Northrop Grumman Corp

2024 CDP Corporate Questionnaire 2024

Word version

Important: this export excludes unanswered questions
This document is an export of your organization's CDP questionnaire response. It contains all data points for questions that are answered or in progress. There may be questions or data points that you have been requested to provide, which are missing from this document because they are currently unanswered. Please note that it is your responsibility to verify that your questionnaire response is complete prior to submission. CDP will not be liable for any failure to do so.
Terms of disclosure for corporate questionnaire 2024 - CDP

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10/08/2024, 02:15 pm

Contents

C1. Introduction

(1.1) In which language are you submitting your response?

Select from:

☑ English

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

Select from:

☑ USD

(1.3) Provide an overview and introduction to your organization.

(1.3.2) Organization type

Select from:

☑ Publicly traded organization

(1.3.3) Description of organization

Northrop Grumman Corporation (herein referred to as "Northrop Grumman," the "company," "we," "us," or "our") is a publicly traded company whose common stock is listed on the New York Stock Exchange (NYSE: NOC). Northrop Grumman is a leading global aerospace and defense (A&D) technology company. We deliver a broad range of products, services and solutions to United States (U.S.) and international customers, and principally to the U.S. Department of Defense (DoD) and intelligence community. Our broad portfolio is aligned to support national security priorities and our solutions equip our customers with capabilities they need to connect, protect and advance humanity. The company is a leading provider of space systems, advanced aircraft, missile defense, advanced weapons and long-range fires capabilities, mission systems, networking and communications, strategic deterrence systems, and breakthrough technologies, such as artificial intelligence, advanced computing and cyber. We are focused on competing and winning programs that enable continued growth, performing on our commitments and affordably delivering capability our customers need. With the investments we've made in advanced technologies, combined with our talented workforce and digital transformation capabilities, Northrop Grumman is well positioned to meet our customers' needs today and in the future. Northrop Grumman established an environmental sustainability program in 2008 to reduce the company's environmental footprint by improving operational efficiency and integrating environmental sustainability practices across our operations. Our Environmental Sustainability Program supports a vision for a more sustainable future by expanding environmental sustainability awareness throughout our organization, supporting our corporate values and meeting the expectations of our diverse set of stakeholders. Northrop Grumman announced our next generation sustainability goals in April 2022, which expand the company's focus on sustainability beyond our operational footprint. Our

next generation sustainability initiatives focus on activity around three mission areas: (1) Footprint: Minimizing the footprint of our operations; (2) Handprint: Enhance sustainability within the aerospace and defense industry by supporting customer needs and supply chain objectives; and (3) Blueprint: Affirm Sustainability leadership by collaborating to protect ecosystems and define environmental opportunities in our communities.
[Fixed row]

(1.4) State the end date of the year for which you are reporting data. For emissions data, indicate whether you will be providing emissions data for past reporting years.

(1.4.1) End date of reporting year

09/30/2023

(1.4.2) Alignment of this reporting period with your financial reporting period

Select from:
☑ No

(1.4.3) Indicate if you are providing emissions data for past reporting years

Select from:
☑ Yes

(1.4.4) Number of past reporting years you will be providing Scope 1 emissions data for

Select from:
☑ 2 years

(1.4.5) Number of past reporting years you will be providing Scope 2 emissions data for

Select from:
☑ 2 years

(1.4.6) Number of past reporting years you will be providing Scope 3 emissions data for

Select from:
☑ 2 years
[Fixed row]

(1.5) Provide details on your reporting boundary.

	Is your reporting boundary for your CDP disclosure the same as that used in your financial statements?
	Select from: ☑ Yes

[Fixed row]

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

	Does your organization use this unique identifier?	Provide your unique identifier
Ticker symbol	*Select from:* ☑ Yes	*NOC*

[Add row]

(1.24) Has your organization mapped its value chain?

(1.24.1) Value chain mapped

Select from:

☑ Yes, we have mapped or are currently in the process of mapping our value chain

(1.24.2) Value chain stages covered in mapping

Select all that apply

☑ Upstream value chain

☑ Downstream value chain

(1.24.3) Highest supplier tier mapped

Select from:

☑ Tier 1 suppliers

(1.24.4) Highest supplier tier known but not mapped

Select from:

☑ All supplier tiers known have been mapped

(1.24.7) Description of mapping process and coverage

We have mapped our value chain at a high level, considering our operations, as well as customers and suppliers. This exercise included information on our customers/end users, and the type of suppliers by procurement category that act as inputs.
[Fixed row]

C2. Identification, assessment, and management of dependencies, impacts, risks, and opportunities

(2.1) How does your organization define short-, medium-, and long-term time horizons in relation to the identification, assessment, and management of your environmental dependencies, impacts, risks, and opportunities?

Short-term

(2.1.1) From (years)

0

(2.1.3) To (years)

5

(2.1.4) How this time horizon is linked to strategic and/or financial planning

Time horizons defined within this response are for the purpose of our climate-related risk and opportunity assessments.

Medium-term

(2.1.1) From (years)

5

(2.1.3) To (years)

15

(2.1.4) How this time horizon is linked to strategic and/or financial planning

Time horizons defined within this response are for the purpose of our climate-related risk and opportunity assessments.

Long-term

(2.1.1) From (years)

15

(2.1.2) Is your long-term time horizon open ended?

Select from:

☑ Yes

(2.1.4) How this time horizon is linked to strategic and/or financial planning

Time horizons defined within this response are for the purpose of our climate-related risk and opportunity assessments.
[Fixed row]

(2.2) Does your organization have a process for identifying, assessing, and managing environmental dependencies and/or impacts?

(2.2.1) Process in place

Select from:

☑ Yes

(2.2.2) Dependencies and/or impacts evaluated in this process

Select from:

☑ Impacts only

(2.2.4) Primary reason for not evaluating dependencies and/or impacts

Select from:

☑ Not an immediate strategic priority

(2.2.5) Explain why you do not evaluate dependencies and/or impacts and describe any plans to do so in the future

We currently evaluate our climate impacts by managing, measuring and reporting on our emissions. While we evaluate many of our impacts and dependencies on an individual topic level (e.g. climate, water risk, biodiversity) we have not undertaken a formal process to identify environmental dependencies as defined by CDP. [Fixed row]

(2.2.1) Does your organization have a process for identifying, assessing, and managing environmental risks and/or opportunities?

	Process in place	Risks and/or opportunities evaluated in this process	Is this process informed by the dependencies and/or impacts process?
	Select from: ☑ Yes	*Select from:* ☑ Both risks and opportunities	*Select from:* ☑ Yes

[Fixed row]

(2.2.2) Provide details of your organization's process for identifying, assessing, and managing environmental dependencies, impacts, risks, and/or opportunities.

Row 1

(2.2.2.1) Environmental issue

Select all that apply

☑ Climate change

(2.2.2.2) Indicate which of dependencies, impacts, risks, and opportunities are covered by the process for this environmental issue

Select all that apply

☑ Impacts
☑ Risks
☑ Opportunities

(2.2.2.3) Value chain stages covered

Select all that apply
☑ Direct operations
☑ Upstream value chain
☑ Downstream value chain

(2.2.2.4) Coverage

Select from:
☑ Full

(2.2.2.5) Supplier tiers covered

Select all that apply
☑ Tier 1 suppliers

(2.2.2.7) Type of assessment

Select from:
☑ Qualitative and quantitative

(2.2.2.8) Frequency of assessment

Select from:
☑ Annually

(2.2.2.9) Time horizons covered

Select all that apply

☑ Short-term
☑ Medium-term
☑ Long-term

(2.2.2.10) Integration of risk management process

Select from:
☑ Integrated into multi-disciplinary organization-wide risk management process

(2.2.2.11) Location-specificity used

Select all that apply
☑ Site-specific

(2.2.2.12) Tools and methods used

Enterprise Risk Management
☑ Enterprise Risk Management
☑ Internal company methods

Other
☑ Desk-based research
☑ Internal company methods
☑ Scenario analysis

(2.2.2.13) Risk types and criteria considered

Acute physical
☑ Cyclones, hurricanes, typhoons
☑ Flood (coastal, fluvial, pluvial, ground water)
☑ Wildfires

Chronic physical

☑ Changing precipitation patterns and types (rain, hail, snow/ice)

☑ Sea level rise

☑ Water stress

Policy

☑ Carbon pricing mechanisms

☑ Changes to national legislation

Market

☑ Availability and/or increased cost of raw materials

☑ Changing customer behavior

Reputation

☑ Other reputation, please specify **:**Reputational risks related to climate change

Technology

☑ Transition to lower emissions technology and products

Liability

☑ Non-compliance with regulations

(2.2.2.14) Partners and stakeholders considered

Select all that apply

☑ Customers

☑ Employees

☑ Investors

☑ Suppliers

☑ Regulators

☑ Local communities

(2.2.2.15) Has this process changed since the previous reporting year?

Select from:

☑ No

(2.2.2.16) Further details of process

Northrop Grumman's management team is directly involved in sustainability risk assessment and monitoring, including risks related to climate change and natural disasters. The management team has a multi-faceted approach to risk-assessment, including through the Enterprise Risk Management Committee (ERMC). The ERMC seeks to ensure that the company has identified and understands the more significant risks facing our business and that we have effective mitigation measures in place to address each of them. These risks are described in Northrop Grumman's Annual Report on Form 10-K and include risks related to natural disasters, environmental, health and safety, compliance with laws, hazardous and high-risk operations, and climate-related risks, such as increased wildfire exposure, rising mean temperature and sea levels, and long-term changes in precipitation patterns, including increased drought, desertification and/or poor water quality. Certain members of the ERMC have responsibility for management of specific risks, such as the CSO's responsibility for climate-related risks, and are responsible for assessing risks, developing and executing risk mitigation plans, and monitoring status and trends. In addition to the enterprise risk management process, other groups within the company, such as business continuity and operational resiliency, and supply chain management, have additional specialized practices in place for additional risk identification, assessment and management. These processes are described in more depth in our 2023 TCFD Report, p. 12-13. We evaluate our climate-related impacts by measuring and managing our emissions, and reporting our progress on an annual basis. We take into account how the scale of our climate impact (our carbon emissions) could impact the magnitude of certain climate risks, for example, a potential carbon tax.
[Add row]

(2.2.7) Are the interconnections between environmental dependencies, impacts, risks and/or opportunities assessed?

(2.2.7.1) Interconnections between environmental dependencies, impacts, risks and/or opportunities assessed

Select from:

☑ Yes

(2.2.7.2) Description of how interconnections are assessed

We evaluate the interconnection between our climate risks, opportunities and impacts. As described in our 2023 TCFD Report, some climate risks could also be opportunities depending on how the company manages them. Additionally, we take into account how the scale of our climate impact (our carbon emissions) could impact the size of certain climate risks. For example, the risk of a potential carbon tax would likely be correlated to the amount of our emissions. We aim to reduce our emissions to reduce our impact, as well as reduce the potential climate-related risk associated with emissions.
[Fixed row]

(2.4) How does your organization define substantive effects on your organization?

Risks

(2.4.1) Type of definition

Select all that apply

☑ Qualitative

(2.4.6) Metrics considered in definition

Select all that apply

☑ Likelihood of effect occurring

☑ Other, please specify **:**Relevance to understanding our impact on the environment

(2.4.7) Application of definition

We use the word “substantive” throughout this questionnaire, as is consistent with CDP, and the term "substantive effects" represents notable business impacts. "Notable" refers to impacts that have been identified by the business as relevant to understanding our impact on the environment, but may not be financially significant when considering the scale of our full business. We do not consider “substantive” to be analogous with materiality as defined by, or in the context of, the U.S. Securities and Exchange Commission (SEC) laws, including those related to SEC reporting and disclosure obligations (or any other securities laws) or as the term is used in the context of financial statements and financial reporting.
[Add row]

C3. Disclosure of risks and opportunities

(3.1) Have you identified any environmental risks which have had a substantive effect on your organization in the reporting year, or are anticipated to have a substantive effect on your organization in the future?

	Environmental risks identified
Climate change	*Select from:* ☑ Yes, both in direct operations and upstream/downstream value chain

[Fixed row]

(3.1.1) Provide details of the environmental risks identified which have had a substantive effect on your organization in the reporting year, or are anticipated to have a substantive effect on your organization in the future.

Climate change

(3.1.1.1) Risk identifier

Select from:

☑ Risk1

(3.1.1.3) Risk types and primary environmental risk driver

Policy

☑ Carbon pricing mechanisms

(3.1.1.4) Value chain stage where the risk occurs

Select from:

☑ Direct operations

(3.1.1.6) Country/area where the risk occurs

Select all that apply

☑ United States of America

(3.1.1.9) Organization-specific description of risk

Companies across the board may face new climate change-related policy and legal requirements, such as carbon taxes or cap-and-trade programs in the states and/or countries in which they primarily operate. The financial impact of a carbon tax could be notable, based on Northrop Grumman's historical Scope 1 and 2 emission levels and the International Energy Agency's (IEA's) estimated carbon price of 140 tCO2 by 2040. The primary source of potential cost from the implementation of carbon pricing is from purchased electricity costs, as utility companies pass the carbon price on their emissions through the cost of electricity.

(3.1.1.11) Primary financial effect of the risk

Select from:

☑ Increased direct costs

(3.1.1.12) Time horizon over which the risk is anticipated to have a substantive effect on the organization

Select all that apply

☑ Long-term

(3.1.1.13) Likelihood of the risk having an effect within the anticipated time horizon

Select from:

☑ Likely

(3.1.1.14) Magnitude

Select from:

☑ Low

(3.1.1.16) Anticipated effect of the risk on the financial position, financial performance and cash flows of the organization in the selected future time horizons

The financial impact of a carbon tax could be a cost to the company, which could impact our results of operations and/or cash flows, based on Northrop Grumman's historical Scope 1 and 2 emission levels and the International Energy Agency's (IEA's) estimated carbon price of 140/tCO2 by 2040.

(3.1.1.17) Are you able to quantify the financial effect of the risk?

Select from:

☑ Yes

(3.1.1.23) Anticipated financial effect figure in the long-term – minimum (currency)

11201260

(3.1.1.24) Anticipated financial effect figure in the long-term – maximum (currency)

112012600

(3.1.1.25) Explanation of financial effect figure

The estimated calculation represents an estimated annual carbon tax Northrop Grumman would have to pay annually in 2040 if the company maintains emissions at 2019 levels. Our analysis, as described in our TCFD report, is based on an estimated carbon price of 140/tCO2 that IEA estimates will occur by 2040. Financial impact: By multiplying our 2019 base year annual emissions (800,090 tCO2) by the estimated 2040 carbon price (140/tCO2), we identify one scenario of how our business could be impacted by a carbon price (our high-end estimate of 112,012,600. This high-end estimate assumes that our carbon emissions would continue at 2019 levels until 2040. At the low end of the range, we assume that we achieve our Net Zero operations goal, with a remaining 10% emissions at the end of the goal period to offset. The lower estimate is based on 10% of our 2019 base year emissions (which is 80,009 tCO2) multiplied by the same carbon price (140/tCO2), which equals 11,201,260. Based on this scenario analysis, we do not anticipate the impact of carbon pricing to be significant relative to overall costs, and we believe we are currently resilient to this risk.

(3.1.1.26) Primary response to risk

Infrastructure, technology and spending

☑ Other infrastructure, technology and spending, please specify :Investments in energy efficiency and GHG emissions reduction projects

(3.1.1.27) Cost of response to risk

6000000

(3.1.1.28) Explanation of cost calculation

The cost of response to this risk represents the sum of the 2023 investments in emissions reductions activities that enable the company to minimize its greenhouse gas emissions and make progress towards its Net Zero operations goal.

(3.1.1.29) Description of response

By proactively and voluntarily reducing our emissions, we are reducing exposure to future carbon taxes from the federal government, states and/or countries where we do business, while also making a contribution to the fight against climate change. We have set a Net Zero emissions by 2035 goal for our operations (Scopes 1 and 2), with a 50% reduction by 2030. Achieving this goal can lower the risk of carbon pricing to our business. In order to achieve our Net Zero operations goal and minimize our exposure to future carbon taxes, each year we invest in our infrastructure through energy efficiency and GHG emissions reduction projects. The 6 million cost figure represents our annual investment in greenhouse gas emissions-reduction projects in 2023.
[Add row]

(3.6) Have you identified any environmental opportunities which have had a substantive effect on your organization in the reporting year, or are anticipated to have a substantive effect on your organization in the future?

	Environmental opportunities identified
Climate change	*Select from:* ☑ Yes, we have identified opportunities, and some/all are being realized

[Fixed row]

(3.6.1) Provide details of the environmental opportunities identified which have had a substantive effect on your organization in the reporting year, or are anticipated to have a substantive effect on your organization in the future.

Climate change

(3.6.1.1) Opportunity identifier

Select from:

☑ Opp1

(3.6.1.3) Opportunity type and primary environmental opportunity driver

Resource efficiency

☑ Cost savings

(3.6.1.4) Value chain stage where the opportunity occurs

Select from:

☑ Direct operations

(3.6.1.5) Country/area where the opportunity occurs

Select all that apply

☑ United States of America

(3.6.1.8) Organization specific description

Resource efficiency, driven by Northrop Grumman’s environmental sustainability program and next-generation goals, creates an opportunity for reduced operating costs at our sites. Each year we invest in our infrastructure through energy efficiency and greenhouse gas emissions reductions projects, reducing the cost of our operations and minimizing our environmental footprint worldwide. For example, we have 17 “green” buildings in our portfolio, certified to Energy Star and LEED standards, and totaling approximately 2.1 million square feet of floor space. We are expanding "Energy Efficiency As a Service" initiatives across our business--these projects were initiated at 15 of our sites in 2023, representing 36% of our total Scope 1 and 2 emissions. These investments will continue to drive our strategy to achieve our Net Zero operations by 2035 goal.

(3.6.1.9) Primary financial effect of the opportunity

Select from:

☑ Reduced indirect (operating) costs

(3.6.1.10) Time horizon over which the opportunity is anticipated to have a substantive effect on the organization

Select all that apply

☑ Medium-term

(3.6.1.11) Likelihood of the opportunity having an effect within the anticipated time horizon

Select from:

☑ Very likely (90–100%)

(3.6.1.12) Magnitude

Select from:

☑ Low

(3.6.1.14) Anticipated effect of the opportunity on the financial position, financial performance and cash flows of the organization in the selected future time horizons

Resource efficiency creates an opportunity for reduced operating costs at our sites.

(3.6.1.15) Are you able to quantify the financial effects of the opportunity?

Select from:

☑ Yes

(3.6.1.19) Anticipated financial effect figure in the medium-term - minimum (currency)

3000000

(3.6.1.20) Anticipated financial effect figure in the medium-term - maximum (currency)

9000000

(3.6.1.23) Explanation of financial effect figures

*The estimated financial impact represents the annual positive financial implications of our 2023 investments in resource efficiency projects. Lifetime cost savings of the 2023 investment in greenhouse gas emissions-reduction projects is calculated over the medium-term time frame as disclosed above, which is 5-15 years. The average payback period for these projects is 10 years. Our minimum financial impact is 3,000,000(600,000 annual cost savings * 5 years) and our maximum financial impact is 9,000,000 (600,000 annual cost savings * 15 years).*

(3.6.1.24) Cost to realize opportunity

6000000

(3.6.1.25) Explanation of cost calculation

The cost to realize the opportunity represents the sum of the 2023 investments in emissions reductions activities that enable the company to minimize its greenhouse gas emissions and make progress towards its Net Zero operations goal.

(3.6.1.26) Strategy to realize opportunity

Northrop Grumman manages this opportunity through the company's Environmental, Health & Safety (EHS) and Environmental Sustainability organizations. The EHS team heads the company's efforts to provide a safe and healthy workplace for our employees and to ensure that we conduct our operations in an environmentally responsible manner and that we conduct our business activities in accordance with applicable legal requirements. To manage potential greenhouse gas emissions reporting obligations the environmental sustainability program was established in 2008. Our current goal is to achieve Net Zero emissions in our operations (Scopes 1 and 2) by 2035, with a 50% reduction by 2030. Our Net Zero operations transition plan includes many strategies, one of which is "Embedding resource conservation and efficiency measures within our processes." We achieve this through, among other programs, our environmental and efficiency (E&E) allocated capital. Through this program, we solicit project ideas from across the company and fund impact-oriented projects that drive efficiency and performance against our goals. The funding is distributed across the company for projects and initiatives across all environmental footprint elements.
[Add row]

C4. Governance

(4.1) Does your organization have a board of directors or an equivalent governing body?

(4.1.1) Board of directors or equivalent governing body

Select from:

☑ Yes

(4.1.2) Frequency with which the board or equivalent meets

Select from:

☑ More frequently than quarterly

(4.1.3) Types of directors your board or equivalent is comprised of

Select all that apply

☑ Executive directors or equivalent

☑ Independent non-executive directors or equivalent

(4.1.4) Board diversity and inclusion policy

Select from:

☑ Yes, and it is publicly available

(4.1.5) Briefly describe what the policy covers

In evaluating director candidates, the Nominating and Corporate Governance Committee aims to ensure a diverse, inclusive and effective board, benefiting from diversity of thought, perspective and experience. The Nominating and Corporate Governance Committee seeks to ensure broad diversity, including in race and gender, as well as in professional experience, education, skill and other qualities that contribute to our Board and the long-term interests of our Company and our shareholders. In considering Board nominees, the Nominating and Corporate Governance Committee considers each individual's background and personal and professional experiences in addition to general qualifications. Nominees are evaluated in the context of the Board as a whole, with a focus on achieving a diverse mix of skills and attributes needed to provide effective governance and oversight, advancing the long-term interests of our shareholders. The Nominating and Corporate

Governance Committee is focused on ensuring a diverse, talented, and inclusive board, with members who have the background, skills and experience, and the time and resources necessary to devote to their service for our Company and our shareholders. The Nominating and Corporate Governance Committee regularly assesses and communicates with the Board about the current and future skills and backgrounds to ensure the Board maintains an appropriate mix, taking into account anticipated retirement dates.

(4.1.6) Attach the policy (optional)

Nominating and Corporate Governance Committee Charter (Final) (7-10-24).pdf
[Fixed row]

(4.1.1) Is there board-level oversight of environmental issues within your organization?

	Board-level oversight of this environmental issue
Climate change	*Select from:* ☑ Yes

[Fixed row]

(4.1.2) Identify the positions (do not include any names) of the individuals or committees on the board with accountability for environmental issues and provide details of the board's oversight of environmental issues.

Climate change

(4.1.2.1) Positions of individuals or committees with accountability for this environmental issue

Select all that apply
☑ Chief Sustainability Officer (CSO)
☑ Board-level committee

(4.1.2.2) Positions' accountability for this environmental issue is outlined in policies applicable to the board

Select from:

☑ Yes

(4.1.2.3) Policies which outline the positions' accountability for this environmental issue

Select all that apply

☑ Other policy applicable to the board, please specify **:**Board Committee Charters

(4.1.2.4) Frequency with which this environmental issue is a scheduled agenda item

Select from:

☑ Scheduled agenda item in some board meetings – at least annually

(4.1.2.5) Governance mechanisms into which this environmental issue is integrated

Select all that apply

☑ Overseeing the setting of corporate targets

☑ Monitoring progress towards corporate targets

☑ Approving and/or overseeing employee incentives

☑ Overseeing and guiding major capital expenditures

☑ Overseeing reporting, audit, and verification processes

☑ Overseeing and guiding the development of a business strategy

☑ Monitoring compliance with corporate policies and/or commitments

(4.1.2.7) Please explain

Our Board provides leadership and oversight with respect to ESG practices and our enterprise risk management activities, including those related to climate, among other duties. Each of our independent Board committees assists in this role, providing its expertise. The full Board has ultimate responsibility for the oversight of risk and receives updates from each of the committees as well as periodic reports from senior management, including the Chief Sustainability Officer (CSO), addressing specific issues and risks, including those related to climate. The Policy Committee oversees the company's environmental programs, including climate change, Net Zero operations, water and waste reduction, and other initiatives and matters. The Policy Committee reviews with the CSO at least annually the status of such programs and reviews. The committee also provides oversight and recommendations regarding the company's ESG/Sustainability report and the TCFD report. In 2023, the committee reviewed the 2022 ESG Report and 2023 TCFD Report and in 2024, the committee reviewed the 2023 Sustainability Report. In each case, this included review of the company's commitment to achieving Net Zero GHG emissions in our operations by 2035. The Compensation and Human Capital Committee approves the annual and long-term performance goals for our compensation program, including financial and nonfinancial metrics for our compensation program, among other responsibilities. The non-financial metrics include people-related, environmental and other goals. The non-financial metrics account for 10% of the overall 2023 annual incentive plan score and include a specific environmental metric - Annual progress towards achieving net zero greenhouse gas emissions in the Company's operations by 2035. In addition, non-financial metrics are among the factors that impact bonus payments to all eligible employees. The Audit and Risk

Committee assists the Board in its overall financial and enterprise risk management responsibility, including a review of the company's risks related to environmental (including climate change) matters. The committee also provides oversight of internal controls over publicly reported data in the ESG and TCFD reports and provides oversight of audit and assurance processes for ESG reporting. The Nominating and Corporate Governance Committee assists the Board in ensuring a comprehensive and effective framework for Board oversight, including of ESG matters. The committee also looks broadly at governance-related risks, including the role of each committee with respect to oversight of ESG and corporate culture, among other responsibilities.
[Fixed row]

(4.2) Does your organization's board have competency on environmental issues?

Climate change

(4.2.1) Board-level competency on this environmental issue

Select from:
☑ Yes

(4.2.2) Mechanisms to maintain an environmentally competent board

Select all that apply
☑ Other, please specify **:**Board and committees receive periodic reports from senior management, including the Chief Sustainability Officer (CSO), addressing specific issues and risks, including those related to climate
[Fixed row]

(4.3) Is there management-level responsibility for environmental issues within your organization?

	Management-level responsibility for this environmental issue
Climate change	*Select from:* ☑ Yes

[Fixed row]

(4.3.1) Provide the highest senior management-level positions or committees with responsibility for environmental issues (do not include the names of individuals).

Climate change

(4.3.1.1) Position of individual or committee with responsibility

Executive level

☑ Chief Sustainability Officer (CSO)

(4.3.1.2) Environmental responsibilities of this position

Dependencies, impacts, risks and opportunities

☑ Assessing environmental dependencies, impacts, risks, and opportunities

☑ Assessing future trends in environmental dependencies, impacts, risks, and opportunities

☑ Managing environmental dependencies, impacts, risks, and opportunities

Policies, commitments, and targets

☑ Monitoring compliance with corporate environmental policies and/or commitments

☑ Measuring progress towards environmental corporate targets

☑ Setting corporate environmental policies and/or commitments

☑ Setting corporate environmental targets

Strategy and financial planning

☑ Conducting environmental scenario analysis

☑ Managing annual budgets related to environmental issues

☑ Implementing the business strategy related to environmental issues

☑ Developing a business strategy which considers environmental issues

☑ Managing environmental reporting, audit, and verification processes

☑ Managing acquisitions, mergers, and divestitures related to environmental issues

☑ Managing major capital and/or operational expenditures relating to environmental issues
☑ Managing priorities related to innovation/low-environmental impact products or services (including R&D)

(4.3.1.4) Reporting line

Select from:
☑ Reports to the Chief Executive Officer (CEO)

(4.3.1.5) Frequency of reporting to the board on environmental issues

Select from:
☑ Half-yearly

(4.3.1.6) Please explain

The CSO, who reports to the CEO, leads a team focused on a variety of sustainability initiatives such as designing and implementing enterprise-wide business practices for carbon reduction, resource efficiency and material management, including the development, management, tracking and reporting of climate-related targets and goals. The CSO is responsible for helping to reduce the company's environmental impact and advance sustainability throughout the business. The CSO is also responsible for the monitoring of climate-related issues and risks and, as a member of the Enterprise Risk Management Committee (ERMC). The CSO provides periodic updates to the Board and the Policy Committee reviews with the CSO at least annually the status of the company's environmental programs, including climate change and our Net Zero operations goal.
[Add row]

(4.5) Do you provide monetary incentives for the management of environmental issues, including the attainment of targets?

Climate change

(4.5.1) Provision of monetary incentives related to this environmental issue

Select from:
☑ Yes

(4.5.2) % of total C-suite and board-level monetary incentives linked to the management of this environmental issue

2

(4.5.3) Please explain

As noted in the 2024 Proxy Statement, under our 2023 Annual Incentive Plan (AIP), we used a mix of financial and non-financial metrics to measure our performance for purposes of determining award payout to our Named Executive Officers (including the CEO, CFO and others) annually. Environmental Sustainability is one of five nonfinancial metrics. Performance against this metric is measured in terms of annual progress towards achieving Net Zero greenhouse gas emissions in the Company's operations by 2035. Performance against the five non-financial metrics accounted for 10% of the overall 2023 annual incentive plan score. As environmental sustainability is one of five non-financial metrics, we have assigned it one-fifth of the total 10% AIP score.
[Fixed row]

(4.5.1) Provide further details on the monetary incentives provided for the management of environmental issues (do not include the names of individuals).

Climate change

(4.5.1.1) Position entitled to monetary incentive

Board or executive level

☑ Corporate executive team

(4.5.1.2) Incentives

Select all that apply

☑ Bonus - % of salary

(4.5.1.3) Performance metrics

Targets

☑ Progress towards environmental targets

Emission reduction

☑ Reduction in absolute emissions

(4.5.1.4) Incentive plan the incentives are linked to

Select from:

☑ Short-Term Incentive Plan, or equivalent, only (e.g. contractual annual bonus)

(4.5.1.5) Further details of incentives

As noted in the 2024 Proxy Statement, under our 2023 Annual Incentive Plan (AIP), we used a mix of financial and non-financial metrics to measure our performance for purposes of determining award payout to our Named Executive Officers (including the CEO, CFO and others) annually. Environmental Sustainability is one of five non-financial metrics. Performance against this metric is measured in terms of annual progress towards achieving Net Zero greenhouse gas emissions in the Company's operations by 2035. Performance against the five non-financial metrics accounted for 10% of the overall 2023 annual incentive plan score.

(4.5.1.6) How the position's incentives contribute to the achievement of your environmental commitments and/or climate transition plan

The environmental sustainability portion of the non-financial metric incentive is directly tied to progress toward achieving our Net Zero operations goal.
[Add row]

(4.6) Does your organization have an environmental policy that addresses environmental issues?

	Does your organization have any environmental policies?
	Select from: ☑ Yes

[Fixed row]

(4.6.1) Provide details of your environmental policies.

Row 1

(4.6.1.1) Environmental issues covered

Select all that apply

☑ Climate change

(4.6.1.2) Level of coverage

Select from:

☑ Organization-wide

(4.6.1.3) Value chain stages covered

Select all that apply

☑ Direct operations

☑ Upstream value chain

(4.6.1.4) Explain the coverage

Our policy covers all of our business operations and points to our Business Code of Conduct for Suppliers and Other Trading Partners, which sets expectations for our suppliers for sustainability

(4.6.1.5) Environmental policy content

Environmental commitments

☑ Commitment to comply with regulations and mandatory standards

☑ Commitment to take environmental action beyond regulatory compliance

☑ Commitment to stakeholder engagement and capacity building on environmental issues

☑ Other environmental commitment, please specify **:**Environmental Issues

Climate-specific commitments

☑ Commitment to net-zero emissions

☑ Other climate-related commitment, please specify :By 2030, 50% of total electricity from renewable sources.

(4.6.1.6) Indicate whether your environmental policy is in line with global environmental treaties or policy goals

Select all that apply

☑ No, and we do not plan to align in the next two years

(4.6.1.7) Public availability

Select from:

☑ Publicly available

(4.6.1.8) Attach the policy

EHS Policy Webpage.pdf
[Add row]

(4.10) Are you a signatory or member of any environmental collaborative frameworks or initiatives?

(4.10.1) Are you a signatory or member of any environmental collaborative frameworks or initiatives?

Select from:

☑ Yes

(4.10.2) Collaborative framework or initiative

Select all that apply

☑ Other, please specify :IAEG; Corporate Eco Forum

(4.10.3) Describe your organization’s role within each framework or initiative

Northrop Grumman was a founding member of IAEG (International Aerospace Environmental Group), a non-profit organization of global aerospace companies created to collaborate on, and share, innovative environmental solutions for the industry. Northrop Grumman participates in IAEG workgroups that enhance collaboration and frameworks related to environmental issues. For example, Work Group 3 (GHG Management and Reporting) of IAEG was established to address the issue of GHG accounting and reporting by aerospace companies specifically to promote industry wide GHG emissions accounting and reporting and to drive consistent practices within the industry. The group has developed the GHG Reporting Guidance for the Aerospace industry as a supplement to the greenhouse gas protocol, has published a guidance document for the industry in support of Scope 3 reporting on Capital Goods and Services. In addition, we support the efforts of Work Group 11, Aerospace Industry ESG Engagement, which has been chartered to establish a voluntary sectoral framework for ESG engagement. Northrop Grumman is a member of the Corporate Eco Forum (CEF). The CEF is a membership organization comprised of Fortune and Global 500 companies that demonstrate a serious commitment to sustainability as a business strategy issue. CEF drives year-round senior executive dialogue, supports peer-to-peer learning, and spurs collaborations to advance solutions on the topics our members prioritize. CEF was founded in 2008 after extensive interviews with over 70 global business leaders revealed the need for a neutral forum for senior executives to speak candidly with their peers on sustainability challenges, best practices and innovation. We participate in events, trainings and meetings throughout the year, as well as in research and special initiatives developed by CEF.
[Fixed row]

(4.11) In the reporting year, did your organization engage in activities that could directly or indirectly influence policy, law, or regulation that may (positively or negatively) impact the environment?

(4.11.1) External engagement activities that could directly or indirectly influence policy, law, or regulation that may impact the environment

Select all that apply

☑ Yes, we engaged indirectly through, and/or provided financial or in-kind support to a trade association or other intermediary organization or individual whose activities could influence policy, law, or regulation

(4.11.2) Indicate whether your organization has a public commitment or position statement to conduct your engagement activities in line with global environmental treaties or policy goals

Select from:

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

(4.11.5) Indicate whether your organization is registered on a transparency register

Select from:

☑ Yes

(4.11.6) Types of transparency register your organization is registered on

Select all that apply

☑ Mandatory government register

(4.11.7) Disclose the transparency registers on which your organization is registered & the relevant ID numbers for your organization

Lobbying Disclosure Act of 1995, as amended by the Honest Leadership and Open Government Act of 2007 – House Registrant ID: 31641 /Senate Registrant ID: 29551

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

Northrop Grumman seeks engagements that are consistent with the company's overall climate strategy through collaboration and regular updates with leadership and stakeholder engagement groups within our organization, with our external stakeholders, and through our larger public and private partnerships. Internally, we engage with the Board of Director committees, the Chief Sustainability Officer, the Vice Presidents of Operations/Quality (Environmental Sustainability Executive Sponsors), Environmental, Health and Safety Leadership Committee (ELC), the Facilities Working Group (FWG), Government Relations, and Communications, among others. These organizations collaboratively monitor regulations and proposals related to environmental policy, including providing guidance through facility operations management team meetings on these policies. Close coordination across the company provides the environmental sustainability program with further insights into policy activities and also provide the Government Relations team a go-to resource for environmental sustainability topics. Environmental technical experts also maintain regular communication with Northrop Grumman representatives serving within industry groups to ensure the activities of relevant associations are consistent with the company's climate strategy.
[Fixed row]

(4.11.2) Provide details of your indirect engagement on policy, law, or regulation that may (positively or negatively) impact the environment through trade associations or other intermediary organizations or individuals in the reporting year.

Row 1

(4.11.2.1) Type of indirect engagement

Select from:

☑ Indirect engagement via a trade association

(4.11.2.4) Trade association

North America

☑ Other trade association in North America, please specify :AIA (Aerospace Industries Association)

(4.11.2.5) Environmental issues relevant to the policies, laws, or regulations on which the organization or individual has taken a position

Select all that apply

☑ Climate change

(4.11.2.6) Indicate whether your organization's position is consistent with the organization or individual you engage with

Select from:

☑ Consistent

(4.11.2.7) Indicate whether your organization attempted to influence the organization or individual's position in the reporting year

Select from:

☑ No, we did not attempt to influence their position

(4.11.2.8) Describe how your organization's position is consistent with or differs from the organization or individual's position, and any actions taken to influence their position

Northrop Grumman is a member of the Aerospace Industries Association (AIA) and retains a position on the Executive Committee of this organization. As a member of AIA, Northrop Grumman participates in a number of different committees including those related to climate and environment. Northrop Grumman provides input on environmental and climate policy related to the aerospace industry, as well as related policy areas and proposed rules. Our position when engaging on these topics remains consistent with our stated company goals and priorities. Through these engagements, we provide input and perspective to inform development of comments, stated positions, and advocacy priorities. Our position is consistent with our climate goals.

(4.11.2.9) Funding figure your organization provided to this organization or individual in the reporting year (currency)

518810.09

(4.11.2.10) Describe the aim of this funding and how it could influence policy, law or regulation that may impact the environment

Northrop Grumman provides input on environmental and climate policy related to the aerospace industry, as well as related policy and regulatory areas.

(4.11.2.11) Indicate if you have evaluated whether your organization's engagement is aligned with global environmental treaties or policy goals

Select from:
☑ Yes, we have evaluated, and it is aligned

(4.11.2.12) Global environmental treaties or policy goals aligned with your organization's engagement on policy, law or regulation

Select all that apply
☑ Paris Agreement
[Add row]

(4.12.1) Provide details on the information published about your organization's response to environmental issues for this reporting year in places other than your CDP response. Please attach the publication.

Row 1

(4.12.1.1) Publication

Select from:
☑ In voluntary sustainability reports

(4.12.1.3) Environmental issues covered in publication

Select all that apply
☑ Climate change

☑ Water
☑ Biodiversity

(4.12.1.4) Status of the publication

Select from:
☑ Complete

(4.12.1.5) Content elements

Select all that apply
☑ Strategy
☑ Governance
☑ Emission targets
☑ Emissions figures
☑ Risks & Opportunities
☑ Other, please specify

(4.12.1.6) Page/section reference

In voluntary sustainability report 7, 8, 12-14, 53-66

(4.12.1.7) Attach the relevant publication

2023-sustainability-report.pdf

(4.12.1.8) Comment

N/A

Row 2

(4.12.1.1) Publication

Select from:

☑ In voluntary sustainability reports

(4.12.1.3) Environmental issues covered in publication

Select all that apply

☑ Climate change

☑ Water

(4.12.1.4) Status of the publication

Select from:

☑ Complete

(4.12.1.5) Content elements

Select all that apply

☑ Strategy

☑ Governance

☑ Emission targets

☑ Emissions figures

☑ Risks & Opportunities

☑ Other, please specify

(4.12.1.6) Page/section reference

TCFD Report 1-37

(4.12.1.7) Attach the relevant publication

20220330-Northrop-Grumman-TCFD-Report_Final.pdf

(4.12.1.8) Comment

N/A

Row 3

(4.12.1.1) Publication

Select from:

☑ In mainstream reports

(4.12.1.3) Environmental issues covered in publication

Select all that apply

☑ Climate change

☑ Water

(4.12.1.4) Status of the publication

Select from:

☑ Complete

(4.12.1.5) Content elements

Select all that apply

☑ Risks & Opportunities

☑ Emission targets

☑ Other, please specify

(4.12.1.6) Page/section reference

In mainstream reports 8, 14,16

(4.12.1.7) Attach the relevant publication

2023 Annual Report.pdf

(4.12.1.8) Comment

N/A

Row 4

(4.12.1.1) Publication

Select from:

☑ In other regulatory filings

(4.12.1.3) Environmental issues covered in publication

Select all that apply

☑ Climate change

☑ Water

(4.12.1.4) Status of the publication

Select from:

☑ Complete

(4.12.1.5) Content elements

Select all that apply

☑ Governance

☑ Emission targets

☑ Other, please specify

(4.12.1.6) Page/section reference

In other regulatory filings 1, 37-39, 60, 62

(4.12.1.7) Attach the relevant publication

2024-Proxy-Statement.pdf

(4.12.1.8) Comment

N/A
[Add row]

C5. Business strategy

(5.1) Does your organization use scenario analysis to identify environmental outcomes?

Climate change

(5.1.1) Use of scenario analysis

Select from:
☑ Yes

(5.1.2) Frequency of analysis

Select from:
☑ Not defined
[Fixed row]

(5.1.1) Provide details of the scenarios used in your organization's scenario analysis.

Climate change

(5.1.1.1) Scenario used

Climate transition scenarios
☑ IEA SDS

(5.1.1.3) Approach to scenario

Select from:
☑ Qualitative and quantitative

(5.1.1.4) Scenario coverage

Select from:

☑ Organization-wide

(5.1.1.5) Risk types considered in scenario

Select all that apply

☑ Policy

(5.1.1.6) Temperature alignment of scenario

Select from:

☑ 1.6ºC - 1.9ºC

(5.1.1.7) Reference year

2021

(5.1.1.8) Timeframes covered

Select all that apply

☑ 2025

☑ 2030

☑ 2040

☑ 2050

(5.1.1.9) Driving forces in scenario

Regulators, legal and policy regimes

☑ Global regulation

☑ Level of action (from local to global)

☑ Global targets

☑ Methodologies and expectations for science-based targets

Macro and microeconomy

☑ Domestic growth

(5.1.1.10) Assumptions, uncertainties and constraints in scenario

Using information from scientific studies performed by the IEA and other available energy and policy projections, we determined and modeled the characteristics associated with IEA's Stated Policies Scenario (STEPS) and Sustainable Development Scenario (SDS) climate change scenarios from present day through 2050. We also considered two potential emissions paths to quantify the potential carbon cost associated with each under the defined time horizons and climate scenarios. The first of these represents a scenario that does not reflect consideration of Northrop Grumman's Net Zero operations commitment and so includes no expected GHG reductions. Although we do not expect this scenario to occur, we modeled this to reflect the potential risk to our operations in the absence of a Net Zero commitment. The second scenario reflects the potential impact of achieving our commitment to Net Zero operations by 2035. Our model applied a simplified approach to emissions reductions. We will continue to refine this analysis in the future. We did not explicitly model, for example, the emergence of the cost of a transition to renewable energy generation sources that may arise in the future. In addition to different climate scenarios and GHG strategies, we separately projected carbon prices for the operating regions in which Northrop Grumman observes significant GHG emissions (U.S., U.K. and E.U. countries with and without a Net Zero target, and Australia) under each climate change scenario. We calculated the direct Scope 1 carbon price impact based upon these projections in conjunction with Scope 1 emissions projections by site under both future GHG strategies and relevant time horizons. Indirect Scope 2 carbon price impacts were modeled through the increase in electricity costs to our business (assumed to be passed through from electric utilities). We separately projected electricity prices for the operational regions listed above under each climate change scenario. The indirect Scope 2 carbon price impact was calculated based on these projections, in conjunction with energy consumption projections by site, under both future GHG strategies.

(5.1.1.11) Rationale for choice of scenario

To understand the potential impacts of carbon pricing, we chose two scenarios for our analysis based upon the IEA Stated Policies Scenario STEPS (2.6C) and SDS (1.5-to-2C), across a time horizon spanning from a base year of 2021 to 2050. For the purpose of modelling the impact of carbon pricing, SDS represents IEA's view on the policy necessary for an orderly transition to a low-carbon economy in support of global temperature increases well below 2C. SDS assumes a near-term surge in clean energy policies and investments to achieve sustainable energy objectives in line with the Paris Agreement, including universal access to modern energy and air quality goals. Although some assumptions made by the IEA may seem aggressive relative to current trends, they are modelled as presented for standardization purposes and best practices to allow us to understand the impact to our business under a 1.5-to-2C warming scenario. We believe these two scenarios provide a useful comparison between existing policy (STEPS) and what would be necessary to avoid the worst physical impacts of climate change (SDS).

Climate change

(5.1.1.1) Scenario used

Climate transition scenarios

☑ IEA STEPS (previously IEA NPS)

(5.1.1.3) Approach to scenario

Select from:

☑ Quantitative

(5.1.1.4) Scenario coverage

Select from:

☑ Organization-wide

(5.1.1.5) Risk types considered in scenario

Select all that apply

☑ Policy

(5.1.1.6) Temperature alignment of scenario

Select from:

☑ 2.5ºC - 2.9ºC

(5.1.1.7) Reference year

2021

(5.1.1.8) Timeframes covered

Select all that apply

☑ 2025

☑ 2030

☑ 2040

☑ 2050

(5.1.1.9) Driving forces in scenario

Regulators, legal and policy regimes

☑ Global regulation

☑ Level of action (from local to global)

☑ Global targets

Macro and microeconomy

☑ Domestic growth

(5.1.1.10) Assumptions, uncertainties and constraints in scenario

Using information from scientific studies performed by the IEA and other available energy and policy projections, we determined and modeled the characteristics associated with IEA's STEPS and SDS climate change scenarios from present day through 2050. We also considered two potential emissions paths to quantify the potential carbon cost associated with each under the defined time horizons and climate scenarios. The first of these represents a scenario that does not reflect consideration of Northrop Grumman's Net Zero operations commitment and so includes no expected GHG reductions. Although we do not expect this scenario to occur, we modeled this to reflect the potential risk to our operations in the absence of a Net Zero commitment. The second scenario reflects the potential impact of achieving our commitment to Net Zero operations by 2035. Our model applied a simplified approach to emissions reductions. We will continue to refine this analysis in the future. We did not explicitly model, for example, the emergence of the cost of a transition to renewable energy generation sources that may arise in the future. In addition to different climate scenarios and GHG strategies, we separately projected carbon prices for the operating regions in which Northrop Grumman observes significant GHG emissions (U.S., U.K. and E.U. countries with and without a Net Zero operations target, and Australia) under each climate change scenario. We calculated the direct Scope 1 carbon price impact based upon these projections in conjunction with Scope 1 emissions projections by site under both future GHG strategies and relevant time horizons. Indirect Scope 2 carbon price impacts were modeled through the increase in electricity costs to our business (assumed to be passed through from electric utilities). We separately projected electricity prices for the operational regions listed above under each climate change scenario. The indirect Scope 2 carbon price impact was calculated based on these projections, in conjunction with energy consumption projections by site, under both future GHG strategies.

(5.1.1.11) Rationale for choice of scenario

To understand the potential impacts of carbon pricing, we chose two scenarios for our analysis based upon the IEA STEPS (2.6C) and SDS (1.5-to-2C), across a time horizon spanning from a base year of 2021 to 2050. For the purpose of modelling the impact of carbon pricing, STEPS considers only currently enacted carbon policy (which aligns with a 2.6C increase in temperature by 2100 relative to pre-industrial levels). STEPS is based on policies in place as of mid-2021. It includes long-term energy and climate targets only to the extent that they are backed up by specific governmental or regulatory policies. Under STEPS, the share of renewable energy is gradually increasing, and accounts for over 40% of electricity generation by 2040. Renewables are even more prevalent than in STEPS, with all advanced economies reaching Net Zero emissions by 2050. Although some assumptions made by the IEA may seem aggressive relative to current trends, they are modelled as presented for standardization purposes and best practices to allow us to understand the impact to our business under a 1.5-to-2C warming scenario. We believe

these two scenarios provide a useful comparison between existing policy (STEPS) and what would be necessary to avoid the worst physical impacts of climate change (SDS).

Climate change

(5.1.1.1) Scenario used

Physical climate scenarios

☑ RCP 2.6

(5.1.1.2) Scenario used SSPs used in conjunction with scenario

Select from:

☑ No SSP used

(5.1.1.3) Approach to scenario

Select from:

☑ Qualitative

(5.1.1.4) Scenario coverage

Select from:

☑ Organization-wide

(5.1.1.5) Risk types considered in scenario

Select all that apply

☑ Acute physical

☑ Chronic physical

(5.1.1.6) Temperature alignment of scenario

Select from:

☑ 1.6ºC - 1.9ºC

(5.1.1.7) Reference year

2021

(5.1.1.8) Timeframes covered

Select all that apply

☑ 2025

☑ 2030

☑ 2040

☑ 2050

(5.1.1.9) Driving forces in scenario

Local ecosystem asset interactions, dependencies and impacts

☑ Changes to the state of nature

☑ Speed of change (to state of nature and/or ecosystem services)

☑ Climate change (one of five drivers of nature change)

Regulators, legal and policy regimes

☑ Global regulation

☑ Level of action (from local to global)

☑ Global targets

(5.1.1.10) Assumptions, uncertainties and constraints in scenario

Our physical risk assessment assigned objective, peril-based risk scores to each of Northrop Grumman's site locations. A baseline (present day) score was given to each location for each peril type we analyzed, and this score was then projected into future time horizons. Projections were calculated by analyzing historically-observed weather data, current risk scores and weather projections under various climate change scenarios. Upon modeling the baseline and projected risk scores, we analyzed the results at site and regional levels to determine potential climate risk exposure and identified the locations and perils contributing the most risk.

(5.1.1.11) Rationale for choice of scenario

Representative Concentration Pathways (RCP) 2.6 and RCP 8.5 are two generally-accepted scenarios used for the purposes of discussing physical risk scenario testing, and we believe that they provide a useful contrast of best- and worst-case physical risk exposure. RCP 2.6 is characterized by substantial net negative GHG emissions by the year 2100. It assumes carbon transition policies are put in place and is largely aligned with the well-below 2C warming scenario described in the Paris Agreement.

Climate change

(5.1.1.1) Scenario used

Physical climate scenarios

☑ RCP 8.5

(5.1.1.2) Scenario used SSPs used in conjunction with scenario

Select from:

☑ No SSP used

(5.1.1.3) Approach to scenario

Select from:

☑ Qualitative

(5.1.1.4) Scenario coverage

Select from:

☑ Organization-wide

(5.1.1.5) Risk types considered in scenario

Select all that apply

☑ Acute physical

☑ Chronic physical

(5.1.1.6) Temperature alignment of scenario

Select from:

☑ 4.0ºC and above

(5.1.1.7) Reference year

2021

(5.1.1.8) Timeframes covered

Select all that apply

☑ 2025

☑ 2030

☑ 2040

☑ 2050

(5.1.1.9) Driving forces in scenario

Local ecosystem asset interactions, dependencies and impacts

☑ Changes to the state of nature

☑ Speed of change (to state of nature and/or ecosystem services)

☑ Climate change (one of five drivers of nature change)

Regulators, legal and policy regimes

☑ Global regulation

☑ Level of action (from local to global)

☑ Global targets

(5.1.1.10) Assumptions, uncertainties and constraints in scenario

Our physical risk assessment assigned objective, peril-based risk scores to each of Northrop Grumman's site locations. A baseline (present day) score was given to each location for each peril type we analyzed, and this score was then projected into future time horizons. Projections were calculated by analyzing historically-

observed weather data, current risk scores and weather projections under various climate change scenarios. Upon modeling the baseline and projected risk scores, we analyzed the results at site and regional levels to determine potential climate risk exposure and identified the locations and perils contributing the most risk.

(5.1.1.11) Rationale for choice of scenario

Representative Concentration Pathways (RCP) 2.6 and RCP 8.5 are two generally-accepted scenarios used for the purposes of discussing physical risk scenario testing, and we believe that they provide a useful contrast of best- and worst-case physical risk exposure. RCP 8.5 is characterized by very high emissions throughout the 21st century. Though considered relatively unlikely, this scenario would result in approximately 4.3C of warming as minimal additional effort is made to constrain GHG emissions. This is generally considered a "worst-case" climate change scenario.
[Add row]

(5.1.2) Provide details of the outcomes of your organization's scenario analysis.

Climate change

(5.1.2.1) Business processes influenced by your analysis of the reported scenarios

Select all that apply

☑ Risk and opportunities identification, assessment and management

☑ Strategy and financial planning

☑ Target setting and transition planning

(5.1.2.2) Coverage of analysis

Select from:

☑ Organization-wide

(5.1.2.3) Summarize the outcomes of the scenario analysis and any implications for other environmental issues

The time horizon included in our scenario analysis was from 2021 to 2050. Our transition scenario analysis focused on the potential carbon price impact to Northrop Grumman. The potential impact varies considerably across climate change scenarios, as the lower warming scenario (SDS) requires a more stringent policy implementation. In either scenario, the estimated direct impact of carbon pricing on our Scope 1 emissions, as produced by our model, is negligible due to our low Scope 1 emission levels. The primary source of potential cost from the implementation of carbon pricing is from purchased electricity costs (Scope 2 emissions) as utility companies pass the carbon price on their emissions through the cost of electricity. Our risk of carbon pricing can be decreased by achieving our commitment to Net Zero GHG emissions in our operations. Currently, we believe we are resilient in a carbon policy environment that is aligned to 1.5-to-2C. Our physical risk

assessment focused on the potential changes to the risk of flood, tornados, tropical cyclones and wildfires at all of our locations. Overall, Northrop Grumman's business is diversified geographically in both high and low warming scenarios, and no single peril presents a heavily concentrated risk across all locations. Business processes influenced: Our transition scenario analysis focused on carbon price indicated that Northrop Grumman could help mitigate this risk by reducing emissions. As a result, we took action to set our Net Zero operations goal, with an interim target of 50% reduction by 2030. By investing in achieving this emissions reduction outcome, we mitigate this risk identified by our transition scenario analysis.
[Fixed row]

(5.2) Does your organization's strategy include a climate transition plan?

(5.2.1) Transition plan

Select from:

☑ No, but we are developing a climate transition plan within the next two years

(5.2.15) Primary reason for not having a climate transition plan that aligns with a 1.5°C world

Select from:

☑ Other, please specify **:**Lack of available data for scope 3, Use of Sold Products

(5.2.16) Explain why your organization does not have a climate transition plan that aligns with a 1.5°C world

We share a high-level Net Zero operations transition plan in our annual Sustainability Report. This plan covers our goal to achieve our Net Zero operations goal, which includes Scope 1 and 2 emissions. Our strategy includes multiple facets – (1) sourcing renewable electricity, (2) identifying and implementing energy efficiency solutions across our sites and (3) engraining resource conservation and efficiency into operations decisions. Northrop Grumman is also pursuing other emissions reduction solutions including electrification, alternative fuels and energy monitoring. We expect that in order to reach Net Zero operations, approximately 10 percent of the overall emissions reduction from the 2019 baseline year will likely be addressed through carbon removals as the emissions will be from hard-to-abate sources. Within the next two years, we plan to develop a comprehensive transition plan and roadmap to achieving our Net Zero target. As noted elsewhere in this disclosure, due to the nature of our primary customer (the U.S. government, principally the Department of Defense), we have not completed an emissions calculation for Scope 3, Use of Sold Products, which limits our ability to fully align with a 1.5C transition plan, as defined by CDP.
[Fixed row]

(5.3) Have environmental risks and opportunities affected your strategy and/or financial planning?

(5.3.1) Environmental risks and/or opportunities have affected your strategy and/or financial planning

Select from:

☑ Yes, both strategy and financial planning

(5.3.2) Business areas where environmental risks and/or opportunities have affected your strategy

Select all that apply

☑ Products and services

☑ Upstream/downstream value chain

☑ Investment in R&D

☑ Operations

[Fixed row]

(5.3.1) Describe where and how environmental risks and opportunities have affected your strategy.

Products and services

(5.3.1.1) Effect type

Select all that apply

☑ Opportunities

(5.3.1.2) Environmental issues relevant to the risks and/or opportunities that have affected your strategy in this area

Select all that apply

☑ Climate change

(5.3.1.3) Describe how environmental risks and/or opportunities have affected your strategy in this area

Climate-related issues may increase demand by our customers for technologies and capabilities provided by Northrop Grumman that support environmental and weather research. From observations to decision support, Northrop Grumman has made the strategic business decision to develop and operate systems and services to deliver environmental intelligence through science, sensors and enterprise services. The time horizon for these activities is ongoing (short-, medium-, and long-term as specified in C2.1a). Northrop Grumman provides an array of products that support climate and earth monitoring activities being completed by our customers.

The data acquired from the systems we develop provide important information that is required to better understand the Earth's changing climate. The continued need for these systems provides further opportunity to leverage Northrop Grumman's capabilities

Upstream/downstream value chain

(5.3.1.1) Effect type

Select all that apply

☑ Risks

(5.3.1.2) Environmental issues relevant to the risks and/or opportunities that have affected your strategy in this area

Select all that apply

☑ Climate change

(5.3.1.3) Describe how environmental risks and/or opportunities have affected your strategy in this area

Climate/natural disaster issues are one of many characteristics integrated into our Global Supply Chain Risk Management strategy. We have a committee that meets monthly to identify, assess and monitor medium-term (5 to 10 years) supply chain risks across the enterprise in order to manage issues on an ongoing basis. Our strategy is influenced by the fact that our suppliers and subcontractors are subject to natural and environmental disasters that could affect their performance to our contracts and ultimately impact our operations.

Investment in R&D

(5.3.1.1) Effect type

Select all that apply

☑ Risks

☑ Opportunities

(5.3.1.2) Environmental issues relevant to the risks and/or opportunities that have affected your strategy in this area

Select all that apply

☑ Climate change

(5.3.1.3) Describe how environmental risks and/or opportunities have affected your strategy in this area

Climate-related risks and opportunities can have a direct impact on our investment in R&D due to the nature of our business. Our products and services are designed to meet contractual requirements of our customers, primarily the U.S. Government and principally the Department of Defense and intelligence community. Company-sponsored R&D investment strategy includes significant investment to support future technologies and mission solutions primarily related to government programs.

Operations

(5.3.1.1) Effect type

Select all that apply

☑ Risks

☑ Opportunities

(5.3.1.2) Environmental issues relevant to the risks and/or opportunities that have affected your strategy in this area

Select all that apply

☑ Climate change

(5.3.1.3) Describe how environmental risks and/or opportunities have affected your strategy in this area

Our strategy is influenced by the fact that our business is subject to disruption caused by natural and/or environmental disasters that could adversely affect our profitability and our overall financial position. We have significant operations located in regions that may be exposed to hurricanes and other damaging storms and natural disasters. We have implemented a Net Zero operations goal to anticipate these risks, and we are also implementing additional strategies in parallel. For example, a substantial business decision made as a result of integration of climate-related issues, specifically related to greenhouse gas emissions reductions, was the decision to look beyond just our goals and minimize our impact to the environment as our operations expand. This is being accomplished through investing in clean energy as well as building our portfolio of both onsite and offsite solar projects to support decarbonization. Sixteen percent of the electricity we used in 2023 came from renewable sources. To achieve our 50% renewable electricity goal by 2030, we are performing engineering studies and negotiating terms for a mix of onsite and offsite renewable energy opportunities across our locations. In support of onsite solar, we developed standard solar power purchase and site license agreements that can be utilized by sites throughout our portfolio. We have two onsite solar projects under active assessment and/or negotiation and four under development. Furthermore, we have commissioned a new study to evaluate the feasibility of hosting onsite solar on some of our environmental remediation sites. [Add row]

(5.3.2) Describe where and how environmental risks and opportunities have affected your financial planning.

Row 1

(5.3.2.1) Financial planning elements that have been affected

Select all that apply

☑ Revenues

☑ Indirect costs

☑ Capital expenditures

☑ Assets

(5.3.2.2) Effect type

Select all that apply

☑ Risks

☑ Opportunities

(5.3.2.3) Environmental issues relevant to the risks and/or opportunities that have affected these financial planning elements

Select all that apply

☑ Climate change

(5.3.2.4) Describe how environmental risks and/or opportunities have affected these financial planning elements

Our business is subject to disruption caused by natural and/or environmental disasters that could impact our business. We have significant operations located in regions that may be exposed to hurricanes and other damaging storms and natural disasters. We expect our facilities, operations, employees and communities in the future, particularly at facilities in coastal areas and areas prone to extreme weather events and water scarcity to continue to be at risk for future natural disasters or other weather events (which may be exacerbated by climate change). If a natural disaster occurs, our operations could be interrupted, our employees could be impacted, we could incur significant costs and our performance could be adversely affected. Disruptions could increase insurance and other operating costs, or result in a lack of available coverage. Although we take steps to mitigate these risks, including considering them in determining where to put new businesses, the damage and disruption resulting from natural disasters, which may increase, as well as delays in recovery, may be significant. If insurance or other sources are unavailable or insufficient to recover all costs or if we experience a significant disruption to our business due to a natural disaster, it could have a material adverse effect on our financial position, results of operations and/or cash flows. As outlined in Question 3.6.1, Northrop Grumman drives resource efficiency through capital expenditures required to achieve environmental sustainability program goals and objectives as well as to reduce operating costs. This includes expenditures for energy efficiency, LEED certified buildings, onsite renewable energy systems, water conservation, and solid waste diversion. As disclosed in our 2023 Sustainability Report, in 2023,

our execution of greenhouse gas emissions-reductions projects across the company are expected to reduce annual emissions by approximately 3,400 MTCO2e. Project examples include HVAC and boiler updates, lighting upgrades and energy management. In addition,17 of our buildings, representing 2.1 million sq. ft. of the company's footprint, have achieved a LEED or Energy Star rating.
[Add row]

(5.4) 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
	Select from: ☑ No, and we do not plan to in the next two years

[Fixed row]

(5.10) Does your organization use an internal price on environmental externalities?

(5.10.1) Use of internal pricing of environmental externalities

Select from:
☑ No, and we do not plan to in the next two years

(5.10.3) Primary reason for not pricing environmental externalities

Select from:
☑ Other, please specify **:**We use other mechanisms to incentivize carbon reductions

(5.10.4) Explain why your organization does not price environmental externalities

We use mechanisms other than pricing environmental externalities for incentivizing actions that contribute towards our carbon reduction targets and goals. We track carbon emissions and monitor progress across our business towards our environmental sustainability goals. We also have a non-financial metric related to our

emissions reduction goals which is a component of executive compensation. As disclosed in our 2024 Proxy Statement, in 2023, our non-financial metric was "annual progress towards achieving Net Zero greenhouse gas emissions in the Company's operations by 2035" and we "exceeded the annual target toward reducing greenhouse gas emissions, driving further progress towards our multi-year environmental sustainability goals."
[Fixed row]

(5.11) Do you engage with your value chain on environmental issues?

	Engaging with this stakeholder on environmental issues	Environmental issues covered
Suppliers	*Select from:* ☑ Yes	*Select all that apply* ☑ Climate change
Customers	*Select from:* ☑ Yes	*Select all that apply* ☑ Climate change
Investors and shareholders	*Select from:* ☑ Yes	*Select all that apply* ☑ Climate change
Other value chain stakeholders	*Select from:* ☑ Yes	*Select all that apply* ☑ Climate change

[Fixed row]

(5.11.1) Does your organization assess and classify suppliers according to their dependencies and/or impacts on the environment?

Climate change

(5.11.1.1) Assessment of supplier dependencies and/or impacts on the environment

Select from:
☑ Yes, we assess the dependencies and/or impacts of our suppliers

(5.11.1.2) Criteria for assessing supplier dependencies and/or impacts on the environment

Select all that apply

☑ Contribution to supplier-related Scope 3 emissions

(5.11.1.3) % Tier 1 suppliers assessed

Select from:

☑ Unknown

(5.11.1.4) Define a threshold for classifying suppliers as having substantive dependencies and/or impacts on the environment

For this engagement, we define our transportation suppliers as having an impact on Scope 3 transportation emissions.

(5.11.1.5) % Tier 1 suppliers meeting the thresholds for substantive dependencies and/or impacts on the environment

Select from:

☑ Unknown

[Fixed row]

(5.11.2) Does your organization prioritize which suppliers to engage with on environmental issues?

Climate change

(5.11.2.1) Supplier engagement prioritization on this environmental issue

Select from:

☑ Yes, we prioritize which suppliers to engage with on this environmental issue

(5.11.2.2) Criteria informing which suppliers are prioritized for engagement on this environmental issue

Select all that apply

☑ Strategic status of suppliers

☑ Other, please specify :Status as a Transportation provider

(5.11.2.4) Please explain

Throughout our global supply chain, we pursue opportunities to improve efficiency and reduce our greenhouse gas (GHG) emissions associated with transportation and logistics. We are proud that we have been a registered U.S. Environmental Protection Agency (EPA) SmartWay Transport Partner since 2008. Today, we use SmartWay Carrier Partners across our business to meet many of our freight transportation requirements. We also consider environmental impacts as part of our transportation management strategy. We continue to consolidate domestic shipments and switch from air to ocean freight carriers to further drive down GHG emissions for Scope 3 transportation where feasible. Where air freight carriers must be utilized, we have prioritized partnerships with providers who use sustainable aviation fuel and consolidate traffic at the container level. We are also pursuing opportunities to reduce emissions by modally diverting shipments from air to surface transportation through partnerships with logistics service providers (LSPs) who deploy zero emission vehicles (ZEVs) or utilize alternative fuels for the movement of our goods.
[Fixed row]

(5.11.5) Do your suppliers have to meet environmental requirements as part of your organization's purchasing process?

Climate change

(5.11.5.1) Suppliers have to meet specific environmental requirements related to this environmental issue as part of the purchasing process

Select from:
☑ Yes, suppliers have to meet environmental requirements related to this environmental issue, but they are not included in our supplier contracts

(5.11.5.2) Policy in place for addressing supplier non-compliance

Select from:
☑ Yes, we have a policy in place for addressing non-compliance

(5.11.5.3) Comment

In early 2024, we published an updated version of our "Standards of Business Conduct for Suppliers and Other Trading Partners" to incorporate leading sustainability practices. We request that suppliers acknowledge these standards. If we find that a seller is in violation of the code of conduct, Northrop Grumman may terminate the supplier relationship.
[Fixed row]

(5.11.6) Provide details of the environmental requirements that suppliers have to meet as part of your organization's purchasing process, and the compliance measures in place.

Climate change

(5.11.6.1) Environmental requirement

Select from:

☑ Other, please specify **:**Managing, measuring and wherever practicable, reducing GHG emissions; Applying environmental management system principles; Contractual language to seek data and remediate non-compliance

(5.11.6.2) Mechanisms for monitoring compliance with this environmental requirement

Select all that apply

☑ Other, please specify **:**We have a hotline to report any potential non-compliance observed at a supplier facility

(5.11.6.3) % tier 1 suppliers by procurement spend required to comply with this environmental requirement

Select from:

☑ 100%

(5.11.6.4) % tier 1 suppliers by procurement spend in compliance with this environmental requirement

Select from:

☑ 100%

(5.11.6.7) % tier 1 supplier-related scope 3 emissions attributable to the suppliers required to comply with this environmental requirement

Select from:

☑ None

(5.11.6.8) % tier 1 supplier-related scope 3 emissions attributable to the suppliers in compliance with this environmental requirement

Select from:

☑ None

(5.11.6.9) Response to supplier non-compliance with this environmental requirement

Select from:

☑ Exclude

(5.11.6.12) Comment

We expect all our suppliers to abide by our Standards of Business Conduct for Suppliers and Other Trading Partners, which includes expectations related to sustainability. Suppliers will not be onboarded if they do not acknowledge the Standards of Business Conduct; therefore, we expect 100% of our suppliers to be in compliance with these requirements. We do not currently have a full Scope 3 accounting for our supplier emissions; therefore we cannot estimate a percent of emissions attributable to suppliers.
[Add row]

(5.11.7) Provide further details of your organization's supplier engagement on environmental issues.

Climate change

(5.11.7.2) Action driven by supplier engagement

Select from:

☑ Emissions reduction

(5.11.7.3) Type and details of engagement

Information collection

☑ Collect GHG emissions data at least annually from suppliers

(5.11.7.4) Upstream value chain coverage

Select all that apply

☑ Tier 1 suppliers

(5.11.7.5) % of tier 1 suppliers by procurement spend covered by engagement

Select from:

☑ Unknown

(5.11.7.6) % of tier 1 supplier-related scope 3 emissions covered by engagement

Select from:

☑ Unknown

(5.11.7.9) Describe the engagement and explain the effect of your engagement on the selected environmental action

This engagement focuses on our domestic transportation and logistics suppliers. Northrop Grumman has been a registered EPA SmartWay Transport Partner since 2008. We use SmartWay Carrier Partners across our business to meet many of our freight transportation requirements. The SmartWay program also provides supplier emissions data that supports internal benchmarking and informs our supplier selection process. Northrop Grumman leverages the EPA SmartWay program to select transportation and logistics suppliers who have committed to the carrier partner program. SmartWay carrier partners commit to providing documented emissions metrics, demonstrating efficiency improvements and optimizing fuel economy. Northrop Grumman prioritizes selection of SmartWay carrier partners, and we have seen measured success with this engagement since, of the data managed by our logistics partner (approx. 60%), 99.6% of shipments were completed by SmartWay carrier companies. By engaging with SmartWay partners, Northrop Grumman is prioritizing suppliers committed to lowering emissions as a best practice, and can use the emissions metrics provided to make more informed decisions on the carriers and transportation modes we utilize. This metric provides us a solid foundation off which we are able to expand engagement with our transportation suppliers to identify other efficiencies including consolidating shipments and integrating sustainability requirements into our contracts.

(5.11.7.10) Engagement is helping your tier 1 suppliers meet an environmental requirement related to this environmental issue

Select from:

☑ No, this engagement is unrelated to meeting an environmental requirement

(5.11.7.11) Engagement is helping your tier 1 suppliers engage with their own suppliers on the selected action

Select from:

☑ No

[Add row]

(5.11.9) Provide details of any environmental engagement activity with other stakeholders in the value chain.

Climate change

(5.11.9.1) Type of stakeholder

Select from:

☑ Customers

(5.11.9.2) Type and details of engagement

Education/Information sharing

☑ Run an engagement campaign to educate stakeholders about the environmental impacts about your products, goods and/or services

(5.11.9.3) % of stakeholder type engaged

Select from:

☑ 76-99%

(5.11.9.4) % stakeholder-associated scope 3 emissions

Select from:

☑ Unknown

(5.11.9.5) Rationale for engaging these stakeholders and scope of engagement

As stated in our 2023 annual report, 86% of our sales are to the U.S. government, and as such, we engage significantly with them on a variety of environment-related topics including climate. Recent climate-related engagement activities with the U.S. Government include responding to the General Services Administration and Airbus requests to disclose climate-related activity via the CDP Supply Chain Program and communicating our climate priorities directly to our Government customers

to better understand how our climate priorities align and to identify opportunities to support our mutual ambitions around climate. We also engage directly with climate-focused offices within federal agencies.

(5.11.9.6) Effect of engagement and measures of success

Engaging in these climate-related requests and discussions has been impactful because it has enabled us to engage with 86% (based on sales) of our customer base, particularly those directly focused on sustainability-related policies. We can measure the success of these engagements by our achievement of a B on the CDP Supplier Engagement Rating Report in 2023.

Climate change

(5.11.9.1) Type of stakeholder

Select from:

☑ Investors and shareholders

(5.11.9.2) Type and details of engagement

Education/Information sharing

☑ Share information on environmental initiatives, progress and achievements

(5.11.9.3) % of stakeholder type engaged

Select from:

☑ 51-75%

(5.11.9.4) % stakeholder-associated scope 3 emissions

Select from:

☑ None

(5.11.9.5) Rationale for engaging these stakeholders and scope of engagement

At Northrop Grumman, we believe that regular, ongoing engagement with our shareholders is a critical component of our corporate governance framework. We have an extensive shareholder outreach program that facilitates robust engagement with our shareholders in a variety of formats throughout the year. These discussions

include key members of our leadership team and Board to ensure we understand our shareholders' top priorities. Every spring in advance of our annual meeting, and each fall in the off-season, we offer engagement opportunities to our top shareholders as part of our proxy-related outreach. Topics discussed include: shareholder proposals, executive compensation, financial performance, environmental goals, humans rights, and many others. In 2023, we engaged with shareholders representing 70% of institutional shares outstanding, and our Sustainability Report is available to all of our Shareholders on our IR website.

(5.11.9.6) Effect of engagement and measures of success

We have a proven record of adopting provisions or modifying practices as a result of shareholder engagement and feedback, emerging trends and corporate governance best practices. For example, in 2023, after considering shareholder inputs and discussions, we submitted a management proposal at our 2023 Annual Meeting to reduce the threshold required to call a special meeting from 25% to 15%. This proposal was overwhelmingly supported by our shareholders with approximately 99% support. We also adjusted our executive compensation program over the last several years to include Return on Invested Capital (ROIC) as part of our long-term financial metrics and to include non-financial metrics in our annual incentive plan. We remain committed to strong levels of engagement in the future to ensure continued alignment to shareholder interests and priorities.

Climate change

(5.11.9.1) Type of stakeholder

Select from:

☑ Other value chain stakeholder, please specify

(5.11.9.2) Type and details of engagement

Education/Information sharing

☑ Educate and work with stakeholders on understanding and measuring exposure to environmental risks

Innovation and collaboration

☑ Other innovation and collaboration, please specify **:**Engaging with industry peers to develop GHG reporting guidance for our industry

(5.11.9.3) % of stakeholder type engaged

Select from:

☑ 100%

(5.11.9.4) % stakeholder-associated scope 3 emissions

Select from:

☑ None

(5.11.9.5) Rationale for engaging these stakeholders and scope of engagement

Northrop Grumman is a founding member of the International Aerospace Environmental Group (IAEG) which was formed to develop collaborative approaches for global aerospace companies in the realm of environmental compliance and sustainability. Through the GHG Management and Reporting Workgroup #3, IAEG has developed GHG Reporting Guidance for the Aerospace Industry, a supplement to the GHG Protocol. We engage with 100% of our industry peers, as listed in our 2024 Proxy Statement, through this initiative.

(5.11.9.6) Effect of engagement and measures of success

The measure of success for this partner engagement is collaboration in development and adoption of the Guidance as well as the improvement in consistency in GHG emissions reporting within the aerospace industry.
[Add row]

(5.13) Has your organization already implemented any mutually beneficial environmental initiatives due to CDP Supply Chain member engagement?

(5.13.1) Environmental initiatives implemented due to CDP Supply Chain member engagement

Select from:

☑ No, and we do not plan to within the next two years

(5.13.2) Primary reason for not implementing environmental initiatives

Select from:

☑ Other, please specify **:**We have our own strategy for implementing emissions reduction activities. We engage with our customers, and consider their plans, where applicable, but our strategies and initiatives are not directly a result of these engagements.

(5.13.3) Explain why your organization has not implemented any environmental initiatives

We have our own strategy for implementing emissions reduction activities. We engage with our customers and consider their plans and feedback, where applicable, but our strategy and initiatives are not a direct result of these engagements.
[Fixed row]

C6. Environmental Performance - Consolidation Approach

(6.1) Provide details on your chosen consolidation approach for the calculation of environmental performance data.

Climate change

(6.1.1) Consolidation approach used

Select from:

☑ Operational control

(6.1.2) Provide the rationale for the choice of consolidation approach

Based on guidance from the GHG Protocol and other standards bodies, we take an operational control approach to reporting our emissions, which is consistent with our approach to collecting EHS information for internal metrics & regulatory compliance requirements.
[Fixed row]

C7. Environmental performance - Climate Change

(7.1) Is this your first year of reporting emissions data to CDP?

Select from:
☑ No

(7.1.1) 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?

	Has there been a structural change?
	Select all that apply ☑ No

[Fixed row]

(7.1.2) Has your emissions accounting methodology, boundary, and/or reporting year definition changed in the reporting year?

(7.1.2.1) Change(s) in methodology, boundary, and/or reporting year definition?

Select all that apply
☑ Yes, a change in methodology

(7.1.2.2) Details of methodology, boundary, and/or reporting year definition change(s)

Our reported Scope 3, category 4 Upstream Transportation emissions have been recalculated to reflect a correction in the emissions factor methodology.
[Fixed row]

(7.1.3) Have your organization's base year emissions and past years' emissions been recalculated as a result of any changes or errors reported in 7.1.1 and/or 7.1.2?

(7.1.3.1) Base year recalculation

Select from:
☑ Yes

(7.1.3.2) Scope(s) recalculated

Select all that apply
☑ Scope 1
☑ Scope 2, location-based
☑ Scope 2, market-based
☑ Scope 3

(7.1.3.3) Base year emissions recalculation policy, including significance threshold

Scope 1 Scope 2 [Location and Market-based] There were minor updates to our base year emissions (

(7.1.3.4) Past years' recalculation

Select from:
☑ Yes
[Fixed row]

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

Select all that apply

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

☑ Other, please specify :IAEG Aerospace GHG Reporting Guidance

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

	Scope 2, location-based	Scope 2, market-based	Comment
	Select from: ☑ We are reporting a Scope 2, location-based figure	*Select from:* ☑ We are reporting a Scope 2, market-based figure	*N/A*

[Fixed row]

(7.4) 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?

Select from:

☑ Yes

(7.4.1) Provide details of the sources of Scope 1, Scope 2, or Scope 3 emissions that are within your selected reporting boundary which are not included in your disclosure.

Row 1

(7.4.1.1) Source of excluded emissions

Mobile emissions for small fleets (

(7.4.1.2) Scope(s) or Scope 3 category(ies)

Select all that apply

☑ Scope 1

(7.4.1.3) Relevance of Scope 1 emissions from this source

Select from:

☑ Emissions are not relevant

(7.4.1.10) Explain why this source is excluded

Fuel consumption (diesel, gasoline and propane) for all reporting sites comprises 1.2% of the baseline total inventory. Therefore, it was concluded that mobile emissions associated with sites that have fewer than 10 vehicles are immaterial to the GHG inventory. This category is continuously monitored and was reflected in the NGC GHG inventory that received limited assurance through third party verification.

(7.4.1.11) Explain how you estimated the percentage of emissions this excluded source represents

*Mobile diesel, gasoline, and propane usage accounted for 10,950 MT CO2e emissions in 2023. Using an intensity metric of emissions per SF, we estimate that our emissions from mobile emissions for small fleets would be 4,530 MT CO2e. Our total gross S1 S2 emissions in 2023 was 710,270 therefore (4,530/710,270)*100 0.64 %.*

Row 2

(7.4.1.1) Source of excluded emissions

Non-utility fuel data for sites less than 100,000 square feet

(7.4.1.2) Scope(s) or Scope 3 category(ies)

Select all that apply

☑ Scope 1

(7.4.1.3) Relevance of Scope 1 emissions from this source

Select from:

☑ Emissions are not relevant

(7.4.1.10) Explain why this source is excluded

For sites less than 100,000 square feet, fuel deliveries that are not utility based (e.g., natural gas and propane) are excluded because they are not common at Northrop Grumman and are immaterial to the baseline inventory. This category is continuously monitored and was reflected in the NGC GHG inventory that received limited assurance through third party verification.

(7.4.1.11) Explain how you estimated the percentage of emissions this excluded source represents

Total stationary generator reporting (sites 100K or voluntary under the threshold) accounted for 8,030 MT CO2e emissions in 2023. Using an intensity metric of emissions per total square feet, we estimate that our emissions from non-utility fuel data for sites

Row 3

(7.4.1.1) Source of excluded emissions

Refrigerant emissions excluded for buildings less than 100,000 square feet

(7.4.1.2) Scope(s) or Scope 3 category(ies)

Select all that apply

☑ Scope 1

(7.4.1.3) Relevance of Scope 1 emissions from this source

Select from:

☑ Emissions are not relevant

(7.4.1.10) Explain why this source is excluded

A majority of manufacturing and testing is performed at Northrop Grumman sites and campuses that are greater than 100,000 sq.ft. The majority of buildings in the Northrop Grumman real estate portfolio that are less than 100,000 sq. ft are used primarily as office space and not for manufacturing operations. Thus, refrigerant emissions related to operations in these sites are associated with HVAC systems and considered immaterial. This category is continuously monitored and was reflected in the NGC GHG inventory that received limited assurance through third party verification.

(7.4.1.11) Explain how you estimated the percentage of emissions this excluded source represents

Total refrigerant emissions (sites 100K or voluntary under the threshold), accounted for 25,440 MT CO2e emissions in 2023 -- this includes both process and HVAC refrigerants. Using an intensity metric of emissions per total square feet, we estimate that our emissions from refrigerants for sites

Row 4

(7.4.1.1) Source of excluded emissions

Process emissions excluded for buildings less than 100,000 square feet

(7.4.1.2) Scope(s) or Scope 3 category(ies)

Select all that apply

☑ Scope 1

(7.4.1.3) Relevance of Scope 1 emissions from this source

Select from:

☑ Emissions are not relevant

(7.4.1.10) Explain why this source is excluded

A majority of manufacturing and testing is performed at the Northrop Grumman sites and campuses that are greater than 100,000 sq.ft. The majority of buildings in the Northrop Grumman real estate portfolio that are less than 100,000 sq. ft are used primarily as office space and not for manufacturing operations. Thus, any process emissions related to operations in these sites are considered immaterial. This category is continuously monitored and was reflected in the NGC GHG inventory that received limited assurance through third party verification.

(7.4.1.11) Explain how you estimated the percentage of emissions this excluded source represents

Total process emissions (sites 100K or voluntary under the threshold) accounted for 14,550 MT CO2e emissions in 2023. Using an intensity metric of emissions per total square feet, we estimate that our emissions from process emissions for sites

Row 5

(7.4.1.1) Source of excluded emissions

Emissions of PFCs from fire suppression systems

(7.4.1.2) Scope(s) or Scope 3 category(ies)

Select all that apply

☑ Scope 1

(7.4.1.3) Relevance of Scope 1 emissions from this source

Select from:

☑ Emissions are not relevant

(7.4.1.10) Explain why this source is excluded

Northrop Grumman tracks fire suppression system leaks and releases. In our base year, releases accounted for 0.13 percent of the GHG inventory and were deemed immaterial to the inventory. This category is continuously monitored and was reflected in the NGC GHG inventory that received limited assurance through third party verification.

(7.4.1.11) Explain how you estimated the percentage of emissions this excluded source represents

*Fire suppression system releases accounted for 1,075 MT CO2e emissions in 2019 (current base year). Our total gross S1 S2 emissions in 2023 was 710,270, therefore (1,075/710,270)*100 0.15%.*

Row 6

(7.4.1.1) Source of excluded emissions

Scope 3 category 1: Purchased goods and services

(7.4.1.2) Scope(s) or Scope 3 category(ies)

Select all that apply

☑ Scope 3: Purchased goods and services

(7.4.1.6) Relevance of Scope 3 emissions from this source

Select from:

☑ Emissions are relevant but not yet calculated

(7.4.1.9) Estimated percentage of total Scope 3 emissions this excluded source represents

0

(7.4.1.10) Explain why this source is excluded

Northrop Grumman spent approximately 12.4 billion domestically on subcontractors during the U.S. government's fiscal year 2023. Of this, 4.1 billion was awarded to small business suppliers, representing 33% of our total domestic spend. We have a large supply chain that may be multiple levels deep and are exploring ways to calculate/estimate Scope 3 emissions for purchased goods and services.

(7.4.1.11) Explain how you estimated the percentage of emissions this excluded source represents

0

Row 7

(7.4.1.1) Source of excluded emissions

Scope 3 category 2: Capital goods

(7.4.1.2) Scope(s) or Scope 3 category(ies)

Select all that apply

☑ Scope 3: Capital goods

(7.4.1.6) Relevance of Scope 3 emissions from this source

Select from:

☑ Emissions are relevant but not yet calculated

(7.4.1.9) Estimated percentage of total Scope 3 emissions this excluded source represents

0

(7.4.1.10) Explain why this source is excluded

Northrop Grumman spent approximately 12.4 billion domestically on subcontractors during the U.S. government's fiscal year 2023. Of this, 4.1 billion was awarded to small business suppliers, representing 33% of our total domestic spend. We have a large supply chain that may be multiple levels deep and are exploring ways to calculate/estimate Scope 3 emissions for purchased goods and services.

(7.4.1.11) Explain how you estimated the percentage of emissions this excluded source represents

0

Row 8

(7.4.1.1) Source of excluded emissions

Scope 3 category 8: Upstream leased assets

(7.4.1.2) Scope(s) or Scope 3 category(ies)

Select all that apply

☑ Scope 3: Upstream leased assets

(7.4.1.6) Relevance of Scope 3 emissions from this source

Select from:

☑ Emissions are not relevant

(7.4.1.9) Estimated percentage of total Scope 3 emissions this excluded source represents

0

(7.4.1.10) Explain why this source is excluded

Northrop Grumman reports emissions from leased spaces as part of Scope 1 and Scope 2 inventories since we consider leased space within our operational control. Therefore, we do not have additional emissions to report as part of this Scope 3 category.

(7.4.1.11) Explain how you estimated the percentage of emissions this excluded source represents

0

Row 9

(7.4.1.1) Source of excluded emissions

Scope 3 category 9: Downstream transportation and distribution

(7.4.1.2) Scope(s) or Scope 3 category(ies)

Select all that apply

☑ Scope 3: Downstream transportation and distribution

(7.4.1.6) Relevance of Scope 3 emissions from this source

Select from:

☑ Emissions are not relevant

(7.4.1.9) Estimated percentage of total Scope 3 emissions this excluded source represents

0

(7.4.1.10) Explain why this source is excluded

According to the Voluntary GHG Reporting Guidance for the Aerospace Industry (IAEG, 2016), downstream transportation and distribution emissions are most often captured in a customer's Scope 1 emissions or are more appropriately quantified in Scope 3 Category 4. Therefore, Category 9 is irrelevant to the aerospace industry. The International Aerospace Environmental Group (IAEG) is a non-profit organization of global aerospace companies created to collaborate on and share environmental solutions for the industry.

(7.4.1.11) Explain how you estimated the percentage of emissions this excluded source represents

0

Row 10

(7.4.1.1) Source of excluded emissions

Scope 3 category 10: Processing of sold products

(7.4.1.2) Scope(s) or Scope 3 category(ies)

Select all that apply

☑ Scope 3: Processing of sold products

(7.4.1.6) Relevance of Scope 3 emissions from this source

Select from:

☑ Emissions are not relevant

(7.4.1.9) Estimated percentage of total Scope 3 emissions this excluded source represents

0

(7.4.1.10) Explain why this source is excluded

Products and services provided by Northrop Grumman do not require further processing, transformation or inclusion in another product before use by the end consumer. This status is a function of Northrop Grumman's role as a prime contractor to the U.S. and allied governments. Where Northrop Grumman is a supplier to another prime contractor, post-processing is minimal and considered immaterial.

(7.4.1.11) Explain how you estimated the percentage of emissions this excluded source represents

0

Row 11

(7.4.1.1) Source of excluded emissions

0

(7.4.1.2) Scope(s) or Scope 3 category(ies)

Select all that apply

☑ Scope 3: Use of sold products

(7.4.1.6) Relevance of Scope 3 emissions from this source

Select from:

☑ Emissions are relevant but not yet calculated

(7.4.1.9) Estimated percentage of total Scope 3 emissions this excluded source represents

0

(7.4.1.10) Explain why this source is excluded

Northrop Grumman's customer base is primarily the U.S. Government, principally the Department of Defense and intelligence community. We also conduct business with foreign, state and local governments, as well as commercial customers. Our products and services are designed to meet the contractual requirements of our customers. Products are sold to government customers who take formal possession of the product. Use case scenarios of the products we sell to military or other national security customers are not public or easily estimable. While use of our sold products is a relevant portion of our emissions profile, we are not yet able to calculate it due to the nature of our business and customer requirements, Northrop Grumman believes that "relevant, not yet calculated" is the most appropriate available response.

(7.4.1.11) Explain how you estimated the percentage of emissions this excluded source represents

0

Row 12

(7.4.1.1) Source of excluded emissions

0

(7.4.1.2) Scope(s) or Scope 3 category(ies)

Select all that apply

☑ Scope 3: End-of-life treatment of sold products

(7.4.1.6) Relevance of Scope 3 emissions from this source

Select from:

☑ Emissions are not relevant

(7.4.1.9) Estimated percentage of total Scope 3 emissions this excluded source represents

0

(7.4.1.10) Explain why this source is excluded

Northrop Grumman's customer base is primarily the U.S. Government, principally the Department of Defense and intelligence community. We also conduct business with foreign, state and local governments, as well as commercial customers. Our products and services are designed to meet contractual requirements of our customers. Products are sold to government customers who take formal possession of the product. Customers have their own property disposition process for owned-property, especially products used for military and defense operations. Due to the nature of our business and customer requirements, Northrop Grumman believes that "not relevant, explanation provided" is the most appropriate available response.

(7.4.1.11) Explain how you estimated the percentage of emissions this excluded source represents

0

Row 13

(7.4.1.1) Source of excluded emissions

0

(7.4.1.2) Scope(s) or Scope 3 category(ies)

Select all that apply

☑ Scope 3: Franchises

(7.4.1.6) Relevance of Scope 3 emissions from this source

Select from:

☑ Emissions are not relevant

(7.4.1.9) Estimated percentage of total Scope 3 emissions this excluded source represents

0

(7.4.1.10) Explain why this source is excluded

Northrop Grumman does not own or operate franchises.

(7.4.1.11) Explain how you estimated the percentage of emissions this excluded source represents

0

Row 14

(7.4.1.1) Source of excluded emissions

0

(7.4.1.2) Scope(s) or Scope 3 category(ies)

Select all that apply

☑ Scope 3: Investments

(7.4.1.6) Relevance of Scope 3 emissions from this source

Select from:

☑ Emissions are not relevant

(7.4.1.9) Estimated percentage of total Scope 3 emissions this excluded source represents

0

(7.4.1.10) Explain why this source is excluded

Northrop Grumman is not a financial institution or financial services organization. Therefore, in accordance with the WRI Scope 3 Protocol, this category of emissions is not relevant to Northrop Grumman.

(7.4.1.11) Explain how you estimated the percentage of emissions this excluded source represents

0
[Add row]

(7.5) Provide your base year and base year emissions.

Scope 1

(7.5.1) Base year end

09/30/2019

(7.5.2) Base year emissions (metric tons CO2e)

275680

(7.5.3) Methodological details

Northrop Grumman tracks its Scope 1 emissions across the full portfolio of our facilities where we have operational control, which represents more than 99% of our global footprint. Our GHG inventory was developed in accordance with the GHG Protocol Corporate Standard and in alignment with the International Aerospace Environmental Group Greenhouse Gas Reporting Guidance, and includes CO2, CH4, N2O, HFCs, PFCs, SF6 and NF3. We report on environmental data on a government fiscal year (October-September). We use emissions factors from reputable sources such as the EPA and DEFRA and reference IPCC Fourth Assessment Report for Global Warming Potentials.

Scope 2 (location-based)

(7.5.1) Base year end

09/30/2019

(7.5.2) Base year emissions (metric tons CO2e)

534640

(7.5.3) Methodological details

Northrop Grumman tracks its Scope 2 emissions across the full portfolio of our facilities where we have operational control, which represents more than 99% of our global footprint. Our GHG inventory was developed in accordance with the GHG Protocol Corporate Standard and in alignment with the International Aerospace Environmental Group Greenhouse Gas Reporting Guidance, and includes CO2, CH4, N2O, HFCs, PFCs, SF6 and NF3. We report on environmental data on a government fiscal year (October-September). We use emissions factors from reputable sources such as the EPA and DEFRA and reference IPCC Fourth Assessment Report for Global Warming Potentials.

Scope 2 (market-based)

(7.5.1) Base year end

09/30/2019

(7.5.2) Base year emissions (metric tons CO2e)

524410

(7.5.3) Methodological details

Northrop Grumman tracks its Scope 2 emissions across the full portfolio of our facilities where we have operational control, which represents more than 99% of our global footprint. Our GHG inventory was developed in accordance with the GHG Protocol Corporate Standard and in alignment with the International Aerospace Environmental Group Greenhouse Gas Reporting Guidance, and includes CO2, CH4, N2O, HFCs, PFCs, SF6 and NF3. We report on environmental data on a government fiscal year (October-September). We use emissions factors from reputable sources such as the EPA and DEFRA and reference IPCC Fourth Assessment Report for Global Warming Potentials.

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

(7.5.1) Base year end

09/30/2019

(7.5.2) Base year emissions (metric tons CO2e)

31640

(7.5.3) Methodological details

Northrop Grumman calculated metric tonnes of CO2e due to transmission and distribution loss using the average U.S. nation-wide loss provided by the EPA (https://www.eia.gov/tools/faqs/faq.php?id105&t3). The nation-wide loss published by the EPA for eGRID 2016 was approximately 4.48%. Based on Northrop Grumman's purchased electricity for RY2019 (1,480,855,057 kWh), we calculated the amount of electricity that would have been needed to deliver those kWh taking into consideration a 4.48% loss. We then applied the eGRID2016 U.S. average emission factors, which resulted in 31,640 metric tonnes of CO2e due to transmission and distribution loss. The GWPs are consistent with our Scope 1 and 2 emissions inventory and come from the IPCC Fourth Assessment Report.

Scope 3 category 4: Upstream transportation and distribution

(7.5.1) Base year end

09/30/2019

(7.5.2) Base year emissions (metric tons CO2e)

4680

(7.5.3) Methodological details

Northrop Grumman is an EPA SmartWay partner and utilizes ground shipment data collected, managed and provided by our partner logistics organization. The primary domestic shipment and mileage data from Smartway & non-Smartway carriers is tracked through our partner's Freight Bill Audit & Payment (FBAP) System. Our logistics partner applies the SmartWay program's emission factors based on classification of each carrier and mode type to the primary mileage data per shipment. We assume that approximately 60% of our US domestic transportation data is managed by our third-party logistics management organization; given that we use similar suppliers for shipments not managed through our logistics partner, we estimate our total emissions by prorating the remaining 40%. Of our FBAP-managed data, approximately 96.1% of the emissions reported in this category are associated with shipments carried by SmartWay carrier partners. In 2023, we updated our calculation methodology to utilize SmartWay's emissions factors based on emissions per ton-mile (g CO2/ton-mile), rather than emissions per mile (g CO2/mile). This allows us to prorate emissions relative to the size of our shipments (which is often just a portion of a total truckload), rather than accounting for the total emissions from the entire truckload's mileage, thus causing a significant decrease in our emissions relative to that calculated in our previous methodology. As actual data is not available for 2019 and 2020, base year emissions are being held constant to 2021 emissions.

Scope 3 category 5: Waste generated in operations

(7.5.1) Base year end

09/30/2019

(7.5.2) Base year emissions (metric tons CO2e)

14570

(7.5.3) Methodological details

Northrop Grumman sites within our operational control boundary track their annual waste by category (commodity, product, unit, etc.) and by management method. Per EPA guidance, we the U.S. EPA Center for Corporate Climate Leadership GHG EF Hub to calculate the emissions associated with our waste management activities. The GWPs are consistent with our Scope 1 and 2 emissions inventory and come from the IPCC Fourth Assessment Report. Where waste types could not be readily mapped to the available material EFs, those wastes were conservatively assumed to be landfilled "Mixed MSW." The primary data collected comes from waste hauler-provided receipts demonstrating actual tonnage and the remainder is estimated based on applying a standard factor to facility headcount.

Scope 3 category 6: Business travel

(7.5.1) Base year end

09/30/2019

(7.5.2) Base year emissions (metric tons CO2e)

202750

(7.5.3) Methodological details

Data related to business travel is provided by Northrop Grumman's travel management system. Activity data includes number of hotel nights booked, rental car miles travelled, and the number of air and train miles travelled. Train travel is estimated based on previous years' actual data, as this data is no longer available in our travel management system. The emissions from air and train travel are calculated using emission factors (EFs) from the U.S. EPA Center for Corporate Climate Leadership GHG EF Hub. Emissions from hotel stays are calculated using the respective EFs from Carbon Fund. Emissions from car rentals are provided by the car rental suppliers. The GWPs are consistent with our Scope 1 and 2 emissions inventory and come from the IPCC Fourth Assessment Report. The GHG inventory for business travel achieved Limited Assurance via Third Party Verification from LRQA America’s Sustainability, Inc. A portion of emissions from car rentals are extrapolated based on spend data. 2019 data has been restated due to a minor update in our data management system that caused a recalculation of the business travel emissions data.

Scope 3 category 7: Employee commuting

(7.5.1) Base year end

09/30/2019

(7.5.2) Base year emissions (metric tons CO2e)

223090

(7.5.3) Methodological details

Employee commuting accounts for the emissions associated with employee travel to/from work. The emissions are calculated using emission factors from the U.S. EPA Center for Corporate Climate Leadership GHG EF Hub. The GWPs are consistent with our Scope 1 and 2 emissions inventory and come from the IPCC Fourth Assessment Report. Employee headcount is primary data from the Annual Report (10K) filing which includes all active NG employees. Estimating factors and averages used are from reputable public sources (e.g., EPA). Each business sector provides an average vehicle ridership (AVR) value; if not available, an average is used. The AVR value is multiplied by the number of employees per sector and an average fuel economy. That value is then multiplied by the emission factor to determine the total commuting emissions.

Scope 3 category 13: Downstream leased assets

(7.5.1) Base year end

09/30/2019

(7.5.2) Base year emissions (metric tons CO2e)

3110

(7.5.3) Methodological details

As of December 2019, Northrop Grumman had approximately 54 million square feet of floor space of which approximately 304,000 square feet were leased to third parties (Source: Northrop Grumman 2019 Annual Report, pg. 20). By multiplying the average MWh/sq ft and therms/sqft, we derived electricity & natural gas usage for the facilities Northrop Grumman leases to third parties. The emissions are calculated using emission factors from the U.S. EPA Center for Corporate Climate Leadership GHG Emission Factors Hub. The GWPs are consistent with our Scope 1 and 2 emissions inventory and come from the IPCC Fourth Assessment Report. [Fixed row]

(7.6) What were your organization’s gross global Scope 1 emissions in metric tons CO2e?

Reporting year

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

310610

(7.6.3) Methodological details

Northrop Grumman tracks its Scope 1 emissions across the full portfolio of our facilities where we have operational control, which represents more than 99% of our global footprint. Our GHG inventory was developed in accordance with the GHG Protocol Corporate Standard and in alignment with the International Aerospace Environmental Group Greenhouse Gas Reporting Guidance, and includes CO2, CH4, N2O, HFCs, PFCs, SF6 and NF3. We report on environmental data on a government fiscal year (October-September). We use emissions factors from reputable sources such as the EPA and DEFRA and reference IPCC Fourth Assessment Report for Global Warming Potentials.

Past year 1

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

282300

(7.6.2) End date

09/30/2022

(7.6.3) Methodological details

Northrop Grumman tracks its Scope 1 emissions across the full portfolio of our facilities where we have operational control, which represents more than 99% of our global footprint. Our GHG inventory was developed in accordance with the GHG Protocol Corporate Standard and in alignment with the International Aerospace Environmental Group Greenhouse Gas Reporting Guidance, and includes CO2, CH4, N2O, HFCs, PFCs, SF6 and NF3. We report on environmental data on a government fiscal year (October-September). We use emissions factors from reputable sources such as the EPA and DEFRA and reference IPCC Fourth Assessment Report for Global Warming Potentials.

Past year 2

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

266870

(7.6.2) End date

09/30/2021

(7.6.3) Methodological details

Northrop Grumman tracks its Scope 1 emissions across the full portfolio of our facilities where we have operational control, which represents more than 99% of our global footprint. Our GHG inventory was developed in accordance with the GHG Protocol Corporate Standard and in alignment with the International Aerospace Environmental Group Greenhouse Gas Reporting Guidance, and includes CO2, CH4, N2O, HFCs, PFCs, SF6 and NF3. We report on environmental data on a government fiscal year (October-September). We use emissions factors from reputable sources such as the EPA and DEFRA and reference IPCC Fourth Assessment Report for Global Warming Potentials.
[Fixed row]

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

Reporting year

(7.7.1) Gross global Scope 2, location-based emissions (metric tons CO2e)

498230

(7.7.2) Gross global Scope 2, market-based emissions (metric tons CO2e) (if applicable)

399650

(7.7.4) Methodological details

Northrop Grumman tracks its Scope 2 emissions across the full portfolio of our facilities where we have operational control, which represents more than 99% of our global footprint. Our GHG inventory was developed in accordance with the GHG Protocol Corporate Standard and in alignment with the International Aerospace Environmental Group Greenhouse Gas Reporting Guidance, and includes CO2, CH4, N2O, HFCs, PFCs, SF6 and NF3. We report on environmental data on a government fiscal year (October-September). We use emissions factors from reputable sources such as the EPA and DEFRA and reference IPCC Fourth Assessment Report for Global Warming Potentials.

Past year 1

(7.7.1) Gross global Scope 2, location-based emissions (metric tons CO2e)

475950

(7.7.2) Gross global Scope 2, market-based emissions (metric tons CO2e) (if applicable)

422300

(7.7.3) End date

09/30/2022

(7.7.4) Methodological details

Northrop Grumman tracks its Scope 2 emissions across the full portfolio of our facilities where we have operational control, which represents more than 99% of our global footprint. Our GHG inventory was developed in accordance with the GHG Protocol Corporate Standard and in alignment with the International Aerospace Environmental Group Greenhouse Gas Reporting Guidance, and includes CO2, CH4, N2O, HFCs, PFCs, SF6 and NF3. We report on environmental data on a government fiscal year (October-September). We use emissions factors from reputable sources such as the EPA and DEFRA and reference IPCC Fourth Assessment Report for Global Warming Potentials.

Past year 2

(7.7.1) Gross global Scope 2, location-based emissions (metric tons CO2e)

486070

(7.7.2) Gross global Scope 2, market-based emissions (metric tons CO2e) (if applicable)

476850

(7.7.3) End date

09/30/2021

(7.7.4) Methodological details

Northrop Grumman tracks its Scope 2 emissions across the full portfolio of our facilities where we have operational control, which represents more than 99% of our global footprint. Our GHG inventory was developed in accordance with the GHG Protocol Corporate Standard and in alignment with the International Aerospace Environmental Group Greenhouse Gas Reporting Guidance, and includes CO2, CH4, N2O, HFCs, PFCs, SF6 and NF3. We report on environmental data on a government fiscal year (October-September). We use emissions factors from reputable sources such as the EPA and DEFRA and reference IPCC Fourth Assessment Report for Global Warming Potentials.
[Fixed row]

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

Purchased goods and services

(7.8.1) Evaluation status

Select from:
☑ Relevant, not yet calculated

(7.8.5) Please explain

Northrop Grumman spent approximately 12.4 billion domestically on subcontractors during the U.S. government's fiscal year 2023. Of this, 4.1 billion was awarded to small business suppliers, representing 33% of our total domestic spend. We have a large supply chain that may be multiple levels deep and are exploring ways to calculate/estimate Scope 3 emissions for purchased goods and services.

Capital goods

(7.8.1) Evaluation status

Select from:
☑ Relevant, not yet calculated

(7.8.5) Please explain

Northrop Grumman spent approximately 12.4 billion domestically on subcontractors during the U.S. government's fiscal year 2023. Of this, 4.1 billion was awarded to small business suppliers, representing 33% of our total domestic spend. We have a large supply chain that may be multiple levels deep and are exploring ways to calculate/estimate Scope 3 emissions for purchased goods and services.

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

(7.8.1) Evaluation status

Select from:

☑ Relevant, calculated

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

28360

(7.8.3) Emissions calculation methodology

Select all that apply

☑ Average data method

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

0

(7.8.5) Please explain

Northrop Grumman calculated metric tonnes of CO2e due to distribution loss using the average U.S. nation-wide loss provided by the EPA (https://www.epa.gov/system/files/documents/2023-01/eGRID2021_technical_guide.pdf). The 2021 nation-wide loss published by the EPA was approximately 4.5%. Based on Northrop Grumman's purchased electricity for RY2023 (1,548,473 MWh), we calculated the amount of electricity that would have been needed to deliver those MWh, taking into consideration a 4.5% loss. We then calculated the kWh that were lost during distribution and applied the eGRID2021 U.S. average emission factor of 857.019 lb CO2e/MWh, which resulted in 28,364 metric tonnes of CO2e due to transmission and distribution loss. The primary kWh data used by Northrop Grumman comes from bill pay IT system. However, a 5.10% assumed distribution loss comes from EPA. Therefore, stating 0% of data comes from suppliers or value chain partners.

Upstream transportation and distribution

(7.8.1) Evaluation status

Select from:

☑ Relevant, calculated

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

4870

(7.8.3) Emissions calculation methodology

Select all that apply

☑ Supplier-specific method

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

60

(7.8.5) Please explain

Northrop Grumman is an EPA SmartWay partner and utilizes ground shipment data collected, managed and provided by our partner logistics organization. The primary domestic shipment and mileage data from Smartway & non-Smartway carriers is tracked through our partner's Freight Bill Audit & Payment (FBAP) System. The GWPs are consistent with our Scope 1 and Scope 2 emissions inventory and come from the IPCC Fourth Assessment Report (AR4). Our logistics partner applies the SmartWay program's emission factors based on classification of each carrier and mode type to the primary mileage data per shipment. We assume that approximately 60% of our US domestic transportation data is managed by our third-party logistics management organization; given that we use similar suppliers for shipments not managed through our logistics partner, we estimate our total emissions by prorating the remaining 40%. Of our FBAP-managed data, approximately 97.6% of the emissions reported in this category are associated with shipments carried by SmartWay carrier partners. In 2023, we updated our calculation methodology to utilize SmartWay's emissions factors based on emissions per ton-mile (g CO2/ton-mile), rather than emissions per mile (g CO2/mile). This allows us to prorate emissions relative to the size of our shipments (which is often just a portion of a total truckload), rather than accounting for the total emissions from the entire truckload's mileage, thus causing a significant decrease in our emissions relative to that calculated in our previous methodology.

Waste generated in operations

(7.8.1) Evaluation status

Select from:

☑ Relevant, calculated

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

14470

(7.8.3) Emissions calculation methodology

Select all that apply

☑ Waste-type-specific method

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

62

(7.8.5) Please explain

Northrop Grumman sites within our operational control boundary track their annual waste by category (commodity, product, unit, etc.) and by management method. Per EPA guidance, we use the U.S. EPA Center for Corporate Climate Leadership GHG EF Hub to calculate the emissions associated with our waste management activities. Where waste types could not be readily mapped to the available material EFs, those wastes were conservatively assumed to be landfilled "Mixed MSW." The primary data collected comes from waste hauler-provided receipts demonstrating actual tonnage and the remainder is estimated based on applying estimation factors (e.g., volume to density, container size and pickup schedule, facility headcount).

Business travel

(7.8.1) Evaluation status

Select from:

☑ Relevant, calculated

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

122830

(7.8.3) Emissions calculation methodology

Select all that apply

☑ Hybrid method

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

98

(7.8.5) Please explain

Data related to business travel is provided by Northrop Grumman's travel management system. Activity data includes number of hotel nights booked, rental car miles travelled, and the number of air and train miles travelled. Train travel is estimated based on previous years' actual data, as this data is no longer available in our travel management system. The emissions from air and train travel are calculated using emission factors (EFs) from the U.S. EPA Center for Corporate Climate Leadership GHG EF Hub. Emissions from hotel stays are calculated using the respective EFs from Carbon Fund. Emissions from car rentals are provided by the car rental suppliers. The GWPs are consistent with our Scope 1 and 2 emissions inventory and come from the IPCC Fourth Assessment Report. The GHG inventory for business travel achieved Limited Assurance via Third Party Verification from LRQA America's Sustainability, Inc. A portion of emissions from car rentals are extrapolated based on spend data.

Employee commuting

(7.8.1) Evaluation status

Select from:

☑ Relevant, calculated

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

381940

(7.8.3) Emissions calculation methodology

Select all that apply

☑ Average data method

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

7

(7.8.5) Please explain

Employee commuting accounts for the emissions associated with employee travel to/from work. The emissions are calculated using emission factors from the U.S. EPA Center for Corporate Climate Leadership GHG EF Hub. The GWPs are consistent with our Scope 1 and 2 emissions inventory and come from the IPCC Fourth Assessment Report. Employee headcount is primary data from the Annual Report (10K) filing which includes all active NG employees. Estimating factors and averages used are from reputable public sources (e.g., EPA). Each business sector provides an average vehicle ridership (AVR) value; if not available, an average is

used. The AVR value is multiplied by the number of employees per sector and an average fuel economy. That value is then multiplied by the emission factor to determine the total commuting emissions. Approximately 7% of the data is considered actual data from our value chain because it is collected & reported through compliance mechanisms.

Upstream leased assets

(7.8.1) Evaluation status

Select from:

☑ Not relevant, explanation provided

(7.8.5) Please explain

Northrop Grumman reports emissions from leased spaces as part of Scope 1 and Scope 2 inventories since we consider leased space within our operational control. Therefore, we do not have additional emissions to report as part of this Scope 3 category.

Downstream transportation and distribution

(7.8.1) Evaluation status

Select from:

☑ Not relevant, explanation provided

(7.8.5) Please explain

According to the Voluntary GHG Reporting Guidance for the Aerospace Industry (IAEG, 2016), downstream transportation and distribution emissions are most often captured in a customer's Scope 1 emissions or are more appropriately quantified in Scope 3 Category 4. Therefore, Category 9 is irrelevant to the aerospace industry. The International Aerospace Environmental Group (IAEG) is a non-profit organization of global aerospace companies created to collaborate on and share environmental solutions for the industry.

Processing of sold products

(7.8.1) Evaluation status

Select from:

☑ Not relevant, explanation provided

(7.8.5) Please explain

Products and services provided by Northrop Grumman do not require further processing, transformation or inclusion in another product before use by the end consumer. This status is a function of Northrop Grumman's role as a prime contractor to the U.S. and allied governments. Where Northrop Grumman is a supplier to another prime contractor, post-processing is minimal and considered immaterial.

Use of sold products

(7.8.1) Evaluation status

Select from:

☑ Relevant, not yet calculated

(7.8.5) Please explain

Northrop Grumman's customer base is primarily the U.S. Government, principally the Department of Defense and intelligence community. We also conduct business with foreign, state and local governments, as well as commercial customers. Our products and services are designed to meet contractual requirements of our customers. Products are sold to government customers who take formal possession of the product. Use case scenarios of the products we sell to military or other national security customers are not public or easily estimable. While use of our sold products is a relevant portion of our emissions profile, we are not yet able to calculate it due to the nature of our business and customer requirements, Northrop Grumman believes that "relevant, not yet calculated" is the most appropriate available response.

End of life treatment of sold products

(7.8.1) Evaluation status

Select from:

☑ Not relevant, explanation provided

(7.8.5) Please explain

Northrop Grumman's customer base is primarily the U.S. Government, principally the Department of Defense and intelligence community. We also conduct business with foreign, state and local governments, as well as commercial customers. Our products and services are designed to meet contractual requirements of our customers. Products are sold to government customers who take formal possession of the product. Customers have their own property disposition process for owned-property, especially products used for military and defense operations. Due to the nature of our business and customer requirements, Northrop Grumman believes that "not relevant, explanation provided" is the most appropriate available response.

Downstream leased assets

(7.8.1) Evaluation status

Select from:

☑ Not relevant, calculated

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

340

(7.8.3) Emissions calculation methodology

Select all that apply

☑ Average data method

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

0

(7.8.5) Please explain

As of December 2023, Northrop Grumman had approximately 51 million square feet of floor space of which approximately 37,000 square feet were leased to third parties. By multiplying the average MWh/sq ft and therms/sqft, we derived electricity & natural gas usage for the facilities Northrop Grumman leases to third parties. Using the U.S. national average electricity emission factor from eGRID2021 and natural gas emission factor from EPA eHUB2021, we calculated GHG emissions from downstream leased assets.

Franchises

(7.8.1) Evaluation status

Select from:

☑ Not relevant, explanation provided

(7.8.5) Please explain

Northrop Grumman does not own or operate franchises.

Investments

(7.8.1) Evaluation status

Select from:

☑ Not relevant, explanation provided

(7.8.5) Please explain

Northrop Grumman is not a financial institution or financial services organization. Therefore, in accordance with the WRI Scope 3 Protocol, this category of emissions is not relevant to Northrop Grumman.
[Fixed row]

(7.8.1) Disclose or restate your Scope 3 emissions data for previous years.

Past year 1

(7.8.1.1) End date

09/30/2022

(7.8.1.4) Scope 3: Fuel and energy-related activities (not included in Scopes 1 or 2) (metric tons CO2e)

32030

(7.8.1.5) Scope 3: Upstream transportation and distribution (metric tons CO2e)

4360

(7.8.1.6) Scope 3: Waste generated in operations (metric tons CO2e)

15390

(7.8.1.7) Scope 3: Business travel (metric tons CO2e)

110100

(7.8.1.8) Scope 3: Employee commuting (metric tons CO2e)

333000

(7.8.1.14) Scope 3: Downstream leased assets (metric tons CO2e)

2250

(7.8.1.19) Comment

N/A

Past year 2

(7.8.1.1) End date

09/30/2021

(7.8.1.4) Scope 3: Fuel and energy-related activities (not included in Scopes 1 or 2) (metric tons CO2e)

32560

(7.8.1.5) Scope 3: Upstream transportation and distribution (metric tons CO2e)

4680

(7.8.1.6) Scope 3: Waste generated in operations (metric tons CO2e)

15470

(7.8.1.7) Scope 3: Business travel (metric tons CO2e)

85440

(7.8.1.8) Scope 3: Employee commuting (metric tons CO2e)

288270

(7.8.1.14) Scope 3: Downstream leased assets (metric tons CO2e)

2170

(7.8.1.19) Comment

N/A
[Fixed row]

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

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

[Fixed row]

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

Row 1

(7.9.1.1) Verification or assurance cycle in place

Select from:

☑ Annual process

(7.9.1.2) Status in the current reporting year

Select from:

☑ Complete

(7.9.1.3) Type of verification or assurance

Select from:

☑ Limited assurance

(7.9.1.4) Attach the statement

2023 GHG Verification Statement.pdf

(7.9.1.5) Page/section reference

2

(7.9.1.6) Relevant standard

Select from:

☑ ISO14064-3

(7.9.1.7) Proportion of reported emissions verified (%)

100

[Add row]

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

Row 1

(7.9.2.1) Scope 2 approach

Select from:
☑ Scope 2 location-based

(7.9.2.2) Verification or assurance cycle in place

Select from:
☑ Annual process

(7.9.2.3) Status in the current reporting year

Select from:
☑ Complete

(7.9.2.4) Type of verification or assurance

Select from:
☑ Limited assurance

(7.9.2.5) Attach the statement

2023 GHG Verification Statement.pdf

(7.9.2.6) Page/ section reference

2

(7.9.2.7) Relevant standard

Select from:
☑ ISO14064-3

(7.9.2.8) Proportion of reported emissions verified (%)

100

Row 2

(7.9.2.1) Scope 2 approach

Select from:
☑ Scope 2 market-based

(7.9.2.2) Verification or assurance cycle in place

Select from:
☑ Annual process

(7.9.2.3) Status in the current reporting year

Select from:
☑ Complete

(7.9.2.4) Type of verification or assurance

Select from:
☑ Limited assurance

(7.9.2.5) Attach the statement

2023 GHG Verification Statement.pdf

(7.9.2.6) Page/ section reference

2

(7.9.2.7) Relevant standard

Select from:
☑ ISO14064-3

(7.9.2.8) Proportion of reported emissions verified (%)

100
[Add row]

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

Row 1

(7.9.3.1) Scope 3 category

Select all that apply
☑ Scope 3: Business travel

(7.9.3.2) Verification or assurance cycle in place

Select from:
☑ Annual process

(7.9.3.3) Status in the current reporting year

Select from:
☑ Complete

(7.9.3.4) Type of verification or assurance

Select from:
☑ Limited assurance

(7.9.3.5) Attach the statement

2023 GHG Verification Statement.pdf

(7.9.3.6) Page/section reference

2

(7.9.3.7) Relevant standard

Select from:
☑ ISO14064-3

(7.9.3.8) Proportion of reported emissions verified (%)

100
[Add row]

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

Select from:
☑ Increased

(7.10.1) 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 renewable energy consumption

(7.10.1.1) Change in emissions (metric tons CO2e)

44650

(7.10.1.2) Direction of change in emissions

Select from:

☑ Decreased

(7.10.1.3) Emissions value (percentage)

6.33

(7.10.1.4) Please explain calculation

*In 2023, we sourced 16% of our electricity from renewable sources. 100% of our electricity usage in Virginia and a portion of usage in West Virginia was offset with 102,047 MWh of Renewable Energy Certificates, as a part of our 15-year virtual power purchase agreement with Virigina. We account for the associated emissions reductions using the eGRID2021 emission factors. We continue to operate four other small on-site solar power systems at our sites. Emissions reductions associated with minor fluctuations in annual solar output and eGRID emission factor variance are negligible. We also increased the amount of renewable energy acquired from retail supply and unbundled procurement. The RY2022 total gross S1 S2 market based emissions reported to CDP in 2023 was 705,240 MT CO2e, therefore (44,650/705,240) * 100 6.33% total reduction in emissions due to additional renewable energy consumption.*

Other emissions reduction activities

(7.10.1.1) Change in emissions (metric tons CO2e)

3400

(7.10.1.2) Direction of change in emissions

Select from:

☑ Decreased

(7.10.1.3) Emissions value (percentage)

0.48

(7.10.1.4) Please explain calculation

*In 2023, we implemented innovative solutions through the execution of initiatives expected to save a total of 3,400 MT of carbon dioxide-equivalent (CO2e) annually. This includes 460 MT in boiler and HVAC upgrades, 430 MT in energy management and submetering, and 1,200 MT in LED lighting upgrades. The RY2022 total gross S1 S2 market based emissions reported to CDP in 2023 was 705,240 MT CO2e, therefore (3,400/705,240) * 100 0.48% total reduction in emissions due to emissions-reduction activities.*

Divestment

(7.10.1.1) Change in emissions (metric tons CO2e)

0

(7.10.1.2) Direction of change in emissions

Select from:

☑ No change

(7.10.1.3) Emissions value (percentage)

0

(7.10.1.4) Please explain calculation

NA

Acquisitions

(7.10.1.1) Change in emissions (metric tons CO2e)

0

(7.10.1.2) Direction of change in emissions

Select from:

☑ No change

(7.10.1.3) Emissions value (percentage)

0

(7.10.1.4) Please explain calculation

NA

Mergers

(7.10.1.1) Change in emissions (metric tons CO2e)

0

(7.10.1.2) Direction of change in emissions

Select from:
☑ No change

(7.10.1.3) Emissions value (percentage)

0

(7.10.1.4) Please explain calculation

NA

Change in output

(7.10.1.1) Change in emissions (metric tons CO2e)

53080

(7.10.1.2) Direction of change in emissions

Select from:
☑ Increased

(7.10.1.3) Emissions value (percentage)

7.53

(7.10.1.4) Please explain calculation

*Although our operations are growing to support new business, we continue to invest in emissions reduction initiatives and identify process improvements to increase efficiency. In 2023, we focused our investments in higher-impact emissions reduction initiatives that have longer implementation timelines. For example, we are diversifying our energy portfolio with renewables, conducting site-wide energy efficiency assessments at our major manufacturing sites, pursuing large-scale equipment replacements and planning for the ZEV transition. While the benefit of these investments was not fully realized in our 2023 performance, their impact will support progress towards our long-term goals. The RY 2022 total gross S1 2 market based emissions reported to CDP in 2023 was 705,240 MT CO2e, therefore (53,080/705,240) * 100 7.53% total increase in emissions due to change in output.*

Change in methodology

(7.10.1.1) Change in emissions (metric tons CO2e)

0

(7.10.1.2) Direction of change in emissions

Select from:

☑ No change

(7.10.1.3) Emissions value (percentage)

0

(7.10.1.4) Please explain calculation

NA

Change in boundary

(7.10.1.1) Change in emissions (metric tons CO2e)

0

(7.10.1.2) Direction of change in emissions

Select from:
☑ No change

(7.10.1.3) Emissions value (percentage)

0

(7.10.1.4) Please explain calculation

NA

Change in physical operating conditions

(7.10.1.1) Change in emissions (metric tons CO2e)

0

(7.10.1.2) Direction of change in emissions

Select from:
☑ No change

(7.10.1.3) Emissions value (percentage)

0

(7.10.1.4) Please explain calculation

NA

Unidentified

(7.10.1.1) Change in emissions (metric tons CO2e)

0

(7.10.1.2) Direction of change in emissions

Select from:
☑ No change

(7.10.1.3) Emissions value (percentage)

0

(7.10.1.4) Please explain calculation

NA

Other

(7.10.1.1) Change in emissions (metric tons CO2e)

0

(7.10.1.3) Emissions value (percentage)

0

(7.10.1.4) Please explain calculation

NA
[Fixed row]

(7.10.2) Are your emissions performance calculations in 7.10 and 7.10.1 based on a location-based Scope 2 emissions figure or a market-based Scope 2 emissions figure?

Select from:
☑ Market-based

(7.12) Are carbon dioxide emissions from biogenic carbon relevant to your organization?

Select from:
☑ No

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

Select from:
☑ Yes

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

Row 1

(7.15.1.1) Greenhouse gas

Select from:
☑ CO2

(7.15.1.2) Scope 1 emissions (metric tons of CO2e)

274560

(7.15.1.3) GWP Reference

Select from:
☑ IPCC Fourth Assessment Report (AR4 - 100 year)

Row 2

(7.15.1.1) Greenhouse gas

Select from:

☑ CH4

(7.15.1.2) Scope 1 emissions (metric tons of CO2e)

130

(7.15.1.3) GWP Reference

Select from:

☑ IPCC Fourth Assessment Report (AR4 - 100 year)

Row 3

(7.15.1.1) Greenhouse gas

Select from:

☑ N2O

(7.15.1.2) Scope 1 emissions (metric tons of CO2e)

390

(7.15.1.3) GWP Reference

Select from:

☑ IPCC Fourth Assessment Report (AR4 - 100 year)

Row 4

(7.15.1.1) Greenhouse gas

Select from:

☑ HFCs

(7.15.1.2) Scope 1 emissions (metric tons of CO2e)

23510

(7.15.1.3) GWP Reference

Select from:
☑ IPCC Fourth Assessment Report (AR4 - 100 year)

Row 5

(7.15.1.1) Greenhouse gas

Select from:
☑ PFCs

(7.15.1.2) Scope 1 emissions (metric tons of CO2e)

0

(7.15.1.3) GWP Reference

Select from:
☑ IPCC Fourth Assessment Report (AR4 - 100 year)

Row 6

(7.15.1.1) Greenhouse gas

Select from:
☑ SF6

(7.15.1.2) Scope 1 emissions (metric tons of CO2e)

2720

(7.15.1.3) GWP Reference

Select from:
☑ IPCC Fourth Assessment Report (AR4 - 100 year)

Row 7

(7.15.1.1) Greenhouse gas

Select from:
☑ NF3

(7.15.1.2) Scope 1 emissions (metric tons of CO2e)

2540

(7.15.1.3) GWP Reference

Select from:
☑ IPCC Fourth Assessment Report (AR4 - 100 year)

Row 8

(7.15.1.1) Greenhouse gas

Select from:
☑ Other, please specify **:**Chlorinated Hydrocarborns

(7.15.1.2) Scope 1 emissions (metric tons of CO2e)

0

(7.15.1.3) GWP Reference

Select from:
☑ IPCC Fourth Assessment Report (AR4 - 100 year)

Row 9

(7.15.1.1) Greenhouse gas

Select from:
☑ Other, please specify :CF4

(7.15.1.2) Scope 1 emissions (metric tons of CO2e)

150

(7.15.1.3) GWP Reference

Select from:
☑ IPCC Fourth Assessment Report (AR4 - 100 year)

Row 10

(7.15.1.1) Greenhouse gas

Select from:
☑ Other, please specify :C2F6

(7.15.1.2) Scope 1 emissions (metric tons of CO2e)

6460

(7.15.1.3) GWP Reference

Select from:
☑ IPCC Fourth Assessment Report (AR4 - 100 year)

Row 11

(7.15.1.1) Greenhouse gas

Select from:

☑ Other, please specify **:**C4F8

(7.15.1.2) Scope 1 emissions (metric tons of CO2e)

60

(7.15.1.3) GWP Reference

Select from:

☑ IPCC Fourth Assessment Report (AR4 - 100 year)

Row 12

(7.15.1.1) Greenhouse gas

Select from:

☑ Other, please specify **:**Fluorinated GHGs

(7.15.1.2) Scope 1 emissions (metric tons of CO2e)

90

(7.15.1.3) GWP Reference

Select from:

☑ IPCC Fourth Assessment Report (AR4 - 100 year)

[Add row]

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

Australia

(7.16.1) Scope 1 emissions (metric tons CO2e)

0

(7.16.2) Scope 2, location-based (metric tons CO2e)

830

(7.16.3) Scope 2, market-based (metric tons CO2e)

830

Belgium

(7.16.1) Scope 1 emissions (metric tons CO2e)

160

(7.16.2) Scope 2, location-based (metric tons CO2e)

10

(7.16.3) Scope 2, market-based (metric tons CO2e)

10

Canada

(7.16.1) Scope 1 emissions (metric tons CO2e)

2

(7.16.2) Scope 2, location-based (metric tons CO2e)

0

(7.16.3) Scope 2, market-based (metric tons CO2e)

0

Denmark

(7.16.1) Scope 1 emissions (metric tons CO2e)

0

(7.16.2) Scope 2, location-based (metric tons CO2e)

30

(7.16.3) Scope 2, market-based (metric tons CO2e)

30

France

(7.16.1) Scope 1 emissions (metric tons CO2e)

48

(7.16.2) Scope 2, location-based (metric tons CO2e)

70

(7.16.3) Scope 2, market-based (metric tons CO2e)

70

Germany

(7.16.1) Scope 1 emissions (metric tons CO2e)

440

(7.16.2) Scope 2, location-based (metric tons CO2e)

4420

(7.16.3) Scope 2, market-based (metric tons CO2e)

4420

Italy

(7.16.1) Scope 1 emissions (metric tons CO2e)

90

(7.16.2) Scope 2, location-based (metric tons CO2e)

1040

(7.16.3) Scope 2, market-based (metric tons CO2e)

1040

Japan

(7.16.1) Scope 1 emissions (metric tons CO2e)

0

(7.16.2) Scope 2, location-based (metric tons CO2e)

80

(7.16.3) Scope 2, market-based (metric tons CO2e)

80

Netherlands

(7.16.1) Scope 1 emissions (metric tons CO2e)

40

(7.16.2) Scope 2, location-based (metric tons CO2e)

40

(7.16.3) Scope 2, market-based (metric tons CO2e)

40

Norway

(7.16.1) Scope 1 emissions (metric tons CO2e)

0

(7.16.2) Scope 2, location-based (metric tons CO2e)

0

(7.16.3) Scope 2, market-based (metric tons CO2e)

0

Poland

(7.16.1) Scope 1 emissions (metric tons CO2e)

0

(7.16.2) Scope 2, location-based (metric tons CO2e)

160

(7.16.3) Scope 2, market-based (metric tons CO2e)

160

Republic of Korea

(7.16.1) Scope 1 emissions (metric tons CO2e)

20

(7.16.2) Scope 2, location-based (metric tons CO2e)

130

(7.16.3) Scope 2, market-based (metric tons CO2e)

130

Saudi Arabia

(7.16.1) Scope 1 emissions (metric tons CO2e)

0

(7.16.2) Scope 2, location-based (metric tons CO2e)

40

(7.16.3) Scope 2, market-based (metric tons CO2e)

40

Switzerland

(7.16.1) Scope 1 emissions (metric tons CO2e)

0

(7.16.2) Scope 2, location-based (metric tons CO2e)

0

(7.16.3) Scope 2, market-based (metric tons CO2e)

0

United Arab Emirates

(7.16.1) Scope 1 emissions (metric tons CO2e)

0

(7.16.2) Scope 2, location-based (metric tons CO2e)

60

(7.16.3) Scope 2, market-based (metric tons CO2e)

60

United Kingdom of Great Britain and Northern Ireland

(7.16.1) Scope 1 emissions (metric tons CO2e)

130

(7.16.2) Scope 2, location-based (metric tons CO2e)

520

(7.16.3) Scope 2, market-based (metric tons CO2e)

520

United States of America

(7.16.1) Scope 1 emissions (metric tons CO2e)

309680

(7.16.2) Scope 2, location-based (metric tons CO2e)

490800

(7.16.3) Scope 2, market-based (metric tons CO2e)

392220
[Fixed row]

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

Select all that apply
☑ By business division

(7.17.1) Break down your total gross global Scope 1 emissions by business division.

	Business division	Scope 1 emissions (metric ton CO2e)
Row 1	*Corporate*	*7900*
Row 2	*Aeronautics Systems*	*57640*
Row 3	*Defense Systems*	*35150*
Row 4	*Mission Systems*	*91980*
Row 5	*Space Systems*	*117940*

[Add row]

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

Select all that apply

☑ By business division

(7.20.1) 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)
Row 1	*Space Systems*	*167790*	*158470*
Row 2	*Aeronautics Systems*	*103880*	*92570*
Row 3	*Enterprise Services*	*4400*	*2260*
Row 4	*Defense Systems*	*87680*	*47920*
Row 5	*Mission Systems*	*134480*	*98430*

[Add row]

(7.22) Break down your gross Scope 1 and Scope 2 emissions between your consolidated accounting group and other entities included in your response.

Consolidated accounting group

(7.22.1) Scope 1 emissions (metric tons CO2e)

310610

(7.22.2) Scope 2, location-based emissions (metric tons CO2e)

498230

(7.22.3) Scope 2, market-based emissions (metric tons CO2e)

399650

(7.22.4) Please explain

Our consolidated financial statements include the accounts of Northrop Grumman and its subsidiaries and joint ventures or other investments for which we consolidate the financial results.

All other entities

(7.22.1) Scope 1 emissions (metric tons CO2e)

0

(7.22.2) Scope 2, location-based emissions (metric tons CO2e)

0

(7.22.3) Scope 2, market-based emissions (metric tons CO2e)

0

(7.22.4) Please explain

Our consolidated financial statements include the accounts of Northrop Grumman and its subsidiaries and joint ventures or other investments for which we consolidate the financial results.
[Fixed row]

(7.27) What are the challenges in allocating emissions to different customers, and what would help you to overcome these challenges?

Row 1

(7.27.1) Allocation challenges

Select from:
☑ Diversity of product lines makes accurately accounting for each product/product line cost ineffective

(7.27.2) Please explain what would help you overcome these challenges

Northrop Grumman's customer base is primarily the U.S. Government, principally the Department of Defense and intelligence community. We also conduct business with foreign, state and local governments, as well as commercial customers. Due to the nature of our business, broad product portfolio, and customer requirements the allocation of emissions to an individual product or customer is difficult. Many products are sold to government customers who take formal possession of the product. Use case scenarios of the products we sell to military or other national security customers are not public or easily estimable. Consequently, we provide our full GHG inventory so that customers may allocate in accordance with their methodology.
[Add row]

(7.28) Do you plan to develop your capabilities to allocate emissions to your customers in the future?

(7.28.1) Do you plan to develop your capabilities to allocate emissions to your customers in the future?

Select from:

☑ No

(7.28.3) Primary reason for no plans to develop your capabilities to allocate emissions to your customers

Select from:

☑ Other, please specify **:**Broad product portfolio, customer requirements, sensitivity of information

(7.28.4) Explain why you do not plan to develop capabilities to allocate emissions to your customers

Northrop Grumman's customer base is primarily the U.S. Government, principally the Department of Defense and intelligence community. We also conduct business with foreign, state and local governments, as well as commercial customers. Our broad portfolio is aligned to support national security priorities and our solutions equip our customers with capabilities they need to connect, protect and advance humanity. Due to the nature of our business, broad product portfolio, and customer requirements,the allocation of emissions to an individual product is difficult.
[Fixed row]

(7.30) 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)	*Select from:* ☑ Yes
Consumption of purchased or acquired electricity	*Select from:* ☑ Yes
Consumption of purchased or acquired heat	*Select from:* ☑ No
Consumption of purchased or acquired steam	*Select from:* ☑ Yes
Consumption of purchased or acquired cooling	*Select from:*

	Indicate whether your organization undertook this energy-related activity in the reporting year
	☑ No
Generation of electricity, heat, steam, or cooling	*Select from:* ☑ Yes

[Fixed row]

(7.30.1) Report your organization's energy consumption totals (excluding feedstocks) in MWh.

Consumption of fuel (excluding feedstock)

(7.30.1.1) Heating value

Select from:
☑ Unable to confirm heating value

(7.30.1.2) MWh from renewable sources

0

(7.30.1.3) MWh from non-renewable sources

1442250

(7.30.1.4) Total (renewable and non-renewable) MWh

1442250

Consumption of purchased or acquired electricity

(7.30.1.1) Heating value

Select from:

☑ Unable to confirm heating value

(7.30.1.2) MWh from renewable sources

252480

(7.30.1.3) MWh from non-renewable sources

1333050

(7.30.1.4) Total (renewable and non-renewable) MWh

1585530

Consumption of purchased or acquired steam

(7.30.1.1) Heating value

Select from:

☑ Unable to confirm heating value

(7.30.1.2) MWh from renewable sources

0

(7.30.1.3) MWh from non-renewable sources

3060

(7.30.1.4) Total (renewable and non-renewable) MWh

3060

Consumption of self-generated non-fuel renewable energy

(7.30.1.1) Heating value

Select from:
☑ Unable to confirm heating value

(7.30.1.2) MWh from renewable sources

690

(7.30.1.4) Total (renewable and non-renewable) MWh

690

Total energy consumption

(7.30.1.1) Heating value

Select from:
☑ Unable to confirm heating value

(7.30.1.2) MWh from renewable sources

253170

(7.30.1.3) MWh from non-renewable sources

2778360

(7.30.1.4) Total (renewable and non-renewable) MWh

3031530
[Fixed row]

(7.30.6) 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	*Select from:* ☑ No
Consumption of fuel for the generation of heat	*Select from:* ☑ No
Consumption of fuel for the generation of steam	*Select from:* ☑ No
Consumption of fuel for the generation of cooling	*Select from:* ☑ No
Consumption of fuel for co-generation or tri-generation	*Select from:* ☑ No

[Fixed row]

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

Sustainable biomass

(7.30.7.1) Heating value

Select from:

☑ Unable to confirm heating value

(7.30.7.2) Total fuel MWh consumed by the organization

0

(7.30.7.8) Comment

NA

Other biomass

(7.30.7.1) Heating value

Select from:
☑ Unable to confirm heating value

(7.30.7.2) Total fuel MWh consumed by the organization

0

(7.30.7.8) Comment

NA

Other renewable fuels (e.g. renewable hydrogen)

(7.30.7.1) Heating value

Select from:
☑ Unable to confirm heating value

(7.30.7.2) Total fuel MWh consumed by the organization

0

(7.30.7.8) Comment

NA

Coal

(7.30.7.1) Heating value

Select from:

☑ Unable to confirm heating value

(7.30.7.2) Total fuel MWh consumed by the organization

0

(7.30.7.8) Comment

NA

Oil

(7.30.7.1) Heating value

Select from:

☑ Unable to confirm heating value

(7.30.7.2) Total fuel MWh consumed by the organization

0

(7.30.7.8) Comment

NA

Gas

(7.30.7.1) Heating value

Select from:

☑ Unable to confirm heating value

(7.30.7.2) Total fuel MWh consumed by the organization

1297690

(7.30.7.8) Comment

This is inclusive of our stationary natural gas usage.

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

(7.30.7.1) Heating value

Select from:
☑ Unable to confirm heating value

(7.30.7.2) Total fuel MWh consumed by the organization

144560

(7.30.7.8) Comment

This is inclusive of all other combustion of fuels, not including stationary natural gas.

Total fuel

(7.30.7.1) Heating value

Select from:
☑ Unable to confirm heating value

(7.30.7.2) Total fuel MWh consumed by the organization

1442250

(7.30.7.8) Comment

NA
[Fixed row]

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

Electricity

(7.30.9.1) Total Gross generation (MWh)

690

(7.30.9.2) Generation that is consumed by the organization (MWh)

690

(7.30.9.3) Gross generation from renewable sources (MWh)

690

(7.30.9.4) Generation from renewable sources that is consumed by the organization (MWh)

690

Heat

(7.30.9.1) Total Gross generation (MWh)

0

(7.30.9.2) Generation that is consumed by the organization (MWh)

0

(7.30.9.3) Gross generation from renewable sources (MWh)

0

(7.30.9.4) Generation from renewable sources that is consumed by the organization (MWh)

0

Steam

(7.30.9.1) Total Gross generation (MWh)

0

(7.30.9.2) Generation that is consumed by the organization (MWh)

0

(7.30.9.3) Gross generation from renewable sources (MWh)

0

(7.30.9.4) Generation from renewable sources that is consumed by the organization (MWh)

0

Cooling

(7.30.9.1) Total Gross generation (MWh)

0

(7.30.9.2) Generation that is consumed by the organization (MWh)

0

(7.30.9.3) Gross generation from renewable sources (MWh)

0

(7.30.9.4) Generation from renewable sources that is consumed by the organization (MWh)

0
[Fixed row]

(7.30.14) 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 7.7.

Row 1

(7.30.14.1) Country/area

Select from:
☑ United States of America

(7.30.14.2) Sourcing method

Select from:
☑ Unbundled procurement of energy attribute certificates (EACs)

(7.30.14.3) Energy carrier

Select from:
☑ Electricity

(7.30.14.4) Low-carbon technology type

Select from:
☑ Solar

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

136430

(7.30.14.6) Tracking instrument used

Select from:

☑ US-REC

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

Select from:

☑ United States of America

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

Select from:

☑ No

(7.30.14.10) Comment

NA

Row 2

(7.30.14.1) Country/area

Select from:

☑ United States of America

(7.30.14.2) Sourcing method

Select from:

☑ Unbundled procurement of energy attribute certificates (EACs)

(7.30.14.3) Energy carrier

Select from:

☑ Electricity

(7.30.14.4) Low-carbon technology type

Select from:

☑ Renewable energy mix, please specify **:**Mixture of wind and solar

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

24000

(7.30.14.6) Tracking instrument used

Select from:

☑ US-REC

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

Select from:

☑ United States of America

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

Select from:

☑ No

(7.30.14.10) Comment

NA

Row 3

(7.30.14.1) Country/area

Select from:

☑ United States of America

(7.30.14.2) Sourcing method

Select from:

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

(7.30.14.3) Energy carrier

Select from:

☑ Electricity

(7.30.14.4) Low-carbon technology type

Select from:

☑ Wind

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

4000

(7.30.14.6) Tracking instrument used

Select from:

☑ Contract

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

Select from:

☑ United States of America

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

Select from:

☑ No

(7.30.14.10) Comment

NA

Row 4

(7.30.14.1) Country/area

Select from:
☑ United States of America

(7.30.14.2) Sourcing method

Select from:
☑ Unbundled procurement of energy attribute certificates (EACs)

(7.30.14.3) Energy carrier

Select from:
☑ Electricity

(7.30.14.4) Low-carbon technology type

Select from:
☑ Solar

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

7500

(7.30.14.6) Tracking instrument used

Select from:

☑ US-REC

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

Select from:
☑ United States of America

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

Select from:
☑ Yes

(7.30.14.9) Commissioning year of the energy generation facility (e.g. date of first commercial operation or repowering)

2020

(7.30.14.10) Comment

NA

Row 5

(7.30.14.1) Country/area

Select from:
☑ United States of America

(7.30.14.2) Sourcing method

Select from:
☑ Retail supply contract with an electricity supplier (retail green electricity)

(7.30.14.3) Energy carrier

Select from:

☑ Electricity

(7.30.14.4) Low-carbon technology type

Select from:
☑ Wind

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

44500

(7.30.14.6) Tracking instrument used

Select from:
☑ Contract

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

Select from:
☑ United States of America

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

Select from:
☑ No

(7.30.14.10) Comment

NA

Row 6

(7.30.14.1) Country/area

Select from:

☑ United States of America

(7.30.14.2) Sourcing method

Select from:

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

(7.30.14.3) Energy carrier

Select from:

☑ Electricity

(7.30.14.4) Low-carbon technology type

Select from:

☑ Renewable energy mix, please specify **:**Mixture of wind and solar

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

515

(7.30.14.6) Tracking instrument used

Select from:

☑ Contract

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

Select from:

☑ United States of America

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

Select from:

☑ No

(7.30.14.10) Comment

NA

Row 7

(7.30.14.1) Country/area

Select from:
☑ United States of America

(7.30.14.2) Sourcing method

Select from:
☑ Retail supply contract with an electricity supplier (retail green electricity)

(7.30.14.3) Energy carrier

Select from:
☑ Electricity

(7.30.14.4) Low-carbon technology type

Select from:
☑ Wind

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

8380

(7.30.14.6) Tracking instrument used

Select from:
☑ Contract

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

Select from:

☑ United States of America

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

Select from:

☑ No

(7.30.14.10) Comment

NA

Row 8

(7.30.14.1) Country/area

Select from:

☑ United States of America

(7.30.14.2) Sourcing method

Select from:

☑ Unbundled procurement of energy attribute certificates (EACs)

(7.30.14.3) Energy carrier

Select from:

☑ Electricity

(7.30.14.4) Low-carbon technology type

Select from:

☑ Solar

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

25000

(7.30.14.6) Tracking instrument used

Select from:

☑ US-REC

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

Select from:

☑ United States of America

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

Select from:

☑ Yes

(7.30.14.9) Commissioning year of the energy generation facility (e.g. date of first commercial operation or repowering)

2022

(7.30.14.10) Comment

NA

Row 9

(7.30.14.1) Country/area

Select from:

☑ United States of America

(7.30.14.2) Sourcing method

Select from:

☑ Unbundled procurement of energy attribute certificates (EACs)

(7.30.14.3) Energy carrier

Select from:

☑ Electricity

(7.30.14.4) Low-carbon technology type

Select from:

☑ Wind

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

2155

(7.30.14.6) Tracking instrument used

Select from:

☑ US-REC

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

Select from:

☑ United States of America

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

Select from:

☑ Yes

(7.30.14.9) Commissioning year of the energy generation facility (e.g. date of first commercial operation or repowering)

2019

(7.30.14.10) Comment

NA
[Add row]

(7.30.16) Provide a breakdown by country/area of your electricity/heat/steam/cooling consumption in the reporting year.

Australia

(7.30.16.1) Consumption of purchased electricity (MWh)

1010

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

0

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

0

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

0

(7.30.16.6) Total electricity/heat/steam/cooling energy consumption (MWh)

1010.00

Belgium

(7.30.16.1) Consumption of purchased electricity (MWh)

30

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

0

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

0

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

0

(7.30.16.6) Total electricity/heat/steam/cooling energy consumption (MWh)

30.00

Canada

(7.30.16.1) Consumption of purchased electricity (MWh)

0

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

0

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

0

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

0

(7.30.16.6) Total electricity/heat/steam/cooling energy consumption (MWh)

0.00

Denmark

(7.30.16.1) Consumption of purchased electricity (MWh)

93950

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

0

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

0

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

0

(7.30.16.6) Total electricity/heat/steam/cooling energy consumption (MWh)

93950.00

France

(7.30.16.1) Consumption of purchased electricity (MWh)

1240

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

0

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

0

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

0

(7.30.16.6) Total electricity/heat/steam/cooling energy consumption (MWh)

1240.00

Germany

(7.30.16.1) Consumption of purchased electricity (MWh)

9270

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

0

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

0

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

0

(7.30.16.6) Total electricity/heat/steam/cooling energy consumption (MWh)

9270.00

Italy

(7.30.16.1) Consumption of purchased electricity (MWh)

2580

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

0

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

0

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

0

(7.30.16.6) Total electricity/heat/steam/cooling energy consumption (MWh)

2580.00

Japan

(7.30.16.1) Consumption of purchased electricity (MWh)

160

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

0

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

0

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

0

(7.30.16.6) Total electricity/heat/steam/cooling energy consumption (MWh)

160.00

Netherlands

(7.30.16.1) Consumption of purchased electricity (MWh)

100

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

0

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

0

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

0

(7.30.16.6) Total electricity/heat/steam/cooling energy consumption (MWh)

100.00

Norway

(7.30.16.1) Consumption of purchased electricity (MWh)

0

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

0

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

0

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

0

(7.30.16.6) Total electricity/heat/steam/cooling energy consumption (MWh)

0.00

Poland

(7.30.16.1) Consumption of purchased electricity (MWh)

210

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

0

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

0

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

0

(7.30.16.6) Total electricity/heat/steam/cooling energy consumption (MWh)

210.00

Republic of Korea

(7.30.16.1) Consumption of purchased electricity (MWh)

240

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

0

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

0

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

0

(7.30.16.6) Total electricity/heat/steam/cooling energy consumption (MWh)

240.00

Saudi Arabi

(7.30.16.1) Consumption of purchased electricity (MWh)

50

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

0

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

0

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

0

(7.30.16.6) Total electricity/heat/steam/cooling energy consumption (MWh)

50.00

Switzerland

(7.30.16.1) Consumption of purchased electricity (MWh)

30

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

0

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

0

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

0

(7.30.16.6) Total electricity/heat/steam/cooling energy consumption (MWh)

30.00

United Arab Emirates

(7.30.16.1) Consumption of purchased electricity (MWh)

90

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

0

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

0

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

0

(7.30.16.6) Total electricity/heat/steam/cooling energy consumption (MWh)

90.00

United Kingdom of Great Britain and Northern Ireland

(7.30.16.1) Consumption of purchased electricity (MWh)

2510

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

0

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

0

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

0

(7.30.16.6) Total electricity/heat/steam/cooling energy consumption (MWh)

2510.00

United States of America

(7.30.16.1) Consumption of purchased electricity (MWh)

1474060

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

690

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

3060

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

0

(7.30.16.6) Total electricity/heat/steam/cooling energy consumption (MWh)

1477810.00
[Fixed row]

(7.45) 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.

Row 1

(7.45.1) Intensity figure

0.00001808

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

710270

(7.45.3) Metric denominator

Select from:

☑ unit total revenue

(7.45.4) Metric denominator: Unit total

39290000000

(7.45.5) Scope 2 figure used

Select from:

☑ Market-based

(7.45.6) % change from previous year

6.08

(7.45.7) Direction of change

Select from:

☑ Decreased

(7.45.8) Reasons for change

Select all that apply

☑ Change in output

(7.45.9) Please explain

While our operations are growing to support new business, as reflected in our growth in sales, including product sales, we continue to invest in emissions reduction initiatives and identify process improvements to increase efficiency. In 2023, we focused our investments in higher-impact emissions reduction initiatives that have longer implementation timelines. For example, we are diversifying our energy portfolio with renewables, conducting site-wide energy efficiency assessments at our

major manufacturing sites, pursuing large-scale equipment replacements and planning for the ZEV transition. While the benefit of these investments was not fully realized in our 2023 performance, their impact will support progress towards our long-term goals.

Row 2

(7.45.1) Intensity figure

0.013842721

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

710270

(7.45.3) Metric denominator

Select from:
☑ square foot

(7.45.4) Metric denominator: Unit total

51310000

(7.45.5) Scope 2 figure used

Select from:
☑ Market-based

(7.45.6) % change from previous year

1.19

(7.45.7) Direction of change

Select from:
☑ Increased

(7.45.8) Reasons for change

Select all that apply

☑ Change in output

(7.45.9) Please explain

Although our total square footage decreased relative to RY2022, our operations are growing within our existing footprint to support new business as reflected through our growth in sales, including product sales. We continue to invest in emissions reduction initiatives and identify process improvements to increase efficiency. In 2023, we focused our investments in higher-impact emissions reduction initiatives that have longer implementation timelines. For example, we are diversifying our energy portfolio with renewables, conducting site-wide energy efficiency assessments at our major manufacturing sites, pursuing large-scale equipment replacements and planning for the ZEV transition. While the benefit of these investments was not fully realized in our 2023 performance, their impact will support progress towards our long-term goals.
[Add row]

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

Row 1

(7.52.1) Description

Select from:

☑ Waste

(7.52.2) Metric value

21760

(7.52.3) Metric numerator

Total solid waste to landfill/incineration (tons)

(7.52.5) % change from previous year

1.2

(7.52.6) Direction of change

Select from:

☑ Increased

(7.52.7) Please explain

In 2023, Northrop Grumman set a goal to reduce solid waste sent to landfill and incineration by 10% from a 2019 base year by 2030. In RY2023, our solid waste sent to landfill/incineration increased 6.8% from our RY2019 baseline and 1.2% from RY2022 due to a combination of program growth across the company and increased on-site work; note that historical corrections increased our baseline.

Row 2

(7.52.1) Description

Select from:

☑ Other, please specify **:**Water

(7.52.2) Metric value

1448512000

(7.52.3) Metric numerator

Total Water Withdrawals (in gallons)

(7.52.5) % change from previous year

1

(7.52.6) Direction of change

Select from:

☑ Decreased

(7.52.7) Please explain

In 2023, Northrop Grumman set a goal to reduce absolute water withdrawals by 10% from a 2019 base year by 2030, with a focus on freshwater withdrawals. In RY2023, our water withdrawals increased 0.8% from our RY2019 baseline but decreased by 1.0% compared to RY2022 due to ongoing maintenance of our water-intensive equipment and processes, along with increased system repairs and replacements.
[Add row]

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

Select all that apply
☑ Absolute target

(7.53.1) Provide details of your absolute emissions targets and progress made against those targets.

Row 1

(7.53.1.1) Target reference number

Select from:
☑ Abs 1

(7.53.1.2) Is this a science-based target?

Select from:
☑ No, and we do not anticipate setting one in the next two years

(7.53.1.5) Date target was set

03/28/2022

(7.53.1.6) Target coverage

Select from:
☑ Organization-wide

(7.53.1.7) Greenhouse gases covered by target

Select all that apply

☑ Methane (CH4)
☑ Nitrous oxide (N2O)
☑ Carbon dioxide (CO2)
☑ Perfluorocarbons (PFCs)
☑ Hydrofluorocarbons (HFCs)
☑ Sulphur hexafluoride (SF6)
☑ Nitrogen trifluoride (NF3)

(7.53.1.8) Scopes

Select all that apply

☑ Scope 1
☑ Scope 2

(7.53.1.9) Scope 2 accounting method

Select from:

☑ Market-based

(7.53.1.11) End date of base year

09/30/2019

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

275680

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

524410

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

0.000

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

800090.000

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

100

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

100

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

100

(7.53.1.54) End date of target

09/30/2030

(7.53.1.55) Targeted reduction from base year (%)

50

(7.53.1.56) Total emissions at end date of target covered by target in all selected Scopes (metric tons CO2e)

400045.000

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

310610

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

399650

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

710260.000

(7.53.1.78) Land-related emissions covered by target

Select from:

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

(7.53.1.79) % of target achieved relative to base year

22.45

(7.53.1.80) Target status in reporting year

Select from:

☑ Underway

(7.53.1.82) Explain target coverage and identify any exclusions

This goal covers Scope 1 and Scope 2 emissions for all buildings and facilities within which we have operational control. The target reporting period is based on a government fiscal year.

(7.53.1.83) Target objective

We coupled an interim target of 50% reduction in Scope 1 and 2 GHG emissions by 2030 from a 2019 baseline year with a complementary goal to source 50% of our electricity from renewable sources by 2030 to help drive progress toward our Net Zero operations goal. Minimizing our own emissions footprint is a critical step to support global climate ambitions, so we continue to explore new opportunities to invest in zero-emissions technologies and prioritize emissions reductions in our operations.

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

We have set a target to reduce 50% of Scope 1 and Scope 2 emissions by 2030. This interim target will support progress towards our Net Zero Operations (Scope 1 and 2) by 2035 goal. Our strategy to achieve this target includes multiple facets - (1) sourcing renewable and zero-emissions electricity, (2) identifying and

implementing sound energy management practices across our sites, (3) embedding resource conservation and efficiency measures within our processes, and (4) pursuing electrification and alternative fuels, where possible. Northrop Grumman is also pursuing other emissions reduction solutions including electrification, alternative fuels and energy monitoring. In 2023, we achieved an 11.2% reduction in emissions, compared to our 2019 base year and sourced 16% of electricity from renewable sources, which contributed to our progress.

(7.53.1.85) Target derived using a sectoral decarbonization approach

Select from:

☑ No

[Add row]

(7.53.2) Provide details of your emissions intensity targets and progress made against those targets.

	Intensity figure in base year for all selected Scopes (metric tons CO2e per unit of activity)	Intensity figure in reporting year for all selected Scopes (metric tons CO2e per unit of activity)
Row 1	*0.0000000000*	*0.0000000000*

[Add row]

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

Select all that apply

☑ Targets to increase or maintain low-carbon energy consumption or production

☑ Net-zero targets

(7.54.1) Provide details of your targets to increase or maintain low-carbon energy consumption or production.

Row 1

(7.54.1.1) Target reference number

Select from:

☑ Low 1

(7.54.1.2) Date target was set

03/28/2022

(7.54.1.3) Target coverage

Select from:

☑ Organization-wide

(7.54.1.4) Target type: energy carrier

Select from:

☑ Electricity

(7.54.1.5) Target type: activity

Select from:

☑ Consumption

(7.54.1.6) Target type: energy source

Select from:

☑ Renewable energy source(s) only

(7.54.1.7) End date of base year

09/30/2019

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

1514420

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

1.4

(7.54.1.10) End date of target

09/30/2030

(7.54.1.11) % share of low-carbon or renewable energy at end date of target

50

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

16

(7.54.1.13) % of target achieved relative to base year

30.04

(7.54.1.14) Target status in reporting year

Select from:
☑ Underway

(7.54.1.16) Is this target part of an emissions target?

Yes, this target is associated with our Absolute ghg emissions reduction target (Abs1) and both are aligned with our Net Zero 2035 target (NZ1).

(7.54.1.17) Is this target part of an overarching initiative?

Select all that apply
☑ Other, please specify **:**NGC Next Generation Sustainability Goals

(7.54.1.19) Explain target coverage and identify any exclusions

This target includes all electricity usage (MWh) across the company. The target reporting period is based on a government fiscal year.

(7.54.1.20) Target objective

We coupled an interim target of 50% reduction in Scope 1 and 2 GHG emissions by 2030 from a 2019 baseline year with a complementary goal to source 50% of our electricity from renewable sources by 2030 to help drive progress toward our Net Zero operations goal. Minimizing our own emissions footprint is a critical step to support global climate ambitions, so we continue to explore new opportunities to invest in zero-emissions technologies and prioritize emissions reductions in our operations.

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

Sourcing renewable electricity is an important component of our mission to achieve Net Zero operations by 2035. In 2023, we sourced 16% of electricity from renewable sources. To achieve our 50% renewable electricity goal by 2030, we are performing engineering studies and negotiating terms for a mix of onsite and offsite renewable energy opportunities across our locations. We have two onsite solar projects under active assessment and/or negotiation and four under development. To date, we have assessed 30 potential large-scale offsite solar projects and are making substantial progress in negotiations for developments that will provide renewable electricity and environmental attributes to our load centers in California and Maryland.
[Add row]

(7.54.3) Provide details of your net-zero target(s).

Row 1

(7.54.3.1) Target reference number

Select from:
☑ NZ1

(7.54.3.2) Date target was set

03/28/2022

(7.54.3.3) Target Coverage

Select from:
☑ Organization-wide

(7.54.3.4) Targets linked to this net zero target

Select all that apply

☑ Abs1

☑ Low1

(7.54.3.5) End date of target for achieving net zero

09/30/2035

(7.54.3.6) Is this a science-based target?

Select from:

☑ No, and we do not anticipate setting one in the next two years

(7.54.3.8) Scopes

Select all that apply

☑ Scope 1

☑ Scope 2

(7.54.3.9) Greenhouse gases covered by target

Select all that apply

☑ Methane (CH4)

☑ Nitrous oxide (N2O)

☑ Carbon dioxide (CO2)

☑ Perfluorocarbons (PFCs)

☑ Hydrofluorocarbons (HFCs)

☑ Sulphur hexafluoride (SF6)

☑ Nitrogen trifluoride (NF3)

(7.54.3.10) Explain target coverage and identify any exclusions

This goal covers Scope 1 and Scope 2 emissions for all buildings and facilities within which we have operational control. The target reporting period is based on a government fiscal year.

(7.54.3.11) Target objective

As a leader in the aerospace and defense industry, we support climate science and the need for society as a whole to limit global temperature rise to 1.5 degrees Celsius and drive global GHG emissions to Net Zero by 2050. Minimizing our own emissions footprint is a critical step to support global climate ambitions, so we continue to explore new opportunities to invest in zero-emissions technologies and prioritize emissions reductions in our operations.

(7.54.3.12) Do you intend to neutralize any residual emissions with permanent carbon removals at the end of the target?

Select from:

☑ Yes

(7.54.3.13) Do you plan to mitigate emissions beyond your value chain?

Select from:

☑ No, and we do not plan to within the next two years

(7.54.3.14) Do you intend to purchase and cancel carbon credits for neutralization and/or beyond value chain mitigation?

Select all that apply

☑ No, we do not plan to purchase and cancel carbon credits for neutralization and/or beyond value chain mitigation

(7.54.3.15) Planned milestones and/or near-term investments for neutralization at the end of the target

We currently anticipate that approximately 10% of emissions that have not been otherwise eliminated will required additional neutralization action in the target year.

(7.54.3.17) Target status in reporting year

Select from:

☑ Underway

(7.54.3.19) Process for reviewing target

We have continued to prioritize tracking and maintaining high-quality data about our key operational environmental metrics. We report on environmental data annually on a government fiscal year basis (October-September). This shift accommodates an earlier report publication date and enables our data to include actual results for all months where data is available, improving our data quality and eliminating duplicative reporting efforts. We disclose our emissions inventory and track progress towards our goals annually in our Sustainability Report.

[Add row]

(7.55) 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.

Select from:
☑ Yes

(7.55.1) 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	*0*	*`Numeric input*
To be implemented	*0*	*0*
Implementation commenced	*0*	*0*
Implemented	*47*	*2330*
Not to be implemented	*0*	*`Numeric input*

[Fixed row]

(7.55.2) Provide details on the initiatives implemented in the reporting year in the table below.

Row 1

(7.55.2.1) Initiative category & Initiative type

Energy efficiency in production processes

☑ Other, please specify :Building Services

(7.55.2.2) Estimated annual CO2e savings (metric tonnes CO2e)

2240

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

Select all that apply

☑ Scope 2 (location-based)

☑ Scope 2 (market-based)

(7.55.2.4) Voluntary/Mandatory

Select from:

☑ Voluntary

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

586000

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

5415000

(7.55.2.7) Payback period

Select from:

☑ 4-10 years

(7.55.2.8) Estimated lifetime of the initiative

Select from:

☑ 11-15 years

(7.55.2.9) Comment

Building efficiency projects include HVAC, lighting and compressed air systems. The approximate avoided electricity by implementing these building services projects is 5,605 MWh. In addition to the initiatives described here, additional GHG savings of 1,052 MT CO2e are achieved through routine maintenance and other activities that have higher investments and extended ROIs. The added cost of pursuing additional energy efficiency beyond the standard replacement is difficult to isolate and is not included in this line item. As outlined in our 2023 Sustainability Report, this results in a total of 3,400 MT CO2e from energy efficiency (building services and production processes), process improvements, and other activities in 2023. "

Row 2

(7.55.2.1) Initiative category & Initiative type

Energy efficiency in production processes

☑ Other, please specify **:**Process Consolidation

(7.55.2.2) Estimated annual CO2e savings (metric tonnes CO2e)

60

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

Select all that apply

☑ Scope 2 (location-based)

☑ Scope 2 (market-based)

(7.55.2.4) Voluntary/Mandatory

Select from:

☑ Voluntary

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

13000

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

994000

(7.55.2.7) Payback period

Select from:

☑ >25 years

(7.55.2.8) Estimated lifetime of the initiative

Select from:

☑ 11-15 years

(7.55.2.9) Comment

Process improvement efforts include updates to manufacturing & lab processes that improve operating efficiency. The approximate avoided electricity by implementing process consolidation is 177 MWh.

Row 3

(7.55.2.1) Initiative category & Initiative type

Transportation

☑ Company fleet vehicle replacement

(7.55.2.2) Estimated annual CO2e savings (metric tonnes CO2e)

30

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

Select all that apply

☑ Scope 1

(7.55.2.4) Voluntary/Mandatory

Select from:
☑ Voluntary

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

13000

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

512000

(7.55.2.7) Payback period

Select from:
☑ >25 years

(7.55.2.8) Estimated lifetime of the initiative

Select from:
☑ 11-15 years

(7.55.2.9) Comment

Transportation includes fleet decarbonization efforts. The approximate avoided fuel use by implementing these projects is 2,720 gallons of gasoline.
[Add row]

(7.55.3) What methods do you use to drive investment in emissions reduction activities?

Row 1

(7.55.3.1) Method

Select from:

☑ Internal incentives/recognition programs

(7.55.3.2) Comment

Environmental sustainability (measured in terms of annual progress towards achieving net zero greenhouse gas emissions in operations by 2035) is one of the Company's five non-financial metrics that influences the annual incentive compensation program and holds ourselves accountable.

Row 2

(7.55.3.1) Method

Select from:

☑ Dedicated budget for energy efficiency

(7.55.3.2) Comment

We make annual financial investments in energy efficiency projects in our buildings and operations to support progress towards our goals to reduce greenhouse gas emissions, water withdrawals, and solid waste sent to landfill and incineration.

Row 3

(7.55.3.1) Method

Select from:

☑ Employee engagement

(7.55.3.2) Comment

Employee awareness and behavior is an important element of efficiency and emissions-reductions activities. We engage with employees through our environmentally focused Employee Resource Group, signage in our facilities, webinars, and voluntary training.

Row 4

(7.55.3.1) Method

Select from:

☑ Internal finance mechanisms

(7.55.3.2) Comment

We employ a centralized investment mechanism to allocate targeted environmental and efficiency (E&E) capital, which allows us to solicit project ideas from across the company and fund impactful projects that drive efficiency and performance against our goals.

Row 5

(7.55.3.1) Method

Select from:

☑ Dedicated budget for other emissions reduction activities

(7.55.3.2) Comment

We make annual financial investments in projects that increase efficiency and directly or indirectly result in GHG emissions reductions to support progress towards our goals to reduce greenhouse gas emissions, water withdrawals, and solid waste sent to landfill and incineration.
[Add row]

(7.73) Are you providing product level data for your organization's goods or services?

Select from:

☑ No, I am not providing data

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

Select from:

☑ Yes

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

Row 1

(7.74.1.1) Level of aggregation

Select from:

☑ Product or service

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

Select from:

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

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

Power

☑ Other, please specify **:**Uncrewed Aerial Vehicle

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

Northrop Grumman's uncrewed aerial vehicle, used for surveillance and reconnaissance, is designed to have a smaller fuselage on a bigger wingspan, creating better flying efficiency and lower emissions compared to traditional manned flights. Autonomous flight capabilities also help the system fly with greater efficiency than a human pilot and cruise at higher altitudes. Compared to the equivalent manned system, this UAS not only uses less fuel but also emits 34 times less carbon dioxide. One standard flight uses the equivalent of a 55,922-mile (nearly 90,000 km) car journey, while fuel consumption for its manned counterparts rockets to the equivalent of almost 2 million miles for a similar flight. This helps our customers reduce emissions significantly over the lifespan of the product.

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

Select from:

☑ Yes

(7.74.1.6) Methodology used to calculate avoided emissions

Select from:

☑ Other, please specify **:**Comparative emissions between two products

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

Select from:

☑ Use stage

(7.74.1.8) Functional unit used

One surveillance mission

(7.74.1.9) Reference product/service or baseline scenario used

Equivalent manned system

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

Select from:

☑ Use stage

(7.74.1.12) Explain your calculation of avoided emissions, including any assumptions

We do not provide product specific product use information or revenue as it is proprietary information.
[Add row]

C11. Environmental performance - Biodiversity

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

(11.2.1) Actions taken in the reporting period to progress your biodiversity-related commitments

Select from:

☑ Yes, we are taking actions to progress our biodiversity-related commitments

(11.2.2) Type of action taken to progress biodiversity- related commitments

Select all that apply

☑ Other, please specify **:**In 2023, we expanded our Technology for Conservation (T4C) initiatives to 74 sites (up from 17 sites in 2021) and launched two new T4C projects which support biodiversity and conservation.

[Fixed row]

(11.3) 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
	Select from: ☑ Yes, we use indicators	*Select all that apply* ☑ Other, please specify **:**Number of Northrop Grumman sites with Technology for Conservation projects

[Fixed row]

(11.4) Does your organization have activities located in or near to areas important for biodiversity in the reporting year?

	Indicate whether any of your organization's activities are located in or near to this type of area important for biodiversity	Comment
Legally protected areas	*Select from:* ☑ No	*Our biodiversity assessment covered only our direct operational sites. It did not include a perimeter around sites.*
UNESCO World Heritage sites	*Select from:* ☑ No	*Our biodiversity assessment covered only our direct operational sites. It did not include a perimeter around sites.*
UNESCO Man and the Biosphere Reserves	*Select from:* ☑ No	*Our biodiversity assessment covered only our direct operational sites. It did not include a perimeter around sites.*
Ramsar sites	*Select from:* ☑ No	*Our biodiversity assessment covered only our direct operational sites. It did not include a perimeter around sites.*
Key Biodiversity Areas	*Select from:* ☑ No	*Our biodiversity assessment covered only our direct operational sites. It did not include a perimeter around sites.*
Other areas important for biodiversity	*Select from:* ☑ No	*Our biodiversity assessment covered only our direct operational sites. It did not include a perimeter around sites.*

[Fixed row]

C13. Further information & sign off

(13.1) Indicate if any environmental information included in your CDP response (not already reported in 7.9.1/2/3, 8.9.1/2/3/4, and 9.3.2) is verified and/or assured by a third party?

	Other environmental information included in your CDP response is verified and/or assured by a third party
	Select from: ☑ Yes

[Fixed row]

(13.1.1) Which data points within your CDP response are verified and/or assured by a third party, and which standards were used?

Row 1

(13.1.1.1) Environmental issue for which data has been verified and/or assured

Select all that apply

☑ Climate change

(13.1.1.2) Disclosure module and data verified and/or assured

Environmental performance – Climate change

☑ Base year emissions

☑ Other data point in module 7, please specify :2023 Scope 1 and 2; Scope 3 for business travel

(13.1.1.3) Verification/assurance standard

Climate change-related standards

☑ ISO 14064-3

(13.1.1.4) Further details of the third-party verification/assurance process

Base year emissions for 2019 were verified by our assurance provider.
[Add row]

(13.3) Provide the following information for the person that has signed off (approved) your CDP response.

(13.3.1) Job title

Chief Sustainability Officer

(13.3.2) Corresponding job category

Select from:

☑ Chief Sustainability Officer (CSO)

[Fixed row]