

## C0. Introduction

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### C0.1

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

RTX is the world's largest aerospace and defense company. Our global team of employees pushes the limits of known science and redefines how we connect and protect our world. We are advancing aviation, building smarter defense systems and creating innovations to take us deeper into space. In 2022 the company had sales of \$67 billion and 182,000 employees. It is headquartered in Arlington, Virginia, U.S.A. In 2022 the company was comprised of four principal business segments: Collins Aerospace (Collins), Pratt & Whitney, Raytheon Intelligence & Space (RI&S) and Raytheon Missiles & Defense (RMD). Collins Aerospace specializes in sustainable and cost effective materials, advanced avionics, connected data networks, comfort-driven cabin equipment, connected mission systems and electrified power and control systems for the aerospace and defense industry. Pratt & Whitney designs, manufactures and services the world's most advanced aircraft engines and auxiliary power systems for commercial, military and business aircraft. Raytheon Intelligence & Space develops advanced sensors, cyber services and software solutions- delivering the disruptive technologies customers need to succeed in any domain, against any challenge. Raytheon Missiles & Defense provides the industry's most advanced end-to-end solutions to detect, track and engage threats.

In July 2023, the company announced a change in its branding name from "Raytheon Technologies" to "RTX." This reflects our evolution as a company by marking a key milestone in the company's growth. It also coincides with a business realignment from four business units to three to better deliver on our customers' priorities, capitalize on the full power of our product and technology synergies, and leverage our scale to improve cost structure and overall competitiveness. For the purposes of this questionnaire, we refer to the four business units that existed in 2022.

To learn more, visit [www.rtx.com](http://www.rtx.com).

### C0.2

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#### **(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**

December 1 2021

###### **End date**

November 30 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

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

- Australia
- Brazil
- Canada
- China
- France
- Germany
- Hong Kong SAR, China
- India
- Indonesia
- Ireland
- Israel
- Italy
- Japan
- Malaysia
- Mexico
- Morocco
- Netherlands
- New Zealand
- Philippines
- Poland
- Republic of Korea
- Russian Federation
- Singapore
- Spain
- Taiwan, China
- Turkey
- United Arab Emirates
- United Kingdom of Great Britain and Northern Ireland
- United States of America

**C0.4**

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

USD

**C0.5**

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**(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**

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**(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, an ISIN code	US 75513E1010

**C1. Governance**

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**C1.1**

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

Yes

**C1.1a**

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**(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>The RTX Board of Directors Committee on Governance and Public Policy (GPPC) oversees the Company's strategy, performance and goals relating to the environment and sustainability, including climate-related matters. Among other oversight duties relating to governance and social responsibility, the GPPC is responsible for the review and approval of RTX's formal sustainability goals, including targets for reduction of greenhouse gas (GHG) emissions, energy consumption, water consumption, renewable electricity usage, and waste, which are generally established for five-year periods. The GPPC receives briefings periodically (at least annually) on RTX's sustainability performance in relation to the Company's goals. Additionally, the GPPC receives periodic updates on the evolving interests and expectations of stakeholders pertaining to environmental sustainability, including climate-related issues specifically.</p> <p>Example of a climate-related decision made by the Committee: Our Executive Annual Incentive Plan includes a Corporate Responsibility Scorecard (CRS), comprised of two categories: People &amp; Culture and Sustainability &amp; Safety - each weighted at 10%. The CRS objectives for Sustainability include reducing greenhouse gas emissions and water usage. Throughout the course of 2022, the Board's Human Capital and Compensation Committee (HCCC) conducted a comprehensive analysis of qualitative data to assess the Company's and each business unit's efforts in driving progress on our CRS objectives, including progress toward the Company's public 2025 greenhouse gas emission reduction goal. Following the end of the 2022 performance year, the GPPC reviewed year-end performance in the Sustainability &amp; Safety category and decided on its recommendations to the HCCC for final Sustainability &amp; Safety performance factors for determining awards for 2022 under the Executive Annual Incentive Plan.</p>
Chief Executive Officer (CEO)	Our Board of Directors and its committees provide oversight in the development and execution of our Environmental, Social and Governance (ESG) initiatives, opportunities and risks. Our CEO, who sits on the Board, has ultimate accountability for our ESG strategy and performance. ESG includes climate-related issues and our involvement in advancing sustainable aviation technologies and solutions that will support the air transportation industry's net zero commitment.

**C1.1b**

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

Frequency with which climate-related issues are a scheduled agenda item	Governance mechanisms into which climate-related issues are integrated	Scope of board-level oversight	Please explain
Scheduled – some meetings	Overseeing major capital expenditures Overseeing acquisitions, mergers, and divestitures Reviewing and guiding strategy Overseeing the setting of corporate targets Monitoring progress towards corporate targets	<Not Applicable>	<p>Building on the 5-year goals it had approved in 2020, the GPPC approved in 2022 a longer-term, more aggressive GHG goal for the Company to reduce emissions by 46% by 2030 from 2019 levels. As an interim milestone toward that 2030 goal, the GPPC approved raising the Company's 2025 GHG reduction goal to 15% (market-based).</p> <p>Building upon the publication of the Company's 2021 Environmental, Social and Governance (ESG) Report which tracks and discloses, among other things, the Company's 2021 performance against numerous disclosure metrics and standards established by Sustainability Accounting Standards Board (SASB), the Task Force on Climate-Related Financial Disclosures (TCFD) and the Global Reporting Initiative (GRI), the GPPC directed and provided oversight of the publication of the Company's 2022 ESG Report, which expanded our disclosures and reported on our progress against previously announced goals.</p> <p>RTX's climate change impact mitigation and GHG emissions reduction programs have been and will continue to be reviewed and discussed periodically (at least annually) by the GPPC. The review includes a discussion of progress against program performance objectives, metrics and strategic initiatives and the impacts of facility and process infrastructure investments targeting energy efficiency and reductions in GHG emissions.</p> <p>In addition to the GPPC's oversight of sustainability-related matters, the Finance Committee of the Board of Directors and, in certain cases, the full Board review and approve significant capital investments. In 2021 and 2022, the Finance Committee (and the Board) approved capital expenditures for research and development of various technologies, including in the areas of hybrid-electric propulsion, more fuel-efficient engines and other sustainable aviation technologies.</p> <p>Beginning with 2021, the HCCC incorporated the CRS into the Executive Annual Incentive Plan. The CRS has included qualitative objectives relating to "Sustainability and Safety" (including climate-related objectives) among other metrics. As discussed in greater detail in the Company's 2023 Proxy Statement, the HCCC evaluates progress towards these objectives as part of its annual cash incentive determination process, and for 2023, the CRS will not be evaluated on a qualitative basis, but instead will comprise company-wide metrics with pre-established quantitative goals, including for GHGs (a 5% weighting in the CRS) and water usage (a 5% weighting).</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	The GPPC and the Board regularly consider whether the Board has all of the key skills and expertise needed for effective oversight of our businesses and strategy, taking into account the evolution of our business, as well as the mix of capabilities and experience already represented on the Board. These considerations inform the Board's refreshment efforts and its decisions when selecting candidates to serve as directors. In 2022, the GPPC explicitly added Environmental, Social and Governance ("ESG") as one of the key skills and expertise that should be represented on the Board, reflecting its importance from a strategic, operational and risk standpoint. In assessing directors' ESG skills and expertise, the GPPC considers experience in a range of ESG areas, including environmental issues and sustainability. Experience in these areas – which can be gained through management or board roles at firms in industries involved closely with energy and climate transition matters – strengthens the Board's oversight of key ESG initiatives, reporting and risks, including environmental stewardship & compliance, energy & greenhouse gas emissions, sustainable technology & innovation, climate risk, and business resilience and crisis management.	<Not Applicable>	<Not Applicable>

**(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 (Senior Vice President, Operations, Supply chain, Quality, EH&S)

**Climate-related responsibilities of this position**

Setting climate-related corporate targets  
Monitoring progress against climate-related corporate targets

**Coverage of responsibilities**

<Not Applicable>

**Reporting line**

Operations - COO reporting line

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

Half-yearly

**Please explain**

The Senior Vice President, Operations, Supply Chain, Quality, EH&S is the highest management-level company official responsible for climate change and sustainability. He reports directly to the Chief Operating Officer and briefs the GPPC on climate, energy and other environmental issues. The Environment, Health & Safety organization and programs report to the Senior Vice President, Operations, Supply Chain, Quality, EH&S. This position maintains ongoing engagement on all EH&S activities, including those relating to climate change. This position is directly involved in setting annual and long-term sustainability goals, including greenhouse gas emissions, and tracking progress towards goals on a quarterly basis. The company's Global Security Services, which is responsible for the Business Resilience and Crisis Management program, also reports to the Senior Vice President, Operations, Supply Chain, Quality, EH&S. The Business Resilience and Crisis Management program is the company-wide effort related to building resilience to prevent business disruption due to climate change and other types of threats. When progress is not adequate, or obstacles are encountered, the Senior VP convenes the necessary people and resources to resolve the issue. As part of the Senior Leadership Team of the company, the Senior Vice President, Operations, Supply Chain, Quality, EH&S is also aware of and supports the company's decarbonization strategies.

**Position or committee**

Corporate responsibility committee

**Climate-related responsibilities of this position**

Other, please specify (Driving and monitoring our ESG strategy and performance. A top ESG priority is improving environmental performance of our operations, products and business.)

**Coverage of responsibilities**

<Not Applicable>

**Reporting line**

Corporate Sustainability/CSR reporting line

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

Half-yearly

**Please explain**

The ESG Steering Committee reports to the CEO and is led by the president, chief operating officer and includes the chief financial officer, general counsel, chief human resources officer, chief communications officer, and senior vice president of operations and supply chain. Its role is to approve ESG strategy, monitor ESG performance and remove roadblocks for ESG progress. The Steering Committee oversees teams implementing the ESG strategy, including the ESG Council and several ESG working groups. The ESG Council includes chief sustainability officers and sustainability representatives from each business unit, and from key Corporate functional groups such as Environment, Health & Safety, Operations and Supply Chain, Communications, and Technology and Global Engineering. The Council develops strategy, coordinates with working groups, establishes aspirations and goals, monitors performance and consults across our businesses on ESG performance. There are several ESG Working Groups established to focus on particular ESG topics. One such group that addresses climate-related issues is the Sustainable Technology and Innovation Working Group.

**Position or committee**

Chief Executive Officer (CEO)

**Climate-related responsibilities of this position**

Integrating climate-related issues into the strategy  
Setting climate-related corporate targets  
Monitoring progress against climate-related corporate targets

**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**

Half-yearly

**Please explain**

Our CEO has ultimate accountability for our ESG strategy and performance. ESG includes climate-related issues and our involvement in advancing sustainable aviation technologies and solutions that will support the air transportation industry's net zero commitment.

**(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	We provide incentives for the management of climate-related issues. See below.

**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

**Performance indicator(s)**

Progress towards a climate-related target

Reduction in absolute emissions

**Incentive plan(s) this incentive is linked to**

Short-Term Incentive Plan

**Further details of incentive(s)**

We hold our leaders accountable for advancing our ESG priorities by linking our Executive Annual Incentive Plan to our ESG performance based on the Corporate Responsibility Scorecard. The scorecard is comprised of two categories: People & Culture and Sustainability & Safety, each weighted at 10%. The Sustainability and Safety category measures progress in environmental sustainability including reductions towards the company's public 2025 GHG emission reduction goal. The CRS objectives reinforce the company's commitment to our long-term goals and strengthen alignment between the interests of executives and shareholders.

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

Since the executive compensation incentive program is linked to progress towards our GHG emissions reduction target, it drives GHG emissions reduction projects and initiatives and incentivizes decarbonization efforts.

**Entitled to incentive**

Management group

**Type of incentive**

Monetary reward

**Incentive(s)**

Bonus - % of salary

**Performance indicator(s)**

Achievement of a climate-related target

Reduction in absolute emissions

**Incentive plan(s) this incentive is linked to**

Short-Term Incentive Plan

**Further details of incentive(s)**

We reinforce our ESG commitment and promote employee engagement in ESG by using the same Corporate Responsibility Scorecard objectives contained in our Executive Annual Incentive Plan program for our executives (see row above) for our Broad-Based Annual Incentive Plan. That plan covers approximately 65,000 employees at the management level.

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

The annual incentive plan that is broadly applied to approximately 65,000 employees across the company tracks progress toward our public GHG emissions reduction goals. This helps drive emission reduction efforts across the company and promotes decarbonization activities.

**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 time horizon is aligned with similarly designated time horizons of the company's business practices.
Medium-term	5	10	This time horizon is aligned with similarly designated time horizons of the company's business practices.
Long-term	10	20	This time horizon is aligned with similarly designated time horizons of the company's business practices.

**C2.1b**

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

For the purposes of this questionnaire, RTX defines substantive climate-related impacts broadly to include potential impacts over \$5 million / year.

The impacts can be operational, financial, or strategic. The quantifiable indicator is "dollars of actual or potential impact." The company purposely defined it broadly in our CDP response to include many different types of impacts and to track existing and potential risks and opportunities from climate change in a more comprehensive manner.

**C2.2**

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**(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**

The company uses its Enterprise Risk Management (ERM) process to identify, understand, prioritize, and appropriately manage the full range of significant risks to the company. ERM is led by Finance, with an annual cycle for structured reviews, discussions, and mitigation planning. Each Business Unit and Corporate Function identifies their top business and compliance risks using various methods and tools. The risks can be strategic, operational, financial, reputational, or other types of business risks. The top risks are compiled annually and shared with the Audit Committee of the Board of Directors, as well as the full Board. In connection with this process, the Board allocates oversight responsibilities for these top risks among itself and its committees.

The Business Resilience and Crisis Management (BRCM) program is a key element of ERM and the identification and management of physical climate-related risks. The BRCM policy documents requirements and processes to prepare for, respond to, and recover from a wide range of risks and threats, including natural events that may be caused by climate change. The RTX BRCM program lead reports to the VP, Chief Security Officer, who reports to the Corporate Senior VP Operations, Supply Chain Quality and EH&S. The BRCM processes include:

- a) Threat and Vulnerability Assessment (TVA). There is a policy requirement for all of our key sites to conduct a TVA biennially using approved tools and methodologies. The process requires sites to identify, assess, and manage different types of site-specific risks, including acute and chronic physical risks associated with climate change. The TVAs include an assessment of the probability, severity, and the ease of recovery from an event.
- b) Business Impact Analyses (BIAs). These are conducted at the Company, Business, and site level to determine and assess the potential effects of an event/threat to cause an interruption to critical processes (such as facility operation, product deliveries to customers, connectivity, and supply chain). The BIAs are performed every 3 years and reviewed annually.
- c) Each Business's key sites must maintain an Incident Response Plan (IRP). The plans must address the potential risks identified in their TVAs throughout the value stream. The IRPs must be reviewed and updated as needed on an annual basis or as a result of actual incidents or exercises.
- d) Businesses, functions and sites also maintain Business Continuity Plans (BCPs) to support critical business processes. The BCPs document the resources and processes that are needed to restore critical business processes. Sites with higher risk scores from the TVA must have capabilities to respond and manage the risk commensurate with the level and type of risks.
- e) Annual exercises are conducted to prepare the company for a wide range of crises, and strengthen our preparedness with customers; public and private partners; including the Critical Manufacturing and Defense Industrial Base Sector Coordinating Councils.

The BRCM program enables us to work across the company to take pre-emptive action and respond to potential threats or incidents anywhere in the world. We have integrated this approach across key functions and levels of the business through a series of teams that continually identify, assess, mitigate, and respond to risks. At the Corporate level, our Crisis Management Team is comprised of senior and c-suite executives from across the organization. Our incident support teams are made up of functional leaders and business executives who work in coordination with site-level management and response teams to help ensure timely notification and escalation for any incident.

In addition to the above, Internal Audit incorporates these risks into its continuous risk assessment process and periodically audits specific risks based on prioritization.

Case study of physical risk - The BRCM program has identified, assessed, and enabled sites to prepare and respond to hurricane, drought, wildfire, and flooding threats and vulnerabilities. BRCM identifies specific sites that are more vulnerable to climate-related events, have higher value assets, and/or supply other company sites with important components (higher dependencies). In addition, specific mitigation steps and facility upgrade recommendations are generated and implemented by the program.

Another key process supporting ERM that is used to identify, assess, and manage climate-related risks and opportunities -- particularly transitional or market risks due to climate change -- is the company's well-defined long-range strategic planning process. Each of our business units develops strategic plans, which are the central mechanism for setting business-level operational, technology, R&D investment and funding priorities. The plans are based on extensive research and analysis on the targeted markets, changes in customer needs and priorities, customer procurement, changes in public policies, technology advances and competitor assessments. The Board of Directors is briefed on the strategic plans, which are updated annually

The company's "Technology Roadmaps" for new and innovative technologies augments and supports the Business's long-range plans and ERM process. The roadmaps are created for selected technologies that are deemed high priority for the company and our customers or have been identified as important to multiple Business Units. One example of a Technology Roadmap is for the development and deployment of hybrid electric propulsion systems. The roadmaps are also used to prioritize R&D investment. The company's R&D funding utilizes a defined, gated review process to determine which technologies get funding and at what level.

Case study of transitional risk / opportunity- The strategic planning process and Technology roadmaps described above helped RTX identify and assess products and services that support a sustainable aviation industry. This includes continued research and innovation in many areas including: improved engine performance with better fuel economy, the development of hybrid electric propulsion systems, engines that can burn cleaner alternative fuels such as sustainable aviation fuels and hydrogen, lighter weight components and structures on aircraft, and optimizing flight trajectories which reduce fuel burn.

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C2.2a

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

	Relevance & Inclusion	Please explain
Current regulation	Relevant, always included	<p>Current climate-related regulations are included in ongoing reviews by Business Unit programs, Government Relations, Legal, and EH&amp;S. They are relevant because they can impact costs and operational flexibility.</p> <p>Example of risk type: Examples of regulations that are monitored and reviewed include: The EU Emissions Trading System, which impacts the company's aircraft flying to the EU, the EPA Mandatory Greenhouse Gas Reporting Rule for those facilities that trip the reporting levels, the New England Regional Greenhouse Gas Emissions Initiative (RGGI) which is a cap and trade program that covers one of our sites that has co-generation operations, UK's Streamlined Energy and Carbon Reporting (SECR) framework, and U.S. EPA's regulation of GHG emissions from aircraft.</p>
Emerging regulation	Relevant, always included	<p>The company tracks and monitors proposed climate-related regulations, laws, and other emerging policies that might impact operations or markets that we engage in. The regulations could impose added operational costs or required changes in our manufacturing. One example is potential regulations proposed by the U.S. and EU regulators for new jet aircraft engine emissions, which potentially could have an impact on our Pratt &amp; Whitney jet engines and our customer's use of those products. Another example is greenhouse gas cap and trade regulations that have been proposed in the past that would cover several of our larger facilities. A third example is various proposed energy and/ or carbon tax systems that we are evaluating because of their potential impact to the company. Multiple functional groups assist in the tracking of proposed climate-related requirements including Government Relations, Program Offices, Strategy organizations, and EH&amp;S.</p> <p>Examples of risk type: Examples of emerging regulations that are being tracked and considered include: 1) European Green Deal provisions and implementation measures in the Fit for 55 package, 2) the U.S. Sustainable Aviation Fuel and Blender's Tax Credit proposal, and 3) EU Carbon Border Adjustment Mechanism.</p>
Technology	Relevant, always included	<p>Technology is paramount to the company's products and success, as such the company always includes technology parameters in its risk assessments and strategic planning processes. The commercial aviation's drive for a more sustainable industry has required significant investment and investigation of new technologies, alternative power sources, new materials and airframe structures, and different fuels. The costs of R&amp;D investment add to the company's operating costs. The development of new and superior technologies, and to be first in market implementation, is an important business goal.</p> <p>Examples of risk type: Examples of sustainable technology focus areas from the company's technology roadmap are:</p> <ol style="list-style-type: none"> <li>1) Continuous engine efficiency improvements and technology advancements. Continuously striving to improve our current and future line of engines to deliver maximum performance and efficiency, reducing emissions in use. This includes development of hybrid-electric and hydrogen-fueled propulsion technologies, which have potential to provide lower carbon, or no carbon, emissions solutions for our customers.</li> <li>2) Aircraft system improvements. Optimizing the design of aircraft components and systems to be the lightest, most energy efficient and safest products made, reducing aircraft fuel consumption and contributing to overall aircraft energy efficiency.</li> <li>3) Aircraft trajectory and ground operations improvements. Enabling the most fuel-efficient flight trajectories using GPS-based tools, air traffic management surveillance, and automation systems to follow near-optimal routes at near-optimal altitudes and speeds during all phases of flight, which reduces delays, fuel consumption and emissions. We are also building the systems and tools for passengers, airlines and airports to help the air transportation ecosystem operate as seamlessly as possible, ensuring maximum efficiency and minimum waste.</li> <li>4) Sustainable Aviation Fuel (SAF) and other alternative aviation fuels. Working across the value chain to prepare current and future engines to run on green alternatives to fossil-based jet fuels to reduce emissions, including SAF, and long-term alternatives such as hydrogen-based fuels.</li> </ol>
Legal	Relevant, always included	<p>RTX always considers legal risks in its risk assessment. This includes current regulations, laws, or other policies, as well as emerging regulations, laws, or other policies. Risks can drive up costs and impact operations. This is particularly evident with the widespread global growth of climate related regulations and governmental policies. Legal requirements of our customers and contract requirements are also factored in. We assess legal risks through partnership with Corporate and Business-level legal departments, as well as integration into the company's site-specific Threat and Vulnerability Assessment process.</p> <p>Examples of risk type: Examples of legal requirements we consider include: 1) the EU Emissions Trading System, 2) U.S. EPA Mandatory Greenhouse Gas Reporting Rule, 3) New England Regional Greenhouse Gas Emissions Initiative (RGGI), 4) UK's Streamlined Energy and Carbon Reporting (SECR) framework, 5) U.S. EPA's regulation of GHG emissions from aircraft, and 6) Customers' Supplier Code of Conduct requirements, and other legal requirements contained in existing contracts with our customers.</p>
Market	Relevant, always included	<p>RTX and Business Units continuously monitor and evaluate the market sectors that they operate in to determine changes in customer demands and priorities. This process is incorporated in the company's strategic long-range planning process, and key to the company's business strategy. Significant research and analyses are conducted on all our targeted markets to assess trends, customer changes, and competitor capabilities and assessments. Climate change has created new and expanded markets for low or no carbon emission products and services, sustainable aviation technologies, and climate adaptation products and services.</p> <p>Examples of risk type: Example of changing and new markets being considered include: 1) electric-powered aircraft for short-range, regional, helicopter, and single aisle applications, 2) hybrid electric aircraft market, 3) emerging urban mobility market including drones for deliveries and new modes of transport, 4) increased markets for climate adaptation products and services such as Raytheon Intelligence &amp; Space's (RIS) weather sensing and analysis capabilities. See C2.4, Opportunity 2 and 3.</p>
Reputation	Relevant, always included	<p>The company always includes reputational factors in its risk assessment since reputation can help or harm the company brand. Damage to reputation could also be generated if the company did not have a robust sustainability program, was not committed to making GHG emission reductions, or did not comply with climate-related regulations.</p> <p>Examples of risk type: Examples of risk types being considered are environmental / sustainability reputation, and Corporate Social Responsibility reputation. These two factors are important to the company's overall reputation. Numerous external sustainability rankings and ratings score RTX's performance and standing, which we continuously monitor. The company has received numerous awards and recognition over the last 2 decades for its accomplishments in energy and GHG reductions. Examples include the U.S. EPA ENERGY STAR Partner of the Year Sustained Excellence Award, and recognition for setting and achieving aggressive GHG reduction goals from EPA, The Climate Registry and the Center for Climate and Energy Solutions (C2ES).</p>
Acute physical	Relevant, always included	<p>Acute physical risks are included in the company's risk assessment. These risks are covered in the Business Resilience &amp; Crisis Management program. Key sites conduct a Threat and Vulnerability Assessment every 2 years, which includes physical risks. The impacts of acute physical risks go well beyond the physical boundaries of our facilities and include our employees, supply chain, distribution networks, and customers.</p> <p>Examples of risk type: Examples of acute physical risk types considered are the increase in the number and severity of weather events, like hurricanes, tornadoes, flooding, snow and ice storms, fires, heat waves, droughts, and mud slides at the company's facilities around the world.</p>
Chronic physical	Relevant, sometimes included	<p>The risks associated with longer term chronic physical changes in weather patterns, sea level rise, temperature increases, drought, and other climate change impacts are sometimes considered by RTX, but not as regularly as acute physical risks. These risks are factored into the company's Business Resilience &amp; Crisis Management (BRCM) process as individual sites conduct their specific Threat and Vulnerability Assessments.</p> <p>Examples of risk type: Examples of chronic physical risk types considered include changing weather patterns, sea level rise resulting in more frequent flooding, temperature increases and heat waves, and drought. An example of a chronic physical change that the company faces at several of its facilities is the increase in the number of days that are over 90 degrees F (Fahrenheit) in temperature (e.g., at its Arizona facilities). Such extreme temperature increases the demand for air conditioning and puts stress on the local electricity power grid, which may result in power outages and cause business interruptions. Specialized temperature-controlled manufacturing environments (e.g., cleanrooms) could be vulnerable. It could also lead to a reduction in employee productivity for employees that are not in air-conditioned spaces if the temperature forces employees to slow down their activities or take more frequent breaks.</p>

**C2.3**

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

Yes

**C2.3a**



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

**Identifier**

Risk 1

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

Direct operations

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

Emerging regulation	Carbon pricing mechanisms
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**Primary potential financial impact**

Increased indirect (operating) costs

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

<Not Applicable>

**Company-specific description**

Policies and regulations that put a price on carbon is one of the mechanisms that governments can use to drive reductions in GHGs. It can take the form of a direct carbon tax or be part of an Emissions Trading System. The United Kingdom and many countries in the European Union already have some form of carbon pricing, but the scope of emissions that are covered varies. We have facilities in the UK and EU; however, they comprise less than 10% of the company's emissions. It is anticipated that more countries will implement carbon pricing mechanisms in the future to achieve their Paris Climate Agreement commitments (Nationally Determined Contributions). The financial impact of carbon pricing on the company depends on the set price; what emissions it applies to (e.g., Scope 1 only vs. Scope 1 and 2; power plant emissions only vs manufacturing industry); which countries mandate them and the company's profile in these countries; and the phase-in schedule. As RTX continues to implement its decarbonization roadmap, company emissions will decline leading to fewer emissions that a carbon tax would apply to.

**Time horizon**

Medium-term

**Likelihood**

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)**

25500000

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

88400000

**Explanation of financial impact figure**

To estimate the potential financial impact of carbon pricing, we assumed variables for three factors: 1) the potential regulatory carbon price, 2) the percent of RTX emissions the carbon tax would apply to, and 3) the total company's emissions.

A carbon price range of between \$51 - \$90 was assumed in the estimate. According to IHS Markit's Global Carbon Index, the average weighted carbon price was \$51.06 as of June 1, 2022. The Index tracks carbon credit markets globally and consolidates data from the European Union Allowances (EUA), California Carbon Allowance (CCA), and Regional Greenhouse Gas Initiative (RGGI). We assumed that the carbon price increases over time to \$90 by 2030. \$90 is based on the projected EU carbon price in 2030 as presented in IEA's Stated Policy Scenario in the World Energy Outlook 2022.

We assumed a range of total emissions from 2022 levels (1.43 M mtCO<sub>2e</sub>) to our projected 2030 emissions where our 2030 goal is achieved (approximately 982K mtCO<sub>2e</sub>).

We also assume the percent of our emissions that the carbon tax would apply to, ranging from 35% (which is the percent of emissions that Scope 1 represents) to 100%. The use of carbon pricing mechanisms by countries is likely to increase overtime leading to a higher percentage of our emissions being subject to future carbon taxes.

On the low end of the range, the calculation is: \$51/mtCO<sub>2e</sub> x 1.43M mtCO<sub>2e</sub> emissions x 35% = \$25.5 M / year. On the high end of the range, the calculation is: \$90/mtCO<sub>2e</sub> x 982K mtCO<sub>2e</sub> emissions x 100% = \$ 88.4 M / year.

**Cost of response to risk**

17300000

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

The primary methods for managing this risk are to continue to implement initiatives and programs to reduce the company's energy consumption, increase energy efficiency of its buildings and manufacturing equipment, reduce greenhouse gas emissions, and increase the use of renewable energy in order to stay under regulatory applicability threshold levels. This is driven by the company's GHG reduction goal, and a companion goal to implement 11 energy/GHG best management practices throughout the company. These projects include investing in building and equipment upgrades, and pursuing changes in operations and manufacturing processes.

The estimated cost of responding to the risk in 2022 is estimated to be \$17.3 million / year. This number represents the investments made in 2022 to reduce energy / greenhouse gas emissions from facility energy projects. This amount may increase in the future as our decarbonization efforts accelerate.

**Case Studies:**

- 1) A case study of how RTX is implementing energy projects in order to manage this risk includes its robust energy management program, which in 2022 resulted in the completion of over 70 energy efficiency projects including numerous LED lighting upgrades at many of our sites, replacing several chillers, compressed air optimization, and implementation of numerous building HVAC control enhancements to reduce energy consumption.
- 2) Another method for managing this risk is investigating the feasibility of renewable energy projects, both on-site and off-site, such as off-site wind and on-site solar. Energy generated with renewable resources would not be covered by most carbon pricing systems or climate regulations. In the last several years, the company has investigated and implemented numerous renewable projects and has increased the percent of renewable electricity that it procures to 4.2% of the total electricity in 2022.

## 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	Other, please specify (Increased severity and frequency of extreme weather events such as severe storms, tornados, hurricanes and wildfires)
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### Primary potential financial impact

Increased indirect (operating) costs

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

<Not Applicable>

### Company-specific description

RTX has significant properties in approximately 25 countries, with approximately 515 significant properties comprising approximately 75 million square feet of productive space. Approximately 30% of our square footage related to our significant properties is leased, and 70% is owned. Approximately 60% of our square footage related to our significant properties is located in the United States. Some of the properties are located in areas historically impacted by extreme weather events, such as hurricanes, tornadoes, severe lightning storms, floods, heat waves, and drought conditions that cause forest fires. For example, RTX has facilities in "hurricane alley" in the U.S., including FL, MS and TX and several facilities in the mid-west and central U.S. that are prone to tornadoes. Severe weather events have the potential to cause several impacts to the company such as: business interruption, property damage, damage to products and other assets, the welfare of our employees and their property, and damage to suppliers', subcontractors' and service providers' property/assets. Potential financial impacts will be greater at sites with higher asset values and those with more interdependencies with other company sites (e.g., they supply parts or components to other sites). The number and severity of severe weather events are forecasted to increase over time due to the impacts of climate change.

An example of the impacts of physical risks to the company was a significant flooding event at one of our fabrication operations in New Jersey in September 2021, connected with the remnants of Hurricane Ida. The location sustained almost 9 inches of rain in less than a 24-hour period, causing significant damage to the facility and assets in the building.

Another example of extreme weather-related risk occurred in February 2021 when Texas (where the company has several facilities) was gripped by winter storms and freezing rain. Temperatures plunged between 10 - 20 degrees F causing residents to increase electricity use during a period of insufficient generation of power which resulted in loss of electricity across the grid and freezing pipes. Increased cost of fuel to operate generators during power outages and increased electric costs to heat facilities and repair broken water pipes was experienced as well as business disruptions caused by employees unable to get to work or attending to personal property damage.

### Time horizon

Short-term

### Likelihood

Virtually certain

### 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)

300000

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

10000000

### Explanation of financial impact figure

The range of potential financial impacts in any given year varies significantly and is estimated between \$300,000 - \$10 million. It is impossible to predict the number and severity of weather events that would impact our facilities. Therefore, the financial impact range is highly speculative. The range was calculated based on estimated potential loss expectancies (including business interruptions) and an assumed number and severity of weather events impacting the company. On the low end, it is assumed that the company is impacted by 1 weather event leading to relatively small impacts (\$300,000). On the high end of the range, it is assumed that RTX is impacted by 1 or 2 events that cause significant impact to the facilities and the company in one year. The probability of incurring the high estimate value is very low to possible.

Severe weather events can damage property, damage assets within the facility, cause business interruptions at the site, and lead to second order business disruptions if there are key interdependencies with other sites and product lines. Damage will be higher at larger sites, those with higher asset values, sites that have more interconnections with other sites (i.e., they supply parts or components to other company sites), and sites with greater natural hazards.

There are additional financial implications to our business operations if one or more of our supplier's facilities was damaged or otherwise impacted, especially if it is a critical or sole-source supplier.

### Cost of response to risk

#### Description of response and explanation of cost calculation

We are not able to reasonably estimate the cost of responding to this risk. However, below is a description of some of the different ways the company manages this risk.

- 1) We work with our property insurance company to conduct Facility Hazard Audits of our facilities. The insurance company assesses risks and provides recommendations to enhance facility resiliency. In addition, sites have capital expenditure budgets that include many different building envelope improvements.
- 2) We maintain a strong Business Resiliency & Crisis Management (BRCM) program (as reported in C2.2) which requires sites to conduct Threat and Vulnerability Assessments, conduct Business Impact Analyses, and develop Continuity and Recovery plans to prepare for events.
- 3) We maintain property and business interruption insurance which protects the company against significant losses.

## Comment

### Identifier

Risk 3

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

Downstream

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

Technology	Transitioning to lower emissions technology
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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

The company is subject to market/ technology risks as a result of climate change. These risks are associated with increasing demands for offerings focused on addressing climate change, transitioning to lower emission technologies for our products, including low to no carbon products and services, the use of alternative energy sources and other sustainable aviation technologies, and climate adaptation products and services.

We are also seeing increasing focus on our environmental sustainability practices and commitments with respect to our operations, products and suppliers from customers, shareholders and investors. As a result, we anticipate that we will need to make additional investments in new technologies and capabilities and devote additional management and other resources in response to the foregoing.

We may not realize the anticipated benefits of these investments and actions for a variety of reasons, including technological challenges, evolving government and customer requirements and our ability to anticipate them and develop in-demand technologies on a timely basis, and other risks related to the development of advanced technologies.

In addition, certain technologies will be dependent upon government action, such as investments in infrastructure, creating appropriate market incentives and making certain raw materials available for development of certain technologies. Moreover, we rely on our suppliers to timely and effectively adapt and meet our evolving technological supply needs, and they may be unable to fully respond to our requirements in a timing manner.

We also face competition risks as our competitors also respond by advancing sustainable technologies. Our competitors may develop these in-demand technologies before we do, their new technologies may be deemed by our customers to be superior to technologies we may develop, and their technologies may otherwise gain industry acceptance in advance of or instead of our products. In addition, as we and our competitors develop increasingly sustainable technologies, demand for our older offerings may decrease or become non-existent.

### Time horizon

Medium-term

### Likelihood

Very likely

### Magnitude of impact

Medium-high

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

No, we do not have this figure

### Potential financial impact figure (currency)

<Not Applicable>

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

<Not Applicable>

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

<Not Applicable>

### Explanation of financial impact figure

The potential financial impact of transitioning to lower emissions technology cannot be reasonably estimated due to many uncontrollable variables. The company has 2 businesses focused on the aviation sector, a sector that is already seeing significant activity to transition to sustainable technologies: Pratt & Whitney, and Collins Aerospace. Their 2022 total net sales were \$20.5 billion, and \$20.6 billion respectively. Jet engines and aircraft components that we produce are used by customers around the world.

### Cost of response to risk

#### Description of response and explanation of cost calculation

In 2021, the company joined Air Transport Action Group's (ATAG's) "Fly Net-zero" commitment to achieve industrywide net-zero carbon emissions in civil aviation by 2050. We developed a technology roadmap to achieve that ambition. Our roadmap to 2050 allows for the long-term nature of technology and infrastructure advancements in the aviation sector and includes 4 technology focus areas:

- 1) Continuous engine efficiency improvements and technology advancements. Continuously striving to improve our current and future line of engines to deliver maximum performance and efficiency, reducing emissions in use. This includes development of hybrid-electric and hydrogen-fueled propulsion technologies, which have potential to provide lower carbon, or no carbon, emissions solutions for our customers.
- 2) Aircraft system improvements. Optimizing the design of aircraft components and systems to be the lightest, most energy efficient and safest products made, reducing aircraft fuel consumption and contributing to overall aircraft energy efficiency.
- 3) Aircraft trajectory and ground operations improvements. Enabling the most fuel-efficient flight trajectories using GPS-based tools, air traffic management surveillance, and automation systems to follow near-optimal routes at near-optimal altitudes and speeds during all phases of flight, which reduces delays, fuel consumption and emissions. We are also building the systems and tools for passengers, airlines and airports to help the air transportation ecosystem operate as seamlessly as possible, ensuring maximum efficiency and minimum waste.

4) Sustainable Aviation Fuel (SAF) and other alternative aviation fuels. Working across the value chain to prepare current and future engines to run on green alternatives to fossil-based jet fuels to reduce emissions, including SAF, and long-term alternatives such as hydrogen-based fuels.

We are unable to reasonably estimate the cost of responding to this risk due to too many variables such as technology advancements, R&D funding, customer requirements, regulatory landscape, market competitors, governmental funding and incentives for new technologies, etc. In 2022, the company invested a total of \$7.1 billion in customer- and company-funded R&D that included support for developing products with world-class sustainability performance.

#### Comment

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## C2.4

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

Yes

## C2.4a

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

#### Identifier

Opp1

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

Direct operations

#### Opportunity type

Resource efficiency

#### Primary climate-related opportunity driver

Move to more efficient buildings

#### Primary potential financial impact

Reduced indirect (operating) costs

#### Company-specific description

Increased resource efficiency is a potential climate-related opportunity which would reduce the company's utility costs, reduce operating costs and make the company more competitive. Many new innovative building and manufacturing processes and equipment are being developed as a result of the focus on climate change. As the company seeks to minimize the financial impact of future energy and climate regulations, we are aggressively pursuing energy and GHG reduction measures. Many of these projects are energy conservation and energy efficiency projects, which ultimately lower our energy bill and make the company more resource efficient. These projects include implementing building upgrades, enhancing maintenance activities, installing energy efficient equipment and control systems, and installing onsite solar projects. One of company's 2025 Sustainability goals is to implement energy best management practices at over 200 facilities in order to increase the energy efficiency of its buildings and reduce costs.

#### Time horizon

Short-term

#### Likelihood

Virtually certain

#### Magnitude of impact

Low

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

Yes, a single figure estimate

#### Potential financial impact figure (currency)

1403500

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

<Not Applicable>

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

<Not Applicable>

#### Explanation of financial impact figure

The \$1,403,500 potential financial impact number represents an estimate of the annual energy savings as a result of our continued investment in energy efficiency and GHG emissions reduction projects. It is based on estimated annual savings of the energy/GHG projects that we implemented in 2022.

#### Cost to realize opportunity

17300000

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

The \$17.3 M per year cost represents an estimate of potential costs associated with our continued investment in energy efficiency and GHG emissions reduction projects. The number represents the investments made in 2022 to reduce energy / GHG emissions from facility energy projects.

Increasing energy efficiency at our facilities will require capital and operating expenses. The costs are dependent on the size, type and number of energy projects that are implemented. Many of the less expensive projects, and those with a short payback period have already been implemented at many of our facilities, therefore investment cost may rise over time. However, this may be offset by increased costs of energy, resulting in higher savings from the investment.

#### Case studies:

We address the risks in order to realize this opportunity in several different ways:

1) Our sites conduct periodic energy audits. The audits are required by our Corporate Energy and GHG Policy. Projects and recommendations identified by the audits are then considered for funding and implementation.

- 2) We set a long-term goal to reduce GHG emissions by 15% by 2025 from 2019 levels. Each Business Unit has the same goal. The goal helps drive sites to continually identify, assess, and implement energy projects.
- 3) The company also has a formal sustainability goal to implement 11 energy/GHG best management practices by 2025. These BMPs include establishing an energy/GHG team, identifying significant users, creating a plan to upgrade lighting to LED where practical, evaluating automated building management systems, and examining building systems such as HVAC, boilers, insulation, and compressed air.
- 4) We also are an active member of the U.S. EPA ENERGY STAR program and have won the Partner of the Year Sustained Excellence Award for 15 consecutive years. Our participation in the program has helped us enhance our energy program through various ENERGY STAR tools, campaigns and guidelines, as well as the ability to leverage best practices from other member companies at conferences and workshops.

**Comment**

**Identifier**

Opp2

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

Downstream

**Opportunity type**

Products and services

**Primary climate-related opportunity driver**

Development and/or expansion of low emission goods and services

**Primary potential financial impact**

Increased revenues resulting from increased demand for products and services

**Company-specific description**

Climate change and the aviation industry’s aggressive goal to achieve net zero carbon emissions by 2050 is driving the industry to innovate. In 2021, the company joined Air Transport Action Group’s (ATAG’s) “Fly Net-zero” commitment to achieve industry-wide net-zero carbon emissions in civil aviation by 2050. We developed a technology roadmap to achieve that ambition. RTX is well positioned to be a leader in sustainable aviation technologies and capture new business opportunities. Our roadmap includes the following 4 technology focus areas:

- 1) Continuous engine efficiency improvements and technology advancements. Continuously striving to improve our current and future line of aircraft engines to deliver maximum performance and efficiency, thereby reducing emissions of our products. This includes development of hybrid-electric and hydrogen-fueled propulsion technologies, which have potential to provide lower carbon, or no carbon, emissions solutions for our customers.
- 2) Aircraft system improvements. Optimizing the design of aircraft components and systems to be the lightest, most energy efficient and safest products made, which contributes to overall aircraft energy efficiency and reduces fuel consumption.
- 3) Aircraft trajectory and ground operations improvements. Enabling the most fuel-efficient flight trajectories using GPS-based tools, air traffic management surveillance, and automation systems to follow near-optimal routes at near-optimal altitudes and speeds during all phases of flight, which reduces delays, fuel consumption and emissions. We are also building the systems and tools for passengers, airlines and airports to enable the air transportation ecosystem to operate as seamlessly as possible, ensuring maximum efficiency and minimum waste.
- 4) Sustainable Aviation Fuel (SAF) and other alternative aviation fuels. We are working across the value chain to prepare current and future engines to run on lower carbon, clean alternatives to fossil-based jet fuels to reduce emissions, including SAF, and long-term alternatives such as hydrogen-based fuels.

**Time horizon**

Medium-term

**Likelihood**

Virtually certain

**Magnitude of impact**

Medium-high

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

No, we do not have this figure

**Potential financial impact figure (currency)**

<Not Applicable>

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

<Not Applicable>

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

<Not Applicable>

**Explanation of financial impact figure**

It is not yet possible to assess the potential financial opportunities created by climate change and the transition to a sustainable aviation industry due to too many unknown parameters such as speed of technology developments, level of R&D funding and governmental support, regulatory schemes, market competition, customer demand, etc. The company has 2 businesses with significant focus on the commercial aviation market: Pratt & Whitney, and Collins Aerospace. Their 2022 net sales were \$20.5 billion, and \$20.6 billion respectively. Jet engines and aircraft components that we produce are used by customers around the world.

**Cost to realize opportunity**

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

We have developed strategic technology roadmaps for numerous technology areas and continue to make investments in advanced technologies. In 2022, RTX invested a total of \$7.1B in customer- and company-funded R&D that included support for developing products with world-class sustainability performance. A second important strategy RTX utilizes to pursue these opportunities is continual engagement with our customers, trade associations, universities, research organizations, regulating bodies, and other organizations to identify customer needs, monitor technology developments, and integrate this information into our business strategies.

Listed below are examples of initiatives relating to pursuing such opportunities:

- Putting into service our latest advanced regional turboprop engine model PW127 XTM, which offers 40% extended time on wing, 20% lower maintenance costs and 3% improvement in fuel efficiency.
- Completed first successful engine run of our hybrid-electric propulsion technology demonstrator, a key milestone on the journey toward eventual installation and flight testing on a modified De Havilland Canada Dash 8-100 aircraft, targeted to begin in 2024.

- Developing advanced-cycle engines that recover water and waste heat to improve engine efficiency in the near term – Sustainable Water Injecting Turbofan Comprising Hybrid Electrics (SWITCH), and hydrogen-powered engines in the longer-term – Hydrogen Steam-Injected Inter-Cooled Turbine Engines (HySIITE).
- Launched FlightHub™ which provides pilots with real-time route recommendations that enable a more efficient flight path and reduce fuel consumption and emissions.
- Partnering with NASA to develop technologies that will continue to reduce fuel consumption including advanced high-pressure turbine technologies, next-generation ceramic matrix composite materials (CMC) and demonstrating the compatibility of SAF with advance combustors for small core engines.

Cost to realize opportunity - We are unable to reasonably estimate the cost of realizing these opportunities due to too many variables such as speed of technology advancements, R&D funding levels, customer requirements, regulatory landscape, market competitors, governmental funding/incentives for new technologies, and the long time horizon required for significant technology changes.

**Comment**

**Identifier**

Opp3

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

Downstream

**Opportunity type**

Products and services

**Primary climate-related opportunity driver**

Development of climate adaptation, resilience and insurance risk solutions

**Primary potential financial impact**

Increased revenues resulting from increased demand for products and services

**Company-specific description**

Physical impacts of climate change (e.g., hurricanes, tornadoes, severe storms, rising sea level, rising temperatures, etc.) may present potential business opportunities for both existing and new products and services as a result of increased demand for climate-adaptation solutions. The company has several technologies and products related to weather and climate instrumentation and analysis that are likely to increase in demand to help meet the demand for improved data and analysis relating to climate data and weather forecasting. Examples include:

- 1) EVI-5 GLIMR (Geosynchronous Littoral Imaging and Monitoring Radiometer): A new NASA mission utilizes this instrument which is designed to closely monitor the health of our oceans and assess risks for coastal communities to protect both our environment and our economy. It will provide unique observations of ocean biology, chemistry, and ecology in several regions, including how these may be changing over time.
- 2) VIIRS (Visible Infrared Imaging Radiometer Suite): Part of NOAA's Joint Polar Satellite System (JPSS) in partnership with NASA, and the follow-on to both NOAA's Advanced Very High Resolution Radiometer (AVHRR) and NASA's Moderate Resolution Imaging Spectroradiometer (MODIS). Using VIIRS data, scientists can measure cloud and atmospheric particle properties, ocean color, sea and land surface temperature, ice motion and temperature, fires, and the amount of sunlight reflected from the Earth's surface. The first VIIRS was launched in 2011, with two more now on orbit another two planned for launch; this will provide a climate-scale record of over two decades.
- 3) Earth Observing System Data and Information System (EOSDIS) Evolution and Development (EED): This is the program that manages all of NASA's satellite data archives from a multitude of missions to support Earth science and climate research and monitoring. We continue to implement improvements on data discovery and access toward that end, including migrating functionality and data to the cloud.
- 4) Earth Prediction Innovation Center (EPIC): This is a NOAA program charged with making operational weather and environmental models more readily available to the research community, to speed research to operations (R2O). By containerizing the models and maintaining common repositories of code and test data, we make it easier for new innovations to be tested for potential inclusion in operations.

**Time horizon**

Short-term

**Likelihood**

Very likely

**Magnitude of impact**

Medium

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

No, we do not have this figure

**Potential financial impact figure (currency)**

<Not Applicable>

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

<Not Applicable>

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

<Not Applicable>

**Explanation of financial impact figure**

It is not yet possible to assess the potential financial impacts of this opportunity due to too many unknown parameters such as customer demand and expectations, level of R&D funding, market competition, etc.

RTXs has several different products, services, and expertise that may increase in demand due to climate change and as the need increases for improved data and analysis relating to climate data and weather forecasting. This is likely to lead to additional revenues. In addition, it is likely new programs will be developed by current and new customers. The potential financial impact (revenue) figure could be in the billions over the 10 -year period or so. There are current NASA and NOAA weather-related programs of this financial size.

**Cost to realize opportunity**

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

We are unable to reasonably estimate the cost of realizing this opportunity due to too many variables and unknowns such as customer requirements, technology advancements, market competitors, etc. RTX plans to continue investing research and development dollars to maintain its leadership in the science of this area. The company actively manages and maintains existing products and services and is continually looking for new ways and new markets in which to deploy them. We also

evaluate methods to enhance the products to meet new customer demands.

A key company strategy to realize this potential opportunity is to engage and dialogue with our customers, governmental agencies, trade associations, military experts, universities, and think tank organizations on potential future needs and requirements of existing and future customers.

Another strategy we pursue is investment in R&D to continue to lead the scientific study and understanding in this field, which is a discriminating factor that enables us to continue our leadership position in this area.

**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**

We are continuing to assess the potential impacts of climate change on our business (including both physical risks and transition risks) and developing mitigation and adaption plans to manage the risks. We already have many of the key elements of a Climate Transition Plan, as identified in CDP’s Climate Transition Plan Discussion Paper including: 1) governance systems, 2) scenario analysis, 3) value chain engagement, 4) processes to identify and assess potential climate risks and opportunities, 5) targets, and 6) emissions verification. One key transition the company is making in response to climate change is focusing on sustainable aviation and the necessary technologies, innovation, customer engagement, and R&D funding. We have developed technology roadmaps to guide our strategy and funding. For our operations (scope 1 and 2 emissions), the company recently set an additional greenhouse gas emissions goal (2030) which aligns with a 1.5 degree C pathway and needed pace of reductions.

We plan to develop a full climate transition plan within the next two years.

**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?**

	<b>Use of climate-related scenario analysis to inform strategy</b>	<b>Primary reason why your organization does not use climate-related scenario analysis to inform its strategy</b>	<b>Explain why your organization does not use climate-related scenario analysis to inform its strategy and any plans to use it in the future</b>
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 NZE 2050	Company-wide	<Not Applicable>	<p>Rationale for scenario selection: The International Energy Agency’s (IEA’s) Net Zero Emissions by 2050 Scenario (NZE) was selected as one of the scenarios to evaluate because it is aligned with the Paris Agreement’s goal of pursuing efforts to limit global temperature increase to 1.5 °C by the end of the century.</p> <p>Parameters, assumptions, analytical choices: IEA’s annual World Energy Outlook report explores various scenarios. They are based on projections generated by IEA’s World Energy Model (WEM) and the Energy Technology Perspectives (ETP) model. The scenarios also consider other elements and influences including the economic and demographic context, technology costs and learning, energy prices and affordability, corporate sustainability commitments, and social and behavioral factors.</p> <p>The Net Zero Emissions by 2050 (NZE) Scenario was one of the scenarios modeled in the World Energy Outlook 2022 (WEO-2022). It is a normative scenario in that it is designed to achieve a specific outcome-- limiting the global temperature rise to 1.5 °C (without a temperature overshoot) to minimize the most harmful impacts of climate change. In addition, it achieves key energy-related United Nations Sustainable Development Goals (SDGs) related to universal access to energy and major improvements in air quality. It assumes a significant reduction in GHGs by 2030 in order to meet net zero CO2 emissions by 2050. The temperature will peak around 2040, then start to decline slowly as a result of continued reductions in non-CO2 emissions, before dropping to around 1.4 °C in 2100 .</p> <p>Some of the key scenario assumptions include: a) countries go well beyond existing pledges; b) orderly transition across the energy sector to low-carbon resources; c) uptake of all the available technologies and emissions reduction options; d) reduction of methane emissions far more quickly than the other scenarios; and e) cooperation among all countries toward the net zero goal.</p> <p>An inventory of the key policy assumptions available along with all the underlying data on population, economic growth, resources, technology costs and fossil fuel prices are available in WEO-2022 , IEA website, and associated data sets.</p> <p>Time horizon: 3 time horizons were considered: 2030, 2040 and 2050.</p>
Transition scenarios	IEA APS	Company-wide	<Not Applicable>	<p>Rationale for scenario selection: The International Energy Agency’s (IEA’s) Announce Pledges Scenario (APS) was selected as one of the scenarios to evaluate because it is aligned with the Paris Agreement goal of limiting global temperature increase to well below 2 °C by the end of the century.</p> <p>Parameters, assumptions, analytical choices: IEA’s annual World Energy Outlook report explores various scenarios. They are based on projections generated by IEA’s World Energy Model (WEM) and the Energy Technology Perspectives (ETP) model. The WEM is a large-scale simulation model designed to replicate how energy markets function. The model consists of three main modules: final energy consumption (covering residential, services, agriculture, industry, transport and non-energy use); energy transformation including power generation and heat, refinery and other transformation – such as coal to liquids or hydrogen production; and energy supply.</p> <p>The APS scenario assumes that all announced country net zero pledges are achieved in full and on time. It emphasizes near-term emissions reductions. The electricity sector in all G7 countries is assumed to have been predominantly decarbonized to low carbon fuels by 2035. Globally by 2050, the scenario assumes 70% of the electricity is generated from renewable resources.</p> <p>The scenarios also consider other elements and influences including the economic and demographic context, technology costs and learning, energy prices and affordability, corporate sustainability commitments, and social and behavioral factors.</p> <p>An inventory of the key policy assumptions available along with all the underlying data on population, economic growth, resources, technology costs and fossil fuel prices are available in WEO-2022, IEA website, and associated data sets.</p> <p>Time horizon: 3 time horizons were considered: 2030, 2040 and 2050.</p>
Transition scenarios	Customized publicly available transition scenario	Company-wide	1.5°C	<p>Rationale for scenario selection: The scenarios contained in the Air Transport Action Group’s (ATAG’s) Waypoint 2050 Report were selected to be evaluated because they are aviation-specific and relevant to our industry.</p> <p>Parameters, assumptions, analytical choices: The Waypoint 2050 report was developed collaboratively by experts from across the aviation sector. It identifies 3 different scenarios to significantly cut CO2 emissions by 2050 from 2005 levels. In September 2021, ATAG released the Second Edition of the Waypoint 2050 Report that assesses scenarios aligned with the aviation industry’s goal to achieve Net Zero CO2 emissions by 2050, which by itself aligns with Paris Agreement’s goal of pursuing efforts to limit global temperature increase to 1.5 °C by the end of the century.</p> <p>The scenarios are built on a range of sub-scenarios covering technology developments; operations and infrastructure improvements (e.g., airspace trajectory efficiencies and congestion decrease); and sustainable aviation fuel (SAF). An annual traffic growth of 3.1% is assumed. There is minor use of carbon offsets as a transition mechanism.</p> <p>Scenario 1: Pushing technology and operations: a) Technology: Prioritized development of electric and hybrid electric aircraft in the short-range and &lt;100 seat category with entry into service from 2035-2040. b) Operations: High-range improvements and airline load factor improvements. c) SAF: Accounts for approximately 61% of the reductions.</p> <p>Scenario 2: Aggressive sustainable fuel development: a) Technology: Technology improvements are still prioritized but less ambitious than scenario 1. Assumes new airframe configurations with substantial aerodynamics performance such as blended wing body, but not a significant shift to electric or hybrid. b) Operations: Mid-range improvements and airline load factor improvements. c) SAF: SAF accounts for approximately 75% of the reductions.</p> <p>Scenario 3: Aspirational and aggressive technology perspective: a) Technology: Very aggressive acceleration of the introduction of electric, hybrid and zero-emissions (hydrogen) aircraft in the 2035 - 2040 timeframe. b) Operations: Mid-range improvements and airline load factor improvements. c) SAF: Accounts for approximately 50% of the reductions.</p> <p>Detailed information about the parameters, assumptions, and analytical choices are contained in the Waypoint 2050 report.</p> <p>Time horizon: 3 time horizons were considered for each scenario: 2030, 2040 and 2050.</p>

**C3.2b**



**(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**

We used 3 primary focal questions to help provide direction for the climate scenario analysis.

- 1) What aspects of the scenarios and their associated policy assumptions have the greatest potential to impact our company?
- 2) In which time horizon will the greatest potential impact to the company occur?
- 3) What actions can the company take to mitigate the potential impacts?

We selected the scenarios above in order to facilitate discussions around the focal questions. We wanted to include both cross-sector scenarios (e.g., SDS and NZE) and aviation specific scenarios that are more directly relevant to our industry.

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

What aspects of the scenarios and their associated policy assumptions have the greatest potential to impact our company?

- Policies that promote the production and use of alternative fuels and renewables would have a favorable impact on the company, since most of our emissions are related to energy consumption.
- The introduction of CO2 prices would have a potential to impact the company, but its impact depends on the price, what emissions it applies to, which countries mandate them, and the timing of implementation of the tax.
- Some building sector policies assumed in the scenarios would potentially be impactful such as net zero ready emission requirements for existing buildings.
- Policies that promote development and use of Sustainable Aviation Fuel (SAF) would have a positive impact on the company since SAF is the single largest opportunity to decarbonize the aviation industry and all of Pratt & Whitney’s engines are compatible with the current ASTM specifications for SAF.
- Aviation scenarios assume significant enhancements in sustainable aviation technologies but vary in the degree and type of technology development and deployment. This market / technology risk could positively or negatively impact the company. See Q2.3 - Risk 3, and Q2.4 - Opportunity 2 for details
- We also examined several potential climate policies that are being considered by the U.S. Department of Defense (DoD), the Federal Acquisition Regulatory (FAR) Council, and the Security & Exchange Commission (SEC). Integrating climate factors and criteria into DoD procurement decisions (e.g., social costs of carbon, use-phase emissions, and life-cycle assessments) could potentially be impactful to the company, either positively or negatively.

In which time horizon will the greatest potential impact to the company occur?

Impacts of the scenario elements vary over the three time horizons examined, but the greatest potential impacts fell in the short- and mid-term horizons as the company is implementing its decarbonization roadmap, transitioning to more sustainable technologies and products; and upgrading its facilities to be more energy efficient.

What actions can the company take to mitigate the potential impacts?

While evaluating scenario elements, we discussed what measures or actions could help mitigate potential impacts. Key items identified include:

- Continue implementation of our decarbonization plan, including expanded procurement of renewable electricity, to meet our GHG goals. Consider accelerating decarbonization activities if appropriate.
- Continue to drive energy reductions in our facilities through efficiency projects and phasing out less-efficient equipment.
- Continue to implement the company's sustainable aviation technology roadmap and partner with industry organizations to achieve the aviation sector's net zero carbon emissions by 2050 goal.
- Closely track climate-related legislative and regulatory developments, technological advancements, and trends.

**C3.3**

**(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>Climate related risks and opportunities related to our products/services (see C2.3a Risk 3, and C2.4a Opportunity 2) have influenced our product-related strategies. This is particularly evident in civil aviation where the industry has set an aggressive goal to achieve net-zero carbon emissions by 2050 and climate change is driving innovation. This has led RTX to focus on developing a technology roadmap to support achieving this target. Technology focus areas include:</p> <ol style="list-style-type: none"> <li>1) Continuous engine efficiency improvements and technology advancements. This includes development of hybrid-electric and hydrogen-fueled propulsion technologies.</li> <li>2) Aircraft system improvements. Optimizing the design of aircraft components and systems to be the lightest, most energy efficient and safest products made.</li> <li>3) Aircraft trajectory and ground operations improvements. Enabling the most fuel-efficient flight trajectories using GPS-based tools, air traffic management surveillance, and automation systems to follow near-optimal routes, altitudes and speeds.</li> <li>4) Working across the value chain to prepare current and future engines to run on lower carbon, clean alternatives to fossil-based jet fuels, including SAF, and long-term alternatives such as hydrogen-based fuels.</li> </ol> <p>Time horizon: Near, medium, &amp; long-term</p> <p>Examples of substantial strategic decisions influenced by climate risks and opportunities:</p> <ol style="list-style-type: none"> <li>1) The company joined Air Transport Action Group's (ATAG's) "Fly Net-zero" commitment to achieve industrywide net-zero carbon emissions in civil aviation by 2050.</li> <li>2) Putting into service our latest advanced regional turboprop engine model PW127 XTM, which offers 40% extended time on wing, 20% lower maintenance costs and 3% improvement in fuel efficiency.</li> <li>3) Completed first successful engine run of our hybrid-electric propulsion technology demonstrator, a key milestone on the journey toward eventual installation and flight testing on a modified De Havilland Canada Dash 8-100 aircraft, targeted to begin in 2024.</li> <li>4) Launched FlightHub™ which provides pilots with real-time route recommendations that enable a more efficient flight path and reduce fuel consumption and emissions.</li> </ol>

	Have climate-related risks and opportunities influenced your strategy in this area?	Description of influence
Supply chain and/or value chain	Yes	<p>Suppliers are essential to our business, and to our competitive advantage in the industry. We have encountered some supply chain disruptions, including logistic suppliers, due to extreme weather events, such as Hurricanes in Puerto Rico, forest fires in California, ice storms in Texas, and heat waves in southern States. Some weather events not only impact our facilities, but some of our suppliers.</p> <p>Certain weather events have led to delays in receiving parts and materials used at some of our manufacturing facilities, and in a small number of incidents resulted in having to obtain additional suppliers or maintain extra inventory to mitigate potential future disruptions. More attention is being paid to supplier readiness and resiliency.</p> <p>The company has a robust supply chain management program. It seeks to ensure that there can be no single point failures in the supply chain by ensuring more than one supplier for all critical components that are isolated both geographically and geopolitically.</p> <p>Time horizon: Near-term</p> <p>Example of substantial strategic decisions influenced by climate risks:  RTX established a corporate policy on Business Resilience &amp; Crisis Management. Risks to suppliers and logistical channels are one of the types of potential incidents that are explicitly identified in the policy that sites and Businesses must address in their Threat and Vulnerability Assessments and Continuity and Recovery Plans. Sites with a higher risk score and/or more supplier dependencies are required to have more robust assessments and recovery plans.</p>
Investment in R&D	Yes	<p>Climate-related risks and opportunities associated with transitioning to lower emission technologies (as reported in C2.3a Risk 3, and C2.4a Opportunity 2) have influenced the company's R&amp;D investment decisions. We are investing more in sustainable aviation technologies as we continue to support our commitment to the industry's net zero goal. The company has developed Technology Roadmaps for many different technology areas that have been identified as high priority for the company and our customers. The roadmaps are influencing our R&amp;D investment decisions.</p> <p>In 2022, the company invested a total of \$7.1 billion in customer- and company-funded R&amp;D that included support for developing products with world-class sustainability performance.</p> <p>Time horizon: Near-term, medium-term, and long-term</p> <p>Examples of substantial strategic decisions:</p> <ol style="list-style-type: none"> <li>1) Selected by the European Union's Clean Aviation Joint Undertaking to develop propulsion technologies for integration into the GTF engine architecture under the SWITCH program. As the first single-aisle class engine demonstration to incorporate both hybrid-electric propulsion and Water Enhanced Turbofan (WET) technologies, it has a target to provide up to 25% improvement in fuel burn and associated emissions over the current GTF.</li> <li>2) Selected to participate in six additional projects under the European Union's Clean Aviation Joint Undertaking, collaborating with European airframers, engine makers, suppliers and academia to develop disruptive sustainable aviation technologies, including demonstrators for hybrid-electric powered aircraft and ultra-efficient short- and medium-range aircraft, thermal management and systems for novel wing designs.</li> <li>3) Launched our HySITE project, which leverages the cryogenic properties of hydrogen to achieve zero in-flight CO2 emissions, while reducing nitrogen-oxide (NOx) emissions by up to 80% and reducing fuel burn by up to 30%.</li> <li>4) Through our venture capital group, RTX Ventures, we invest in startups to accelerate the development of new technologies. In 2022, we announced agreements with VerdeGo Aero and H55 to accelerate hybrid-electric propulsion and battery technologies for advanced air mobility applications.</li> </ol>
Operations	Yes	<p>Climate related risks and opportunities are influencing how we operate our facilities around the world.</p> <p>Our operations are influenced by the potential acute physical risks relating to climate change affecting our facilities, such as severe weather events - hurricanes, tornadoes, fires, mudslides, flooding, severe snow / ice storms (See C2.3a, Risk 2). This has led to enhanced Threat and Vulnerability Assessments that are conducted at sites and which address physical hazards, as well as Continuity and Recovery planning. This has also led to facility investments to enhance asset management to better survive a severe storm event (e.g., roof and window enhancements in hurricane-prone areas, installation of backup power generators).</p> <p>Second, climate change has influenced the company to continue to reduce energy use, increase energy efficiency, and increase the amount of renewable electricity we use in our operations in order to reduce energy costs and potential carbon prices and mitigate the impact of current or potential climate/energy regulation (See C2.4a, Opportunity 1).</p> <p>Time horizon: Near-term</p> <p>Example of substantial strategic decisions influenced by climate risks and opportunities:</p> <ol style="list-style-type: none"> <li>1) In 2022, due to the increased urgency to accelerate GHG emissions reductions, the company set a longer-term, more aggressive GHG goal to reduce emissions by 46% by 2030 from 2019 levels, which aligns with a 1.5 degree Celsius science-based pathway as identified in the Paris climate agreement. As an interim milestone we raised our 2025 GHG goal to 15% (market-based) to align with a "well below 2 degrees Celsius" science-based pathway. Supporting these GHG goals, the company also established two additional 2025 goals to increase the percent of renewable electricity to 10% and to reduce energy consumption by 2.5% from 2019 levels.</li> <li>2) The company hired a Renewable Energy Advisor to assist in identifying and executing various renewable electricity projects such as physical power purchase agreements and utility green programs offered in regulated markets through local utility companies.</li> </ol>

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 Capital expenditures Acquisitions and divestments	<p>Revenues: The company is working on sustainable aviation technologies and processes to meet customer needs and demands while positioning itself to increase revenues (see 2.4 climate opportunities). This includes enhancements to the fuel efficiency of the GTF engine; hybrid electric propulsion systems; hydrogen-fueled propulsion; lighter-weight, energy-efficient systems and equipment; advancing trajectory-based operations; improving airport and airline operations; and working to prepare current and future engines to run on alternative aviation fuels.</p> <p>Time horizon: Near, medium, and long-term</p> <p>Capital expenditures: Potential climate related risks and opportunities are also influencing the company's current and planned capital expenditures in several different ways: 1) Capital expenditures are needed to support the transition to a sustainable aviation industry and deployment of new technologies, systems, and processes. This includes new facilities and upgrades to existing facilities. 2) To continue to reduce the greenhouse gas emissions from our facilities, the company implements numerous energy reduction and energy efficiency projects each year, many of them needing capital expenditures. Each year EH&amp;S, in coordination with Facilities, develops an EH&amp;S plan that includes funding requirements, including capital projects to meet annual and long-term sustainability goals, including the GHG goal. 3) Capital expenditures are also required in some cases to make our facilities more resilient to severe storm events caused by climate change. Facilities that are located in higher risk areas may need to budget more capital expenditures as part of their Business Resilience and Crisis Management planning. The company's property insurer provides a service to assess physical hazard risks to facilities, especially those with high asset values, and makes recommendations for mitigation measures.</p> <p>Time horizon: Near-term and medium-term</p> <p>Acquisitions: Potential climate related risks and opportunities are also influencing the company's strategy on business acquisitions in order to position it better for future growth and changing customer demands.</p> <p>Time horizon: Near-term and medium-term</p> <p>Examples of substantial strategic decisions influenced by climate risks and opportunities:  <ul style="list-style-type: none"> <li>• Through our venture capital group, RTX Ventures, we invest in startups to accelerate the development of new technologies. In 2022, we announced agreements with VerdeGo Aero and H55 to accelerate hybrid-electric propulsion and battery technologies for advanced air mobility applications.</li> <li>• Putting into service our latest advanced regional turboprop engine model PW127 XTM, which offers 40% extended time on wing, 20% lower maintenance costs and 3% improvement in fuel efficiency.</li> <li>• Completed first successful engine run of our hybrid-electric propulsion technology demonstrator, a key milestone on the journey toward eventual installation and flight testing on a modified De Havilland Canada Dash 8-100 aircraft, targeted to begin in 2024.</li> <li>• Launched FlightHub™ which provides pilots with real-time route recommendations that enable a more efficient flight path and reduce fuel consumption and emissions.</li> <li>• Collins Aerospace acquired FlightAware in 2021, a leading digital aviation company providing global flight tracking solutions, predictive technology, analytics and decision-making tools.</li> <li>• Collins Aerospace acquired Dutch Thermoplastics Components (DTC) in 2021, a leader in the development and fabrication of structural thermoplastic composite parts. With this acquisition, Collins Aerospace will expand the use of advanced thermoplastics to make aircraft lighter and more fuel-efficient.</li> </ul> </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	No, and we do not plan to in the next two years	<Not Applicable>

**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, we consider this a science-based target, but we have not committed to seek validation of this target by the Science Based Targets initiative within the next two years

**Target ambition**

Well-below 2°C aligned

**Year target was set**

2022

**Target coverage**

Company-wide

**Scope(s)**

Scope 1

Scope 2

**Scope 2 accounting method**

Market-based

**Scope 3 category(ies)**

<Not Applicable>

**Base year**

2019

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

615070

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

1206971

**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)**

1822042

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

100

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

100

**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**

2025

**Targeted reduction from base year (%)**

15

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

1548735.7

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

506700

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

926600

**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)**

1433300

**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]**

142.236750488372

**Target status in reporting year**

Underway

**Please explain target coverage and identify any exclusions**

This is a company-wide GHG goal and covers scopes 1 and 2 market-based emissions. In early 2022 we revised our 2025 GHG goal to be more aggressive, to use Scope 2 market-based accounting, and to exclude scope 3 business travel emissions. The new goal is to reduce GHG emissions 15% between 2019 and 2025. This reduction pace is aligned with the SBTi's "well below 2 degrees Celsius" temperature pathway in line with SBTi's 2.5% annual reduction requirement. The goal covers 100% of the company's scope 1 and 2 activities.

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

The company's decarbonization plan to achieve the GHG target includes the following key elements:

- 1) Reduce energy consumption through energy-related reduction and efficiency projects. In 2022 the company implemented 72 energy projects and invested over \$17.3 million in those projects.
- 2) Conduct energy and GHG reduction assessments, surveys, gemba walks, and off hour treasure hunts, to identify opportunities to reduce consumption / emissions.
- 3) Maintain a list of identified, on-going, and completed energy/GHG projects supporting the GHG reduction roadmap, and track implementation.
- 4) Require all major sites to implement 11 energy/GHG best management practices by 2025. These are proven processes and initiatives that help reduce energy use and emissions. As of the end of 2022, we have implemented 64% of them.
- 5) Pursue renewable electricity projects both onsite and offsite. In 2022, we were involved in 44 projects/contracts around the globe that generated over 110,000 MWh of renewable electricity, which represented 4.2% of the company's total electricity use.
- 6) Maintain a cross-functional, cross business unit energy team ("The Conserving RTX Energy & Water (CREW)" team) to oversee the standardizing of policies and processes, assist in program implementation, and share best practices.
- 7) Track progress towards reducing GHG emissions to meet the company's reduction goals. Report results to management.
- 8) Beginning in 2021, the Board's Human Capital and Compensation Committee ("HCCC") incorporated into the Executive Annual Incentive Compensation Program a Corporate Responsibility Scorecard which includes qualitative objectives relating to Sustainability and Safety including progress towards our 2025 GHG reduction goal.

As of the end of 2022, we have reduced our GHG emissions by 21%, surpassing the 2025 goal. However, our GHG reductions are due in part to the impacts of COVID-19 on commercial aviation. We anticipate that those reductions will erode as travel increases and business revenues recover to pre-pandemic levels. We will continue to monitor our progress against our goal.

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

<Not Applicable>

---

**Target reference number**

Abs 2

**Is this a science-based target?**

Yes, we consider this a science-based target, but we have not committed to seek validation of this target by the Science Based Targets initiative within the next two years

**Target ambition**

1.5°C aligned

**Year target was set**

2022

**Target coverage**

Company-wide

**Scope(s)**

Scope 1

Scope 2

**Scope 2 accounting method**

Market-based

**Scope 3 category(ies)**

<Not Applicable>

**Base year**

2019

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

615070

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

1206971

**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)**

1822042

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

100

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

100

**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 (%)**

46

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

983902.68

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

506700

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

926600

**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)**

1433300

**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]**

46.381549072295

**Target status in reporting year**

Underway

**Please explain target coverage and identify any exclusions**

This is a company-wide GHG goal and covers scopes 1 and 2 market-based emissions. In early 2022 we announced a longer-term, aggressive GHG total that aligns with a 1.5 degree C science-based pathway as specified by SBTi (4.2% annual reduction). The goal is to reduce GHG emissions by 46% by 2030 from 2019 levels (scopes 1 and 2 market). The goal covers 100% of the company's scope 1 and 2 activities.

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

The company's decarbonization plan to achieve the GHG target includes the following key elements:

- 1) Reduce energy consumption through energy-related reduction and efficiency projects. In 2022 the company implemented 72 energy projects and invested over \$17.3 million in those projects.
- 2) Conduct energy and GHG reduction assessments, surveys, gemba walks, and off hour treasure hunts, to identify opportunities to reduce consumption / emissions
- 3) Maintain a list of identified, on-going, and completed energy/GHG projects supporting the GHG reduction roadmap, and track implementation
- 4) Require all major sites to implement 11 energy/GHG best management practices by 2025. These are proven processes and initiatives that help reduce energy use and emissions. As of the end of 2022, we have implemented 64% of them.
- 5) Pursue renewable electricity projects both onsite and offsite. In 2022, we were involved in 44 projects/contracts around the globe that generated over 110,000 MWh of renewable electricity, which represented 4.2% of the company's total electricity use.
- 6) Maintain a cross-functional, cross business unit energy team ("The Conserving RTX Energy & Water (CREW)" team) to oversee the standardizing of policies and processes, assist in program implementation, and share best practices.
- 7) Track progress towards reducing GHG emissions to meet the company's reduction goals. Report results to management.
- 8) Beginning in 2021, the Board's Human Capital and Compensation Committee ("HCCC") incorporated into the Executive Annual Incentive Compensation Program a Corporate Responsibility Scorecard which includes qualitative objectives relating to Sustainability and Safety including progress towards our 2025 GHG reduction goal.

As of the end of 2022, we have reduced our GHG emissions by 21%. Our GHG reductions are due in part to the impacts of COVID-19 on commercial aviation. We anticipate that those reductions will erode as travel increases and business revenues recover to pre-pandemic levels. We will continue to monitor our progress against our goal while we also look to providing additional details on actions to drive achievement of the 2030 target.

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

<Not Applicable>

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## C4.2

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### (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

## C4.2a

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### (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**

2022

**Target coverage**

Company-wide

**Target type: energy carrier**

Electricity

**Target type: activity**

Consumption

**Target type: energy source**

Renewable energy source(s) only

**Base year**

2021

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

92000

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

3.5

**Target year**

2025

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

10

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

4.2

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

10.7692307692308

**Target status in reporting year**

Underway

**Is this target part of an emissions target?**

Yes, it's related to the company's 2025 and 2030 GHG reduction target.

**Is this target part of an overarching initiative?**

No, it's not part of an overarching initiative

**Please explain target coverage and identify any exclusions**

The renewable energy goal is to increase the use of electricity to 10% of total electricity by 2025.

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

Pursuing numerous projects and initiatives including offsite physical power purchase agreements, utility green pricing programs, utility green tariff programs, community solar, and onsite projects.

**List the actions which contributed most to achieving this target**

<Not Applicable>

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## C4.3

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### (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

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**(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	525	0
To be implemented*	130	27300
Implementation commenced*	175	18000
Implemented*	80	12900
Not to be implemented	109	0

### C4.3b

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

**Initiative category & Initiative type**

Energy efficiency in buildings	Other, please specify (Many of the above types of initiatives (e.g., lighting, HVAC, building energy management systems, compressed air, insulation, solar, motor and drives, maintenance))
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**Estimated annual CO2e savings (metric tonnes CO2e)**

4300

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

Scope 1

Scope 2 (location-based)

**Voluntary/Mandatory**

Voluntary

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

1403500

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

17300000

**Payback period**

11-15 years

**Estimated lifetime of the initiative**

11-15 years

**Comment**

**Initiative category & Initiative type**

Low-carbon energy consumption	Other, please specify (Onsite and offsite renewable electricity projects, and use of sustainable aviation fuel (biofuel) for engine testing )
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**Estimated annual CO2e savings (metric tonnes CO2e)**

8600

**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)**

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

**Payback period**

Please select

**Estimated lifetime of the initiative**

Please select

**Comment**

Numerous offsite renewable electricity projects / contracts were initiated in 2022, along with start-up of a couple of onsite projects. In addition, sustainable aviation fuel use increased in 2022.

### C4.3c

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

Method	Comment
Internal finance mechanisms	Since the majority of Scope 1 and 2 GHG emissions are related to energy use, energy reduction investments drive our GHG reductions. The company examines the costs and benefits of energy and building projects and calculates a Return on Investment (ROI). This assists in selecting the most cost-effective projects.
Other (Greenhouse Gas Emission goals established and tracked)	We established formal GHG reduction targets for each business unit. Meeting the annual goals is one of the drivers behind Business unit and site emission reduction investments.
Other (R&D budgets and Technology Roadmaps)	In 2022, the company invested a total of \$7.1 billion in customer- and company-funded R&D that included support for developing products with world-class sustainability performance.  The company has developed Technology Roadmaps (see C2.4a Opportunity 2) for many different technology areas that have been identified as high priority for the company and our customers. Many relate to technologies that are critical in transitioning to a sustainable aviation industry, such as hybrid electric propulsion. These roadmaps identify key steps needed to advance technological knowledge in these areas. The roadmaps also help prioritize R&D investment. The company's R&D funding utilizes a defined, gated review process to determine which technologies get funding and at what level.

**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**

Group of products or services

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

No taxonomy used to classify product(s) or service(s) as low carbon

**Type of product(s) or service(s)**

Aviation	Geared Turbo Fan/ Ultra-High Bypass Ratio engine
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**Description of product(s) or service(s)**

Pratt & Whitney pioneered a revolutionary geared fan architecture in the Pratt & Whitney GTF™ engine, which decreases fuel consumption and CO2 emissions by 16-to-20% per trip over prior generation engines – and up to 25% per seat. Since GTF engines entered service in 2016, they have saved single-aisle aircraft operators 1.2 billion gallons (about 4 billion liters) of fuel, and avoided more than 12 million metric tons of CO2 emissions, reduced NOx emissions by 50%, and slashed noise footprint by 75%.

The GTF engine builds on a long track record of innovation and efficiency gains at Pratt & Whitney – a 70% improvement in fuel efficiency since we introduced the JT8D in the 1960s. This engine is the industry's best-in-class for single-aisle applications. Our engineers revolutionized the traditional jet engine architecture, adding a gear system in between the fan in the front and the turbine in the back, so that the fan and the turbine can spin at their optimal speeds for improved efficiency. This geared architecture enables reduction in the number of engine stages and airfoils, providing industry-leading efficiency, weight and environmental benefits to the engine. The GTF engine is the only geared propulsion system in service that is delivering industry-leading sustainability benefits. We are also ensuring that the GTF engine will be compatible with 100% SAF, to further reduce engine emissions.

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

Yes

**Methodology used to calculate avoided emissions**

Other, please specify (RTX calculations applicable to CO2 reductions associated with the use of the GTF engine to replace prior generation engines. We also utilized weight-emission reduction data in "Destination 2050-A route to net zero European aviation" report.)

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

Use stage

**Functional unit used**

Operating an aircraft powered by a Pratt & Whitney GTF engine vs an aircraft powered by prior-generation best-in-class engines in 2015 (i.e., IAE V2500 turbofan engine).

**Reference product/service or baseline scenario used**

2015 best-in-class engines, i.e., IAE V2500 turbofan engine. This was used as a baseline reference since these engines were the best-in-class at the time that the GTF entered into service (in 2016).

**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**

12000000

**Explain your calculation of avoided emissions, including any assumptions**

Since GTF engines entered service in 2016, they have saved single-aisle aircraft operators 1.2 billion gallons (about 4 billion liters) of fuel and avoided more than 12 million metric tons of CO2 emissions. This was calculated by factoring in the increased GTF engine efficiency (which results in less fuel consumption) and applying it to an estimated number of miles flown by all the airlines that utilize the GTF engines compared to prior generation engines operated identically.

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

**Level of aggregation**

Group of products or services

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

No taxonomy used to classify product(s) or service(s) as low carbon

**Type of product(s) or service(s)**

Aviation	Other, please specify (Trajectory-based operation (TBO) products and services)
----------	--

**Description of product(s) or service(s)**

Another way to reduce fuel burn and emissions is through trajectory-based operations (TBO), a concept that proactively optimizes and manages flight trajectories and air traffic operations instead of continuously reacting to local conditions and traffic conflicts throughout the flight. Several solutions from RTX work together to unlock the ability to optimize and reliably execute optimized flight trajectories, thereby avoiding greenhouse gas emissions. Examples include:

- 1) The FAA's Wide Area Augmentation System (WAAS), which enhances the Global Positioning System (GPS) and provides precision navigation over North America.
- 2) The FAA's Standard Terminal Automation Replacement System (STARS), which is used by air traffic controllers to manage the airspace around the nation's busiest terminal areas.
- 3) Global air-ground data communications capabilities, such as Controller Pilot Data Link Communications (CPDLC), Automatic Dependent Surveillance-Contract (ADS-C) and ARINC Global Network.
- 4) Flight planning and dispatch, fuel analysis, weight and balance, and departure control systems that help with more efficient and predictable flight plans, including offerings from recent acquisition of FlightAware.
- 5) Avionics solutions such as the Multi-mode GPS receivers compatible with multiple global navigation satellite constellations and augmentation systems, as well as ground based radio navigation aids.

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

No

**Methodology used to calculate avoided emissions**

<Not Applicable>

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

<Not Applicable>

**Functional unit used**

<Not Applicable>

**Reference product/service or baseline scenario used**

<Not Applicable>

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

<Not Applicable>

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

<Not Applicable>

**Explain your calculation of avoided emissions, including any assumptions**

<Not Applicable>

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

**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?**

No

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

<Not Applicable>

**Details of structural change(s), including completion dates**

<Not Applicable>

**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	No	<Not Applicable>

**C5.2**

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

**Scope 1**

**Base year start**

January 1 2019

**Base year end**

December 31 2019

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

615070

**Comment**

2019 is our baseline year for the company's 2025 GHG goal.

**Scope 2 (location-based)**

**Base year start**

January 1 2019

**Base year end**

December 31 2019

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

1183138

**Comment**

2019 is our baseline year for the company's 2025 goal, however our goal uses scope 2 market-based emissions not location-based.

**Scope 2 (market-based)**

**Base year start**

January 1 2019

**Base year end**

December 31 2019

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

1206971

**Comment**

2019 is our baseline year for the company's 2025 goal.

**Scope 3 category 1: Purchased goods and services**

**Base year start**

January 1 2020

**Base year end**

December 31 2020

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

14614000

**Comment**

Listed above are the GHG emissions for 2020. This is the first year of full data for RTX. It is based on the International Aerospace Environmental Group's (IAEG's) spend method methodology. We do not have a scope 3 goal for this category.

**Scope 3 category 2: Capital goods**

**Base year start**

**Base year end**

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

**Comment**

We do not have a baseline year for this category.

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

**Base year start**

**Base year end**

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

**Comment**

We do not have a baseline year for this category.

**Scope 3 category 4: Upstream transportation and distribution**

**Base year start**

**Base year end**

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

**Comment**

We do not have a baseline year for this category.

**Scope 3 category 5: Waste generated in operations**

**Base year start**

**Base year end**

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

**Comment**

We do not have a baseline year for this category.

**Scope 3 category 6: Business travel**

**Base year start**

January 1 2019

**Base year end**

December 31 2019

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

200195

**Comment**

2019 is the baseline year.

**Scope 3 category 7: Employee commuting**

**Base year start**

**Base year end**

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

**Comment**

We do not have a baseline year for this category.

**Scope 3 category 8: Upstream leased assets**

**Base year start**

**Base year end**

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

**Comment**

This category is not relevant to the company.

**Scope 3 category 9: Downstream transportation and distribution**

**Base year start**

**Base year end**

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

**Comment**

We do not have a baseline year for this category.

**Scope 3 category 10: Processing of sold products**

**Base year start**

**Base year end**

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

**Comment**

This category is not relevant to the company.

**Scope 3 category 11: Use of sold products**

**Base year start**

**Base year end**

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

**Comment**

We do not have a baseline year for this category.

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

**Base year start**

**Base year end**

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

**Comment**

We do not have a baseline year for this category.

**Scope 3 category 13: Downstream leased assets**

**Base year start**

**Base year end**

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

**Comment**

This category is not relevant to the company.

**Scope 3 category 14: Franchises**

**Base year start**

**Base year end**

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

**Comment**

This category is not relevant to the company.

**Scope 3 category 15: Investments**

**Base year start**

**Base year end**

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

**Comment**

This category is not relevant to the company.

**Scope 3: Other (upstream)**

**Base year start**

**Base year end**

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

**Comment**

This category is not relevant to the company.

**Scope 3: Other (downstream)**

**Base year start**

**Base year end**

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

**Comment**

This category is not relevant to the company.

**C5.3**

---

**(C5.3) Select the name of the standard, protocol, or methodology you have used to collect activity data and calculate emissions.**

Australia - National Greenhouse and Energy Reporting Act

IEA CO2 Emissions from Fuel Combustion

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

The Greenhouse Gas Protocol: Scope 2 Guidance

US EPA Center for Corporate Climate Leadership: Direct Fugitive Emissions from Refrigeration, Air Conditioning, Fire Suppression, and Industrial Gases

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

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

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

US EPA Emissions & Generation Resource Integrated Database (eGRID)

Other, please specify (Canada's National Inventory Report electricity emissions factors; International Energy Agency World electricity emission factors)

**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)**  
506700

**Start date**  
<Not Applicable>

**End date**  
<Not Applicable>

**Comment**

C6.2

---

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

**Row 1**

**Scope 2, location-based**  
We are reporting a Scope 2, location-based figure

**Scope 2, market-based**  
We are reporting a Scope 2, market-based figure

**Comment**

C6.3

---

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

**Reporting year**

**Scope 2, location-based**  
936100

**Scope 2, market-based (if applicable)**  
926600

**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)**  
13243800

**Emissions calculation methodology**  
Supplier-specific method  
Spend-based method

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

**Please explain**

We are a member of the International Aerospace Environment Group (IAEG), a 50-company member global aerospace related industry group. IAEG's mission is to employ the resources of members to address environmental issues of common interest. In 2019 an IAEG workgroup completed the development of a Scope 3 Purchased Goods and Services (PGS) and Capital Goods (CG) GHG calculation tool. The tool allows users to input either spend (total \$ spent) or materials acquired (kg) in 64 categories of materials, goods and services, and then utilizes spend-based and material-based emission factors for each category to estimate the CO2e emissions resulting from the category. We used the spend method for calculating emissions from both PGS and CG. The data is based on 2022 spend.

## Capital goods

### Evaluation status

Relevant, calculated

### Emissions in reporting year (metric tons CO2e)

731000

### Emissions calculation methodology

Spend-based method

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

0

### Please explain

We are a member of the International Aerospace Environment Group (IAEG), a 50-company member global aerospace related industry group. IAEG's mission is to employ the resources of members to address environmental issues of common interest. In 2019 an IAEG workgroup completed the development of a Scope 3 Purchased Goods and Services (PGS) and Capital Goods (CG) GHG calculation tool. The tool allows users to input either spend (total \$ spent) or materials acquired (kg) in 64 categories of materials, goods and services, and then utilizes spend-based and material-based emission factors for each category to estimate the CO2e emissions resulting from the category. We used the spend method for calculating emissions from both PGS and CG. The data is based on 2022 spend.

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

### Evaluation status

Relevant, calculated

### Emissions in reporting year (metric tons CO2e)

303600

### Emissions calculation methodology

Fuel-based method

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

100

### Please explain

GHGs from fuel and energy-related activities are based off electricity invoices, natural gas bills, fuel invoices, hot water and chilled water bills, and jet fuel bills. These bills/invoices all are provided to the company from its energy and fuel suppliers, utility companies, and other partners. A portion of the fuel use calculations from our fleet vehicles is estimated and based on miles driven and the fuel efficiency of the vehicle. The fuel records are not consistently maintained in a centralized IT system to allow retrieval of the information. This estimated amount represents approximately 5% of the total GHGs in this emission source.

## Upstream transportation and distribution

### Evaluation status

Relevant, calculated

### Emissions in reporting year (metric tons CO2e)

869300

### Emissions calculation methodology

Spend-based method  
Methodology for direct use phase emissions, please specify

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

0

### Please explain

This category includes emissions associated with inbound shipments to our facilities, shipments between our facilities, and outbound shipments from our facilities that we pay for. The spend was mapped to corresponding commodities and then multiplied by cradle-to-gate emission factors by commodity from the US EPA Office of Research and Development, Supply Chain GHG Emissions Factors for US Industries and Commodities, updated January 17, 2022. Global warming potentials (GWPs) used in the EPA EEIO factors are from the IPCC's Fourth Assessment Report (AR4), 100 year average. Supplier-paid inbound expenditures are excluded from the calculations due to lack of data. Similarly, outsourced dedicated contract carriage expenditures (very small) that we pay for (i.e., exclusive-use trucks and shuttles) is excluded because of lack of data. The logistics spend data is not double counted in our scope 3 category 1 emissions, purchased goods and services.

## Waste generated in operations

### Evaluation status

Relevant, calculated

### Emissions in reporting year (metric tons CO2e)

13300

### Emissions calculation methodology

Waste-type-specific method

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

100

### Please explain

This figure represents emissions associated with hazardous and solid waste disposed via landfills and incineration. Data on waste quantity, composition, and disposal method are obtained from our waste management providers via invoices, bills, manifests, or other similar documents. Emissions from waste are calculated using methodologies and emission factors from the EPA's Waste Reduction Model (WARM), from EPA's Emissions Hub (April 2022). This model calculates emissions based on a life-cycle analysis, including emissions from the long-term decomposition of waste in a landfill or from upstream sources/sinks. GWPs are from the Intergovernmental Panel for Climate Change (IPCC) Fourth Assessment Report.

## Business travel

### Evaluation status

Relevant, calculated

### Emissions in reporting year (metric tons CO2e)

121800

### Emissions calculation methodology

Distance-based method

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

100

### Please explain

All of the data we use for business air travel and employee rental cars is obtained from the company's suppliers.

## Employee commuting

### Evaluation status

Relevant, calculated

### Emissions in reporting year (metric tons CO2e)

485500

### Emissions calculation methodology

Average data method  
Distance-based method

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

14

### Please explain

Emissions were calculated in accordance with The GHG Protocol Scope 3 Technical Guidance, Chapter 7, Employee Commuting. We collected employee commuting information from employee commuting surveys at 9 of our facilities, representing 14% of the overall emissions. The survey contained information on the percent of employees using various modes of transportation (e.g., car, light duty truck, transit, etc.) and the frequency of commuting, including telecommuting. To estimate the emissions from all the other company locations, key pieces of information were collected: Number of employees at each site; the percent of employees at each site that work onsite, work remotely, or work in a hybrid arrangement; and the average commute distances in each U.S. State from the U.S. census using mean commute time and assuming 1 minute to travel 1 mile (the average U.S. distance was applied to all other countries). The average percent mode of travel from the 9 surveys was used for the other sites. Estimated number of miles were calculated for each mode of transportation. Miles were converted to GHG emissions using EPA's Employee Commuting emission factors from the Emissions Hub (Table 10), and then summed.

## Upstream 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

All facilities and vehicles that we lease are already included in the scope 1 and 2 GHG emissions.

## Downstream transportation and distribution

### Evaluation status

Relevant, not yet calculated

### 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 calculated.

## 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 sell end products or products that are components of larger systems that are integrated (not processed) into a larger system with minimal processing requirements.

## Use of sold products

### Evaluation status

Relevant, calculated

### Emissions in reporting year (metric tons CO<sub>2</sub>e)

12483800

### Emissions calculation methodology

Methodology for direct use phase emissions, please specify (Adhered to the GHG Protocol's Scope 3 Technical Guidance for Category 11 Emissions.)

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

0

### Please explain

This covers civil aviation engines, military aviation engines, aircraft environmental control systems (ECS), and aircraft Electrical Power Systems (EPS). The methodology follows the GHG Protocol and sector guidance developed by IAEG on Category 11 (in press).

Aircraft engines – Civil engines include commercial air transport engines and auxiliary power units (APUs), regional turboprop, helicopter turboshaft, business jet turbofan, and general aviation turboprop engines. Military engines include engines on multiple military aircraft as well as APUs. As an intermediate product, engine emissions are allocated based on the engine mass ratio with respect to the aircraft. In addition, emissions have been attributed to the company in line with the company's partnership financial share of each engine program. The calculations are carried out by first obtaining fuel burn per year per product following the allocation methods, which is then converted to emissions per product per year using fuel lifecycle emission factors. The annual emissions is multiplied by the expected product lifetime to obtain product lifetime emissions. These lifetime emissions are then multiplied by the number of sold products in the reporting year across engine families. The sum of all engine families resulting in the total engine emissions in CO<sub>2</sub>e.

Aircraft ECS and EPS - These are the two major consumers of engine power offtakes in an aircraft and result in direct use-phase emissions. The coverage includes regional jets, regional turboprop, single aisle, and widebody aircraft. The emissions are calculated based on power usage of the systems and aircraft utilization through a fuel penalty model where secondary power extracted from the engine due to system draw and/or losses results in an equivalent fuel consumption metric. From the equivalent fuel consumption, the lifetime emissions per product are calculated based on aircraft type and expected life of the product using fuel lifecycle emission factors. ECS and EPS programs do not have partnerships. These lifetime emissions per product are then multiplied by the number of sold products in the reporting year across ECS and EPS product families. The sum of all families results in the total ECS and EPS emissions in CO<sub>2</sub>e.

This analysis assumes that the availability of sustainable aviation fuels (SAF) remains at the 2022 level.

## End of life treatment of sold products

### Evaluation status

Relevant, not yet calculated

### Emissions in reporting year (metric tons CO<sub>2</sub>e)

<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 calculated.

## Downstream leased assets

### Evaluation status

Not relevant, explanation provided

### Emissions in reporting year (metric tons CO<sub>2</sub>e)

<Not Applicable>

### Emissions calculation methodology

<Not Applicable>

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

<Not Applicable>

### Please explain

The company does not have any assets leased to others that are not already included in the scope 1 and 2 GHG inventory.

## Franchises

### Evaluation status

Not relevant, explanation provided

### Emissions in reporting year (metric tons CO<sub>2</sub>e)

<Not Applicable>

### Emissions calculation methodology

<Not Applicable>

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

<Not Applicable>

### Please explain

The company does not operate 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**

The company does not hold investments that would present a relevant impact to our Scope 3 emissions.

**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**

No other upstream emissions.

**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**

No other downstream emissions.

C6.7

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

No

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**

21.4

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

1433300

**Metric denominator**

Other, please specify (Total revenue (\$ Millions))

**Metric denominator: Unit total**

67100

**Scope 2 figure used**

Market-based

**% change from previous year**

4.1

**Direction of change**

Decreased

**Reason(s) for change**

Other emissions reduction activities

Change in revenue

**Please explain**

The intensity decreased by 4.1%. Scope 1 and 2 market-based GHG emissions were approximately 0.1% lower in 2022 than in 2021 due to emissions reduction initiatives. Company revenues increased by 4.2% from 2021 to 2022. Consequently, the intensity figure of GHG emissions (Scope 1 & 2) divided by revenues declined by 4.1%.

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**Intensity figure**

7.9

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

1433300

**Metric denominator**

full time equivalent (FTE) employee

**Metric denominator: Unit total**

182000

**Scope 2 figure used**

Market-based

**% change from previous year**

4.5

**Direction of change**

Decreased

**Reason(s) for change**

Other emissions reduction activities

Other, please specify (Increase in employee population)

**Please explain**

The intensity decreased by approximately 4.5%. Scope 1 and 2 market-based GHG emissions were approximately 0.1% lower in 2022 than in 2021 due to emissions reduction initiatives. Full time equivalent (FTE) employees increased by approximately 4.6% from 2021 to 2022. Consequently, the intensity figure of GHG emissions (Scope 1 & 2) per FTE employee decreased by approximately 4.5%.

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## C7. Emissions breakdowns

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### C7.1

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

Yes

### C7.1a

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

Greenhouse gas	Scope 1 emissions (metric tons of CO2e)	GWP Reference
CO2	457782	IPCC Fifth Assessment Report (AR5 – 100 year)
CH4	200	IPCC Fifth Assessment Report (AR5 – 100 year)
N2O	1099	IPCC Fifth Assessment Report (AR5 – 100 year)
HFCs	37076	IPCC Fifth Assessment Report (AR5 – 100 year)
PFCs	10457	IPCC Fifth Assessment Report (AR5 – 100 year)
SF6	86	IPCC Fifth Assessment Report (AR5 – 100 year)
NF3	0	IPCC Fifth Assessment Report (AR5 – 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)
United States of America	457324
Poland	4931
Singapore	783
Israel	532
Canada	19086
China	790
Mexico	4820
Philippines	24
United Kingdom of Great Britain and Northern Ireland	6925
Other, please specify (Rest of world)	11485

## C7.3

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

By business division

## C7.3a

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

Business division	Scope 1 emissions (metric ton CO2e)
Collins Aerospace	199522
Pratt & Whitney	213683
Raytheon Intelligence & Space	35511
Raytheon Missiles & Defense	35727
Corporate	22257

## 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)
United States of America	607023	571974
Poland	109306	127007
Singapore	47036	50706
Israel	39073	44876
Canada	19090	19090
China	23669	28136
Mexico	23026	23031
Philippines	20227	20234
United Kingdom of Great Britain and Northern Ireland	12238	8227
Other, please specify (Rest of World)	35412	33319

C7.6

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

By business division

C7.6a

(C7.6a) Break down your total gross global Scope 2 emissions by business division.

Business division	Scope 2, location-based (metric tons CO2e)	Scope 2, market-based (metric tons CO2e)
Collins Aerospace	396102	397587
Pratt & Whitney	276496	272501
Raytheon Intelligence & Space	127956	120467
Raytheon Missiles & Defense	125677	126161
Corporate	9869	9884

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	10404	Decreased	0.7	Several additional renewable electricity projects/contracts were initiated in 2022. In addition, a few existing renewable electricity projects increased the annual amount generated. The resulting market-based emission reductions associated with the increased renewable electricity was 10,404 mt CO2e, divided by our 2021 total emissions gives a 0.7% decrease $(10,404/1,434,600) * 100 = -0.7\%$
Other emissions reduction activities	4298	Decreased	0.3	Energy reduction and energy efficiency projects were implemented in 2022, thereby reducing GHGs. See Q 4.3 a and b for more details on the implemented projects. A total of 72 energy related projects were implemented relating to energy efficiency of our buildings. The projects include upgrades in the following: lighting, HVAC, compressed air, building energy management systems, and insulation.  The resulting market-based emission reduction was 4,298 mt CO2e, divided by our total emissions in 2021 of 1,434,600 mt CO2e gives a 0.3% reduction $(4,298/1,434,600) * 100 = -0.3\%$ .
Divestment	0	No change	0	There were no significant divestments that affected the change in emissions.
Acquisitions	0	No change	0	There were no significant acquisitions that affected the change in emissions.
Mergers	0	No change	0	There were no mergers that affected the change in emissions.
Change in output	43038	Increased	3	The economic recovery post-pandemic continued in 2022, particularly in the commercial aviation industry. Company revenues increased by 4.2% from 2021 to 2022. For the purposes of evaluating the drivers of the GHG emission change from last year, we estimate a 3% increase in output. 3% of our 2021 total market-based emissions of 1,434,600 mt CO2e results in an increase of 43,038 mt $(3\% \times 1,434,600 = 43,038)$ .
Change in methodology	0	No change	0	There were no changes in methodology that affected the change in emissions. In 2022, the company changed its GHG accounting methodology for its goal and reporting to market-based accounting and rebaselined previous years, including 2021.
Change in boundary	0	No change	0	There were no change in boundaries that affected the change in emissions.
Change in physical operating conditions	0	No change	0	There were no change in physical operating conditions that affected the change in emissions.
Unidentified	0	No change	0	There were no unidentified that affected the change in emissions.
Other	27257	Decreased	1.9	Electricity emissions factors continue to decline as electricity utilities use more renewable resources and switch to lower-carbon fuels to generate their electricity. Although the reductions were not in all regions and countries. Some emission factors increased. For the purposes of evaluating the drivers of the GHG emission change from last year, we estimate the electric grid emission factors declined 1.9% from 2021 levels. 1.9% of our 2021 total market-based emissions of 1,434,600 mt CO2e is 27,257 mt $(1.9\% \times 1,434,600 = 27,257 \text{ mt})$ .

C7.9b



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

Market-based

## C8. Energy

### C8.1

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

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

### C8.2

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

	Indicate whether your organization undertook this energy-related activity in the reporting year
Consumption of fuel (excluding feedstocks)	Yes
Consumption of purchased or acquired electricity	Yes
Consumption of purchased or acquired heat	No
Consumption of purchased or acquired steam	Yes
Consumption of purchased or acquired cooling	Yes
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)	LHV (lower heating value)	1374	2332201	2333575
Consumption of purchased or acquired electricity	<Not Applicable>	102485	2542668	2645153
Consumption of purchased or acquired heat	<Not Applicable>	<Not Applicable>	<Not Applicable>	<Not Applicable>
Consumption of purchased or acquired steam	<Not Applicable>	0	51633	51633
Consumption of purchased or acquired cooling	<Not Applicable>	0	26368	26368
Consumption of self-generated non-fuel renewable energy	<Not Applicable>	8615	<Not Applicable>	8615
Total energy consumption	<Not Applicable>	112474	4952870	5065344

### 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	Yes

### C8.2c

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

**Sustainable biomass**

**Heating value**

Unable to confirm heating value

**Total fuel MWh consumed by the organization**

1374

**MWh fuel consumed for self-generation of electricity**

<Not Applicable>

**MWh fuel consumed for self-generation of heat**

0

**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**

0

**Comment**

Sustainable Aviation Fuel (SAF) was certified as Responsible Biomaterials in accordance with the Roundtable on Sustainable Biomaterials (RSB) Standards (RSB-STD-12-001 V1.2 and associated subsections.

**Other biomass**

**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**

0

**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**

0

**Comment**

**Other renewable fuels (e.g. 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**

0

**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**

0

**Comment**

**Coal**

**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**

0

**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**

0

**Comment**

**Oil**

**Heating value**

LHV

**Total fuel MWh consumed by the organization**

3001

**MWh fuel consumed for self-generation of electricity**

<Not Applicable>

**MWh fuel consumed for self-generation of heat**

0

**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**

0

**Comment**

Oil #2 and #4

**Gas**

**Heating value**

LHV

**Total fuel MWh consumed by the organization**

1882032

**MWh fuel consumed for self-generation of electricity**

<Not Applicable>

**MWh fuel consumed for self-generation of heat**

0

**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**

680957

**Comment**

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

**Heating value**

LHV

**Total fuel MWh consumed by the organization**

447167

**MWh fuel consumed for self-generation of electricity**

<Not Applicable>

**MWh fuel consumed for self-generation of heat**

0

**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**

0

**Comment**

**Total fuel**

**Heating value**

LHV

**Total fuel MWh consumed by the organization**

2333575

**MWh fuel consumed for self-generation of electricity**

<Not Applicable>

**MWh fuel consumed for self-generation of heat**

0

**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**

680957

**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	10087	8615	10087	8615
Heat	0	0	0	0
Steam	0	0	0	0
Cooling	0	0	0	0

**C8.2e**

(C8.2e) Provide details on the electricity, heat, steam, and/or cooling amounts that were accounted for at a zero 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**

Physical power purchase agreement (physical PPA) with a grid-connected generator

**Energy carrier**

Electricity

**Low-carbon technology type**

Small hydropower (<25 MW)

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

17198

**Tracking instrument used**

US-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 repowering)**

<Not Applicable>

**Comment**

Relates to 2 sites in Virginia.

---

**Country/area of low-carbon energy consumption**

United Kingdom of Great Britain and Northern Ireland

**Sourcing method**

Retail supply contract with an electricity supplier (retail green electricity)

**Energy carrier**

Electricity

**Low-carbon technology type**

Renewable energy mix, please specify (Renewable product is sourced from many different renewable energy projects including solar, hydro, and wind.)

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

30375

**Tracking instrument used**

GO

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

United Kingdom of Great Britain and Northern Ireland

**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 repowering)**

<Not Applicable>

**Comment**

Relates to 8 sites in the UK.

---

**Country/area of low-carbon energy consumption**

United States of America

**Sourcing method**

Other, please specify (Community solar programs/projects.)

**Energy carrier**

Electricity

**Low-carbon technology type**

Solar

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

38247

**Tracking instrument used**

Other, please specify (RECs are obtained directly through the community solar programs.)

**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 repowering)**

<Not Applicable>

**Comment**

Relates to 2 sites in Florida and Maine.

---

**Country/area of low-carbon energy consumption**

Italy

**Sourcing method**

Retail supply contract with an electricity supplier (retail green electricity)

**Energy carrier**

Electricity

**Low-carbon technology type**

Renewable energy mix, please specify (Renewable product is sourced from different renewable energy projects including solar and wind.)

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

10532

**Tracking instrument used**

GO

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

---

Italy

**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 repowering)**

<Not Applicable>

**Comment**

Relates to 3 sites in Italy.

---

**Country/area of low-carbon energy consumption**

Germany

**Sourcing method**

Retail supply contract with an electricity supplier (retail green electricity)

**Energy carrier**

Electricity

**Low-carbon technology type**

Renewable energy mix, please specify (Renewable product is sourced from different renewable energy projects including solar and wind.)

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

6133

**Tracking instrument used**

GO

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

Germany

**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 repowering)**

<Not Applicable>

**Comment**

Relates to 2 sites in Germany.

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## C8.2g

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

**Country/area**

United States of America

**Consumption of purchased electricity (MWh)**

1882146

**Consumption of self-generated electricity (MWh)**

3600

**Is this electricity consumption excluded from your RE100 commitment?**

<Not Applicable>

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

31676

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

0

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

1917422

---

**Country/area**

Canada

**Consumption of purchased electricity (MWh)**

181428

**Consumption of self-generated electricity (MWh)**

0

**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]**

181428

---

**Country/area**

Poland

**Consumption of purchased electricity (MWh)**

125416

**Consumption of self-generated electricity (MWh)**

210

**Is this electricity consumption excluded from your RE100 commitment?**

&lt;Not Applicable&gt;

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

39774

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

0

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

165400

**Country/area**

Singapore

**Consumption of purchased electricity (MWh)**

107107

**Consumption of self-generated electricity (MWh)**

5258

**Is this electricity consumption excluded from your RE100 commitment?**

&lt;Not Applicable&gt;

**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]**

112365

**Country/area**

Israel

**Consumption of purchased electricity (MWh)**

65293

**Consumption of self-generated electricity (MWh)**

0

**Is this electricity consumption excluded from your RE100 commitment?**

&lt;Not Applicable&gt;

**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]**

65293

**Country/area**

United Kingdom of Great Britain and Northern Ireland

**Consumption of purchased electricity (MWh)**

56529

**Consumption of self-generated electricity (MWh)**

743

**Is this electricity consumption excluded from your RE100 commitment?**

&lt;Not Applicable&gt;

**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]**

57272

**Country/area**

Mexico

**Consumption of purchased electricity (MWh)**

57185

**Consumption of self-generated electricity (MWh)**

57

**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]**

57242

---

**Country/area**

China

**Consumption of purchased electricity (MWh)**

31360

**Consumption of self-generated electricity (MWh)**

0

**Is this electricity consumption excluded from your RE100 commitment?**

<Not Applicable>

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

2588

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

0

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

33948

---

**Country/area**

Philippines

**Consumption of purchased electricity (MWh)**

29504

**Consumption of self-generated electricity (MWh)**

0

**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]**

29504

---

**Country/area**

Other, please specify (Rest of World)

**Consumption of purchased electricity (MWh)**

109185

**Consumption of self-generated electricity (MWh)**

219

**Is this electricity consumption excluded from your RE100 commitment?**

<Not Applicable>

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

3861

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

0

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

113265

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## C9. Additional metrics

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### C9.1

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

**Description**

Other, please specify (Potable water consumption)

**Metric value**

1551700000

**Metric numerator**

Gallons of potable water consumed.

**Metric denominator (intensity metric only)**

This metric is absolute, not an intensity metric.

**% change from previous year**

3.3

**Direction of change**

Increased

**Please explain**

Metric is total potable water consumption and is tied to the company's public water reduction goal of 10% reduction by 2025 from 2019 levels. Between 2021 and 2022 water consumption increased due to continued business recovery from the COVID pandemic. Since 2019, the company has reduced its water consumption by 15%, and remains on target to its 2025 water reduction goal.

**C-CE9.6/C-CG9.6/C-CH9.6/C-CN9.6/C-CO9.6/C-EU9.6/C-MM9.6/C-OG9.6/C-RE9.6/C-ST9.6/C-TO9.6/C-TS9.6**

**(C-CE9.6/C-CG9.6/C-CH9.6/C-CN9.6/C-CO9.6/C-EU9.6/C-MM9.6/C-OG9.6/C-RE9.6/C-ST9.6/C-TO9.6/C-TS9.6) Does your organization invest in research and development (R&D) of low-carbon products or services related to your sector activities?**

	Investment in low-carbon R&D	Comment
Row 1	Yes	In 2021, we joined Air Transport Action Group's (ATAG's) "Fly Net-zero" commitment to achieve industry-wide net-zero carbon emissions in civil aviation by 2050. We developed a technology roadmap to achieve that ambition, including 4 technology focus areas: 1) Continuous engine efficiency improvements and technology advancements, 2) Aircraft system improvements, 3) Aircraft trajectory and ground operations improvements, 4) Sustainable Aviation Fuel (SAF) and other alternative aviation fuels. The roadmaps are influencing our R&D investment decisions. In 2021 we invested \$7.1 billion in customer and company-funded research and development that includes support for the industry's goal of achieving net-zero carbon emissions.

**C-TO9.6a/C-TS9.6a**

**(C-TO9.6a/C-TS9.6a) Provide details of your organization's investments in low-carbon R&D for transport-related activities over the last three years.**

**Activity**

Aviation

**Technology area**

Please select

**Stage of development in the reporting year**

<Not Applicable>

**Average % of total R&D investment over the last 3 years**

**R&D investment figure in the reporting year (unit currency as selected in C0.4) (optional)**

**Average % of total R&D investment planned over the next 5 years**

**Explain how your R&D investment in this technology area is aligned with your climate commitments and/or climate transition plan**

Climate change and the aviation industry's aggressive goal to achieve net zero carbon emissions by 2050 is driving the industry to innovate. In 2021, we joined Air Transport Action Group's (ATAG's) "Fly Net-zero" commitment to achieve industry-wide net-zero carbon emissions in civil aviation by 2050. We developed a technology roadmap to achieve that ambition, including 4 technology focus areas: 1) Continuous engine efficiency improvements and technology advancements, 2) Aircraft system improvements, 3) Aircraft trajectory and ground operations improvements, 4) Sustainable Aviation Fuel (SAF) and other alternative aviation fuels. The roadmaps are influencing our R&D investment decisions.

Leading our efforts is our chief technology officer (CTO), who works closely with the chief sustainability officers (CSOs) in our business units. These leaders work with engineering and advanced technology teams at our business units and the Raytheon Technologies Research Center. Together, they drive R&D to develop products with world-class sustainability performance. In 2022, we spent a total of \$7.1B in customer- and company-funded R&D. We also established the Sustainable Technology & Innovation ESG working group to drive sustainable technology projects across the organization, develop and implement an environmental sustainability technology roadmap and support climate-related disclosures.

**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	No third-party verification or assurance

**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**

RTX 2022 GHG 2022 Verification Statement Limited.pdf

**Page/ section reference**

page 1

**Relevant standard**

ISO14064-3

**Proportion of reported emissions verified (%)**

100

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**C10.1b**

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(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**

RTX 2022 GHG 2022 Verification Statement Limited.pdf

**Page/ section reference**

p.1

**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**

RTX 2022 GHG 2022 Verification Statement Limited.pdf

**Page/ section reference**

p.1

**Relevant standard**

ISO14064-3

**Proportion of reported emissions verified (%)**

100

---

C10.2

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(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

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**(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
C9. Additional metrics	Other, please specify (Water consumption)	International Standard on Assurance Engagements (ISAE) 3000 Revised, Assurance Engagements Other than Audits or Reviews of Historical Financial Information (effective for assurance reports dated on or after Dec. 15, 2015), issued by the International Auditing and Assurance Standards Board.	The company's total potable water consumption for 2022 was independently verified by a third-party and an Assurance Statement was provided. See attached. The assurance was conducted at the limited assurance level with a +/- 5% materiality threshold. RTX Water 2022 Assurance Statement.pdf
C6. Emissions data	Renewable energy products	ISO14064-3	The company's renewable electricity use and carbon offset purchases were independently verified by a third-party as part of the greenhouse gas emission verification audit (limited assurance level). See attached Assurance Statement. Renewable electricity use was part of the Scope 2 market based verification scope. Carbon offset reductions are identified separately in the Assurance Statement. RTX 2022 GHG 2022 Verification Statement Limited.pdf

RTX Water  
2022  
Assurance  
Statement.pdf  
RTX 2022  
GHG 2022  
Verification  
Statement  
Limited.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)?**

Yes

**C11.1a**

**(C11.1a) Select the carbon pricing regulation(s) which impacts your operations.**

EU ETS  
RGGI - ETS  
UK ETS

**C11.1b**

**(C11.1b) Complete the following table for each of the emissions trading schemes you are regulated by.**

**EU ETS**

**% of Scope 1 emissions covered by the ETS**  
0.02

**% of Scope 2 emissions covered by the ETS**  
0

**Period start date**  
January 1 2022

**Period end date**  
December 31 2022

**Allowances allocated**  
0

**Allowances purchased**  
109

**Verified Scope 1 emissions in metric tons CO2e**  
109

**Verified Scope 2 emissions in metric tons CO2e**  
0

**Details of ownership**  
Other, please specify (The company's owned or leased aircraft fleet)

**Comment**  
The company's aircraft fleet traveling to the EU is subject to the EU's Emissions Trading System.

## RGGI - ETS

### % of Scope 1 emissions covered by the ETS

13

### % of Scope 2 emissions covered by the ETS

0

### Period start date

January 1 2022

### Period end date

December 31 2022

### Allowances allocated

24432

### Allowances purchased

0

### Verified Scope 1 emissions in metric tons CO2e

65896

### Verified Scope 2 emissions in metric tons CO2e

0

### Details of ownership

Facilities we own and operate

### Comment

RGGI allowances associated with 1 Connecticut based co-generation facility

## UK ETS

### % of Scope 1 emissions covered by the ETS

0.01

### % of Scope 2 emissions covered by the ETS

0

### Period start date

January 1 2022

### Period end date

December 31 2022

### Allowances allocated

0

### Allowances purchased

26

### Verified Scope 1 emissions in metric tons CO2e

26

### Verified Scope 2 emissions in metric tons CO2e

0

### Details of ownership

Other, please specify (The company's owned or leased aircraft fleet)

### Comment

The company's aircraft fleet traveling to the UK is subject to the UK Emissions Trading System.

## C11.1d

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

The company's strategy for compliance with these systems is to 1) fully understand the requirements and monitor any changes in the regulatory schemes, 2) submit the necessary reporting by the required deadlines, 3) work with third party consultants where needed to assist in compliance, and 4) collect energy and GHG data quarterly from all of our sites, and conduct a GHG verification audit annually by a certified verifier, to ensure we can evaluate potential future regulatory schemes that regulate either GHG emissions or energy consumption.

#### Case study:

The situation is that the company's fleet of aircraft (based in the U.S.) are subject to the EU and UK Emissions Trading Systems relating to flights in and out of the EU and UK. The task is to comply with the Emissions Trading Systems. Our action is to work with a third party to assist in tracking, quantifying, and determining any required fees that are needed to be paid to the EU to comply. The result is that each year we calculate what the required fees are and we submit payment.

## C11.2

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

Yes

**C11.2a**

**(C11.2a) Provide details of the project-based carbon credits canceled by your organization in the reporting year.**

**Project type**

Methane avoidance

**Type of mitigation activity**

Emissions reduction

**Project description**

Komburi General Starch, Thailand - The General Starch factory in Kornburi District produces tapioca starch from dried cassava that is grown by farmers in the region. This process creates vast amounts of wastewater which is stored in a series of open lagoons. The large size of these lagoons and the warm temperature creates perfect conditions for the breakdown of organic compounds in the wastewater. This produces large amounts of the greenhouse gas methane, which is known to contribute to global warming. The existing process has been modified into a closed loop system that captures the methane emissions and uses them to generate heat and electricity for the factory. The project not only reduces GHG emissions by avoiding the release of methane into the atmosphere, but also by reducing fossil fuel consumption.

**Credits canceled by your organization from this project in the reporting year (metric tons CO2e)**

2279

**Purpose of cancellation**

Voluntary offsetting

**Are you able to report the vintage of the credits at cancellation?**

Yes

**Vintage of credits at cancellation**

2012

**Were these credits issued to or purchased by your organization?**

Purchased

**Credits issued by which carbon-crediting program**

VCS (Verified Carbon Standard)

**Method(s) the program uses to assess additionality for this project**

Consideration of legal requirements

Investment analysis

Barrier analysis

**Approach(es) by which the selected program requires this project to address reversal risk**

No risk of reversal

**Potential sources of leakage the selected program requires this project to have assessed**

Upstream/downstream emissions

Activity-shifting

**Provide details of other issues the selected program requires projects to address**

For additional details please refer to VCS's website.

**Comment**

**Project type**

Methane avoidance

**Type of mitigation activity**

Emissions reduction

**Project description**

Bluefire Biogas, Thailand - The Nakhon Ratchasima area in North Eastern Thailand - A local starch factory used an open lagoon system as part of its manufacturing process. The wastewater in the open lagoons contains methane, which is a greenhouse gas 21 times stronger than CO2. It was allowed to be released into the atmosphere, which also produced a strong unpleasant smell to the residents and employees. This project involves converting the open lagoons system into two closed anaerobic wastewater treatment facilities (Upflow Anaerobic Sludge Blanket technology) that capture these methane emissions and use them for clean energy production on the plant site. In addition to reduced GHG emissions, the plant is less reliant on the purchase of fossil fuels, and excess revenue has generated more jobs as well as health and educational support in the local community.

**Credits canceled by your organization from this project in the reporting year (metric tons CO2e)**

873

**Purpose of cancellation**

Voluntary offsetting

**Are you able to report the vintage of the credits at cancellation?**

Yes

**Vintage of credits at cancellation**

2011

**Were these credits issued to or purchased by your organization?**

Purchased

**Credits issued by which carbon-crediting program**

Gold Standard

**Method(s) the program uses to assess additionality for this project**

Consideration of legal requirements  
Investment analysis  
Barrier analysis

**Approach(es) by which the selected program requires this project to address reversal risk**

No risk of reversal

**Potential sources of leakage the selected program requires this project to have assessed**

Upstream/downstream emissions  
Activity-shifting

**Provide details of other issues the selected program requires projects to address**

Vintage for the credits span multiple years: 2011, 2012 and 2014. For additional details please refer to the Gold Standard website.

**Comment**

---

**Project type**

Solar

**Type of mitigation activity**

Emissions reduction

**Project description**

Srepok Solar Power, Vietnam - The project combats the use of fossil fuels by installing a solar energy plant in the Dak Lak province, north of Ho Chi Minh City. With the help of 151,500 solar panels converting endless energy from the beating sun into sustainable electricity, the plant generates over 75,000 MWh of clean energy which is directly sent to the national grid. This project reduces Vietnam's reliance on carbon-intensive energy sources, displacing fossil fuels and reducing harmful greenhouse gas emissions. It drives Vietnam toward growth and economic development, fulfilled by green and reliable power.

**Credits canceled by your organization from this project in the reporting year (metric tons CO2e)**

7297

**Purpose of cancellation**

Voluntary offsetting

**Are you able to report the vintage of the credits at cancellation?**

Yes

**Vintage of credits at cancellation**

2020

**Were these credits issued to or purchased by your organization?**

Issued

**Credits issued by which carbon-crediting program**

VCS (Verified Carbon Standard)

**Method(s) the program uses to assess additionality for this project**

Consideration of legal requirements  
Investment analysis  
Barrier analysis

**Approach(es) by which the selected program requires this project to address reversal risk**

No risk of reversal

**Potential sources of leakage the selected program requires this project to have assessed**

Activity-shifting

**Provide details of other issues the selected program requires projects to address**

For additional details please refer to the VCS website.

**Comment**

---

**Project type**

Other, please specify (Safe community water supply - Maintenance of water groundwater boreholes for drinking water in a community. This reduces the need to boil water over inefficient wood-fuel fires, which generates greenhouse gas emissions.)

**Type of mitigation activity**

Emissions reduction

**Project description**

Safe Community Water Supply, Rwanda - The quality of water in Rwanda is typically not safe to drink; for clean water, families must either boil it over inefficient wood-fueled fires or travel long distances. The burden to source water, sometimes hours each day, or suffer respiratory illnesses from inhaling smoke from the indoor fires, especially impacts women and children. Boreholes offer an excellent solution, however, communities are often unable to maintain them over the long term. This project restores and repairs existing boreholes to provide clean drinking water to Rwandan communities, removing the need to boil water for purification. Each borehole is up to 100 meters deep and can be operated with a simple hand pump. The boreholes will be maintained over the project lifetime. By providing safe water to communities, this project sparks a chain of positive benefits. Children do not have to spend as much time gathering water or firewood, so they can dedicate time to studying. Family resources are freed up as they don't have to spend money or time on firewood, instead, they can take part in other income-generating activities, household tasks or taking care of each other. Water-borne and respiratory diseases are reduced thanks to better sanitary conditions and less indoor smoke. By removing the need to boil water the project significantly reduces greenhouse gas emissions as well as deforestation pressures on surrounding forests where firewood is sourced.

**Credits canceled by your organization from this project in the reporting year (metric tons CO2e)**

731

**Purpose of cancellation**

Voluntary offsetting

**Are you able to report the vintage of the credits at cancellation?**

---

Yes

**Vintage of credits at cancellation**

2019

**Were these credits issued to or purchased by your organization?**

Issued

**Credits issued by which carbon-crediting program**

Gold Standard

**Method(s) the program uses to assess additionality for this project**

Consideration of legal requirements

Investment analysis

Barrier analysis

**Approach(es) by which the selected program requires this project to address reversal risk**

No risk of reversal

**Potential sources of leakage the selected program requires this project to have assessed**

Activity-shifting

Market leakage

**Provide details of other issues the selected program requires projects to address**

Vintage of credits span multiple years: 2019 and 2020. For additional details please refer to the Gold Standard website.

**Comment**

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C11.3

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

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

C12. Engagement

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C12.1

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

Yes, our suppliers

Yes, our customers/clients

C12.1a

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

**Type of engagement**

Engagement & incentivization (changing supplier behavior)

**Details of engagement**

Other, please specify (The company maintains a supplier code of conduct that includes expectations that suppliers conserve natural resources, prevent pollution, and minimize emissions and energy consumption.)

**% of suppliers by number**

100

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

100

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

100

**Rationale for the coverage of your engagement**

Coverage of this engagement is 100% of our suppliers. Our standard terms and conditions of purchase for all suppliers require them to comply with all applicable laws and regulations. In addition, they require suppliers to adopt and comply with a code of conduct or policy statement regarding business conduct, ethics, and compliance that satisfies, at a minimum, the principles set forth in our Supplier Code of Conduct. Among other things, the Supplier Code requires all suppliers to conduct operations in a manner that 1) Complies with all applicable environmental, health, and safety laws, regulations and directives, 2) Actively manages risk, 3) Conserves natural resources, 4) Prevents pollution, 5) Safeguards the environment, and 6) Minimizes waste, emissions and energy consumption.

To cascade this impact throughout our supply chain, our Supplier Code requires each of our suppliers to, among other things, have management systems, tools and processes to ensure compliance with applicable laws and regulations and the requirements contained in the Supplier Code. To help achieve these outcomes, we actively engage with our suppliers. We provide onboarding training to new strategic suppliers and communicate with existing suppliers as needed.

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

Measure of success - acknowledgment the supplier will adopt and comply with the Supplier Code of Conduct. The measure threshold is if the supplier agrees to comply with the Supplier Code of Conduct or not.



---

**Comment****Type of engagement**

Engagement & incentivization (changing supplier behavior)

**Details of engagement**

Climate change performance is featured in supplier awards scheme

**% of suppliers by number****% total procurement spend (direct and indirect)****% of supplier-related Scope 3 emissions as reported in C6.5****Rationale for the coverage of your engagement**

The company utilizes a Supplier Health Assessment (SHA) as a tool to help assess our suppliers on many different aspects of their business, including sustainability issues, greenhouse gas emissions and energy reduction programs. This structured tool helps to determine the total business health of a supplier, in order to identify and measure risks, capabilities and process maturity in the supply base.

The SHA is an online self-assessment tool that is used on new and existing suppliers including those identified for growth and for the various award programs. Once the supplier completes the assessment, we evaluate the assessment to confirm the results and develop actions plans as needed. The assessment process involves over 80 questions and takes considerable time to complete and to be reviewed, so suppliers are carefully selected and evaluated. The SHA questions are focused key categories that the company has identified. The sustainability questions are structured to identify the maturity level achieved by the supplier.

The SHA also measures key criteria in the company's Performance+ program, which includes company's supplier award programs - both Platinum Awards and Premier Awards. The Platinum Award is awarded on an ongoing basis to suppliers that perform in the top percentile of the company's supply base. The Premier Award is awarded annually to suppliers for excellence in one of four categories (Cost Competitiveness, Technology & Innovation, Business Management/Customer Service, and Collaboration).

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

We believe the SHA and the Performance+ Program are effective ways to communicate our values and our supplier expectations, as well as assessing supplier performance and identifying areas that need attention.

A measure of success is the average scores of the SHA assessment questions. Aggregate scores are calculated for each supplier. Higher scores are an indicator that suppliers are enhancing their programs. We do not yet have trend data since this is a new questionnaire as a result of harmonizing legacy company's supplier questionnaires.

Ultimately, success of these supplier engagements would be decreases in supplier GHG emissions. Other measures of success are increased supplier awareness of GHG emissions and climate change, and an increased number of companies setting GHG reduction targets.

**Comment**

We are unable at this time to identify the percent of suppliers, percent of spend, and percent of scope 3 emissions that this engagement covers.

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**Type of engagement**

Information collection (understanding supplier behavior)

**Details of engagement**

Other, please specify (Contracted with third party to implement supplier surveys to assess, manage and report ESG risk in our supply chain.)

**% of suppliers by number****% total procurement spend (direct and indirect)****% of supplier-related Scope 3 emissions as reported in C6.5****Rationale for the coverage of your engagement**

As part of our supply chain sustainability program, we are collaborating with the International Aerospace Environmental Group (IAEG) to implement a voluntary standard for assessing, managing and reporting ESG risk in aerospace supply chains. In 2022, we aligned with a third-party provider to support this effort and we anticipate rolling out the three-year plan starting in 2023.

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

The data collection platform will assist in identifying, assessing, and managing ESG risks of our suppliers, including climate-related risks.

**Comment**

We are unable at this time to identify the percent of suppliers, percent of spend, and percent of scope 3 emissions that this engagement covers.

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C12.1b

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

**Type of engagement & Details of engagement**

Collaboration & innovation	Other, please specify (Collaboration, discussion, and joint R&D investment in sustainable aviation technologies)
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**% of customers by number**

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

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

RTX actively engages with its commercial aviation customers to collaborate and innovate towards a more sustainable aviation industry. One of the forums used to accomplish this is the Air Transport Action Group (ATAG), an organization with approximately 40 members worldwide representing all sectors of the air transport industry. The organization provides an effective venue to discuss critical issues related to aviation's sustainability goals and seek coordinated solutions. Another forum is the International Air Transport Association (IATA). IATA's mission is to represent, lead, and serve the airline industry by working together to shape the future growth of a safe, secure and sustainable air transport industry that connects and enriches our world. Two of the company's businesses, Pratt & Whitney and Collins Aerospace, are strategic partners of IATA.

The company also engages with aviation customers in other forums. For example, Collins Aerospace is a Founding Member of the Governing Board of the Clean Aviation Joint Undertaking (JU), a public-private partnership launched in 2021 between the European Union (represented by the European Commission) and the European aviation sector (represented by the founding members and the associated members). Envisaged under the Horizon Europe research and innovation funding program, the Clean Aviation JU has the mission to develop disruptive new aircraft technologies towards the de-carbonization of aviation by 2050. Another forum to engage with our customers is through the International Aerospace Environmental Group (IAEG), which is a non-profit organization of global aerospace companies created to collaborate on and share innovative environmental solutions for the industry. The group works to promote the development of voluntary consensus standards and provide accessible solutions for key environmental issues. We are a founding member and on the Board of Directors.

RTX also engages with the U.S. Department of Defense, including the DoD Chief Sustainability Officer, and NATO to better understand strategic climate adaptation roadmap and initiatives, and we can support achieving military customer goals in technology advancements and supply chain resiliency.

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

We measure the success of engagement with customers on climate issues in various ways. For example, attendance at ATAG's Global Sustainability Aviation Summit, issuance of various publications that advance sustainable aviation (e.g., ATAG's Waypoint 2050 report which identifies several pathways for the aviation industry to achieve its carbon reduction goals), and successful project demonstrations of new technologies. The ultimate measure of success is supporting our customers to help them achieve their climate goals such as the commercial aviation industry's milestones and net zero goal.

Note: We are unable at this time to identify the percent of customers and percent of customer-related scope 3 emissions that this engagement covers.

**C12.2**

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

No, and we do not plan to introduce climate-related requirements within the next two years

**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, we engage directly with policy makers

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?**

No, and we do not plan to have one in the next two years

**Attach commitment or position statement(s)**

<Not Applicable>

**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**

RTX's direct policy and trade association activities are centrally controlled by the company's Corporate Government Relations organization. They coordinate with affected Businesses and functional organizations, and therefore the activities reflect the company's overall climate change strategy. Government Relations adheres to formal policies and procedures in their outreach to legislators and regulators. For some industry-specific organizations (e.g., Air Transport Action Group - ATAG) the company's business units take a prominent role in the engagement activities.

**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>

**C12.3a**

**(C12.3a) On what policy, law, or regulation that may impact the climate has your organization been engaging directly with policy makers in the reporting year?**

Specify the policy, law, or regulation on which your organization is engaging with policy makers

Conference on Aviation and Alternative Fuels (CAAF/3)

**Category of policy, law, or regulation that may impact the climate**

Low-carbon products and services

**Focus area of policy, law, or regulation that may impact the climate**

Alternative fuels

Low-carbon innovation and R&D

**Policy, law, or regulation geographic coverage**

Global

**Country/area/region the policy, law, or regulation applies to**

<Not Applicable>

**Your organization's position on the policy, law, or regulation**

Support with no exceptions

**Description of engagement with policy makers**

We continue to actively promote the development and use of Sustainable Aviation Fuel (SAF) with multiple policymakers to drive decarbonization in the aviation industry. The Third Conference on Aviation and Alternative Fuels (CAAF/3) is an international conference that will be held in November 2023 by the International Civil Aviation Organization (ICAO). The conference will focus on the development and deployment of SAFs as a means of reducing the environmental impact of aviation. The conference will bring together government representatives and policy makers from ICAO member nations with the goal to develop a common global policy framework to accelerate development and deployment of SAF as one of the most significant pathways to enable the aviation industry to decarbonize. Additionally, Pratt & Whitney is an active member of ATAG, which strongly endorses and recommends government and industry collaboration to accelerate the development and deployment of SAFs. ATAG strongly recommends that ICAO develop a robust SAF global policy framework through CAAF/3 to drive the rapid deployment of SAF needed to achieve net zero carbon emissions goals by 2050.

**Details of exceptions (if applicable) and your organization's proposed alternative approach to the policy, law or regulation**

<Not Applicable>

**Have you evaluated whether your organization's engagement on this policy, law, or regulation is aligned with the goals of the Paris Agreement?**

Yes, we have evaluated, and it is aligned

**Please explain whether this policy, law or regulation is central to the achievement of your climate transition plan and, if so, how?**

<Not Applicable>

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**Specify the policy, law, or regulation on which your organization is engaging with policy makers**

EU ReFuel legislation for Aviation - Eco Labelling Scheme

**Category of policy, law, or regulation that may impact the climate**

Climate change mitigation

**Focus area of policy, law, or regulation that may impact the climate**

Other, please specify (Eco-labelling)

**Policy, law, or regulation geographic coverage**

Regional

**Country/area/region the policy, law, or regulation applies to**

EU27

**Your organization's position on the policy, law, or regulation**

Support with no exceptions

**Description of engagement with policy makers**

European Union Aviation Safety Agency (EASA) Eco Labelling Scheme:

EASA had been tasked to develop a labelling scheme in the frame of ReFuelEU legislation for Aviation, which is part of a wider legislative package under the European Green Deal and the Commission's Sustainable & Smart and Mobility Strategy. The Environmental Labelling Scheme for Aviation has the objective to reduce aviation's environmental impacts by enabling passengers to make informed choices when booking their flights based on trusted, harmonized, reliable and easily understandable information.

Collins Aerospace and Pratt & Whitney are actively engaging with policymakers as participants in the technical expert groups which that have been created by the EASA Management Board to define an Environmental Labelling Scheme for Aviation.

**Details of exceptions (if applicable) and your organization's proposed alternative approach to the policy, law or regulation**

<Not Applicable>

**Have you evaluated whether your organization's engagement on this policy, law, or regulation is aligned with the goals of the Paris Agreement?**

Yes, we have evaluated, and it is aligned

**Please explain whether this policy, law or regulation is central to the achievement of your climate transition plan and, if so, how?**

<Not Applicable>

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**Specify the policy, law, or regulation on which your organization is engaging with policy makers**

Numerous legislation containing provisions related to Sustainable Aviation Fuel (SAF), engine operability of SAF, and advanced structures to reduce weight.

**Category of policy, law, or regulation that may impact the climate**

Climate change mitigation

**Focus area of policy, law, or regulation that may impact the climate**

Other, please specify (Sustainable aviation)

**Policy, law, or regulation geographic coverage**

National

**Country/area/region the policy, law, or regulation applies to**

United States of America

**Your organization's position on the policy, law, or regulation**

Support with no exceptions

**Description of engagement with policy makers**

We have had multiple engagements with policymakers on different bills and authorizations to support/advocate programs and funding related to Sustainable Aviation Fuel (SAF), engine operability on SAF and advanced structures to reduce weight. These are related to our ongoing efforts to support the civil aviation industry's net zero carbon emissions by 2050 commitment. Examples of bills that encourage research, development and use of SAF and alternative sustainable fuel sources include: 1) FAA authorization bill, b) FY24 Energy & Water appropriations bill (Department of Energy), c) FY24 Transportation Housing Urban Development appropriations bill (FAA), and d) FY24 Commerce, Justice, Science appropriations bill (NASA).

**Details of exceptions (if applicable) and your organization's proposed alternative approach to the policy, law or regulation**

<Not Applicable>

**Have you evaluated whether your organization's engagement on this policy, law, or regulation is aligned with the goals of the Paris Agreement?**

Yes, we have evaluated, and it is aligned

**Please explain whether this policy, law or regulation is central to the achievement of your climate transition plan and, if so, how?**

<Not Applicable>

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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 (Air Transport Action Group (ATAG))

**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 Air Transport Action Group (ATAG) is an aviation trade association that advocates for the adoption of policies that will enable global civil aviation operations to achieve net-zero carbon emissions by 2050, supported by accelerated efficiency measures, energy transition and innovation across the aviation sector and in partnership with governments around the world.

The company's Pratt & Whitney business unit is a participating sponsor of ATAG, holds a seat on its Board of Directors, and provides technical expertise to the group in the development of its positions.

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

76070

**Describe the aim of your organization's funding**

Our membership of this Trade Association and the related funding is to coordinate with other industry representatives on a wide variety of shared interests. The aim of the trade association is to track key issues, advocate on specific issues important to our sector, and communicate potential policy and regulatory impacts on industry.

**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

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**Trade association**

Other, please specify (Aerospace Industries Association (AIA))

**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, and they have changed their 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**

In October 2021, the Aerospace Industries Association (AIA) announced a commitment for commercial aviation manufacturers to work with airline customers and governments around the world to achieve net-zero carbon emissions by 2050. As part of that commitment, AIA spearheaded a ground-breaking study to analyze the state of sustainable aviation technologies in the U.S. and identify the types of public policies and investments necessary to achieve this vision. The results of the study were recently published in a report entitled, "Horizon 2050: A Flight Plan for the Future of Sustainable Aviation."

"Innovation is at the heart of what we do as an industry and what will enable a more sustainable aviation future. While strong progress has been made in the energy efficiency of aircraft, we have the opportunity now to make investments in next-generation technology that will propel the industry into a brighter, greener future. Committing to net-zero carbon emissions by 2050 isn't just a pledge to secure a more sustainable aviation ecosystem, it is a testament to the confidence we have in our industry's ability to innovate," said Eric Fanning, President and CEO of AIA.

AIA promotes advances in three prominent focus areas to support sustainable aviation: the development of sustainable aviation fuel, hybrid-electric propulsion systems, and advanced aircraft technology and modernization.

RTX holds a seat on its Board of Directors and Pratt & Whitney chairs the Civil Aviation Environment and Sustainability Committee.

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

**Describe the aim of your organization's funding**

<Not Applicable>

**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

**Trade association**

Business Roundtable

**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?**

No, we did not attempt to influence their 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**

In 2020, the Business Roundtable (BRT) announced support for the goals of the Paris Climate Agreement and a suite of policies to help achieve those goals. The BRT believes corporations should lead by example, support sound public policies and drive the innovation needed to address climate change. To this end, it believes that the U.S. should adopt a more comprehensive, coordinated and market-based approach to reduce emissions. Further, the BRT asserts that this approach must be pursued in a manner that ensures environmental effectiveness while fostering innovation, maintaining U.S. competitiveness, maximizing compliance flexibility, and minimizing costs to business and society.

The transition to a low-carbon future will require a significant evolution in the way businesses and consumers operate.

Key principles to guide public policy:

- Align policy goals and GHG emissions reduction targets with scientific evidence.
- Increase global engagement, cooperation and accountability.
- Leverage market-based solutions wherever possible.
- Provide for adequate transition time and long-term regulatory certainty.
- Preserve the competitiveness of U.S. businesses, including avoiding economic and emissions "leakage."
- Minimize social and economic costs for those least able to bear them.
- Support both public and private investment in low-carbon and GHG emissions reduction technologies along the full innovation pipeline.
- Minimize administrative burdens and duplicative policies while maximizing compliance flexibility.
- Ensure that U.S. policies account for international emissions reduction programs.
- Advance climate resilience and adaptation.
- Eliminate barriers to the deployment of emissions reduction technologies and low-carbon energy.

BRT's philosophy is that international cooperation and diplomacy backed by a broadly supported U.S. policy will be the key to achieving the collective global action required to meet the scope of the challenge and position the U.S. economy for long-term success.

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

**Describe the aim of your organization's funding**

<Not Applicable>

**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

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C12.4

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**(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 voluntary sustainability report

**Status**

Complete

**Attach the document**

2022 RTX ESG Report.pdf

**Page/Section reference**

p. 3 - CEO letter; p. 5-9 - ESG Strategy, Priorities, and Accountability; p. 26 - Planet section; p.27-32 - Sustainable technology and innovation section; p.33- 34 - Energy and GHG emissions in our operations; Appendix - Performance table data p. 57-59 (energy and emissions)

**Content elements**

- Governance
- Strategy
- Risks & opportunities
- Emissions figures
- Emission targets
- Other metrics

**Comment**

**Publication**

In mainstream reports

**Status**

Complete

**Attach the document**

2022 RTX Annual Report.pdf

**Page/Section reference**

Page numbers refer to attached pdf file. p. 3 - CEO letter - Sustainable aviation; p. 6 - Advanced materials for a competitive edge; p.7 - ESG at RTX; Form 10K - Item 1 Business - p. 19 - Regulatory Matters / environmental regulation; Item 1A Risk Factors - Physical events p. 29; Climate-related risks p.32.

**Content elements**

- Strategy
- Risks & opportunities

**Comment**

**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	Other, please specify (Fly Net Zero (ATAG); Commercial Aviation Alternative Fuels Initiative (CAAFI), Alliance for Zero Emission Aviation (AZEA))	<p>Fly Net Zero Commitment: In October 2021, RTX, along with the commercial aviation industry, set an ambitious goal to achieve net-zero carbon emissions for commercial aviation by 2050, aligning global civil aviation with the Paris Agreement to pursue efforts to limit global temperature increase to 1.5°C above pre-industrial levels. The Commitment was facilitated by the Air Transport Action Group (ATAG).</p> <p>Commercial Aviation Alternative Fuels Initiative (CAAFI): Since 2006, the CAAFI has sought to enhance energy security and environmental sustainability for aviation through the use of alternative jet fuels. CAAFI is a coalition of airlines, aircraft and engine manufacturers, energy producers, researchers, international participants and U.S. government agencies. Together these stakeholders are leading the development and deployment of alternative jet fuels for commercial aviation. CAAFI's goal is to promote the development of alternative jet fuel options that offer equivalent safety and favorable costs compared with petroleum based jet fuel, while offering environmental improvement and energy supply security for aviation.</p> <p>Alliance for Zero Emission Aviation (AZEA): Through its operations in Europe, Collins Aerospace and Pratt &amp; Whitney are active members of the Alliance for Zero-Emission Aviation (AZEA), which is voluntary European initiative of private and public stakeholders initiated and governed by the European Commission to prepare the entry into commercial service of hydrogen-powered and electric aircraft (including hybrid-electric aircraft). AZEA has been created by the European Commission to support the goal of decarbonized aviation in the frame of the Commission's Sustainable &amp; Smart and Mobility Strategy under the European Green Deal.</p>

**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	No, and we do not plan to have both within the next two years	<Not Applicable>	<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	No, and we do not plan to do so within the next 2 years	<Not Applicable>	<Not Applicable>

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 and we don't 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 and we don't 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	No, and we do not plan to undertake any biodiversity-related actions	<Not Applicable>

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	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
No publications	<Not Applicable>	<Not Applicable>

C16. Signoff

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C-FI

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(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

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

	Job title	Corresponding job category
Row 1	Senior Vice President, Operations, Supply Chain, Quality, EH&S	Other C-Suite Officer