encourage our suppliers to develop a sustainable procurement program for their own suppliers.

% suppliers by procurement spend that have to comply with this climate-related requirement

100

% suppliers by procurement spend in compliance with this climate-related requirement

100

Mechanisms for monitoring compliance with this climate-related requirement

Grievance mechanism/Whistleblowing hotline

Response to supplier non-compliance with this climate-related requirement

Retain and engage

C12.3

(C12.3) Does your organization engage in activities that could either directly or indirectly influence policy, law, or regulation that may impact the climate?

Row 1

External engagement activities that could directly or indirectly influence policy, law, or regulation that may impact the climate

Yes, our membership of/engagement with trade associations could influence policy, law, or regulation that may impact the climate

Does your organization have a public commitment or position statement to conduct your engagement activities in line with the goals of the Paris Agreement?

Yes

Attach commitment or position statement(s)

Press Release of SBT.pdf

Describe the process(es) your organization has in place to ensure that your external engagement activities are consistent with your climate commitments and/or climate transition plan

We engage with trade associations to collaborate with others in our industry to align on best practices for reporting and regulations as it pertains to our industry. Republic Services also provides feedback to our trade partners on upcoming legislation, such as the impending SEC climate disclosures, for improvements and considerations to be made for the highest level of compliance and transparency.

Primary reason for not engaging in activities that could directly or indirectly influence policy, law, or regulation that may impact the climate

<Not Applicable>

Explain why your organization does not engage in activities that could directly or indirectly influence policy, law, or regulation that may impact the climate

<Not Applicable>

C12.3b

(C12.3b) Provide details of the trade associations your organization is a member of, or engages with, which are likely to take a position on any policy, law or regulation that may impact the climate.

Trade association

Other, please specify (National Waste & Recycling Association (NWRA))

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

Consistent

Has your organization attempted to influence their position in the reporting year?

Yes, we publicly promoted their current position

Describe how your organization's position is consistent with or differs from the trade association's position, and any actions taken to influence their position

The mission of the NWRA (<https://wasterecycling.org/page/Federal>) is to provide leadership, advocacy, research, education and safety expertise to promote the North American waste and recycling industries, serve as their voice and create a climate where members prosper and provide safe, economically sustainable and environmentally sound services. Given the relationship between climate change and waste, there are a number of areas where NWRA states a position that can influence climate change. Their current agenda includes the following:

Recycled Materials - NWRA urges Congress and federal regulatory agencies to implement policies that encourage development of the domestic market for recycled materials through federal grants and tax incentives.

Energy Generation - NWRA supports the continued use of landfill produced methane gas as a renewable energy product.

Food Waste - NWRA encourages adoption of "The Food Recovery Act" establishing grants and loans for facilities to install anaerobic digesters that use food or crop waste to produce energy.

Funding figure your organization provided to this trade association in the reporting year (currency as selected in C0.4)

520420

Describe the aim of your organization's funding

We support the mission of NW&RA which is to provide leadership advocacy, research, education, and safety expertise to promote the North American waste and recycling industries, serve as their voice and create a climate where members prosper and provide safe, economically sustainable and environmentally sound services.

Have you evaluated whether your organization's engagement with this trade association is aligned with the goals of the Paris Agreement?

Yes, we have evaluated, and it is aligned

C12.4

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

Publication

In mainstream reports, incorporating the TCFD recommendations

Status

Complete

Attach the document

2022 Republic Services GRI Report.pdf

2022 Republic Services SASB Report.pdf

2022 Republic Services TCFD Addendum.pdf

Page/Section reference

Content elements

Governance

Strategy

Risks & opportunities

Emissions figures

Emission targets

Other metrics

Comment

We publish our emissions and response to climate change in a number of frameworks outside of CDP. To review our most current responses please visit our website at <https://www.republicservices.com/sustainability>.

Reports include:

-TCFD

-GRI

-SASB

-Republic Services Sustainability Report

-Republic Services Environmental Justice Report

C12.5

(C12.5) Indicate the collaborative frameworks, initiatives and/or commitments related to environmental issues for which you are a signatory/member.

	Environmental collaborative framework, initiative and/or commitment	Describe your organization's role within each framework, initiative and/or commitment
Row 1	We are not a signatory/member of any collaborative framework, initiative and/or commitment related to environmental issues	<Not Applicable>

C15. Biodiversity

C15.1

(C15.1) Is there board-level oversight and/or executive management-level responsibility for biodiversity-related issues within your organization?

	Board-level oversight and/or executive management-level responsibility for biodiversity-related issues	Description of oversight and objectives relating to biodiversity	Scope of board-level oversight
Row 1	Yes, executive management-level responsibility	Our Environmental Policy (https://www.republicservices.com/cms/documents/sustainability_reports/EMSPolicy.pdf) requires that we minimize our impact to air, water, and land. Top-level governance of environmental management and the Environmental Policy is directed by our Board's Sustainability & Corporate Responsibility Committee. The vast majority of our sites are hauling facilities, essentially parking and maintenance for our vehicles, located in industrial zones. Our landfills are where we have an opportunity for closer engagement with the biodiversity of our ecosystems. Once space at a landfill is permanently closed, it is typically dedicated as natural space, such as a park or preservation. At several of our closed landfills, we have employed bioremediation techniques (see GRI 3-3 (https://www.republicservices.com/cms/documents/sustainability_reports/2022-Republic-Services-GRI-Report.pdf) Water and Effluents for description) via our wetlands and vegetation, which allow for an abundance of species biodiversity. See examples in our 2022 Sustainability Report (https://www.republicservices.com/cms/documents/sustainability_reports/2022-Republic-Services-Sustainability-Report.pdf).	<Not Applicable>

C15.2

(C15.2) Has your organization made a public commitment and/or endorsed any initiatives related to biodiversity?

	Indicate whether your organization made a public commitment or endorsed any initiatives related to biodiversity	Biodiversity-related public commitments	Initiatives endorsed
Row 1	Yes, we have endorsed initiatives only	<Not Applicable>	SDG

C15.3

(C15.3) Does your organization assess the impacts and dependencies of its value chain on biodiversity?

Impacts on biodiversity

Indicate whether your organization undertakes this type of assessment

No, but we plan to within the next two years

Value chain stage(s) covered

<Not Applicable>

Portfolio activity

<Not Applicable>

Tools and methods to assess impacts and/or dependencies on biodiversity

<Not Applicable>

Please explain how the tools and methods are implemented and provide an indication of the associated outcome(s)

<Not Applicable>

Dependencies on biodiversity

Indicate whether your organization undertakes this type of assessment

No, but we plan to within the next two years

Value chain stage(s) covered

<Not Applicable>

Portfolio activity

<Not Applicable>

Tools and methods to assess impacts and/or dependencies on biodiversity

<Not Applicable>

Please explain how the tools and methods are implemented and provide an indication of the associated outcome(s)

<Not Applicable>

C15.4

(C15.4) Does your organization have activities located in or near to biodiversity-sensitive areas in the reporting year?

Not assessed

C15.5

(C15.5) What actions has your organization taken in the reporting year to progress your biodiversity-related commitments?

	Have you taken any actions in the reporting period to progress your biodiversity-related commitments?	Type of action taken to progress biodiversity- related commitments
Row 1	Yes, we are taking actions to progress our biodiversity-related commitments	Land/water protection Land/water management Species management Education & awareness Livelihood, economic & other incentives

C15.6

(C15.6) Does your organization use biodiversity indicators to monitor performance across its activities?

	Does your organization use indicators to monitor biodiversity performance?	Indicators used to monitor biodiversity performance
Row 1	No, we do not use indicators, but plan to within the next two years	Please select

C15.7

(C15.7) Have you published information about your organization’s response to biodiversity-related issues for this reporting year in places other than in your CDP response? If so, please attach the publication(s).

Report type	Content elements	Attach the document and indicate where in the document the relevant biodiversity information is located
In voluntary sustainability report or other voluntary communications	Impacts on biodiversity	2022 Republic Services Sustainability Report: Climate Leadership Section https://www.republicservices.com/cms/documents/sustainability_reports/2022-Republic-Services-Sustainability-Report.pdf

C16. 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.

C16.1

(C16.1) Provide details for the person that has signed off (approved) your CDP climate change response.

	Job title	Corresponding job category
Row 1	COO	Chief Operating Officer (COO)

SC. Supply chain module

SC0.0

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

SC0.1

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

	Annual Revenue
Row 1	13511300000

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

Requesting member

Please select

Scope of emissions

Scope 1

Scope 2 accounting method

<Not Applicable>

Scope 3 category(ies)

<Not Applicable>

Allocation level

Company wide

Allocation level detail

<Not Applicable>

Emissions in metric tonnes of CO2e

232.68

Uncertainty (±%)

5

Major sources of emissions

Landfill fugitive emissions, fleet and heavy equipment.

Verified

No

Allocation method

Allocation based on mass of products purchased

Market value or quantity of goods/services supplied to the requesting member

1620.78

Unit for market value or quantity of goods/services supplied

Metric tons

Please explain how you have identified the GHG source, including major limitations to this process and assumptions made

The GHG source was identified using Republic Services' Scope 1 emissions profile, of which roughly 90% are attributable to our customers' organic material decomposing in our landfills. The fraction resulting from the tons of material collected from a single customer compared to the total tons of material that Republic Services collects from all customers is used to determine individual customer's emissions. This percentage was applied to Republic Services' total Scope 1 emissions to determine the Scope 1 emissions allocated to each customer. Republic Services' Scope 1 emissions include emissions due to transportation and landfilling of waste. All Scope 1 emission sources have completed Limited Assurance by a 3rd party verifier.

We encourage our customers to engage in recycling and organics processing, which are emissions-avoiding activities as measured by lifecycle assessment (LCA) calculations. Avoided emissions are not currently reportable in Scopes 1, 2, or 3 according to the Greenhouse Gas Protocol and are not represented in those metrics throughout this report. Having said that, Republic Services diverted approximately 3% of Xylem material from landfills in the reporting year, avoiding 435.6 tonnes of CO2e, according to EPA's WARM v15 LCA tool.

Requesting member

Please select

Scope of emissions

Scope 2

Scope 2 accounting method

Market-based

Scope 3 category(ies)

<Not Applicable>

Allocation level

Company wide

Allocation level detail

<Not Applicable>

Emissions in metric tonnes of CO2e

5.18

Uncertainty (±%)

5

Major sources of emissions

Offices and other facilities.

Verified

No

Allocation method

Allocation based on mass of products purchased

Market value or quantity of goods/services supplied to the requesting member

1620.78

Unit for market value or quantity of goods/services supplied

Metric tons

Please explain how you have identified the GHG source, including major limitations to this process and assumptions made

The GHG source was identified using Republic Services Scope 2 profile, which consists of all electricity purchases and consumption. To allocate total Scope 2 emissions at a customer level, Republic Services uses the market based emissions value of the collection services delivered to a customer from total revenue.

Requesting member

Please select

Scope of emissions

Scope 3

Scope 2 accounting method

<Not Applicable>

Scope 3 category(ies)

Category 1: Purchased goods and services

Category 2: Capital goods

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

Category 4: Upstream transportation and distribution

Category 5: Waste generated in operations

Category 6: Business travel

Category 7: Employee commuting

Category 8: Upstream leased assets

Allocation level

Company wide

Allocation level detail

<Not Applicable>

Emissions in metric tonnes of CO2e

32.45

Uncertainty (±%)

5

Major sources of emissions

Upstream Transportation and Distribution (e.g., 3rd Party Haulers and Subcontract Collection services) and Business Travel.

Verified

No

Allocation method

Allocation based on mass of products purchased

Market value or quantity of goods/services supplied to the requesting member

1620.78

Unit for market value or quantity of goods/services supplied

Metric tons

Please explain how you have identified the GHG source, including major limitations to this process and assumptions made

The GHG source was identified using Republic Services Scope 3 profile, which consists of upstream transportation activities associated with third party hauling/subcontracting, as well as corporate business travel including air and rental vehicles. All Scope 3 emission sources have completed Limited Assurance by a 3rd party verifier. The fraction resulting from the tons of material collected from a single customer compared to the total tons of material that Republic Services collects from all customers is used to determine individual customer's Scope 3 emissions.

Requesting member

Please select

Scope of emissions

Scope 1

Scope 2 accounting method

<Not Applicable>

Scope 3 category(ies)

<Not Applicable>

Allocation level

Company wide

Allocation level detail

<Not Applicable>

Emissions in metric tonnes of CO2e

824.97

Uncertainty (±%)

5

Major sources of emissions

Landfill fugitive emissions, fleet and heavy equipment.

Verified

No

Allocation method

Allocation based on mass of products purchased

Market value or quantity of goods/services supplied to the requesting member

5746.53

Unit for market value or quantity of goods/services supplied

Metric tons

Please explain how you have identified the GHG source, including major limitations to this process and assumptions made

The GHG source was identified using Republic Services' Scope 1 emissions profile, of which roughly 90% are attributable to our customers' organic material decomposing in our landfills. The fraction resulting from the tons of material collected from a single customer compared to the total tons of material that Republic Services collects from all customers is used to determine individual customer's emissions. This percentage was applied to Republic Services' total Scope 1 emissions to determine the Scope 1 emissions allocated to each customer. Republic Services' Scope 1 emissions include emissions due to transportation and landfilling of waste. All Scope 1 emission sources have completed Limited Assurance by a 3rd party verifier.

We encourage our customers to engage in recycling and organics processing, which are emissions-avoiding activities as measured by lifecycle assessment (LCA) calculations. Avoided emissions are not currently reportable in Scopes 1, 2, or 3 according to the Greenhouse Gas Protocol and are not represented in those metrics throughout this report. Having said that, Republic Services diverted approximately 7% of CSX Corporation's material from landfills in the reporting year, avoiding 1359.36 tonnes of CO₂e, according to EPA's WARM v15 LCA tool.

Requesting member

Please select

Scope of emissions

Scope 2

Scope 2 accounting method

Market-based

Scope 3 category(ies)

<Not Applicable>

Allocation level

Company wide

Allocation level detail

<Not Applicable>

Emissions in metric tonnes of CO₂e

18.35

Uncertainty (±%)

5

Major sources of emissions

Offices and other facilities.

Verified

No

Allocation method

Allocation based on mass of products purchased

Market value or quantity of goods/services supplied to the requesting member

5746.53

Unit for market value or quantity of goods/services supplied

Metric tons

Please explain how you have identified the GHG source, including major limitations to this process and assumptions made

The GHG source was identified using Republic Services Scope 2 profile, which consists of all electricity purchases and consumption. To allocate total Scope 2 emissions at a customer level, Republic Services uses the market based emissions value of the collection services delivered to a customer from total revenue.

Requesting member

Please select

Scope of emissions

Scope 3

Scope 2 accounting method

<Not Applicable>

Scope 3 category(ies)

Category 1: Purchased goods and services

Category 2: Capital goods

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

Category 4: Upstream transportation and distribution

Category 5: Waste generated in operations

Category 6: Business travel

Category 7: Employee commuting

Category 8: Upstream leased assets

Allocation level

Company wide

Allocation level detail

<Not Applicable>

Emissions in metric tonnes of CO2e

115.06

Uncertainty (±%)

5

Major sources of emissions

Upstream Transportation and Distribution (e.g., 3rd Party Haulers and Subcontract Collection services) and Business Travel.

Verified

No

Allocation method

Allocation based on mass of products purchased

Market value or quantity of goods/services supplied to the requesting member

5746.53

Unit for market value or quantity of goods/services supplied

Metric tons

Please explain how you have identified the GHG source, including major limitations to this process and assumptions made

The GHG source was identified using Republic Services Scope 3 profile, which consists of upstream transportation activities associated with third party hauling/subcontracting, as well as corporate business travel including air and rental vehicles. All Scope 3 emission sources have completed Limited Assurance by a 3rd party verifier. The fraction resulting from the tons of material collected from a single customer compared to the total tons of material that Republic Services collects from all customers is used to determine individual customer's Scope 3 emissions.

Requesting member

Please select

Scope of emissions

Scope 1

Scope 2 accounting method

<Not Applicable>

Scope 3 category(ies)

<Not Applicable>

Allocation level

Company wide

Allocation level detail

<Not Applicable>

Emissions in metric tonnes of CO2e

25044.45

Uncertainty (±%)

5

Major sources of emissions

Landfill fugitive emissions, fleet and heavy equipment.

Verified

No

Allocation method

Allocation based on mass of products purchased

Market value or quantity of goods/services supplied to the requesting member

174453.43

Unit for market value or quantity of goods/services supplied

Metric tons

Please explain how you have identified the GHG source, including major limitations to this process and assumptions made

The GHG source was identified using Republic Services' Scope 1 emissions profile, of which roughly 90% are attributable to our customers' organic material decomposing in our landfills. The fraction resulting from the tons of material collected from a single customer compared to the total tons of material that Republic Services collects from all customers is used to determine individual customer's emissions. This percentage was applied to Republic Services' total Scope 1 emissions to determine the Scope 1 emissions allocated to each customer. Republic Services' Scope 1 emissions include emissions due to transportation and landfilling of waste. All Scope 1 emission sources have completed Limited Assurance by a 3rd party verifier.

We encourage our customers to engage in recycling and organics processing, which are emissions-avoiding activities as measured by lifecycle assessment (LCA) calculations. Avoided emissions are not currently reportable in Scopes 1, 2, or 3 according to the Greenhouse Gas Protocol and are not represented in those metrics throughout this report. Having said that, Republic Services diverted approximately 30% of CVS Health's material from landfills in the reporting year, avoiding 164,283.40 tonnes of CO2e, according to EPA's WARM v15 LCA tool.

Requesting member

Please select

Scope of emissions

Scope 2

Scope 2 accounting method

Market-based

Scope 3 category(ies)

<Not Applicable>

Allocation level

Company wide

Allocation level detail

<Not Applicable>

Emissions in metric tonnes of CO2e

557.12

Uncertainty (±%)

5

Major sources of emissions

Offices and other facilities.

Verified

No

Allocation method

Allocation based on mass of products purchased

Market value or quantity of goods/services supplied to the requesting member

174453.43

Unit for market value or quantity of goods/services supplied

Metric tons

Please explain how you have identified the GHG source, including major limitations to this process and assumptions made

The GHG source was identified using Republic Services Scope 2 profile, which consists of all electricity purchases and consumption. To allocate total Scope 2 emissions at a customer level, Republic Services uses the market based emissions value of the collection services delivered to a customer from total revenue.

Requesting member

Please select

Scope of emissions

Scope 3

Scope 2 accounting method

<Not Applicable>

Scope 3 category(ies)

Category 1: Purchased goods and services

Category 2: Capital goods

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

Category 4: Upstream transportation and distribution

Category 5: Waste generated in operations

Category 6: Business travel

Category 7: Employee commuting

Category 8: Upstream leased assets

Allocation level

Company wide

Allocation level detail

<Not Applicable>

Emissions in metric tonnes of CO2e

3493.06

Uncertainty (±%)

5

Major sources of emissions

Upstream Transportation and Distribution (e.g., 3rd Party Haulers and Subcontract Collection services) and Business Travel.

Verified

No

Allocation method

Allocation based on mass of products purchased

Market value or quantity of goods/services supplied to the requesting member

174453.43

Unit for market value or quantity of goods/services supplied

Metric tons

Please explain how you have identified the GHG source, including major limitations to this process and assumptions made

The GHG source was identified using Republic Services Scope 3 profile, which consists of upstream transportation activities associated with third party hauling/subcontracting, as well as corporate business travel including air and rental vehicles. All Scope 3 emission sources have completed Limited Assurance by a 3rd party verifier. The fraction resulting from the tons of material collected from a single customer compared to the total tons of material that Republic Services collects from all customers is used to determine individual customer's Scope 3 emissions.

Requesting member

Please select

Scope of emissions

Scope 1

Scope 2 accounting method

<Not Applicable>

Scope 3 category(ies)

<Not Applicable>

Allocation level

Company wide

Allocation level detail

<Not Applicable>

Emissions in metric tonnes of CO2e

2466.57

Uncertainty (±%)

5

Major sources of emissions

Landfill fugitive emissions, fleet and heavy equipment.

Verified

No

Allocation method

Allocation based on mass of products purchased

Market value or quantity of goods/services supplied to the requesting member

17181.51

Unit for market value or quantity of goods/services supplied

Metric tons

Please explain how you have identified the GHG source, including major limitations to this process and assumptions made

The GHG source was identified using Republic Services' Scope 1 emissions profile, of which roughly 90% are attributable to our customers' organic material decomposing in our landfills. The fraction resulting from the tons of material collected from a single customer compared to the total tons of material that Republic Services collects from all customers is used to determine individual customer's emissions. This percentage was applied to Republic Services' total Scope 1 emissions to determine the Scope 1 emissions allocated to each customer. Republic Services' Scope 1 emissions include emissions due to transportation and landfilling of waste. All Scope 1 emission sources have completed Limited Assurance by a 3rd party verifier.

We encourage our customers to engage in recycling and organics processing, which are emissions-avoiding activities as measured by lifecycle assessment (LCA) calculations. Avoided emissions are not currently reportable in Scopes 1, 2, or 3 according to the Greenhouse Gas Protocol and are not represented in those metrics throughout this report. Having said that, Republic Services diverted approximately 4% of International Paper Company material from landfills in the reporting year, avoiding 2,443.32 tonnes of CO2e, according to EPA's WARM v15 LCA tool.

Requesting member

Please select

Scope of emissions

Scope 2

Scope 2 accounting method

Market-based

Scope 3 category(ies)

<Not Applicable>

Allocation level

Company wide

Allocation level detail

<Not Applicable>

Emissions in metric tonnes of CO2e

54.87

Uncertainty (±%)

5

Major sources of emissions

Offices and other facilities.

Verified

No

Allocation method

Allocation based on mass of products purchased

Market value or quantity of goods/services supplied to the requesting member

17181.51

Unit for market value or quantity of goods/services supplied

Metric tons

Please explain how you have identified the GHG source, including major limitations to this process and assumptions made

The GHG source was identified using Republic Services Scope 2 profile, which consists of all electricity purchases and consumption. To allocate total Scope 2 emissions at a customer level, Republic Services uses the market based emissions value of the collection services delivered to a customer from total revenue.

Requesting member

Please select

Scope of emissions

Scope 3

Scope 2 accounting method

<Not Applicable>

Scope 3 category(ies)

Category 1: Purchased goods and services

Category 2: Capital goods

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

Category 4: Upstream transportation and distribution

Category 5: Waste generated in operations

Category 6: Business travel

Category 7: Employee commuting

Category 8: Upstream leased assets

Allocation level

Company wide

Allocation level detail

<Not Applicable>

Emissions in metric tonnes of CO₂e

344.02

Uncertainty (±%)

5

Major sources of emissions

Upstream Transportation and Distribution (e.g., 3rd Party Haulers and Subcontract Collection services) and Business Travel.

Verified

No

Allocation method

Allocation based on mass of products purchased

Market value or quantity of goods/services supplied to the requesting member

17181.51

Unit for market value or quantity of goods/services supplied

Metric tons

Please explain how you have identified the GHG source, including major limitations to this process and assumptions made

The GHG source was identified using Republic Services Scope 3 profile, which consists of upstream transportation activities associated with third party hauling/subcontracting, as well as corporate business travel including air and rental vehicles. All Scope 3 emission sources have completed Limited Assurance by a 3rd party verifier. The fraction resulting from the tons of material collected from a single customer compared to the total tons of material that Republic Services collects from all customers is used to determine individual customer's Scope 3 emissions.

Requesting member

Please select

Scope of emissions

Scope 1

Scope 2 accounting method

<Not Applicable>

Scope 3 category(ies)

<Not Applicable>

Allocation level

Company wide

Allocation level detail

<Not Applicable>

Emissions in metric tonnes of CO₂e

166.89

Uncertainty (±%)

5

Major sources of emissions

Landfill fugitive emissions, fleet and heavy equipment.

Verified

No

Allocation method

Allocation based on mass of products purchased

Market value or quantity of goods/services supplied to the requesting member

1162.55

Unit for market value or quantity of goods/services supplied

Metric tons

Please explain how you have identified the GHG source, including major limitations to this process and assumptions made

The GHG source was identified using Republic Services' Scope 1 emissions profile, of which roughly 90% are attributable to our customers' organic material decomposing in our landfills. The fraction resulting from the tons of material collected from a single customer compared to the total tons of material that Republic Services collects from all customers is used to determine individual customer's emissions. This percentage was applied to Republic Services' total Scope 1 emissions to determine the Scope 1 emissions allocated to each customer. Republic Services' Scope 1 emissions include emissions due to transportation and landfilling of waste. All Scope 1 emission sources have completed Limited Assurance by a 3rd party verifier.

We encourage our customers to engage in recycling and organics processing, which are emissions-avoiding activities as measured by lifecycle assessment (LCA) calculations. Avoided emissions are not currently reportable in Scopes 1, 2, or 3 according to the Greenhouse Gas Protocol and are not represented in those metrics throughout this report. Having said that, Republic Services diverted approximately 19% of National Gird PLC material from landfills in the reporting year, avoiding 717.02 tonnes of CO₂e, according to EPA's WARM v15 LCA tool.

Requesting member

Please select

Scope of emissions

Scope 2

Scope 2 accounting method

Market-based

Scope 3 category(ies)

<Not Applicable>

Allocation level

Company wide

Allocation level detail

<Not Applicable>

Emissions in metric tonnes of CO₂e

3.71

Uncertainty (±%)

5

Major sources of emissions

Offices and other facilities.

Verified

No

Allocation method

Allocation based on mass of products purchased

Market value or quantity of goods/services supplied to the requesting member

1162.55

Unit for market value or quantity of goods/services supplied

Metric tons

Please explain how you have identified the GHG source, including major limitations to this process and assumptions made

The GHG source was identified using Republic Services Scope 2 profile, which consists of all electricity purchases and consumption. To allocate total Scope 2 emissions at a customer level, Republic Services uses the market based emissions value of the collection services delivered to a customer from total revenue.

Requesting member

Please select

Scope of emissions

Scope 3

Scope 2 accounting method

<Not Applicable>

Scope 3 category(ies)

Category 1: Purchased goods and services

Category 2: Capital goods

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

Category 4: Upstream transportation and distribution

Category 5: Waste generated in operations

Category 6: Business travel

Category 7: Employee commuting

Category 8: Upstream leased assets

Allocation level

Company wide

Allocation level detail

<Not Applicable>

Emissions in metric tonnes of CO₂e

23.28

Uncertainty (±%)

5

Major sources of emissions

Upstream Transportation and Distribution (e.g., 3rd Party Haulers and Subcontract Collection services) and Business Travel.

Verified

No

Allocation method

Allocation based on mass of products purchased

Market value or quantity of goods/services supplied to the requesting member

1162.55

Unit for market value or quantity of goods/services supplied

Metric tons

Please explain how you have identified the GHG source, including major limitations to this process and assumptions made

The GHG source was identified using Republic Services Scope 3 profile, which consists of upstream transportation activities associated with third party hauling/subcontracting, as well as corporate business travel including air and rental vehicles. All Scope 3 emission sources have completed Limited Assurance by a 3rd party verifier. The fraction resulting from the tons of material collected from a single customer compared to the total tons of material that Republic Services collects from all customers is used to determine individual customer's Scope 3 emissions.

Requesting member

Please select

Scope of emissions

Scope 1

Scope 2 accounting method

<Not Applicable>

Scope 3 category(ies)

<Not Applicable>

Allocation level

Company wide

Allocation level detail

<Not Applicable>

Emissions in metric tonnes of CO2e

635.68

Uncertainty (±%)

5

Major sources of emissions

Landfill fugitive emissions, fleet and heavy equipment.

Verified

No

Allocation method

Allocation based on mass of products purchased

Market value or quantity of goods/services supplied to the requesting member

4427.97

Unit for market value or quantity of goods/services supplied

Metric tons

Please explain how you have identified the GHG source, including major limitations to this process and assumptions made

The GHG source was identified using Republic Services' Scope 1 emissions profile, of which roughly 90% are attributable to our customers' organic material decomposing in our landfills. The fraction resulting from the tons of material collected from a single customer compared to the total tons of material that Republic Services collects from all customers is used to determine individual customer's emissions. This percentage was applied to Republic Services' total Scope 1 emissions to determine the Scope 1 emissions allocated to each customer. Republic Services' Scope 1 emissions include emissions due to transportation and landfilling of waste. All Scope 1 emission sources have completed Limited Assurance by a 3rd party verifier.

We encourage our customers to engage in recycling and organics processing, which are emissions-avoiding activities as measured by lifecycle assessment (LCA) calculations. Avoided emissions are not currently reportable in Scopes 1, 2, or 3 according to the Greenhouse Gas Protocol and are not represented in those metrics throughout this report. Having said that, Republic Services diverted approximately 6% of Schlumberger Limited material from landfills in the reporting year, avoiding 861.28 tonnes of CO2e, according to EPA's WARM v15 LCA tool.

Requesting member

Please select

Scope of emissions

Scope 2

Scope 2 accounting method

Market-based

Scope 3 category(ies)

<Not Applicable>

Allocation level

Company wide

Allocation level detail

<Not Applicable>

Emissions in metric tonnes of CO2e

14.14

Uncertainty (±%)

5

Major sources of emissions

Offices and other facilities.

Verified

No

Allocation method

Allocation based on mass of products purchased

Market value or quantity of goods/services supplied to the requesting member

4427.97

Unit for market value or quantity of goods/services supplied

Metric tons

Please explain how you have identified the GHG source, including major limitations to this process and assumptions made

The GHG source was identified using Republic Services Scope 2 profile, which consists of all electricity purchases and consumption. To allocate total Scope 2 emissions at a customer level, Republic Services uses the market based emissions value of the collection services delivered to a customer from total revenue.

Requesting member

Please select

Scope of emissions

Scope 3

Scope 2 accounting method

<Not Applicable>

Scope 3 category(ies)

Category 1: Purchased goods and services

Category 2: Capital goods

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

Category 4: Upstream transportation and distribution

Category 5: Waste generated in operations

Category 6: Business travel

Category 7: Employee commuting

Category 8: Upstream leased assets

Allocation level

Company wide

Allocation level detail

<Not Applicable>

Emissions in metric tonnes of CO2e

88.66

Uncertainty (±%)

5

Major sources of emissions

Upstream Transportation and Distribution (e.g., 3rd Party Haulers and Subcontract Collection services) and Business Travel.

Verified

No

Allocation method

Allocation based on mass of products purchased

Market value or quantity of goods/services supplied to the requesting member

4427.97

Unit for market value or quantity of goods/services supplied

Metric tons

Please explain how you have identified the GHG source, including major limitations to this process and assumptions made

The GHG source was identified using Republic Services Scope 3 profile, which consists of upstream transportation activities associated with third party hauling/subcontracting, as well as corporate business travel including air and rental vehicles. All Scope 3 emission sources have completed Limited Assurance by a 3rd party verifier. The fraction resulting from the tons of material collected from a single customer compared to the total tons of material that Republic Services collects from all customers is used to determine individual customer's Scope 3 emissions.

Requesting member

Please select

Scope of emissions

Scope 1

Scope 2 accounting method

<Not Applicable>

Scope 3 category(ies)

<Not Applicable>

Allocation level

Company wide

Allocation level detail

<Not Applicable>

Emissions in metric tonnes of CO2e

489.83

Uncertainty (±%)

5

Major sources of emissions**Verified**

No

Allocation method

Allocation based on mass of products purchased

Market value or quantity of goods/services supplied to the requesting member

3412.03

Unit for market value or quantity of goods/services supplied

Metric tons

Please explain how you have identified the GHG source, including major limitations to this process and assumptions made

The GHG source was identified using Republic Services' Scope 1 emissions profile, of which roughly 90% are attributable to our customers' organic material decomposing in our landfills. The fraction resulting from the tons of material collected from a single customer compared to the total tons of material that Republic Services collects from all customers is used to determine individual customer's emissions. This percentage was applied to Republic Services' total Scope 1 emissions to determine the Scope 1 emissions allocated to each customer. Republic Services' Scope 1 emissions include emissions due to transportation and landfilling of waste. All Scope 1 emission sources have completed Limited Assurance by a 3rd party verifier.

We encourage our customers to engage in recycling and organics processing, which are emissions-avoiding activities as measured by lifecycle assessment (LCA) calculations. Avoided emissions are not currently reportable in Scopes 1, 2, or 3 according to the Greenhouse Gas Protocol and are not represented in those metrics throughout this report. Having said that, Republic Services diverted approximately 2% of Corning Incorporated material from landfills in the reporting year, avoiding 271.28 tonnes of CO2e, according to EPA's WARM v15 LCA tool.

Requesting member

Please select

Scope of emissions

Scope 2

Scope 2 accounting method

Market-based

Scope 3 category(ies)

<Not Applicable>

Allocation level

Company wide

Allocation level detail

<Not Applicable>

Emissions in metric tonnes of CO2e

10.9

Uncertainty (±%)

5

Major sources of emissions**Verified**

No

Allocation method

Allocation based on mass of products purchased

Market value or quantity of goods/services supplied to the requesting member

3412.03

Unit for market value or quantity of goods/services supplied

Metric tons

Please explain how you have identified the GHG source, including major limitations to this process and assumptions made

The GHG source was identified using Republic Services Scope 2 profile, which consists of all electricity purchases and consumption. To allocate total Scope 2 emissions at a customer level, Republic Services uses the market based emissions value of the collection services delivered to a customer from total revenue.

Requesting member

Please select

Scope of emissions

Scope 3

Scope 2 accounting method

<Not Applicable>

Scope 3 category(ies)

Category 1: Purchased goods and services
 Category 2: Capital goods
 Category 3: Fuel-and-energy-related activities (not included in Scopes 1 or 2)
 Category 4: Upstream transportation and distribution
 Category 5: Waste generated in operations
 Category 6: Business travel
 Category 7: Employee commuting
 Category 8: Upstream leased assets

Allocation level

Company wide

Allocation level detail

<Not Applicable>

Emissions in metric tonnes of CO2e

68.32

Uncertainty (±%)

5

Major sources of emissions**Verified**

No

Allocation method

Allocation based on mass of products purchased

Market value or quantity of goods/services supplied to the requesting member

3412.03

Unit for market value or quantity of goods/services supplied

Metric tons

Please explain how you have identified the GHG source, including major limitations to this process and assumptions made

The GHG source was identified using Republic Services Scope 3 profile, which consists of upstream transportation activities associated with third party hauling/subcontracting, as well as corporate business travel including air and rental vehicles. All Scope 3 emission sources have completed Limited Assurance by a 3rd party verifier. The fraction resulting from the tons of material collected from a single customer compared to the total tons of material that Republic Services collects from all customers is used to determine individual customer's Scope 3 emissions.

Requesting member

Please select

Scope of emissions

Scope 1

Scope 2 accounting method

<Not Applicable>

Scope 3 category(ies)

<Not Applicable>

Allocation level

Company wide

Allocation level detail

<Not Applicable>

Emissions in metric tonnes of CO2e

7782.54

Uncertainty (±%)

5

Major sources of emissions**Verified**

No

Allocation method

Allocation based on mass of products purchased

Market value or quantity of goods/services supplied to the requesting member

54211.27

Unit for market value or quantity of goods/services supplied

Metric tons

Please explain how you have identified the GHG source, including major limitations to this process and assumptions made

The GHG source was identified using Republic Services' Scope 1 emissions profile, of which roughly 90% are attributable to our customers' organic material decomposing in our landfills. The fraction resulting from the tons of material collected from a single customer compared to the total tons of material that Republic Services collects from all customers is used to determine individual customer's emissions. This percentage was applied to Republic Services' total Scope 1 emissions to determine the Scope 1 emissions allocated to each customer. Republic Services' Scope 1 emissions include emissions due to transportation and landfilling of waste. All Scope 1 emission sources have completed Limited Assurance by a 3rd party verifier.

We encourage our customers to engage in recycling and organics processing, which are emissions-avoiding activities as measured by lifecycle assessment (LCA) calculations. Avoided emissions are not currently reportable in Scopes 1, 2, or 3 according to the Greenhouse Gas Protocol and are not represented in those metrics

throughout this report. Having said that, Republic Services diverted approximately 12% of WestRock Company material from landfills in the reporting year, avoiding 20,525.14 tonnes of CO₂e, according to EPA's WARM v15 LCA tool.

Requesting member

Please select

Scope of emissions

Scope 2

Scope 2 accounting method

Market-based

Scope 3 category(ies)

<Not Applicable>

Allocation level

Company wide

Allocation level detail

<Not Applicable>

Emissions in metric tonnes of CO₂e

173.12

Uncertainty (±%)

5

Major sources of emissions

Verified

No

Allocation method

Allocation based on mass of products purchased

Market value or quantity of goods/services supplied to the requesting member

54211.27

Unit for market value or quantity of goods/services supplied

Metric tons

Please explain how you have identified the GHG source, including major limitations to this process and assumptions made

The GHG source was identified using Republic Services Scope 2 profile, which consists of all electricity purchases and consumption. To allocate total Scope 2 emissions at a customer level, Republic Services uses the market based emissions value of the collection services delivered to a customer from total revenue.

Requesting member

Please select

Scope of emissions

Scope 3

Scope 2 accounting method

<Not Applicable>

Scope 3 category(ies)

Category 1: Purchased goods and services

Category 2: Capital goods

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

Category 4: Upstream transportation and distribution

Category 5: Waste generated in operations

Category 6: Business travel

Category 7: Employee commuting

Category 8: Upstream leased assets

Allocation level

Company wide

Allocation level detail

<Not Applicable>

Emissions in metric tonnes of CO₂e

1085.47

Uncertainty (±%)

5

Major sources of emissions

Verified

No

Allocation method

Allocation based on mass of products purchased

Market value or quantity of goods/services supplied to the requesting member

54211.27

Unit for market value or quantity of goods/services supplied

Metric tons

Please explain how you have identified the GHG source, including major limitations to this process and assumptions made

The GHG source was identified using Republic Services Scope 3 profile, which consists of upstream transportation activities associated with third party hauling/subcontracting, as well as corporate business travel including air and rental vehicles. All Scope 3 emission sources have completed Limited Assurance by a 3rd party verifier. The fraction resulting from the tons of material collected from a single customer compared to the total tons of material that Republic Services collects from all customers is used to determine individual customer's Scope 3 emissions.

Requesting member

Please select

Scope of emissions

Scope 1

Scope 2 accounting method

<Not Applicable>

Scope 3 category(ies)

<Not Applicable>

Allocation level

Company wide

Allocation level detail

<Not Applicable>

Emissions in metric tonnes of CO2e

48.8

Uncertainty (±%)

5

Major sources of emissions

Verified

No

Allocation method

Allocation based on mass of products purchased

Market value or quantity of goods/services supplied to the requesting member

339.95

Unit for market value or quantity of goods/services supplied

Metric tons

Please explain how you have identified the GHG source, including major limitations to this process and assumptions made

The GHG source was identified using Republic Services' Scope 1 emissions profile, of which roughly 90% are attributable to our customers' organic material decomposing in our landfills. The fraction resulting from the tons of material collected from a single customer compared to the total tons of material that Republic Services collects from all customers is used to determine individual customer's emissions. This percentage was applied to Republic Services' total Scope 1 emissions to determine the Scope 1 emissions allocated to each customer. Republic Services' Scope 1 emissions include emissions due to transportation and landfilling of waste. All Scope 1 emission sources have completed Limited Assurance by a 3rd party verifier.

This reporting does not include LCA emission reductions of materials that are recycled or composted. We encourage our customers to engage in these activities and as such feel that the quantification of emissions saved would be of value to them. Using the EPA WARM model v15 to perform a LCA on material that is recycled and composted, we find that the Scope 1 emissions are actually negative by - 128.26 tonnes of CO2e. We calculate that approximately 12% of Burns & McDonnell, Inc. material collected by Republic is recycled.

Requesting member

Please select

Scope of emissions

Scope 2

Scope 2 accounting method

Market-based

Scope 3 category(ies)

<Not Applicable>

Allocation level

Company wide

Allocation level detail

<Not Applicable>

Emissions in metric tonnes of CO2e

1.09

Uncertainty (±%)

5

Major sources of emissions

Verified

No

Allocation method

Allocation based on mass of products purchased

Market value or quantity of goods/services supplied to the requesting member

339.95

Unit for market value or quantity of goods/services supplied

Metric tons

Please explain how you have identified the GHG source, including major limitations to this process and assumptions made

The GHG source was identified using Republic Services Scope 2 profile, which consists of all electricity purchases and consumption. To allocate total Scope 2 emissions at a customer level, Republic Services uses the market based emissions value of the collection services delivered to a customer from total revenue.

Requesting member

Please select

Scope of emissions

Scope 3

Scope 2 accounting method

<Not Applicable>

Scope 3 category(ies)

Category 1: Purchased goods and services

Category 2: Capital goods

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

Category 4: Upstream transportation and distribution

Category 5: Waste generated in operations

Category 6: Business travel

Category 7: Employee commuting

Category 8: Upstream leased assets

Allocation level

Company wide

Allocation level detail

<Not Applicable>

Emissions in metric tonnes of CO₂e

6.81

Uncertainty (±%)

5

Major sources of emissions

Verified

No

Allocation method

Allocation based on mass of products purchased

Market value or quantity of goods/services supplied to the requesting member

339.95

Unit for market value or quantity of goods/services supplied

Metric tons

Please explain how you have identified the GHG source, including major limitations to this process and assumptions made

The GHG source was identified using Republic Services Scope 3 profile, which consists of upstream transportation activities associated with third party hauling/subcontracting, as well as corporate business travel including air and rental vehicles. All Scope 3 emission sources have completed Limited Assurance by a 3rd party verifier. The fraction resulting from the tons of material collected from a single customer compared to the total tons of material that Republic Services collects from all customers is used to determine individual customer's Scope 3 emissions.

Requesting member

Please select

Scope of emissions

Scope 1

Scope 2 accounting method

<Not Applicable>

Scope 3 category(ies)

<Not Applicable>

Allocation level

Company wide

Allocation level detail

<Not Applicable>

Emissions in metric tonnes of CO₂e

18.85

Uncertainty (±%)

5

Major sources of emissions

Verified

No

Allocation method

Allocation based on mass of products purchased

Market value or quantity of goods/services supplied to the requesting member

131.28

Unit for market value or quantity of goods/services supplied

Metric tons

Please explain how you have identified the GHG source, including major limitations to this process and assumptions made

The GHG source was identified using Republic Services' Scope 1 emissions profile, of which roughly 90% are attributable to our customers' organic material decomposing in our landfills. The fraction resulting from the tons of material collected from a single customer compared to the total tons of material that Republic Services collects from all customers is used to determine individual customer's emissions. This percentage was applied to Republic Services' total Scope 1 emissions to determine the Scope 1 emissions allocated to each customer. Republic Services' Scope 1 emissions include emissions due to transportation and landfilling of waste. All Scope 1 emission sources have completed Limited Assurance by a 3rd party verifier.

This reporting does not include LCA emission reductions of materials that are recycled or composted. While we performed no recycling activities for Arcadis during the reporting year, we encourage our customers to engage in these activities and as such feel that the quantification of emissions saved would be of value to them, which we typically provide here.

Requesting member

Please select

Scope of emissions

Scope 2

Scope 2 accounting method

Market-based

Scope 3 category(ies)

<Not Applicable>

Allocation level

Company wide

Allocation level detail

<Not Applicable>

Emissions in metric tonnes of CO2e

0.42

Uncertainty (±%)

5

Major sources of emissions**Verified**

No

Allocation method

Allocation based on mass of products purchased

Market value or quantity of goods/services supplied to the requesting member

131.28

Unit for market value or quantity of goods/services supplied

Metric tons

Please explain how you have identified the GHG source, including major limitations to this process and assumptions made

The GHG source was identified using Republic Services Scope 2 profile, which consists of all electricity purchases and consumption. To allocate total Scope 2 emissions at a customer level, Republic Services uses the market based emissions value of the collection services delivered to a customer from total revenue.

Requesting member

Please select

Scope of emissions

Scope 3

Scope 2 accounting method

<Not Applicable>

Scope 3 category(ies)

Category 1: Purchased goods and services

Category 2: Capital goods

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

Category 4: Upstream transportation and distribution

Category 5: Waste generated in operations

Category 6: Business travel

Category 7: Employee commuting

Category 8: Upstream leased assets

Allocation level

Company wide

Allocation level detail

<Not Applicable>

Emissions in metric tonnes of CO2e

2.63

Uncertainty (±%)

5

Major sources of emissions

Verified

No

Allocation method

Allocation based on mass of products purchased

Market value or quantity of goods/services supplied to the requesting member

131.28

Unit for market value or quantity of goods/services supplied

Metric tons

Please explain how you have identified the GHG source, including major limitations to this process and assumptions made

The GHG source was identified using Republic Services Scope 3 profile, which consists of upstream transportation activities associated with third party hauling/subcontracting, as well as corporate business travel including air and rental vehicles. All Scope 3 emission sources have completed Limited Assurance by a 3rd party verifier. The fraction resulting from the tons of material collected from a single customer compared to the total tons of material that Republic Services collects from all customers is used to determine individual customer's Scope 3 emissions.

Requesting member

Please select

Scope of emissions

Scope 1

Scope 2 accounting method

<Not Applicable>

Scope 3 category(ies)

<Not Applicable>

Allocation level

Company wide

Allocation level detail

<Not Applicable>

Emissions in metric tonnes of CO2e

36899.36

Uncertainty (±%)

5

Major sources of emissions

Verified

No

Allocation method

Allocation based on mass of products purchased

Market value or quantity of goods/services supplied to the requesting member

257031.81

Unit for market value or quantity of goods/services supplied

Metric tons

Please explain how you have identified the GHG source, including major limitations to this process and assumptions made

The GHG source was identified using Republic Services' Scope 1 emissions profile, of which roughly 90% are attributable to our customers' organic material decomposing in our landfills. The fraction resulting from the tons of material collected from a single customer compared to the total tons of material that Republic Services collects from all customers is used to determine individual customer's emissions. This percentage was applied to Republic Services' total Scope 1 emissions to determine the Scope 1 emissions allocated to each customer. Republic Services' Scope 1 emissions include emissions due to transportation and landfilling of waste. All Scope 1 emission sources have completed Limited Assurance by a 3rd party verifier.

We encourage our customers to engage in recycling and organics processing, which are emissions-avoiding activities as measured by lifecycle assessment (LCA) calculations. Avoided emissions are not currently reportable in Scopes 1, 2, or 3 according to the Greenhouse Gas Protocol and are not represented in those metrics throughout this report. Having said that, Republic Services diverted approximately 0.1% of Walmart, Inc. material from landfills in the reporting year, avoiding 959.39 tonnes of CO2e, according to EPA's WARM v15 LCA tool.

Requesting member

Please select

Scope of emissions

Scope 2

Scope 2 accounting method

Market-based

Scope 3 category(ies)

<Not Applicable>

Allocation level

Company wide

Allocation level detail

<Not Applicable>

Emissions in metric tonnes of CO2e

820.84

Uncertainty (±%)

5

Major sources of emissions**Verified**

No

Allocation method

Allocation based on mass of products purchased

Market value or quantity of goods/services supplied to the requesting member

257031.81

Unit for market value or quantity of goods/services supplied

Metric tons

Please explain how you have identified the GHG source, including major limitations to this process and assumptions made

The GHG source was identified using Republic Services Scope 2 profile, which consists of all electricity purchases and consumption. To allocate total Scope 2 emissions at a customer level, Republic Services uses the market based emissions value of the collection services delivered to a customer from total revenue.

Requesting member

Please select

Scope of emissions

Scope 3

Scope 2 accounting method

<Not Applicable>

Scope 3 category(ies)

Category 1: Purchased goods and services

Category 2: Capital goods

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

Category 4: Upstream transportation and distribution

Category 5: Waste generated in operations

Category 6: Business travel

Category 7: Employee commuting

Category 8: Upstream leased assets

Allocation level

Company wide

Allocation level detail

<Not Applicable>

Emissions in metric tonnes of CO2e

5146.51

Uncertainty (±%)

5

Major sources of emissions**Verified**

No

Allocation method

Allocation based on mass of products purchased

Market value or quantity of goods/services supplied to the requesting member

257031.81

Unit for market value or quantity of goods/services supplied

Metric tons

Please explain how you have identified the GHG source, including major limitations to this process and assumptions made

The GHG source was identified using Republic Services Scope 3 profile, which consists of upstream transportation activities associated with third party hauling/subcontracting, as well as corporate business travel including air and rental vehicles. All Scope 3 emission sources have completed Limited Assurance by a 3rd party verifier. The fraction resulting from the tons of material collected from a single customer compared to the total tons of material that Republic Services collects from all customers is used to determine individual customer's Scope 3 emissions.

Requesting member

Please select

Scope of emissions

Scope 1

Scope 2 accounting method

<Not Applicable>

Scope 3 category(ies)

<Not Applicable>

Allocation level

Company wide

Allocation level detail

<Not Applicable>

Emissions in metric tonnes of CO2e

1.08

Uncertainty (±%)

5

Major sources of emissions**Verified**

No

Allocation method

Allocation based on mass of products purchased

Market value or quantity of goods/services supplied to the requesting member

7.51

Unit for market value or quantity of goods/services supplied

Metric tons

Please explain how you have identified the GHG source, including major limitations to this process and assumptions made

The GHG source was identified using Republic Services' Scope 1 emissions profile, of which roughly 90% are attributable to our customers' organic material decomposing in our landfills. The fraction resulting from the tons of material collected from a single customer compared to the total tons of material that Republic Services collects from all customers is used to determine individual customer's emissions. This percentage was applied to Republic Services' total Scope 1 emissions to determine the Scope 1 emissions allocated to each customer. Republic Services' Scope 1 emissions include emissions due to transportation and landfilling of waste. All Scope 1 emission sources have completed Limited Assurance by a 3rd party verifier.

We encourage our customers to engage in recycling and organics processing, which are emissions-avoiding activities as measured by lifecycle assessment (LCA) calculations. Avoided emissions are not currently reportable in Scopes 1, 2, or 3 according to the Greenhouse Gas Protocol and are not represented in those metrics throughout this report. Having said that, Republic Services diverted approximately 6% of WPS material from landfills in the reporting year, avoiding 1.39 tonnes of CO2e, according to EPA's WARM v15 LCA tool.

Requesting member

Please select

Scope of emissions

Scope 2

Scope 2 accounting method

Market-based

Scope 3 category(ies)

<Not Applicable>

Allocation level

Company wide

Allocation level detail

<Not Applicable>

Emissions in metric tonnes of CO2e

0.02

Uncertainty (±%)

5

Major sources of emissions**Verified**

No

Allocation method

Allocation based on mass of products purchased

Market value or quantity of goods/services supplied to the requesting member

7.51

Unit for market value or quantity of goods/services supplied

Metric tons

Please explain how you have identified the GHG source, including major limitations to this process and assumptions made

The GHG source was identified using Republic Services Scope 2 profile, which consists of all electricity purchases and consumption. To allocate total Scope 2 emissions at a customer level, Republic Services uses the market based emissions value of the collection services delivered to a customer from total revenue.

Requesting member

Please select

Scope of emissions

Scope 3

Scope 2 accounting method

<Not Applicable>

Scope 3 category(ies)

Category 1: Purchased goods and services
 Category 2: Capital goods
 Category 3: Fuel-and-energy-related activities (not included in Scopes 1 or 2)
 Category 4: Upstream transportation and distribution
 Category 5: Waste generated in operations
 Category 6: Business travel
 Category 7: Employee commuting
 Category 8: Upstream leased assets

Allocation level

Company wide

Allocation level detail

<Not Applicable>

Emissions in metric tonnes of CO2e

0.15

Uncertainty (±%)

5

Major sources of emissions**Verified**

No

Allocation method

Allocation based on mass of products purchased

Market value or quantity of goods/services supplied to the requesting member

7.51

Unit for market value or quantity of goods/services supplied

Metric tons

Please explain how you have identified the GHG source, including major limitations to this process and assumptions made

The GHG source was identified using Republic Services Scope 3 profile, which consists of upstream transportation activities associated with third party hauling/subcontracting, as well as corporate business travel including air and rental vehicles. All Scope 3 emission sources have completed Limited Assurance by a 3rd party verifier. The fraction resulting from the tons of material collected from a single customer compared to the total tons of material that Republic Services collects from all customers is used to determine individual customer's Scope 3 emissions.

Requesting member

Please select

Scope of emissions

Scope 1

Scope 2 accounting method

<Not Applicable>

Scope 3 category(ies)

<Not Applicable>

Allocation level

Company wide

Allocation level detail

<Not Applicable>

Emissions in metric tonnes of CO2e

3658.94

Uncertainty (±%)

5

Major sources of emissions**Verified**

No

Allocation method

Allocation based on mass of products purchased

Market value or quantity of goods/services supplied to the requesting member

25487.29

Unit for market value or quantity of goods/services supplied

Metric tons

Please explain how you have identified the GHG source, including major limitations to this process and assumptions made

The GHG source was identified using Republic Services' Scope 1 emissions profile, of which roughly 90% are attributable to our customers' organic material decomposing in our landfills. The fraction resulting from the tons of material collected from a single customer compared to the total tons of material that Republic Services collects from all customers is used to determine individual customer's emissions. This percentage was applied to Republic Services' total Scope 1 emissions to determine the Scope 1 emissions allocated to each customer. Republic Services' Scope 1 emissions include emissions due to transportation and landfilling of waste. All Scope 1 emission sources have completed Limited Assurance by a 3rd party verifier.

We encourage our customers to engage in recycling and organics processing, which are emissions-avoiding activities as measured by lifecycle assessment (LCA) calculations. Avoided emissions are not currently reportable in Scopes 1, 2, or 3 according to the Greenhouse Gas Protocol and are not represented in those metrics

throughout this report. Having said that, Republic Services diverted approximately 25% of Comcast Corporation material from landfills in the reporting year, avoiding 20,554.13 tonnes of CO₂e, according to EPA's WARM v15 LCA tool.

Requesting member

Please select

Scope of emissions

Scope 2

Scope 2 accounting method

Market-based

Scope 3 category(ies)

<Not Applicable>

Allocation level

Company wide

Allocation level detail

<Not Applicable>

Emissions in metric tonnes of CO₂e

81.39

Uncertainty (±%)

5

Major sources of emissions

Verified

No

Allocation method

Allocation based on mass of products purchased

Market value or quantity of goods/services supplied to the requesting member

25487.29

Unit for market value or quantity of goods/services supplied

Metric tons

Please explain how you have identified the GHG source, including major limitations to this process and assumptions made

The GHG source was identified using Republic Services Scope 2 profile, which consists of all electricity purchases and consumption. To allocate total Scope 2 emissions at a customer level, Republic Services uses the market based emissions value of the collection services delivered to a customer from total revenue.

Requesting member

Please select

Scope of emissions

Scope 3

Scope 2 accounting method

<Not Applicable>

Scope 3 category(ies)

Category 1: Purchased goods and services

Category 2: Capital goods

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

Category 4: Upstream transportation and distribution

Category 5: Waste generated in operations

Category 6: Business travel

Category 7: Employee commuting

Category 8: Upstream leased assets

Allocation level

Company wide

Allocation level detail

<Not Applicable>

Emissions in metric tonnes of CO₂e

510.33

Uncertainty (±%)

5

Major sources of emissions

Verified

No

Allocation method

Allocation based on the volume of products purchased

Market value or quantity of goods/services supplied to the requesting member

25487.29

Unit for market value or quantity of goods/services supplied

Metric tons

Please explain how you have identified the GHG source, including major limitations to this process and assumptions made

The GHG source was identified using Republic Services Scope 3 profile, which consists of upstream transportation activities associated with third party hauling/subcontracting, as well as corporate business travel including air and rental vehicles. All Scope 3 emission sources have completed Limited Assurance by a 3rd party verifier. The fraction resulting from the tons of material collected from a single customer compared to the total tons of material that Republic Services collects from all customers is used to determine individual customer's Scope 3 emissions.

Requesting member

Please select

Scope of emissions

Scope 1

Scope 2 accounting method

<Not Applicable>

Scope 3 category(ies)

<Not Applicable>

Allocation level

Company wide

Allocation level detail

<Not Applicable>

Emissions in metric tonnes of CO2e

397.9

Uncertainty (±%)

5

Major sources of emissions

Verified

No

Allocation method

Allocation based on mass of products purchased

Market value or quantity of goods/services supplied to the requesting member

2771.66

Unit for market value or quantity of goods/services supplied

Metric tons

Please explain how you have identified the GHG source, including major limitations to this process and assumptions made

The GHG source was identified using Republic Services' Scope 1 emissions profile, of which roughly 90% are attributable to our customers' organic material decomposing in our landfills. The fraction resulting from the tons of material collected from a single customer compared to the total tons of material that Republic Services collects from all customers is used to determine individual customer's emissions. This percentage was applied to Republic Services' total Scope 1 emissions to determine the Scope 1 emissions allocated to each customer. Republic Services' Scope 1 emissions include emissions due to transportation and landfilling of waste. All Scope 1 emission sources have completed Limited Assurance by a 3rd party verifier.

We encourage our customers to engage in recycling and organics processing, which are emissions-avoiding activities as measured by lifecycle assessment (LCA) calculations. Avoided emissions are not currently reportable in Scopes 1, 2, or 3 according to the Greenhouse Gas Protocol and are not represented in those metrics throughout this report. Having said that, Republic Services diverted approximately 9% of Deutsche Post DHL Group material from landfills in the reporting year, avoiding 782.49 tonnes of CO2e, according to EPA's WARM v15 LCA tool.

Requesting member

Please select

Scope of emissions

Scope 2

Scope 2 accounting method

Market-based

Scope 3 category(ies)

<Not Applicable>

Allocation level

Company wide

Allocation level detail

<Not Applicable>

Emissions in metric tonnes of CO2e

8.85

Uncertainty (±%)

5

Major sources of emissions

Verified

No

Allocation method

Allocation based on mass of products purchased

Market value or quantity of goods/services supplied to the requesting member

2771.66

Unit for market value or quantity of goods/services supplied

Metric tons

Please explain how you have identified the GHG source, including major limitations to this process and assumptions made

The GHG source was identified using Republic Services Scope 2 profile, which consists of all electricity purchases and consumption. To allocate total Scope 2 emissions at a customer level, Republic Services uses the market based emissions value of the collection services delivered to a customer from total revenue.

Requesting member

Please select

Scope of emissions

Scope 3

Scope 2 accounting method

<Not Applicable>

Scope 3 category(ies)

Category 1: Purchased goods and services

Category 2: Capital goods

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

Category 4: Upstream transportation and distribution

Category 5: Waste generated in operations

Category 6: Business travel

Category 7: Employee commuting

Category 8: Upstream leased assets

Allocation level

Company wide

Allocation level detail

<Not Applicable>

Emissions in metric tonnes of CO₂e

55.5

Uncertainty (±%)

5

Major sources of emissions

Verified

No

Allocation method

Allocation based on mass of products purchased

Market value or quantity of goods/services supplied to the requesting member

2771.66

Unit for market value or quantity of goods/services supplied

Metric tons

Please explain how you have identified the GHG source, including major limitations to this process and assumptions made

The GHG source was identified using Republic Services Scope 3 profile, which consists of upstream transportation activities associated with third party hauling/subcontracting, as well as corporate business travel including air and rental vehicles. All Scope 3 emission sources have completed Limited Assurance by a 3rd party verifier. The fraction resulting from the tons of material collected from a single customer compared to the total tons of material that Republic Services collects from all customers is used to determine individual customer's Scope 3 emissions.

Requesting member

Please select

Scope of emissions

Scope 1

Scope 2 accounting method

<Not Applicable>

Scope 3 category(ies)

<Not Applicable>

Allocation level

Company wide

Allocation level detail

<Not Applicable>

Emissions in metric tonnes of CO₂e

33.71

Uncertainty (±%)

5

Major sources of emissions

Verified

No

Allocation method

Allocation based on mass of products purchased

Market value or quantity of goods/services supplied to the requesting member

234.79

Unit for market value or quantity of goods/services supplied

Metric tons

Please explain how you have identified the GHG source, including major limitations to this process and assumptions made

The GHG source was identified using Republic Services' Scope 1 emissions profile, of which roughly 90% are attributable to our customers' organic material decomposing in our landfills. The fraction resulting from the tons of material collected from a single customer compared to the total tons of material that Republic Services collects from all customers is used to determine individual customer's emissions. This percentage was applied to Republic Services' total Scope 1 emissions to determine the Scope 1 emissions allocated to each customer. Republic Services' Scope 1 emissions include emissions due to transportation and landfilling of waste. All Scope 1 emission sources have completed Limited Assurance by a 3rd party verifier.

We encourage our customers to engage in recycling and organics processing, which are emissions-avoiding activities as measured by lifecycle assessment (LCA) calculations. Avoided emissions are not currently reportable in Scopes 1, 2, or 3 according to the Greenhouse Gas Protocol and are not represented in those metrics throughout this report. Having said that, Republic Services diverted approximately 23% of Johnson Matthey material from landfills in the reporting year, avoiding 174.46 tonnes of CO₂e, according to EPA's WARM v15 LCA tool.

Requesting member

Please select

Scope of emissions

Scope 2

Scope 2 accounting method

Market-based

Scope 3 category(ies)

<Not Applicable>

Allocation level

Company wide

Allocation level detail

<Not Applicable>

Emissions in metric tonnes of CO₂e

0.75

Uncertainty (±%)

5

Major sources of emissions**Verified**

No

Allocation method

Allocation based on mass of products purchased

Market value or quantity of goods/services supplied to the requesting member

234.79

Unit for market value or quantity of goods/services supplied

Metric tons

Please explain how you have identified the GHG source, including major limitations to this process and assumptions made

The GHG source was identified using Republic Services Scope 2 profile, which consists of all electricity purchases and consumption. To allocate total Scope 2 emissions at a customer level, Republic Services uses the market based emissions value of the collection services delivered to a customer from total revenue.

Requesting member

Please select

Scope of emissions

Scope 3

Scope 2 accounting method

<Not Applicable>

Scope 3 category(ies)

Category 1: Purchased goods and services

Category 2: Capital goods

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

Category 4: Upstream transportation and distribution

Category 5: Waste generated in operations

Category 6: Business travel

Category 7: Employee commuting

Category 8: Upstream leased assets

Allocation level

Company wide

Allocation level detail

<Not Applicable>

Emissions in metric tonnes of CO2e

4.7

Uncertainty (±%)

5

Major sources of emissions**Verified**

No

Allocation method

Allocation based on mass of products purchased

Market value or quantity of goods/services supplied to the requesting member

234.79

Unit for market value or quantity of goods/services supplied

Metric tons

Please explain how you have identified the GHG source, including major limitations to this process and assumptions made

The GHG source was identified using Republic Services Scope 3 profile, which consists of upstream transportation activities associated with third party hauling/subcontracting, as well as corporate business travel including air and rental vehicles. All Scope 3 emission sources have completed Limited Assurance by a 3rd party verifier. The fraction resulting from the tons of material collected from a single customer compared to the total tons of material that Republic Services collects from all customers is used to determine individual customer's Scope 3 emissions.

Requesting member

Please select

Scope of emissions

Scope 1

Scope 2 accounting method

<Not Applicable>

Scope 3 category(ies)

<Not Applicable>

Allocation level

Company wide

Allocation level detail

<Not Applicable>

Emissions in metric tonnes of CO2e

4.01

Uncertainty (±%)

5

Major sources of emissions**Verified**

No

Allocation method

Allocation based on mass of products purchased

Market value or quantity of goods/services supplied to the requesting member

27.94

Unit for market value or quantity of goods/services supplied

Metric tons

Please explain how you have identified the GHG source, including major limitations to this process and assumptions made

The GHG source was identified using Republic Services' Scope 1 emissions profile, of which roughly 90% are attributable to our customers' organic material decomposing in our landfills. The fraction resulting from the tons of material collected from a single customer compared to the total tons of material that Republic Services collects from all customers is used to determine individual customer's emissions. This percentage was applied to Republic Services' total Scope 1 emissions to determine the Scope 1 emissions allocated to each customer. Republic Services' Scope 1 emissions include emissions due to transportation and landfilling of waste. All Scope 1 emission sources have completed Limited Assurance by a 3rd party verifier.

We encourage our customers to engage in recycling and organics processing, which are emissions-avoiding activities as measured by lifecycle assessment (LCA) calculations. Avoided emissions are not currently reportable in Scopes 1, 2, or 3 according to the Greenhouse Gas Protocol and are not represented in those metrics throughout this report. Having said that, Republic Services diverted approximately 34% of KBR Inc material from landfills in the reporting year, avoiding 30.03 tonnes of CO2e, according to EPA's WARM v15 LCA tool.

Requesting member

Please select

Scope of emissions

Scope 2

Scope 2 accounting method

Market-based

Scope 3 category(ies)

<Not Applicable>

Allocation level

Company wide

Allocation level detail

<Not Applicable>

Emissions in metric tonnes of CO2e

0.09

Uncertainty (±%)

5

Major sources of emissions

Verified

No

Allocation method

Allocation based on mass of products purchased

Market value or quantity of goods/services supplied to the requesting member

27.94

Unit for market value or quantity of goods/services supplied

Metric tons

Please explain how you have identified the GHG source, including major limitations to this process and assumptions made

The GHG source was identified using Republic Services Scope 2 profile, which consists of all electricity purchases and consumption. To allocate total Scope 2 emissions at a customer level, Republic Services uses the market based emissions value of the collection services delivered to a customer from total revenue.

Requesting member

Please select

Scope of emissions

Scope 3

Scope 2 accounting method

<Not Applicable>

Scope 3 category(ies)

Category 1: Purchased goods and services

Category 2: Capital goods

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

Category 4: Upstream transportation and distribution

Category 5: Waste generated in operations

Category 6: Business travel

Category 7: Employee commuting

Category 8: Upstream leased assets

Allocation level

Company wide

Allocation level detail

<Not Applicable>

Emissions in metric tonnes of CO2e

0.56

Uncertainty (±%)

5

Major sources of emissions

Verified

No

Allocation method

Allocation based on mass of products purchased

Market value or quantity of goods/services supplied to the requesting member

27.94

Unit for market value or quantity of goods/services supplied

Metric tons

Please explain how you have identified the GHG source, including major limitations to this process and assumptions made

The GHG source was identified using Republic Services Scope 3 profile, which consists of upstream transportation activities associated with third party hauling/subcontracting, as well as corporate business travel including air and rental vehicles. All Scope 3 emission sources have completed Limited Assurance by a 3rd party verifier. The fraction resulting from the tons of material collected from a single customer compared to the total tons of material that Republic Services collects from all customers is used to determine individual customer's Scope 3 emissions.

SC1.2

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

Republic Services Scope 1, 2 and 3 emissions were reported to the CDP in July 2023 and are included in the Republic Services 2022 GRI Report found at https://www.republicservices.com/cms/documents/sustainability_reports/2022-Republic-Services-GRI-Report.pdf.

For the LCA estimates using the EPA WARM Model v15, the methodologies used to develop these emission factors, user guides and other documentation are described in detail in the background reports and are available for download at <https://www.epa.gov/warm>.

SC1.3

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

Allocation challenges	Please explain what would help you overcome these challenges
Other, please specify (Complexity of waste/material solutions)	Complexity of solutions for materials management The calculations around materials management are complex with multiple nuances including data issues with 3rd party vendors, access to data for weight of material collected for individual locations, using a modeled not measured approach, and the dynamic nature of our operations' routes. Depending on the number of locations for a given customer, calculations may be complex. We are exploring the use of software tools to improve this calculation process, but we would still have gaps with the limited supplier data available. Additionally, we are exploring advanced measurement technology, for example remote sensing via drones and satellites to survey landfill emissions.

SC1.4

(SC1.4) Do you plan to develop your capabilities to allocate emissions to your customers in the future?

Yes

SC1.4a

(SC1.4a) Describe how you plan to develop your capabilities.

We are looking to improve the allocation methodology by matching a customer to the specific landfills they are utilizing across the country. When we model the Company's landfill emissions we take into account the landfill's gas collection efficiency, type of cover used, and location-specification climate, etc. Because landfills vary so greatly in their emissions profiles, the ability to match a customer to the landfills they are utilizing will provide even greater understanding of their impact. However, we run into considerable challenges implementing this methodology, as outlined in SC1.3.

SC2.1

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

SC2.2

(SC2.2) Have requests or initiatives by CDP Supply Chain members prompted your organization to take organizational-level emissions reduction initiatives?

No

SC4.1

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

No, I am not providing data

Submit your response

In which language are you submitting your response?

English

Please confirm how your response should be handled by CDP

Please select your submission options	I understand that my response will be shared with all requesting stakeholders	Response permission
	Yes	Public

Please confirm below

I have read and accept the applicable Terms