

## C0. Introduction

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### C0.1

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

At BAE Systems, our advanced defence technology protects people and national security, and keeps critical information and infrastructure secure. We search for new ways to provide our customers with a competitive edge across the air, maritime, land and cyber domains.

In 2021 BAE Systems reported sales of £21,310 million across its five principal reporting segments of Air; Maritime; Electronic Systems; Platforms and Services (US) and Cyber Intelligence. As of 31 December 2021, the Group had a strong order backlog of £44 billion.

BAE Systems has a broad geographic base with business operations in four principal markets around the world, in the US, the UK, the Kingdom of Saudi Arabia and Australia. The company is a top ten defence contractor in the US, the number one supplier to the UK Ministry of Defence, and the number one in-country defence supplier in Saudi Arabia and Australia. The Group has a strong international presence with well-established relationships across the globe, supported by regional sales offices.

BAE Systems employs around 90,500 people working in over 40 countries. 16,400 employees work within the Electronic Systems reporting segment; 12,300 within Platforms and Services; 29,700 in Air; 18,200 in Maritime, 9,600 in Cyber and Intelligence, 4,300 in HQ/other.

As a major manufacturer, our operations have an impact on the environment – from the energy and resources we use to the products we manufacture and the waste we generate. We are committed to high standards of environmental management and undertake activities which reduce the environmental impact of our operations, products and supply chain. Such activities range from considering direct combustion of fossil fuels on sites; to realizing energy efficiencies in the operation of major platforms; to controlling and reducing hazardous materials in the supply chain.

### C0.2

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

	Start date	End date	Indicate if you are providing emissions data for past reporting years	Select the number of past reporting years you will be providing emissions data for
Reporting year	January 1 2021	December 31 2021	No	<Not Applicable>

### C0.3

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

- Australia
- Bahrain
- Belgium
- Brazil
- Canada
- China
- Czechia
- Egypt
- Finland
- France
- Germany
- Greece
- India
- Indonesia
- Iraq
- Ireland
- Isle of Man
- Japan
- Kuwait
- Malaysia
- Netherlands
- Norway
- Oman
- Poland
- Qatar
- Republic of Korea
- Saudi Arabia
- Singapore
- Slovakia
- South Africa
- Spain
- Sweden
- Taiwan, China
- Thailand
- Turkey
- United Arab Emirates
- United Kingdom of Great Britain and Northern Ireland
- United States of America

**C0.4**

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

GBP

**C0.5**

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

Operational control

**C0.8**

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

Indicate whether you are able to provide a unique identifier for your organization	Provide your unique identifier
Yes, an ISIN code	GB0002634946

**C1. Governance**

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**C1.1**

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

Yes

C1.1a

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

Position of individual(s)	Please explain
Chief Executive Officer (CEO)	Responsibility for climate and environment sits with our Chief Executive Officer (CEO) who chairs the executive committee. He is responsible for our Operational Framework (OF), which includes our global policies and processes. Our Environmental policy which details our commitment to addressing environmental impacts related to our products and activities, including climate change, is included within our OF. He is supported by the Board and ESG Committee in ensuring that an appropriate environmental programme and performance objectives are set and flowed down across the business. These objectives are intended to mitigate the Group's environmental impact, including in relation to climate change in the immediate and long term, and to enable the Group to deliver against its environmental commitments within its business model. The ESG Committee monitors progress in this area. Our sustainability agenda is fundamental to the success of our business. It supports our global business and provides a framework on how we do business. It is driven from the top with input from a wide range of stakeholders. When we think about what is material, we consider how our approach to sustainability will drive success, contribute to our wider communities and reduce our impact on the environment. Environment and climate change are considered principal risks and are managed as part of our sustainability agenda. An example of a climate-related decision made by the CEO in 2022 was setting bonus related objectives for EC members to support our net zero initiatives and appointing a Group ESG, Culture and Business Transformation Director at group level to drive progress in net zero programme. The ESG Committee approved ESG-related objectives which form part of the executive director' incentives. Delivery of the next phase of the net zero plan was included within the non-financial element of the executive directors' objectives.

C1.1b

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

Frequency with which climate-related issues are a scheduled agenda item	Governance mechanisms into which climate-related issues are integrated	Scope of board-level oversight	Please explain
Scheduled – some meetings	Reviewing and guiding risk management policies Monitoring implementation and performance of objectives	<Not Applicable>	The Board has the responsibility to ensure that climate-related risks and opportunities are appropriately addressed. We understand that without effective climate governance structures, it will be difficult to make informed strategic decisions, manage climate transition risks and monitor the associated metrics to achieve our climate related goals. The Committee supports the Board in overseeing the progress of the executive in ensuring that the Company takes an integrated, strategic approach to addressing climate transition risks and opportunities.

C1.1d

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

	Board member(s) have competence on climate-related issues	Criteria used to assess competence of board member(s) on climate-related issues	Primary reason for no board-level competence on climate-related issues	Explain why your organization does not have at least one board member with competence on climate-related issues and any plans to address board-level competence in the future
Row 1	Yes	Our Board is comprised of directors who have an understanding of climate change and the Company's climate transition strategy. We have five directors who are skilled and experienced in environmental and social matters.	<Not Applicable>	<Not Applicable>

C1.2

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

Name of the position(s) and/or committee(s)	Reporting line	Responsibility	Coverage of responsibility	Frequency of reporting to the board on climate-related issues
Chief Executive Officer (CEO)	<Not Applicable>	Both assessing and managing climate-related risks and opportunities	<Not Applicable>	Quarterly

C1.2a

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

Day-to-day responsibility for environmental issues, including those related to climate, and our net zero programme, sits with our Group ESG, Culture and Business Transformation Director. She reports to our Chief Executive and attends the ESG Committee meetings.

The ESG Committee invites the Chairman, Chief Executive and a number of other senior executives to attend its meetings to discuss and monitor progress on the ESG issues including objectives and targets. Progress of the Company's net zero programme is a standing agenda item. The CEO reviews the progress report that the ESG Committee produces about Company progress on ESG on a quarterly basis. Regular updates on our environmental and net zero programme are provided to the CEO. The CEO is given updates on the net zero working group as the SHE team report to the Group ESG, Culture and Business Transformation Director. Our Group ESG, Culture and Business Transformation Director owns the environmental policy giving her operational responsibility for climate change actions which are reported to the CEO via business performance meetings.

During 2021 we incorporated climate transition into our Group-level Environmental Policy and created a governance, reporting and planning roadmap to achieve net zero. During 2022, this roadmap is being embedded across the Group to help further support a focus on climate-related issues in decision making across the business. We have also established a Sustainability Council, reporting to the Group ESG, Culture and Business Transformation Director, to support the Company's strategy, recommending to the EC areas of sustainability to be given priority and focus for the forthcoming year and supporting Line and Functional leaders in the implementation of the Company's sustainability programme. During 2021 we operated a cross-functional, net zero working group chaired by the Sustainability Director, Safety Health and Environment and D&I, made up of functional representatives and business leads with a focus on coordinating net zero and the progression of our net zero ambitions for the group.

**C1.3**

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

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

**C1.3a**

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

Entitled to incentive	Type of incentive	Activity incentivized	Comment
Director on board	Monetary reward	Emissions reduction target Company performance against a climate-related sustainability index	During 2021 all members of our Corporate Executive Committee (CEC), including CEO and CFO who are executive board directors, were set bonus-related objectives in support of our net zero initiative including supporting the development of business sector-specific net zero roadmaps. Another key role of the ESG Committee is to approve ESG-related objectives and targets which form part of the executive directors' incentives – see page 152. In 2021, delivery of the next phase of the net zero plan was included within the non-financial element of the executive directors' objectives and other elements specifically set within the non-financial element of the executive objectives are related to employee engagement, delivery of the next phase of the net zero plan and driving an inclusive culture. Objectives are supported by 8 behaviours, which complement our Company values – Trusted, Innovative and Bold, and focuses on how we do things across the business. One behaviour is focused on 'Strategic Vision – anticipates and plans for future business landscape'. Employees are assessed via performance reviews during the year, regarding how they demonstrate and advocate behaviours, ensuring employee's performance is assessed on not only what is achieved, but also how it was achieved. The Performance Development Review (PDR) process is where the behaviours and achievement of objectives are assessed. The PDR influences the multiplier applied to all-employee bonuses and any additional individual bonuses. Also, certain employees with direct environmental responsibility will have relevant performance metrics included in their PDR. The 'Chairman's Award' process includes Sustainability - Chairman's Award categories include "Building a Sustainable Future". It states "Sustainability is about more than the environment. It's everything we do holistically to ensure the long-term success of our business. This category celebrates colleagues whose outstanding efforts demonstrate our commitment to being a forward-looking, inclusive and responsible business. Colleagues who have come up with great ways to reduce our environmental footprint, inspire the next generation or to help our people, and the communities where we live and work, thrive."

**C2. Risks and opportunities**

**C2.1**

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

Yes

**C2.1a**

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

	From (years)	To (years)	Comment
Short-term	0	2	Risk is a regular agenda item at Board meetings, and the Board reviews risk as part of its annual strategy review process. The Board delegates the oversight of certain risk management activities to the Audit and ESG Committees who monitor the Group's key risks identified by the risk assessment processes and report their findings to the Board twice a year. On a short-term basis, an inherent risk for our business (that is driven by changes in regulation) is that of carbon schemes / taxes (e.g., UK ETS, Climate Change Levy) which applies to our UK operations. Although the magnitude of this risk has been assessed to be relatively low, it will have a direct impact on our operational costs.
Medium-term	3	10	Annually the Board approves the Integrated Business Plan (IBP) which allows for a consistent approach for strategic planning, aligning resources with the delivery forecast of financial performance and strategic objectives. The IBP not only contains a financial forecast for the current year but also projections for the next ten years, with consideration of environmental risks and opportunities and their potential financial impact to the business. A number of medium term risk associated with the shift to a low carbon economy, the most material of these risks over the medium to long term the cost of substituting existing products and services with lower emissions options and disposal of legacy assets. Associated with this are potential risks around our ability to attract and retain future talent.
Long-term	10	50	Within BAE Systems, due to the long lifecycle of our products, we have to be aware of the long term risks to our business and products, inclusive of environmental factors. Solving the challenge of climate change requires all of us to act together, with urgency. One of the focus areas of our sustainability agenda is to play our part in addressing the significant and lasting impact of climate change. As a defence and security company, technology is at the core of our business and we must leverage this while progressing our ambition of net zero greenhouse gas emissions. Our goal is to develop and implement a long-term strategy that reduces the impact of our activities, supply chain and products on the environment. One key long-term risk that we have identified relates to changing climate and in turn weather extremes. Extreme weather events, primarily flood risks, have the potential to directly impact our operations.

**C2.1b**

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

Substantive financial or strategic impact on our business is defined as an event, that may occur, that will have a negative impact on the achievement of the objectives within the Group Strategic Framework and underpinning Integrated Business Plans (IBP). These can be categorized as either Financial or Non-Financial Risks. Financial risks expose the Group to potential costs which are quantifiable on the basis that their probability and impact can be understood adequately and related to the financial statements. Non-financial risks cannot be assessed readily in financial terms and, therefore, cannot be reflected reliably in the financial statements. Our overall risk management process is applicable to both financial and non-financial risks and is tailored to accommodate the differences in the management of these risks. Climate change risks may feature as financial or non-financial risks depending on the extent to which their impacts can be quantified, and how they have been classified. The definition of Substantive impact is determined locally for each business and is typically based upon a financial impact level and a probability. For example, it could be a £1M impact at a 20% probability.

**C2.2**

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

**Value chain stage(s) covered**

Direct operations  
Upstream  
Downstream

**Risk management process**

Integrated into multi-disciplinary company-wide risk management process

**Frequency of assessment**

More than once a year

**Time horizon(s) covered**

Short-term  
Medium-term  
Long-term

**Description of process**

Our approach to risk management is aimed at the early identification of key risks and opportunities (e.g. risks and opportunities that have a substantive financial or strategic impact), mitigating the effect of those risks and opportunities and dealing with them effectively if they crystallize. Line management of the businesses analyse risks and opportunities that have been identified as part of the local risk management practices that take place using evaluation systems such as ISO 14001 that have set methodology and frameworks. The risks are then evaluated, and mitigation strategies are determined. This includes Climate related risks where appropriate. For example, the risk of more frequent flooding events has been identified as a physical climate change risk to sites mainly located within coastal regions. Identified risks are reported and monitored according to the Group's Operational Framework. Identified material risks (e.g. risks that have a substantive financial or strategic impact) are documented in risk registers showing: the risks that have been identified; characteristics of the risk; the basis for determining mitigation strategy; and what reviews and monitoring are necessary. Each risk is allocated an owner who has authority and responsibility for assessing and managing it. Climate change is a principal risk that has been identified at group level and this risk has been allocated as a priority for future years. Climate change and nature-related risks have the potential to impact BAE Systems over short- (less than two years), medium- (three to ten years) and long-term (beyond ten years) time horizons. As a result, we have set a global target to achieve net zero greenhouse gas emissions across our operations by 2030, and work towards a net zero value chain by 2050. In 2021 we have started to develop our net zero roadmap to achieve this target. To better understand how the potential long-term impacts of climate change could impact our business, in line with the TCFD recommendations, this year we have begun the process of climate change scenario analysis. We identified the climate-related risks and opportunities with the potential to impact BAE Systems' business model and strategy by developing high level impact pathways to demonstrate the causal links between the risk and opportunity drivers and the expected impacts based on likelihood of occurrence and the potential to impact the Group in terms of costs, revenue and asset value. We are exposed to a number of risks associated with a shift to a low carbon economy, the most material of these risks over the medium to long term being the cost of substituting existing products and services with lower emissions options and disposal of legacy assets. Associated with this are potential risks around our ability to attract and retain future talent. While we recognise these risks, the opportunity around the transition is also significant for BAE Systems over the medium to long term. There is an opportunity for us to play a key role in enabling the low carbon transition through our development of innovative new technologies. BAE Systems also conduct a thorough analysis to identify and assess the impact of physical climate risk on our facilities (direct operations in 2021 and critical first tier supplier manufacturer locations in 2022) worldwide through our climate scenario analysis process using the Swiss Re Tool. We use RCP 2.6, 4.5 and 8.5 scenarios for 2030, 2050 and 2085. This has enabled us to identify which locations carry the greatest natural catastrophe risk today and how this will change over the long term (beyond ten years). We have identified the list of sites that have a high-risk exposure to natural hazards and physical climate risk and have prioritised these for survey visits, working with the climate team from our risk engineering survey provider. The risks at these sites identified for surveys would have a substantive financial or strategic impact on the organisation. For example, following pluvial flood losses at one site in 2020 we have scoped out our first site visit to evaluate planned drainage mitigations, adequacy of existing flood defences to 2050 and any vulnerabilities to windstorm. Additionally, this analysis allows us to identify and assess opportunities for the company, for example identifying sites where their current locations have low risk in the short, medium to long term where the company can have an opportunity to expand operations and therefore increase revenue. In addition, every six months, the businesses and Group functions complete an Operational Assurance Statement (OAS), which is a mandated policy under the Operational Framework. The OAS is in two parts: a self-assessment of compliance with the Operational Framework; and a report showing the key financial and non-financial risks for the relevant business and Group functions. Together with reviews undertaken by Internal Audit and the work of the external auditors, the OAS forms the Group's process for reviewing the effectiveness of the system of internal controls. Additionally, the financial implications of the gross risk exposure to the Integrated Business Plans (IBP) are comprehensively reviewed and the risks prioritized in relation to the achievement of business objectives. The key financial and non-financial risks identified by the businesses from the risk assessment processes are collated and reviewed by the Executive Committee to identify those issues where the cumulative financial or transition risk, for example possible reputational impacts, could be significant. The risk management process remains the same for different value chain stages. Additionally, different time horizons are reviewed and include short term (0-2 year), medium term (3-10 years) and long term (beyond 10 years). The group environmental policy encourages the businesses to look for opportunities to improve their environmental performance.

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**C2.2a**

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

	Relevance & inclusion	Please explain
Current regulation	Relevant, always included	Current climate-related regulations, such as those related to Emissions Trading (e.g. UK/EU ETS) are relevant to our business and are identified as a principal risk for the Group- 'the Group is subject to risk from a failure to comply with laws and regulations'. The Group operates in a highly regulated environment across many jurisdictions and is subject to regulations relating to environmental factors. Failure by the Group, or others acting on its behalf, to comply with these regulations could result in fines and penalties and consideration of current and emerging regulation within our climate-related risk assessments is key.
Emerging regulation	Relevant, always included	Emerging climate-related regulations, such as low emissions or reporting standards, are relevant to our business and are identified as a principal risk for the Group- 'the Group is subject to risk from a failure to comply with laws and regulations'. The Group operates in a highly regulated environment across many jurisdictions and is subject to regulations relating to environmental factors. Failure by the Group, or others acting on its behalf, to comply with these regulations could result in fines and penalties, therefore consideration of current and emerging regulation within our climate-related risk assessments is key. For example, in the UK, the government's Streamlined Energy and Carbon Reporting (SECR) framework was put into law during 2019. This emerging legislation was monitored, and the business implemented the requirements in the last two reporting periods and will continue to do so in future years. Additionally, as a premium listed company, BAE were required by the Listing Rules to report climate-related information in alignment with Task Force on Climate related Financial Disclosures (TCFD) recommendations for 2021.
Technology	Relevant, sometimes included	Technology risks, such as low emissions products, are relevant to our business. The Group's largest customers are governments and the Group has long-standing relationships and security arrangements with a number of its government customers. In the complex and fast changing environment in which we work, harnessing technology and innovation is key to developing the most effective and efficient solutions for our products and ensuring that our long-standing customer relationships are maintained. One example of this is the development, in collaboration with Prismatic Ltd, of a Persistent High Altitude Solar electric aircraft (PHASA-35®) that has the potential to stay airborne for a year.
Legal	Relevant, always included	Legal risks, such as failure to comply with environmental regulations, are relevant to our business and are identified as a principal risk for the Group- 'the Group is subject to risk from a failure to comply with laws and regulations'. The Group operates in a highly regulated environment across many jurisdictions and is subject to regulations relating to environmental factors. Failure by the Group, or others acting on its behalf, to comply with these regulations could result in fines and penalties and consideration of current and emerging regulation within our climate-related risk assessments is key. Examples of environmental regulations that are relevant to the business includes SECR, ESOS, EU Energy Efficiency Directive Article 8 and UK ETS.
Market	Relevant, sometimes included	Market risks, such as differing legislation, regulations and government policy in different geographies, are relevant to our business and have potential impacts on our operations if we were unable to comply with the requirements of a specific region. Each region will respond to the risks of climate change differently and hence the legislation, regulations and policies will vary and change independently. Non- compliance with these poses the risk of fines and the termination of permits, further restricting our ability to operate. Additionally, risks associated with the increased cost of raw materials (e.g. steel, natural gas) used for our manufacturing purposes has been identified as a risk in the organisation's risk assessments. The increased costs will lead to a financial burden for the company if costs only continue to increase and alternative materials cannot be sourced.
Reputation	Relevant, sometimes included	Reputation risks, such as changing customer perceptions and expectations are relevant to our business. Stakeholders have higher expectations of how businesses respond to climate change issues, for example GHG reduction targets (specifically net zero) and expect to see the business meeting this target by the set deadline. For BAE Systems, this is 2030. Risks in this area can lead to loss of revenue or market share if these expectations are not addressed.
Acute physical	Relevant, always included	Acute physical risks, such as flooding, are relevant to our business and are becoming increasingly frequent. As a company, we have already experienced the impact of a flooding event and are therefore aware of the impact it can have on our sites and operations. In response to the flood at a site in the UK, BAE Systems created a defence scheme and will invest an amount to protect the site from future flash flooding. This will involve installation of a new drainage network, providing increased drainage features and increased maintenance. After a flood at a US site in 2011, BAE Systems shifted its site location, moving away from a high-risk flooding area to minimize the likelihood of such an event happening again to the same operations. In 2020, we conducted a refresh of this data and during 2021 we modelled climate scenarios for 2030, 2050 and 2085, which gives us a portfolio-level understanding of the Group's exposure to natural hazards, both current and future. We have prioritised sites requiring hazard-specific surveys, which will lead to the identification and implementation of risk improvement recommendations, which may include investment to improve facilities, for locations not previously assessed. We are also modelling climate scenarios for Tier 1 critical suppliers.
Chronic physical	Relevant, always included	Chronic physical risks, such as sea level rises, or water scarcity are relevant to our business due to many of our sites' locations near rivers or within coastal regions. One example of this, identified at one site in the UK, is the risk that water abstraction rules may change due to water stress issues near the site. This site uses abstracted river water for processing purposes and may not be able to abstract at the same levels in future.

**C2.3**

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

Yes

**C2.3a**

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

**Identifier**

Risk 1

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

Direct operations

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

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

Increased direct costs

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

<Not Applicable>

**Company-specific description**

A key risk driver is that of energy and carbon schemes - one of the most relevant to our business is the EU ETS Emission Trading System (now UK ETS) which applies to two of our largest sites within the UK and our corporate air travel business. Current and emerging climate legislation is a factor that the Group considers in its climate risk assessments. It is noted that the Group operates in a highly regulated environment across many jurisdictions and is subject to regulations relating to environmental factors. Failure by the Group, or others acting on its behalf, to comply with the UK/EU ETS regulations could result in fines and penalties, however, current controls include engaging a specialist consultant and third-party assurance.

**Time horizon**

Short-term

**Likelihood**

Unlikely

**Magnitude of impact**

Medium-low

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

Yes, a single figure estimate

**Potential financial impact figure (currency)**

87000

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

&lt;Not Applicable&gt;

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

&lt;Not Applicable&gt;

**Explanation of financial impact figure**

Based on an average of the civil penalties published by the government in April 2021 relating to the failure to surrender sufficient allowances or submit a verified report for EK ETS. An estimated average of all the civil penalties published came to £87,000. It is impractical to list all figures used in the calculation, please see the government's published list for figures.

**Cost of response to risk**

100000

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

Company's response to risk and cost of response to UK ETS is estimated £50,000-£100,000. The company's response to the risk includes engaging specialist consultants and third-party assurance to ensure the sites are meeting the UK ETS requirements such a site in Wales.

**Comment****Identifier**

Risk 2

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

Direct operations

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

Acute physical	Flood (coastal, fluvial, pluvial, groundwater)
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**Primary potential financial impact**

Increased capital expenditures

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

&lt;Not Applicable&gt;

**Company-specific description**

Extreme weather (primarily flood risks) has the potential to cause damage to our operations and is therefore considered a risk to our direct operations. It is recognised within the business that climate change is taking place and in turn extreme weather events, such as flooding, are becoming increasingly frequent. Examples of extreme weather impacts include fluvial flooding events in the US (2011) and UK (2020) and the subsequent interruptions to our operations. We have implemented flood defences and drainage systems (Southeast UK site - storm surge risk, UK site - pluvial, fluvial and storm surge risk) which take into account the risk today and out to 2050.

**Time horizon**

Short-term

**Likelihood**

Unlikely

**Magnitude of impact**

Medium-low

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

Yes, a single figure estimate

**Potential financial impact figure (currency)**

1000000

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

&lt;Not Applicable&gt;

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

&lt;Not Applicable&gt;

**Explanation of financial impact figure**

The actual amount at risk will depend upon the nature of the event, the effectiveness of any mitigations, the facilities impacted and the extent of insurance cover in place.

**Cost of response to risk**

350000

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

The £350,000 includes the cost of the annual survey programme, including natural hazard and climate specific surveys and software licensing for analytical tools. The cost of resulting risk improvement recommendations will vary depending on the requirement and will be determined on a site by site survey basis This figure also includes the estimated costs of implementing new drainage and water storage systems at a UK site with the pluvial, fluvial and storm surge risk. Sea defence improvements have been implemented by the City Council at no cost to BAE Systems bringing protection to our Southeast site. The site suffered no impact during the storms in December 2021.

**Comment****Identifier**

Risk 3

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

Direct operations

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

Emerging regulation	Other, please specify (Increased water resource shortages, drought, areas of water stress )
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**Primary potential financial impact**

Increased capital expenditures

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

&lt;Not Applicable&gt;

**Company-specific description**

It's recognised that various locations experience water stress and access to water is vital for the industry. Without access to water the business would see severe interruptions in terms of manufacturing our products. In the UK NRW, Defra and the EA have consulted on moving abstraction licencing to environmental permitting regulations. Without a permit under the regulations water would have to be supplied directly from mains. Potential costs associated with moving from abstraction to main water based on a single Land UK site.

**Time horizon**

Short-term

**Likelihood**

More likely than not

**Magnitude of impact**

Medium-low

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

Yes, a single figure estimate

**Potential financial impact figure (currency)**

1500000

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

&lt;Not Applicable&gt;

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

&lt;Not Applicable&gt;

**Explanation of financial impact figure**

This is the estimated annual cost associated with the site moving away from abstracted water and procuring all its water via the mains water supply. Based on 2021 abstracted volumes being procured at the current rate of £1.37 per m3 (this does not include service charge of circa £400 per year). Based on current mains water costs £1.37 per m3 (from February's invoice) and 2021 abstracted volumes it would be: 1,046,824m3 x £1.37 = £1,434,148 per year This estimate does not take into account the amount saved from the license fee to abstract and is an estimate only.

**Cost of response to risk****Description of response and explanation of cost calculation**

The cost of the response to the risk is the additional cost to procuring water at a higher price from the mains supply, as well as the changes to pipelines to redirect the supply of water from the abstraction source to the mains supply. This has not been calculated at present.

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

Yes

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

Opp1

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

Direct operations

**Opportunity type**

Resource efficiency

**Primary climate-related opportunity driver**

Use of more efficient production and distribution processes

**Primary potential financial impact**

Reduced direct costs

**Company-specific description**

BAE's sites have opportunities to improve efficiency and reduce energy consumption across multiple business units. In 2021 this was done by improving the controls on existing HVAC equipment. This improves the efficiency of equipment, reducing unnecessary usage and leading to a reduction in natural gas consumption which also reduced risks of climate change.

**Time horizon**

Short-term

**Likelihood**

Virtually certain

**Magnitude of impact**

Medium-low

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

Yes, a single figure estimate

**Potential financial impact figure (currency)**

19000

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

&lt;Not Applicable&gt;

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

&lt;Not Applicable&gt;

**Explanation of financial impact figure**

Estimated annual cost savings from improving HVAC controls. The energy savings in kWh were multiplied by the energy cost per kWh.

**Cost to realize opportunity**

12000

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

To realise the opportunity, BAE's sites evaluate projects based on emissions reduction potential and return on investment. The costs were determined from the estimated cost of implementation of several efficiency improvement projects in 2021. For example, in 2021 one of our large UK sites improved the controls on their air handling units.

**Comment****Identifier**

Opp2

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

Direct operations

**Opportunity type**

Resource efficiency

**Primary climate-related opportunity driver**

Use of more efficient production and distribution processes

**Primary potential financial impact**

Reduced direct costs

**Company-specific description**

BAE System's sites have opportunities to improve efficiency and reduce energy consumption across multiple business units but replacing current inefficient fluorescent lighting with efficient LED alternatives. Reducing energy consumption at site, reducing the risks of climate change and reducing direct operation costs due to reduced energy consumption.

**Time horizon**

Medium-term

**Likelihood**

Virtually certain

**Magnitude of impact**

Medium-low

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

Yes, a single figure estimate

**Potential financial impact figure (currency)**

86000

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

&lt;Not Applicable&gt;

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

&lt;Not Applicable&gt;

**Explanation of financial impact figure**

Estimated annual cost savings from implementing process improvements. The energy savings in kWh were multiplied by the energy cost per kWh.

**Cost to realize opportunity**

62000

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

To realise the opportunity for process improvements and resource efficiency, BAE's sites evaluate projects based on emissions reduction potential and return on investment. The costs were determined from the estimated cost of implementation of LED lighting replacement projects across two UK sites.

**Comment****Identifier**

Opp3

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

Downstream

**Opportunity type**

Products and services

**Primary climate-related opportunity driver**

Ability to diversify business activities

**Primary potential financial impact**

Increased revenues resulting from increased demand for products and services

**Company-specific description**

During 2019, BAE Systems unveiled its next-generation full battery electric power and propulsion system for transit buses. The newest system expanded the range of options from hybrid to full battery electric solutions to enable cities around the world to get to zero transportation emissions and improve the range and efficiency of their electric transit bus fleets. The Series-EV system uses fewer, lighter, and more compact components to make it easy to install and reduce the need for future maintenance. Across our portfolio of solutions, BAE Systems has more than 15,000 electric drive propulsion systems fielded around the globe including major cities such as Paris, London, New York, and San Francisco. Every year its systems are capable of traveling over 330 million miles and transporting nearly 2 billion people. The company's electric propulsion systems are contributing to a cleaner world by eliminating significant transit related carbon dioxide emissions each year across the globe. Our R&D activities have allowed us to diversify our business activities and release low carbon products for our customers, reducing GHG emissions and climate change risk.

**Time horizon**

Short-term

**Likelihood**

Virtually certain

**Magnitude of impact**

Medium-low

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

No, we do not have this figure

**Potential financial impact figure (currency)**

<Not Applicable>

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

<Not Applicable>

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

<Not Applicable>

**Explanation of financial impact figure**

Financial opportunity from sales on 15,000 full electric and hybrid systems globally.

**Cost to realize opportunity**

0

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

Cost of doing business, so no additional cost to produce and sell systems to customers.

**Comment**

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### C3. Business Strategy

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#### C3.1

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

**Row 1**

**Transition plan**

Yes, we have a transition plan which aligns with a 1.5°C world

**Publicly available transition plan**

No

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

We have a different feedback mechanism in place

**Description of feedback mechanism**

General engagement with shareholders at shareholder meetings which are not specific to 'transition plan'.

**Frequency of feedback collection**

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

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

<Not Applicable>

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

<Not Applicable>

C3.2

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

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

C3.2a

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

Climate-related scenario	Scenario analysis coverage	Temperature alignment of scenario	Parameters, assumptions, analytical choices
Physical climate scenarios	RCP 4.5 Company-wide	<Not Applicable>	In 2021 we modelled climate scenarios for 2030, 2050 and 2085, which gives us portfolio-level understanding of the Group's exposure to natural hazards, both current and future. We completed this analysis with Swiss Re to evaluate dry, wet and sea level rise risks RCP 2.6, 4.5 and 8.5 scenarios. RCP 4.5 was the main scenario used for the analysis. We identified the 2030, 2050 and 2085 dates for our climate scenario analysis as these were most relevant to our business to understand the long and short-term risks that are in line with the BAE System's wider risk analysis. The areas of our organisation considered as part of the scenario analysis include all BAE Systems site locations and also Tier 1 critical suppliers' locations. The locations have been passed through both the tools to obtain the risk scores across a broad range of perils which has enabled us to analyse climate related risk at portfolio level, individual peril level and site level. The climate risk score is based on Swiss Re's interpretation of the risk for each of these scenarios underpinned by their catastrophe models and the latest science from the most recent IPCC report. The RCP scenarios were driven by the capability of the Swiss Re tools where RCP 6 is not yet available. The specific risks that have been analysed and their severity include: flooding, windstorm, hailstorm, seismic, lightning, tornado and wildfire. Publicly available information about pluvial flood risk from the environmental agency has been utilised in our analysis as well as the data inbuilt in the Swiss Re tool. Swiss Re are an insurance company which has been involved and advising on climate science for over twenty-five years. As a major reinsurer they have significant experience and data on natural hazard events which underpins their modelling tools as well as incorporating the latest guidance from IPCC reports. The assumptions Swiss Re make in their modelling is their intellectual property. We have to work on the very broad assumption that our business remains the same e.g. we continue to operate in the same facilities, with similar processes and similar values at risk. The models generally assume today's position with regard to natural hazard mitigations so will not account for future state investments to tackle physical climate risks such as investments in flood defences. We also assume a continuation of insurance provision for natural catastrophe perils and therefore a consistent self-insured retention.
Transition scenarios	Bespoke transition scenario Company-wide	1.6°C – 2°C	To better understand how the potential long-term impacts of climate change could impact our business, in line with the TCFD recommendations, this year we have begun the process of climate change scenario analysis. We have conducted qualitative climate change risk and opportunity hotspot mapping with representatives from across our business to obtain a better understanding of the climate issues that could impact the business in the future. We have conducted a qualitative review into the scenario attributes of orderly (below 2°C), disorderly (approximately 2°C) transition scenarios and a business as usual (greater than 4°C) scenario considering peer-reviewed, publicly available third-party scenarios, including the International Energy Agency (IEA), Network for Greening the Financial System (NGFS) and the IPCC's Representative Concentration Pathways.

C3.2b

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

**Row 1**

**Focal questions**

What climate risks and opportunities have the potential to impact BAE Systems' business model and strategy over the short, medium and long term.

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

BAE Systems has a list of sites which are exposed to natural hazards and climate risk. This provides a return period for the natural hazard and a climate score out of 10 for each site which gives an indication of the current and future magnitude of risk. This list has been prioritised based on value at risk and magnitude of risk in order to refresh our risk engineering reviews of critical sites. A detailed climate analysis followed by site visit is being planned for a key UK site as a pilot to a more comprehensive survey programme. Of those signification sites, we have 25 high vulnerability to river or pluvial flood, seven for storm surge with three of these seven included in the 25. The seven sites with high storm surge risk are all vulnerable to sea level rise using RCP 8.5 and reducing to five sites using RCP 4.5. Continuing to look at water related risks, using the RCP 8.5 scenario four sites have a high wet climate risk score showing a significant increase in risk over time (2030, 2050 and 2085). Based on RCP 4.5 this reduces to one site with a high wet score. We have nine significant sites with a high wildfire risk today with all nine seeing a moderate to high climate risk score for prolonged heat, water scarcity and extremes of temperature using the RCP 8.5 scenario. The climate risk scores reduce to a moderate increase in risk on the RCP 4.5 scenario. Our water / storm-based risks are in the US, UK, Australia and Sweden. Our sea level rise risks are in Saudi Arabia, US, Australia and the UK. Finally, our wildfire related risks are in Australia and the US although extremes of temperature will be an issue in Saudi Arabia for other reasons where there is no wildfire risk. The risks increase in severity over the time periods reviewed 2030, 2050 and 2085. We are exposed to a number of risks associated with a shift to a low carbon economy, the most material of these risks over the medium to long term being the cost of substituting existing products and services with lower emissions options and disposal of legacy assets. Associated with this are potential risks around our ability to attract and retain future talent. While we recognise these risks, the opportunity around the transition is also significant for BAE Systems over the medium to long term. There is an opportunity for us to play a key role in enabling the low carbon transition through our development of innovative new technologies. There is growing demand, and therefore revenue streams, for low emissions products and services from new and existing customers, including in adjacent sectors. We have incorporated the future sustainability of our operations and the further development of our net zero roadmap into our strategy. Our work to date in relation to net zero has focused on a 1.5°C pathway and based on current information we believe our strategy is sufficiently resilient to respond to transition risks associated with that scenario.

C3.3

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

	Have climate-related risks and opportunities influenced your strategy in this area?	Description of influence
Products and services	Yes	Risks and opportunities from policies to restrict emissions, government net zero commitments, and costs of fossil fuel have influenced our strategic decision making to develop low carbon products and services in the medium term (2-5 years). For example, in 2019, BAE Systems unveiled its next-generation full battery electric power and propulsion system for transit buses. This remains the most substantial strategic decision in this area to date. The newest system positions cities around the world to get to zero transportation emissions and improve the range and efficiency of their electric transit bus fleets. The Series-EV system uses fewer, lighter, and more compact components to make it easy to install and reduce the need for future maintenance. Across its portfolio of solutions, as of In 2021, BAE Systems has had more than 15,000 electric drive propulsion systems fielded electric-hybrid systems in service around the globe including major cities such as Paris, London, New York, and San Francisco. Every year its systems are capable of traveling over 330 million miles and transporting nearly 2 billion people. The company's electric propulsion systems are contributing to a cleaner world by eliminating 335,000 tons of significant transit related carbon dioxide emissions each year across the globe. As a defence and security company, technology is at the core of our business and we must leverage this while progressing our ambition of net zero greenhouse gas emissions. Our goal is to develop and implement a long-term strategy that reduces the impact of our activities, supply chain and products on the environment.
Supply chain and/or value chain	Yes	Risks associated with suppliers' environmental impacts influenced the procurement team in the short term to create sustainable development performance requirements (e.g., our Handbook for Sustainable Procurement) and also a set of Supplier Principles for suppliers to abide by. Suppliers are monitored regularly e.g. within the Land business; sustainability is an agenda item for quarterly business reviews for key suppliers. In addition, during 2021, we undertook supply chain assurance activity to assess compliance with our Supplier Principles. Our assessments covered 25% of global spend. In 2021 we started to engage with our supply chain in regard to environmental performance and to collate GHG information on an annual basis. This is to progress the company's Net Zero value chain target and reduce risks associated with the delivery of the value chain, working towards Net Zero by 2050.
Investment in R&D	Yes	In 2019, BAE Systems unveiled its next-generation full battery electric power and propulsion system for transit buses. This remains the most substantive strategic decision in this area to date. The newest system positions cities around the world to get to zero transportation emissions and improve the range and efficiency of their electric transit bus fleets. Updated data for 2021 details that across its portfolio of solutions, BAE Systems has more than 15,000 electric drive propulsion systems fielded electric-hybrid systems in service around the globe including major cities such as Paris, London, New York, and San Francisco. Every year its systems are capable of traveling over 330 million miles and transporting nearly 2 billion people. The company's electric propulsion systems are contributing to a cleaner world by saving more than 30 millions of gallons of fuel and eliminating 335,000 tons of significant transit related CO2 emissions each year.
Operations	Yes	Risks and opportunities from mandatory energy reporting schemes (e.g. SECR), increasing energy costs, and the commitment to be a responsible organisation has influenced our strategic decision to explore additional energy saving opportunities in the short-term and to implement, and maintain energy management systems. In 2021, BAE sites across the globe implemented projects that will give estimated energy savings of 20,400 tCO2e. We recognise the need for a resilient energy supply, and in line with our net zero roadmap for the UK we will focus on maximising energy efficiency, reducing emissions where feasible and focusing on natural renewable power.

**C3.4**

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

	Financial planning elements that have been influenced	Description of influence
Row 1	Revenues Direct costs	Risks and opportunities from policies to restrict emissions, government Net Zero commitments, costs of fossil fuel etc. have been factored into our financial planning process to determine new sources of revenue in the long-term (10 years and beyond). For example, we have sold 14,000 hybrid electric systems globally, have developed a hybrid-electric boat, set two Net Zero targets and are currently progressing our Net Zero transition plan across the business. Risks and opportunities from mandatory energy assessment schemes (e.g. ESOS and SECR), increasing energy costs, and the commitment to be a responsible organisation have been factored into our financial planning process to reduce direct costs in the short-term (0-2 years). As a result of one of the energy audits that had taken place due to the mandatory energy assessment scheme (ESOS), BAE Systems commenced the implementation of a LED lighting replacement scheme that will save the company an estimated £75,000 due to the energy savings.

**C3.5**

**(C3.5) In your organization's financial accounting, do you identify spending/revenue that is aligned with your organization's transition to a 1.5°C world?**

No, but we plan to in the next two years

**C4. Targets and performance**

**C4.1**

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

Absolute target

**C4.1a**

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

**Target reference number**

Abs 1

**Year target was set**

2021

**Target coverage**

Business division

**Scope(s)**

Scope 1

Scope 2

**Scope 2 accounting method**

Location-based

**Scope 3 category(ies)**

<Not Applicable>

**Base year**

2020

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

15528

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

23489

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

<Not Applicable>

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

39017

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

10

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

7

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

<Not Applicable>

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

8

**Target year**

2021

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

5

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

37066.15

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

14988

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

21550

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

<Not Applicable>

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

36537

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

127.124074121537

**Target status in reporting year**

Achieved

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

No, but we anticipate setting one in the next 2 years

**Target ambition**

<Not Applicable>

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

We anticipate setting Science Based Target initiatives in the next two years within our UK business only. This target relates to the Air business in the UK, who update the target annually and therefore re-baseline each year. This fits with the requirement on all businesses to set objectives and targets in line with their ISO 14001 (Environmental Management Systems) and/or ISO 50001 (Energy Management Systems). This Air target has been estimated & converted from an energy reduction target to an emissions reduction target using relevant location-based emissions factors from 2021 taken from the UK Government website. Note that although the Air business target is used as an example here, all businesses set targets to improve their energy performance. These targets take various formats depending on what works most effectively for the different businesses across the Group. They could require an absolute reduction; a reduction against an informed forecast energy consumption; or a reduction calculated on the basis of the successful completion of a large programme of energy saving projects, or there may be targets to improve reporting, maintain energy systems, raise awareness, etc. The target only includes the emissions for electricity for scope 2 and natural gas for scope 1.

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

<Not Applicable>

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

- Replacing current inefficient florescent lighting with LED alternatives
- Replacement of outside light bollards.

C4.2

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

Net-zero target(s)

C4.2c

**(C4.2c) Provide details of your net-zero target(s).**

**Target reference number**

NZ1

**Target coverage**

Company-wide

**Absolute/intensity emission target(s) linked to this net-zero target**

Abs1

**Target year for achieving net zero**

2030

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

Yes, we consider this a science-based target, and we have committed to seek validation of this target by the Science Based Targets initiative in the next 2 years

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

We are intending to seek validation of this target by the Science Based Targets initiatives in the next 2 years for our UK businesses. Our Operational Net Zero Target covers our scope 1 and 2 greenhouse emissions (CO<sub>2</sub>, CH<sub>4</sub> and N<sub>2</sub>O) across our operations in the UK, US, Australia, Saudi Arabia, Sweden and countries within our 'Rest of World' reporting category. Our scope 1 and 2 emissions inventory do not include hydrofluorocarbons, perfluorocarbons or sulphur hexafluorides.

**Do you intend to neutralize any unabated emissions with permanent carbon removals at the target year?**

Yes

**Planned milestones and/or near-term investments for neutralization at target year**

BAE Systems are planning on neutralizing any unabated emissions at target year. We are currently reviewing details around this and will publish further information in future years.

**Planned actions to mitigate emissions beyond your value chain (optional)**

C4.3

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

Yes

C4.3a

**(C4.3a) Identify the total number of initiatives at each stage of development, and for those in the implementation stages, the estimated CO<sub>2</sub>e savings.**

	Number of initiatives	Total estimated annual CO <sub>2</sub> e savings in metric tonnes CO <sub>2</sub> e (only for rows marked *)
Under investigation	0	0
To be implemented*	4	988
Implementation commenced*	2	194
Implemented*	2	19192
Not to be implemented	0	0

C4.3b

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

**Initiative category & Initiative type**

Energy efficiency in buildings	Lighting
--------------------------------	----------

**Estimated annual CO<sub>2</sub>e savings (metric tonnes CO<sub>2</sub>e)**

924

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

Scope 2 (location-based)

**Voluntary/Mandatory**

Voluntary

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

478600

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

2400000

**Payback period**

4-10 years

**Estimated lifetime of the initiative**

6-10 years

**Comment**

LED lighting installation projects will be implemented at two UK sites in order to reduce energy consumption. The examples provided cover specific sites across multiple business units. These sites were selected as they are collectively the largest consumers of energy. All businesses across the Group will have similar programmes in place to realise energy saving opportunities across their estate. Please note, not all of the energy initiatives implemented within 2021 have been incorporated within this section.

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**Initiative category & Initiative type**

Energy efficiency in buildings	Lighting
--------------------------------	----------

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

138

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

Scope 2 (location-based)

**Voluntary/Mandatory**

Voluntary

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

86400

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

62200

**Payback period**

<1 year

**Estimated lifetime of the initiative**

6-10 years

**Comment**

LED lighting installation projects has been commenced at two UK sites in order to reduce energy consumption. The examples provided cover specific sites across multiple business units. These sites were selected as they are collectively the largest consumers of energy. All businesses across the Group will have similar programmes in place to realise energy saving opportunities across their estate. Please note, not all of the energy initiatives implemented within 2021 have been incorporated within this section.

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**Initiative category & Initiative type**

Energy efficiency in buildings	Heating, Ventilation and Air Conditioning (HVAC)
--------------------------------	--

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

56

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

Scope 1

**Voluntary/Mandatory**

Voluntary

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

25000

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

2200

**Payback period**

<1 year

**Estimated lifetime of the initiative**

3-5 years

**Comment**

An air leak survey has commenced to identify leaks in the compressor house on site. Findings from this survey will lead to maintenance to reduce air leaks and therefore improve the efficiency of the HVAC equipment on site and the reduction of fuel used for the equipment. The examples provided cover specific sites across multiple business units. These sites were selected as they are collectively the largest consumers of energy. All businesses across the Group will have similar programmes in place to realise energy saving opportunities across their estate. Please note, not all of the energy initiatives implemented within 2021 have been incorporated within this section. Figures provided are estimates.

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**Initiative category & Initiative type**

Low-carbon energy consumption	Low-carbon electricity mix
-------------------------------	----------------------------

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

19192

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

Scope 2 (market-based)

**Voluntary/Mandatory**

Voluntary

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

0

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

49600

**Payback period**

No payback

**Estimated lifetime of the initiative**

3-5 years

**Comment**

Switch of electricity supply at UK sites to renewable sources backed by REGOs. This was implemented so REGOs certificates were valid for 7 months of 2021 which lead to a reduction in our scope 2 market based figure. Continuation of REGOs certificates for a number of UK sites also occurred in 2021 - these sites had REGOs backed electricity in previous reporting years. The investment required has been estimated based on invoiced figure from a large UK site.

**Initiative category & Initiative type**

Energy efficiency in buildings	Heating, Ventilation and Air Conditioning (HVAC)
--------------------------------	--

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

32

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

Scope 1

**Voluntary/Mandatory**

Voluntary

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

19200

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

12000

**Payback period**

&lt;1 year

**Estimated lifetime of the initiative**

6-10 years

**Comment**

Improvements to controls on HVAC equipment will take place to improve efficiency of the equipment and reduce fossil fuel consumption. These include AHU control improvements, re-calibrating sensors on AHUs and improve the 'flat-V' control which does not currently suit the requirements of the building. The examples provided cover specific sites across multiple business units. These sites were selected as they are collectively the largest consumers of energy. All businesses across the Group will have similar programmes in place to realise energy saving opportunities across their estate. Please note, not all of the energy initiatives implemented within 2021 have been incorporated within this section. Figures provided are estimates.

**Initiative category & Initiative type**

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

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

20

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

Scope 2 (location-based)

Scope 2 (market-based)

**Voluntary/Mandatory**

Voluntary

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

16100

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

135000

**Payback period**

4-10 years

**Estimated lifetime of the initiative**

16-20 years

**Comment**

The implementation of a 100kWp PV solar installation has been proposed at a large UK site to power EV charging points and electricity used by the building. This will lead

to the site reducing the need for grid electricity and will generate renewable electricity for consumption, reducing tCO2e produced for the site. Figures provided are estimates.

**Initiative category & Initiative type**

Energy efficiency in buildings	Heating, Ventilation and Air Conditioning (HVAC)
--------------------------------	--

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

13

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

Scope 1

**Voluntary/Mandatory**

Voluntary

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

7700

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

10000

**Payback period**

4-10 years

**Estimated lifetime of the initiative**

3-5 years

**Comment**

A process optimization project is set to be implemented at a large UK site to improve efficiency and reduce energy consumption. This will involve setting up flat-v control on the SLM cells on 1-3 CCU fans. The examples provided cover specific sites across multiple business units. These sites were selected as they are collectively the largest consumers of energy. All businesses across the Group will have similar programmes in place to realise energy saving opportunities across their estate. Please note, not all of the energy initiatives implemented within 2021 have been incorporated within this section. Figures provided are estimates.

**C4.3c**

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

Method	Comment
Compliance with regulatory requirements/standards	With respect to environment, as a minimum we ensure that our businesses comply with relevant regulations, standards and laws on top of contractual requirements applicable to the projects. This is stipulated within our Environmental Policy which is applicable to the Group.
Employee engagement	Various awareness raising campaigns are active each year across the businesses. Some are coordinated at a global level, such as our Sustainability Week and World Environment Day, and some national level, and others are business unit/ site specific.
Financial optimization calculations	Businesses set objectives and targets for energy management each year and use a variety of methods to produce relevant business cases locally for capital investment.
Internal incentives/recognition programs	Employee bonuses are linked to whether a business meets its stated objectives. Certain employees with direct environmental responsibility (energy/environmental managers) will have relevant performance metrics included in their 'Personal Development Review' (PDR). The PDR process influences the multiplier applied to employee bonuses and any additional individual bonuses.
Partnering with governments on technology development	The design of our products and provision of our services has an impact on the GHG emissions of our customers. There are a number of ways that we engage with our customers to understand their energy/ environmental challenges, from commissioned studies/ thought leadership to formal working groups and domain-specific interactions within individual businesses and projects.

**C4.5**

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

Yes

**C4.5a**

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

**Level of aggregation**

Group of products or services

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

Other, please specify (Low Emissions Bus Certificate)

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

Other	Other, please specify (Electric Bus)
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**Description of product(s) or service(s)**

BAE Systems Power & Propulsion Solutions, part of the Electronic Systems business has been active in the heavy duty vehicle green propulsion sector since the mid-nineties. Our flag- ship product portfolio is a series of hybrid and full electric drive propulsion systems designed specifically for city bus applications. The latest addition to the portfolio is the Series- EV, a fully electric drive system with on-board generation and energy storage. It can employ a traditional diesel engine to generate electricity or in some cases a hydrogen fuel cell for zero emissions. Additionally we have taken our proven green bus technology to the water with the introduction of three hybrid and electric solutions; HybriGen® provides hybrid power for boat accessories and cleaner, quieter vessel propulsion; HybriGen® Zero addresses the inland towboat market with hybrid power; saving fuel, space and maintenance costs; and Hybrid Assist uses parallel hybrid configuration to drive a vessel on electric power at low speeds with a boost of power for high speeds when required.

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

No

**Methodology used to calculate avoided emissions**

<Not Applicable>

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

<Not Applicable>

**Functional unit used**

<Not Applicable>

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

<Not Applicable>

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

<Not Applicable>

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

<Not Applicable>

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

<Not Applicable>

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

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**C5. Emissions methodology**

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**C5.1**

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

No

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**C5.1a**

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

Row 1

**Has there been a structural change?**

No

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

<Not Applicable>

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

<Not Applicable>

---

**C5.1b**

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

	Change(s) in methodology, boundary, and/or reporting year definition?	Details of methodology, boundary, and/or reporting year definition change(s)
Row 1	Yes, a change in reporting year definition	The reporting period for scope 1 fuels and scope 2 electricity and steam has always been calendar year (1st January to 31st December). In previous years, the reporting period for the transport data was different (1st November 2019 to 31st October 2020) due to historic systems in place to capture global transport data. In the most recent reporting period, the reporting period for transport has been adjusted so it is in line with the calendar year period used for the rest of the GHG Inventory. All data for the reporting period is therefore for 1st January 2021 to 31st December 2021.

**C5.1c**

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

	Base year recalculation	Base year emissions recalculation policy, including significance threshold
Row 1	No, because we have not evaluated whether the changes should trigger a base year recalculation	This policy is currently in draft, and we aim to have this in place for the reporting period FY2022.

**C5.2**

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

**Scope 1**

**Base year start**

January 1 2019

**Base year end**

December 31 2019

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

480392

**Comment**

In 2020, base year emissions for Scope 1 were re-baselined to 496,134 . This was to take account of more accurate estimates and updated conversion factors (for Scope 2).

**Scope 2 (location-based)**

**Base year start**

January 1 2019

**Base year end**

December 31 2019

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

484504

**Comment**

In 2020, base year emissions for Scope 2 were re-baselined to 432,325 . This was to take account of more accurate estimates and updated conversion factors (for Scope 2).

**Scope 2 (market-based)**

**Base year start**

January 1 2019

**Base year end**

December 31 2019

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

517035

**Comment**

In 2020, base year emissions for Scope 2 were re-baselined to 489,991. This was to take account of more accurate estimates and updated conversion factors (for Scope 2).

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

**Base year start**

**Base year end**

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

**Comment**

Scope 3 category 2: Capital goods

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment

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

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment

Scope 3 category 4: Upstream transportation and distribution

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment

Scope 3 category 5: Waste generated in operations

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment

Scope 3 category 6: Business travel

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment

Scope 3 category 7: Employee commuting

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment

Scope 3 category 8: Upstream leased assets

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment

Scope 3 category 9: Downstream transportation and distribution

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment

Scope 3 category 10: Processing of sold products

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment

Scope 3 category 11: Use of sold products

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment

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

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment

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

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment

**Scope 3 category 14: Franchises**

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment

**Scope 3 category 15: Investments**

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment

**Scope 3: Other (upstream)**

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment

**Scope 3: Other (downstream)**

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment

**C5.3**

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

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

**C6. Emissions data**

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**C6.1**

---

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

**Reporting year**

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

142241

**Start date**

<Not Applicable>

**End date**

<Not Applicable>

**Comment**

BAE Systems direct GHG emissions are derived by calculation and expressed as CO2 equivalent using the Department for Business, Energy & Industrial Strategy's Scope 1 GHG emission factors (as listed on gov.uk) using the latest factors available at the start of the reporting year. We report direct GHG emissions related to the combustion of energy from usage data measured in our Scope 1 fields (natural gas, liquefied petroleum gas or propane gas, light fuel oil, petrol, heavy fuel oil, aviation fuel), plus natural gas usage estimated for facilities at which we have a presence but do not process the utilities, Petrol/Diesel - purchased and consumed within BAE Systems controlled road vehicles (i.e. hire cars and executive-lease cars) where the fuel does not come from stores at the facility and Aviation fuel - purchased and consumed within BAE Systems controlled aircraft (i.e. Corporate Air Travel aircraft) where the fuel does not come from stores at the facility.

**C6.2**

---

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

**Row 1**

**Scope 2, location-based**

We are reporting a Scope 2, location-based figure

**Scope 2, market-based**

We are reporting a Scope 2, market-based figure

**Comment**

BAE Systems is reporting Scope 2 location-based and market-based emissions according to the Greenhouse Gas Protocol guidance.

**C6.3**

---

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

**Reporting year**

**Scope 2, location-based**

268735

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

232856

**Start date**

<Not Applicable>

**End date**

<Not Applicable>

**Comment**

The location-based Scope 2 emissions have been calculated using country specific location-based emission factors. For the market based scope 2 emissions, supplier-specific emission factors have been sought for most of our significant operating regions but were deemed of insufficient quality to use at present or were unavailable. Therefore, in line with the Greenhouse Gas Protocol guidance, this figure has been calculated using residual mix emission factors where available for our UK, US and Sweden operations. In our other significant operating regions, residual-mix factors are either unavailable or within the margin of error of the standard grid average emission factor, and therefore the latter has been used. The UK sites purchase grid electricity that is backed by REGOs, therefore the emissions for these sites have been calculated as 0 tCO2e for the period of time the REGOs certificates were valid. Electricity from plug in hybrid vehicles is also included in the scope 2 calculations and the emissions calculated using the relevant Department for Business, Energy and Industrial Strategy's emission factors.

**C6.4**

---

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

Yes

**C6.4a**

---

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

**Source**

GHG emissions associated with hydrofluorocarbons, perfluorocarbons and sulphur hexafluoride are not included.

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

Emissions are not relevant

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

Emissions are not relevant

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

Emissions are not relevant

**Explain why this source is excluded**

These emissions have historically been excluded from the GHG inventory on the basis of technical feasibility. An annual strategic and risk review of these emissions used in 2021 did not indicate that any change in this exclusion was required. This will be reviewed again in the next reporting round.

**Estimated percentage of total Scope 1+2 emissions this excluded source represents**

1

**Explain how you estimated the percentage of emissions this excluded source represents**

The emissions have been estimated to be less than 1% of the global scope 1 and 2 emissions. This estimation was completed by calculating the GHG emissions from refrigerants for a large sample site where the refrigerant log sheets were available and refrigerant use was expected to be largest. The UK Government's emission factors were used to calculate the emissions. The materiality of these emissions against the site's total scope 1 and 2 emissions was calculated and concluded to be less than 1% of the total emissions.

---

**C6.5**

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

**Purchased goods and services**

**Evaluation status**

Relevant, not yet calculated

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

<Not Applicable>

**Emissions calculation methodology**

<Not Applicable>

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

<Not Applicable>

**Please explain**

**Capital goods**

**Evaluation status**

Relevant, not yet calculated

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

<Not Applicable>

**Emissions calculation methodology**

<Not Applicable>

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

<Not Applicable>

**Please explain**

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

**Evaluation status**

Relevant, not yet calculated

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

<Not Applicable>

**Emissions calculation methodology**

<Not Applicable>

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

<Not Applicable>

**Please explain**

## Upstream transportation and distribution

### Evaluation status

Relevant, calculated

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

9989

### Emissions calculation methodology

Spend-based method

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

100

### Please explain

The emissions calculation methodology is estimated using the spend-based method. The scope 1 emissions from our main logistics provider was divided by their revenue figure to understand the intensity metric - tCO2e/£m. This intensity metric was then used to estimate the transportation and distribution emissions associated with BAE's spend with the logistics company. The spend data includes upstream and downstream transportation, therefore these emissions will also include some emissions from the scope 3 category 9 as well.

## Waste generated in operations

### Evaluation status

Relevant, calculated

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

1624

### Emissions calculation methodology

Waste-type-specific method

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

100

### Please explain

The emissions calculation methodology is estimated using the water-type-specific method. The waste data used in the calculation included our UK operations waste and was estimated based on the waste type and stream. Data was taken from supplier's records.

## Business travel

### Evaluation status

Relevant, calculated

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

24094

### Emissions calculation methodology

Distance-based method

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

100

### Please explain

Business travel includes estimated GHG emissions related to air travel data for the majority of the global business, rail data for business units operating in the UK and US, and grey fleet for US, UK and Australia. This data is taken from suppliers' procurement records.

## Employee commuting

### Evaluation status

Relevant, calculated

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

73747

### Emissions calculation methodology

Average data method

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

0

### Please explain

The employee commuting figure in 2021 has been estimated using the average data method using the following formula ' $\sum$  (no. employees using mode of transport  $\times$  round trip commuting distance (km)  $\times$  working days per year  $\times$  emission factor of transport mode (kg CO2e/vehicle-km or kg CO2e/passenger-km)). Commuting data has been established for car, bus, train and foot. The number of employees used in the estimation is based on actual FTE figures published in BAE System's annual report. The mode of transport has been calculated using the office for national statistics 2018 data. The commuting distance has been generated taking the miles from the department for transport national travel survey 2019 UK, taking the average commuting miles per person per year (1,276/average commuting trips per person 140). Working days per year has been estimated at 225 giving 5 weeks of annual leave and taking into account absence periods of 10 days.

## Upstream leased assets

### Evaluation status

Not relevant, explanation provided

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

<Not Applicable>

### Emissions calculation methodology

<Not Applicable>

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

<Not Applicable>

### Please explain

We include significant leased assets in our Scope 1 and 2 emissions inventories.

## Downstream transportation and distribution

### Evaluation status

Relevant, not yet calculated

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

<Not Applicable>

### Emissions calculation methodology

<Not Applicable>

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

<Not Applicable>

### Please explain

We have undertaken a number of studies that clearly show the usage phase of our Products to be by far the most GHG-intensive phase of their lifecycle. However, we do not currently have a robust calculation process in place to provide an estimate of the overall impact of our sold products, inclusive of downstream transportation and distribution. Additionally, downstream emissions have been included in the GHG emission figure calculated for upstream transportation and distribution as due to the current estimation methodology, we cannot separate the emissions.

## Processing of sold products

### Evaluation status

Not relevant, explanation provided

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

<Not Applicable>

### Emissions calculation methodology

<Not Applicable>

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

<Not Applicable>

### Please explain

We have undertaken some pilot studies that show the in-use phase of our 'platform' products to be by far the most GHG-intensive phase of their lifecycle. The emissions associated with manufacturing our products are covered in scopes 1 and 2

## Use of sold products

### Evaluation status

Relevant, not yet calculated

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

<Not Applicable>

### Emissions calculation methodology

<Not Applicable>

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

<Not Applicable>

### Please explain

We have undertaken a number of studies that clearly show the usage phase of our Products to be by far the most GHG-intensive phase of their lifecycle. However, we do not currently have a robust calculation process in place to provide an estimate of the overall impact of our sold products.

## End of life treatment of sold products

### Evaluation status

Relevant, not yet calculated

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

<Not Applicable>

### Emissions calculation methodology

<Not Applicable>

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

<Not Applicable>

### Please explain

Due to the nature of our business, end of life treatment of our products is tightly dictated by our customers. The long-life cycles associated with our most energy intensive products will mean that end of life considerations materialise a long way into the future.

**Downstream leased assets**

**Evaluation status**

Not relevant, explanation provided

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

<Not Applicable>

**Emissions calculation methodology**

<Not Applicable>

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

<Not Applicable>

**Please explain**

We do have some downstream leased assets, primarily related to our UK Shared Services business. However, the emissions associated with these assets are very small in relation to our overall Scope 1 & 2 GHG footprint.

**Franchises**

**Evaluation status**

Not relevant, explanation provided

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

<Not Applicable>

**Emissions calculation methodology**

<Not Applicable>

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

<Not Applicable>

**Please explain**

Franchises are not relevant to our company/ business model.

**Investments**

**Evaluation status**

Not relevant, explanation provided

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

<Not Applicable>

**Emissions calculation methodology**

<Not Applicable>

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

<Not Applicable>

**Please explain**

BAE Systems does not have investments with significant GHG emissions.

**Other (upstream)**

**Evaluation status**

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

<Not Applicable>

**Emissions calculation methodology**

<Not Applicable>

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

<Not Applicable>

**Please explain**

**Other (downstream)**

**Evaluation status**

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

<Not Applicable>

**Emissions calculation methodology**

<Not Applicable>

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

<Not Applicable>

**Please explain**

**C-CG6.6**

**(C-CG6.6) Does your organization assess the life cycle emissions of any of its products or services?**

	Assessment of life cycle emissions	Comment
Row 1	No, but we plan to start doing so within the next two years	

## C6.7

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

No

## C6.10

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

**Intensity figure**

0.000019

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

410976

**Metric denominator**

unit total revenue

**Metric denominator: Unit total**

2131000000

**Scope 2 figure used**

Location-based

**% change from previous year**

17

**Direction of change**

Decreased

**Reason for change**

Between FY20 and FY21 the revenue figure increased and the absolute GHG emissions decreased. The reduction in Scope 1 and 2 emissions is due to various factors including the implementation of emission reduction projects and the increase in renewable electricity generated and used on sites in FY2021.

---

**Intensity figure**

5

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

410976

**Metric denominator**

full time equivalent (FTE) employee

**Metric denominator: Unit total**

79983

**Scope 2 figure used**

Location-based

**% change from previous year**

6

**Direction of change**

Decreased

**Reason for change**

Between FY2020 and FY2021 there was a reduction in scope 1 and 2 emissions by 16% and a 11% reduction in number for the FTE employees. The reduction in scope 1 and 2 emissions is due to various factors including emission reduction projects and the increase in renewable electricity generated and used on sites in FY2021. The intensity figure was calculated by dividing the scope 1 and 2 combined emissions figure by the FTE figure.

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## C7. Emissions breakdowns

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### C7.1

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

No

### C7.2

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

Country/Region	Scope 1 emissions (metric tons CO2e)
United Kingdom of Great Britain and Northern Ireland	76133.02
United States of America	53027.28
Saudi Arabia	1290.42
Australia	3622.41
Sweden	458.71
Other, please specify (Rest of World) <i>Rest of World category includes all other BAE Systems locations not located in the main regions as listed above.</i>	7708.76

**C7.3**

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

By business division

**C7.3a**

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

Business division	Scope 1 emissions (metric ton CO2e)
Air	32955.33
Maritime	1353.99
Inc.	58545
Shared Services	11124.88
Applied Intelligence	1781.76
Land	11305.44
Submarines	20119.33
Other	1055.38
Naval ships	3999.48

**C7.5**

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

Country/Region	Scope 2, location-based (metric tons CO2e)	Scope 2, market-based (metric tons CO2e)
United Kingdom of Great Britain and Northern Ireland	71602.31	25033.52
United States of America	112296	122873.39
Saudi Arabia	56285.67	56285.67
Australia	18086.36	18086.36
Other, please specify (Rest of World) <i>Rest of World category includes all other BAE Systems locations not located in the main regions as listed above.</i>	10325.44	10325.44
Sweden	139.38	251.97

**C7.6**

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

By business division

**C7.6a**

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

Business division	Scope 2, location-based (metric tons CO2e)	Scope 2, market-based (metric tons CO2e)
Air	98906.08	78395.84
Maritime	1113.57	1474.72
Inc.	121226.98	129219.46
Shared Services	11720.02	9816.3
Applied Intelligence	4193.88	4004.96
Land	5101.64	1893.01
Submarines	18701.53	2629.11
Naval ships	5900.66	3489.95
Other	1870.79	1932.99

**C7.9**

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

Decreased

**C7.9a**

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

	Change in emissions (metric tons CO2e)	Direction of change	Emissions value (percentage)	Please explain calculation
Change in renewable energy consumption	54781	Decreased	11	In 2021, BAE Systems increased the amount renewable electricity backed by REGOs for the UK sites. 54,781 tons of CO2e were estimated to be reduced because of the REGOs backed renewable electricity and our total Scope 1 and 2 emissions in the previous year was 499,211 tCO2e, therefore we arrived at -11% through $(-55,781/499,211) \times 100 = -11\%$ (i.e. a -11% decrease in emissions).
Other emissions reduction activities	20400	Decreased	4	In 2021, BAE Systems implemented emission reduction projects totalling an estimated 20,374 tCO2e in emission reductions. As this figure is an estimated, it has been rounded up to 20,400. These amounted to a decrease in emissions of 5% (calculated $20,400 / 499,211$ multiplied by 100). Many business units were involved in implementing emission reduction initiatives throughout the year, such as process efficiency, lighting and building insulation improvements
Divestment		<Not Applicable >		
Acquisitions		<Not Applicable >		
Mergers		<Not Applicable >		
Change in output	8933	Decreased	10	The change in output due to the continuing effects of COVID led to a small decrease in production and operations which included the reduction of hire cars and office usage from continued home working and implementation of hybrid working arrangements. The emission reduction was estimated $(48,933 / 499,211 \times 100)$ . The small decrease in production was also followed by a larger office closure which contributed to the impact.
Change in methodology		<Not Applicable >		
Change in boundary		<Not Applicable >		
Change in physical operating conditions		<Not Applicable >		
Unidentified		<Not Applicable >		
Other		<Not Applicable >		

**C7.9b**

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

Market-based

**C-CG7.10**

**(C-CG7.10) How do your total Scope 3 emissions for the reporting year compare to those of the previous reporting year?**

Decreased

**C-CG7.10a**

**(C-CG7.10a) For each Scope 3 category calculated in C6.5, specify how your emissions compare to the previous year and identify the reason for any change.**

**Upstream transportation and distribution**

**Direction of change**

First year of reporting this category

**Primary reason for change**

<Not Applicable>

**Change in emissions in this category (metric tons CO2e)**

<Not Applicable>

**% change in emissions in this category**

<Not Applicable>

**Please explain**

<Not Applicable>

**Waste generated in operations**

**Direction of change**

First year of reporting this category

**Primary reason for change**

<Not Applicable>

**Change in emissions in this category (metric tons CO2e)**

<Not Applicable>

**% change in emissions in this category**

<Not Applicable>

**Please explain**

<Not Applicable>

**Business travel**

**Direction of change**

Decreased

**Primary reason for change**

Change in output

**Change in emissions in this category (metric tons CO2e)**

30072

**% change in emissions in this category**

56

**Please explain**

BAE System's estimated GHG emissions from business travel decreased from 2021 due to the continuing effects of the global pandemic and the subsequent change in business operations (most notably the reduction in business related travel to other countries). The most notable decrease in business travel emissions is in KSA for the reduction in long haul flights.

**Employee commuting**

**Direction of change**

Increased

**Primary reason for change**

Change in methodology

**Change in emissions in this category (metric tons CO2e)**

53347

**% change in emissions in this category**

262

**Please explain**

In 2020 the employee commuting figure was estimated using the GHG Protocol Scope 3 evaluator tool. This tool uses highly estimated ranges and figures and therefore BAE Systems were keen to increase the accuracy of the employee commuting figure in 2021. The average data method was used to calculate the updated 2021 figure using actual FTE figures and secondary data from sources such as national transportation departments, ministries or agencies, national statistical publications and or industry associations.

**C8. Energy**

## C8.1

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

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

## C8.2

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

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

## C8.2a

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

	Heating value	MWh from renewable sources	MWh from non-renewable sources	Total (renewable and non-renewable) MWh
Consumption of fuel (excluding feedstock)	HHV (higher heating value)	0	718682	718682
Consumption of purchased or acquired electricity	<Not Applicable>	257998	625841	883839
Consumption of purchased or acquired heat	<Not Applicable>	<Not Applicable>	<Not Applicable>	<Not Applicable>
Consumption of purchased or acquired steam	<Not Applicable>	0	19653	19653
Consumption of purchased or acquired cooling	<Not Applicable>	<Not Applicable>	<Not Applicable>	<Not Applicable>
Consumption of self-generated non-fuel renewable energy	<Not Applicable>	2486	<Not Applicable>	2486
Total energy consumption	<Not Applicable>	260484	1364176	1624660

## C8.2b

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

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

## C8.2c

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

**Sustainable biomass**

**Heating value**

Unable to confirm heating value

**Total fuel MWh consumed by the organization**

0

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

0

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

0

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

0

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

<Not Applicable>

**MWh fuel consumed for self- cogeneration or self-trigeneration**

<Not Applicable>

**Comment**

Sustainable biomass is not used for the business

**Other biomass**

**Heating value**

Unable to confirm heating value

**Total fuel MWh consumed by the organization**

0

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

0

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

0

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

0

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

<Not Applicable>

**MWh fuel consumed for self- cogeneration or self-trigeneration**

<Not Applicable>

**Comment**

Biomass is not used in the business

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

**Heating value**

Unable to confirm heating value

**Total fuel MWh consumed by the organization**

0

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

0

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

0

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

0

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

<Not Applicable>

**MWh fuel consumed for self- cogeneration or self-trigeneration**

<Not Applicable>

**Comment**

Other renewable fuels such as renewable hydrogen is not used in the business.

**Coal****Heating value**

Unable to confirm heating value

**Total fuel MWh consumed by the organization**

0

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

0

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

0

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

0

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

<Not Applicable>

**MWh fuel consumed for self- cogeneration or self-trigeneration**

<Not Applicable>

**Comment**

Coal is not used by the business.

**Oil****Heating value**

HHV

**Total fuel MWh consumed by the organization**

48997

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

0

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

48997

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

0

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

<Not Applicable>

**MWh fuel consumed for self- cogeneration or self-trigeneration**

<Not Applicable>

**Comment**

We use Gas Oil and heavy fuel oil in our business. Within our reporting, we do not define what the fuel has been consumed for, nor do we define how much we have generated internally. Following the guidance, it has therefore been assumed that the majority of our fuel has been used for the generation of heat. The megawatt figure is estimated.

**Gas****Heating value**

HHV

**Total fuel MWh consumed by the organization**

613618

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

0

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

613618

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

0

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

<Not Applicable>

**MWh fuel consumed for self- cogeneration or self-trigeneration**

<Not Applicable>

**Comment**

Within our reporting, we do not define what the fuel has been consumed for, nor do we define how much we have generated internally. Following the guidance, it has therefore been assumed that the majority of our fuel has been used for the generation of heat. The megawatt figure is estimated.

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

**Heating value**

HHV

**Total fuel MWh consumed by the organization**

56177

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

0

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

56177

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

0

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

<Not Applicable>

**MWh fuel consumed for self- cogeneration or self-trigeneration**

<Not Applicable>

**Comment**

Within our reporting, we do not define what the fuel has been consumed for, nor do we define how much we have generated internally. Following the guidance, it has therefore been assumed that the majority of our fuel has been used for the generation of heat. These fuels include aviation fuel, propane and petrol. The megawatt figure is estimated.

**Total fuel**

**Heating value**

HHV

**Total fuel MWh consumed by the organization**

718682

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

0

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

718682

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

0

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

<Not Applicable>

**MWh fuel consumed for self- cogeneration or self-trigeneration**

<Not Applicable>

**Comment**

Within our reporting, we do not define what the fuel has been consumed for, nor do we define how much we have generated internally. Following the guidance, it has therefore been assumed that the majority of our fuel has been used for the generation of heat. The megawatt figure is estimated.

**C8.2d**

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

	Total Gross generation (MWh)	Generation that is consumed by the organization (MWh)	Gross generation from renewable sources (MWh)	Generation from renewable sources that is consumed by the organization (MWh)
Electricity	2486	2486	2486	2486
Heat	0	0	0	0
Steam	0	0	0	0
Cooling	0	0	0	0

**C8.2e**

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

**Sourcing method**

Unbundled energy attribute certificates (EACs) purchase

**Energy carrier**

Electricity

**Low-carbon technology type**

Solar

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

United Kingdom of Great Britain and Northern Ireland

**Tracking instrument used**

REGO

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

257998

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

United Kingdom of Great Britain and Northern Ireland

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

**Comment**

Estimated on the basis of REGOs purchased by the UK Division.

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**C8.2g**

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**(C8.2g) Provide a breakdown of your non-fuel energy consumption by country.**

**Country/area**

United Kingdom of Great Britain and Northern Ireland

**Consumption of electricity (MWh)**

339623

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

315094

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

654717

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

<Not Applicable>

---

**Country/area**

United States of America

**Consumption of electricity (MWh)**

388446

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

257065

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

645511

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

<Not Applicable>

---

**Country/area**

Sweden

**Consumption of electricity (MWh)**

10889

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

1614

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

12503

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

<Not Applicable>

---

**Country/area**

Australia

**Consumption of electricity (MWh)**

26353

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

14882

---

**Total non-fuel energy consumption (MWh) [Auto-calculated]**  
41235

**Is this consumption excluded from your RE100 commitment?**  
<Not Applicable>

---

**Country/area**  
Saudi Arabia

**Consumption of electricity (MWh)**  
91225

**Consumption of heat, steam, and cooling (MWh)**  
2841

**Total non-fuel energy consumption (MWh) [Auto-calculated]**  
94066

**Is this consumption excluded from your RE100 commitment?**  
<Not Applicable>

---

**Country/area**  
Other, please specify (Rest of World category)

**Consumption of electricity (MWh)**  
29731

**Consumption of heat, steam, and cooling (MWh)**  
41776

**Total non-fuel energy consumption (MWh) [Auto-calculated]**  
71507

**Is this consumption excluded from your RE100 commitment?**  
<Not Applicable>

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#### C-CG8.5

**(C-CG8.5) Does your organization measure the efficiency of any of its products or services?**

	Measurement of product/service efficiency	Comment
Row 1	No, but we plan to start doing so within the next two years	

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#### C9. Additional metrics

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##### C9.1

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

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

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

	Investment in low-carbon R&D	Comment
Row 1	Yes	

---

#### C-CG9.6a

(C-CG9.6a) Provide details of your organization's investments in low-carbon R&D for capital goods products and services over the last three years.

**Technology area**

Energy efficient heating and cooling systems

**Stage of development in the reporting year**

Please select

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

Please select

**R&D investment figure in the reporting year (optional)**

**Comment**

BAE invests in R&D of hybrid electric buses and boats in the long-term. For example in 2019, BAE Systems unveiled its next-generation full battery electric power and propulsion system for transit buses. The newest system positions cities around the world to get to zero transportation emissions and improve the range and efficiency of their electric transit bus fleets. The Series-EV system uses fewer, lighter, and more compact components to make it easy to install and reduce the need for future maintenance. BAE Systems has more than 10,000 electric-hybrid systems in service around the globe including major cities such as Paris, London, New York, and San Francisco. Every year its systems travel over 330 million miles and transport nearly 2 billion people. The company's electric propulsion systems are contributing to a cleaner world by saving more than 22 million gallons of fuel and eliminating 250,000 tons of carbon dioxide each year across the globe – the equivalent of taking 42,000 cars off the road or planting 4 million trees.

C10. Verification

C10.1

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

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

C10.1a

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

**Verification or assurance cycle in place**

Annual process

**Status in the current reporting year**

Complete

**Type of verification or assurance**

Limited assurance

**Attach the statement**

BAE Systems\_FY21 Verification Statement\_Feb 01 (1).pdf

**Page/ section reference**

p1-3 of document

**Relevant standard**

ISO14064-3

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

100

C10.1b

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

**Scope 2 approach**

Scope 2 location-based

**Verification or assurance cycle in place**

Annual process

**Status in the current reporting year**

Complete

**Type of verification or assurance**

Limited assurance

**Attach the statement**

BAE Systems\_FY21 Verification Statement\_Feb 01 (1).pdf

**Page/ section reference**

p1-3 of document

**Relevant standard**

ISO14064-3

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

100

---

**Scope 2 approach**

Scope 2 market-based

**Verification or assurance cycle in place**

Annual process

**Status in the current reporting year**

Complete

**Type of verification or assurance**

Limited assurance

**Attach the statement**

BAE Systems\_FY21 Verification Statement\_Feb 01 (1).pdf

**Page/ section reference**

p1-3 of document

**Relevant standard**

ISO14064-3

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

100

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## C10.1c

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

**Scope 3 category**

Scope 3: Business travel

**Verification or assurance cycle in place**

Annual process

**Status in the current reporting year**

Complete

**Type of verification or assurance**

Limited assurance

**Attach the statement**

BAE Systems\_FY21 Verification Statement\_Feb 01 (1).pdf

**Page/section reference**

p1-3 of document

**Relevant standard**

ISO14064-3

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

100

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## C10.2

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

Yes

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C10.2a

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

Disclosure module verification relates to	Data verified	Verification standard	Please explain
C8. Energy	Energy consumption	ISO 14064-3	As part of the limited assurance process completed annually, the energy consumption reported for the largest consuming sites is reviewed against primary supplier data, activity data from invoices and meter reads. If there is over a 5% discrepancy with the actual and reported energy kWh, then the reported figures are reviewed with relevant stakeholders and amended if a material misstatement has been found. The GHG emissions are then updated as required. The reliability of the reported information and data in the responses in this return are subject to inherent uncertainties given the available methods for determining, calculating or estimating the energy consumption. It is important to understand our conclusions in this context.
C6. Emissions data	Other, please specify (Verification of the data behind GHG emissions )		Ramboll US Consulting, Inc. has provided independent third-party verification of BAE Systems' 2021 greenhouse gas (GHG) emissions, in order to provide limited assurance that based on the verification process and procedures conducted there is no evidence that the Company's reporting is not complete, not accurate, not consistent, not transparent and free of material discrepancies. BAE Systems' management is responsible for preparing the GHG inventory and for the collection and presentation of information within it. Ramboll's responsibility is to express conclusions on the agreed verification work and to determine based on the verification process and procedures conducted that there is no evidence that the work has not been prepared in accordance with the outlined methodology statement on page 46 of the Annual Report 2021. The reliability of the reported information and data is subject to inherent uncertainties given the available methods for determining, calculating or estimating the GHG emissions. It is important to understand our conclusions in this context.
C7. Emissions breakdown	Other, please specify (Verification of the data behind GHG emissions )		The reliability of the reported information and data in the responses in this return are subject to inherent uncertainties given the available methods for determining, calculating or estimating the GHG emissions. It is important to understand our conclusions in this context.
C5. Emissions performance	Other, please specify (Verification of the data behind GHG emissions )		The reliability of the reported information and data in the responses in this return are subject to inherent uncertainties given the available methods for determining, calculating or estimating the GHG emissions. It is important to understand our conclusions in this context.

BAE  
Systems\_FY21  
Verification  
Statement\_Feb  
01 (1).pdf

C11. Carbon pricing

C11.1

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

Yes

C11.1a

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

EU ETS

C11.1b

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

**EU ETS**

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

18

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

0

**Period start date**

January 1 2021

**Period end date**

December 31 2021

**Allowances allocated**

25850

**Allowances purchased**

0

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

25850

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

0

**Details of ownership**

Facilities we own and operate

**Comment**

The scheme covers two sites in the UK and the Corporate Air Travel (CAT) activity. There was no requirement to purchase allowances for the two sites as the actual emissions came below the allocations. Both sites have active energy efficiency/reduction programmes in place.

**C11.1d**

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

Our strategy for complying with the EU ETS is to work with a third-party contractor for all three parts of the business, to ensure all fuels are included, data is accurate and assured. In addition, our sites that are applicable, actively review options to reduce carbon emissions to levels below the scheme thresholds. For example, both the sites are actively reviewing the options to replace boilers with different systems /cleaner fuels. Both sites are certified to ISO 14001 (environmental management systems) and have active programmes for improving energy efficiency.

**C11.2**

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

No

**C11.3**

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

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

**C12. Engagement**

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**C12.1**

---

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

Yes, our suppliers

Yes, our customers/clients

**C12.1a**

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

**Type of engagement**

Information collection (understanding supplier behavior)

**Details of engagement**

Collect climate change and carbon information at least annually from suppliers

**% of suppliers by number**

100

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

100

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

**Rationale for the coverage of your engagement**

100% of BAE Systems' suppliers are included in the coverage of our engagement as the company wants to ensure all suppliers the company works with understand BAE's way of working and our aim to only work with suppliers that are on the same journey as us. BAE Systems are working towards becoming Net Zero by 2050 in our value chain and engagement with all suppliers is key to understanding the best possible route to achieving this target. This includes suppliers from all geographies our supply chain operates in and for 100% of our procurement spend. The engagement activity includes issuing all suppliers with a pre-qualification questionnaire which asks questions regarding environmental risks, targets and accreditations etc. including if the supplier has an approved science-based target, if they disclose to CDP and if they have had any environmental compliance notices.

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

BAE Systems measure the success of our supplier engagement activities by the percentage of suppliers that respond to the pre-qualification questionnaire. If 100% of our suppliers respond and share the required information we have requested, then we determine our engagement to be successful. The impact of this engagement activity includes understanding where the supplier is on their net zero journey, while identifying opportunities relating to sustainable procurement. This will impact BAE Systems' ability to meet our Net Zero by 2050 in the value chain target. In future years, when this engagement activity matures and suppliers have progressed in their journeys, we will include other measures of success including % of spend with suppliers with SBT and % of suppliers who have set carbon net zero.

**Comment**

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**C12.1b**

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

**Type of engagement & Details of engagement**

Collaboration & innovation	Other, please specify (Commissioned studies/ thought leadership, formal working groups, and domain-specific interactions with individual businesses. )
----------------------------	--

**% of customers by number**

100

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

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

Within BAE Systems our main customers are governments; within the UK, this would be the Ministry of Defence and we engage with them on the products that we are contracted to produce for the UK military. BAE Systems' Life Cycle Management (LCM) Framework highlights how the LCM can be tailored for projects and the need for environmental considerations throughout the whole process, through from design to disposal.

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

There are a number of ways in which we engage with our customers to understand their energy/ environmental challenges, from commissioned studies/ thought leadership, to formal working groups, to domain-specific interactions with individual businesses. Design improvements in environmental performance are actively sought and are particularly important due to the long lifecycles of the majority of our products. We measure success as supporting our customers with their emissions reductions and maintaining a good relationship. An example of the impact of our engagement strategy is our collaboration and engagement with the Royal Navy. We supported the installation of a Combined Heat and Power Plant (CHP) at Portsmouth Naval Base. BAE Systems works closely with the Royal Navy to deliver long-term energy cost savings to the naval base. This CHP system recycles energy and generates sizable output of heat and power. Energy and electrical requirements at the naval base will significantly increase with the new aircraft carriers and a dedicated CHP facility supports the Ministry of Defence's drive for a more modern and energy efficient base.

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**C12.2**

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

Yes, suppliers have to meet climate-related requirements, but they are not included in our supplier contracts

**C12.2a**

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

**Climate-related requirement**

Complying with regulatory requirements

**Description of this climate related requirement**

A climate related minimum requirement that suppliers have to meet as part of BAE Systems' purchasing process includes complying with regulatory requirements in the locations they operate which includes those relating to the environment and climate. Our global procurement policy requires our businesses to communicate our 'Supplier Principles – Guidance for Responsible Business' to our suppliers. The Supplier Principles are based on our code of conduct and group policies. They set out what we expect from our suppliers and their supply chains and outline best practice guidance for suppliers and the BAE Systems Code of Conduct. Our Supplier Principles and our standard terms and conditions require suppliers to comply with all applicable laws and regulations, including those related to the environment and climate. The requirement of complying with environmental and climate related regulatory requirements is placed on 100% of our suppliers across all geographies that the value chain operates in. All suppliers are expected to comply fully, and the company engage with our suppliers on a regular basis regarding these expectations. Additionally, this is included within the supplier questionnaire that is issued to 100% of our suppliers. The next steps of our supplier engagement will be to set emission reduction targets for our key suppliers.

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

100

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

100

**Mechanisms for monitoring compliance with this climate-related requirement**

Certification

Supplier self-assessment

Off-site third-party verification

Grievance mechanism/Whistleblowing hotline

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

Retain and engage

---

**C12.3**

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

**Row 1**

**Direct or indirect engagement that could influence policy, law, or regulation that may impact the climate**

Yes, we engage indirectly through trade associations

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

Yes

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

Please see page 36 of the Annual Report. We continue to support the UN Sustainable Development Goals (SDGs) and remain committed to driving progress on specific goals that are aligned to our sustainability agenda.

bae-ar-complete-2021.pdf

**Describe the process(es) your organization has in place to ensure that your engagement activities are consistent with your overall climate change strategy**

By ensuring that representatives who attend supplier engagement forums are suitably knowledgeable on our climate strategy.

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

<Not Applicable>

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

<Not Applicable>

**C12.3b**

---

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

**Trade association**

Other, please specify (Aerospace, Defense, Space and Security Trade Organisation (ADS))

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

Consistent

**Has your organization influenced, or is your organization attempting to influence their position?**

We are attempting to influence them to change their position

**State the trade association's position on climate change, explain where your organization's position differs, and how you are attempting to influence their position (if applicable)**

ADS has publicly announced their support to meet the UK's net zero ambitions by 2050, by supporting their industries to overcome challenges and develop opportunities, enabling them to grow, invest, and recover from the economic impact of the pandemic. BAE Systems has a similar target to net zero greenhouse gas emissions across our operations (Scope 1 and 2) by 2030 and working towards Net Zero by 2050 in our value chain. We collaborate with ADS with similar discussions on climate change.

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

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

<Not Applicable>

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

Yes, we have evaluated, and it is aligned

**C12.4**

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

**Publication**

In mainstream reports

**Status**

Complete

**Attach the document**

bae-ar-complete-2021.pdf

**Page/Section reference**

p14-25, p48, p38, p107, p36

**Content elements**

Governance  
Strategy  
Risks & opportunities  
Emissions figures  
Emission targets

**Comment**

**C15. Biodiversity**

**C15.1**

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

	Board-level oversight and/or executive management-level responsibility for biodiversity-related issues	Description of oversight and objectives relating to biodiversity	Scope of board-level oversight
Row 1	No, and we do not plan to have both within the next two years	<Not Applicable>	<Not Applicable>

**C15.2**

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

	Indicate whether your organization made a public commitment or endorsed any initiatives related to biodiversity	Biodiversity-related public commitments	Initiatives endorsed
Row 1	No, and we do not plan to do so within the next 2 years	<Not Applicable>	<Not Applicable>

**C15.3**

**(C15.3) Does your organization assess the impact of its value chain on biodiversity?**

	Does your organization assess the impact of its value chain on biodiversity?	Portfolio
Row 1	No, and we do not plan to assess biodiversity-related impacts within the next two years	<Not Applicable>

**C15.4**

**(C15.4) What actions has your organization taken in the reporting year to progress your biodiversity-related commitments?**

	Have you taken any actions in the reporting period to progress your biodiversity-related commitments?	Type of action taken to progress biodiversity-related commitments
Row 1	Yes, we are taking actions to progress our biodiversity-related commitments	Other, please specify (Ecological enhancement including installing owl boxes, bat boxes and tree planting in the local community)

**C15.5**

**(C15.5) Does your organization use biodiversity indicators to monitor performance across its activities?**

	Does your organization use indicators to monitor biodiversity performance?	Indicators used to monitor biodiversity performance
Row 1	Yes, we use indicators	Other, please specify (Species listings - Bird nesting counts)

**C15.6**

**(C15.6) Have you published information about your organization's response to biodiversity-related issues for this reporting year in places other than in your CDP response? If so, please attach the publication(s).**

Report type	Content elements	Attach the document and indicate where in the document the relevant biodiversity information is located
In mainstream financial reports	Other, please specify (Details on how the company identifies and manages biodiversity impact)	bae-ar-complete-2021.pdf

**C16. Signoff**

**C-FI**

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

**C16.1**

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

	Job title	Corresponding job category
Row 1	Sustainability Director, Safety Health and Environment and D&I	Business unit manager

**SC. Supply chain module**

**SC0.0**

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

At present, we don't have a means to easily quantify our product emissions related to our sales to the US GSA, CNH Industrial, BT, Airbus SE, AIB Group, CBRE Group, HSBC or NEC Corporation. This is partly due to the diverse nature of our product lines, and due to the sensitive nature of our business.

Please note, we have made efforts to give as full a response as possible to the main climate change questionnaire in the hope that this provides those interested with beneficial information despite the fact that we are currently unable to easily quantify our product emissions related to our sales.

SC0.1

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

	Annual Revenue
Row 1	19521000000

SC1.1

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

SC1.2

(SC1.2) Where published information has been used in completing SC1.1, please provide a reference(s).

SC1.3

(SC1.3) What are the challenges in allocating emissions to different customers, and what would help you to overcome these challenges?

Allocation challenges	Please explain what would help you overcome these challenges
Managing the different emission factors of diverse and numerous geographies makes calculating total footprint difficult	Improved sector specific guidance and more granular specific emission factors for different geographies. Improving data quality for different stages of the product's life cycle.
Doing so would require we disclose business sensitive/proprietary information	Improved sector specific guidance.

SC1.4

(SC1.4) Do you plan to develop your capabilities to allocate emissions to your customers in the future?

Yes

SC1.4a

(SC1.4a) Describe how you plan to develop your capabilities.

We are currently reviewing our current products to understand in-life emissions. We will be reviewing sector specific guidance as and when it is released and work with technical experts to help quantify emissions for products that are not sensitive in nature, if required.

SC2.1

(SC2.1) Please propose any mutually beneficial climate-related projects you could collaborate on with specific CDP Supply Chain members.

SC2.2

(SC2.2) Have requests or initiatives by CDP Supply Chain members prompted your organization to take organizational-level emissions reduction initiatives?

No

SC4.1

(SC4.1) Are you providing product level data for your organization's goods or services?

No, I am not providing data

Submit your response

In which language are you submitting your response?

English

**Please confirm how your response should be handled by CDP**

	I understand that my response will be shared with all requesting stakeholders	Response permission
Please select your submission options	Yes	Public

**Please confirm below**

I have read and accept the applicable Terms