

## C0. Introduction

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### C0.1

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

Lockheed Martin is a publicly traded global security and aerospace company principally engaged in research, design, development, manufacture, integration and sustainment of advanced technology systems, products and services. Our mission is to solve complex challenges, advance scientific discovery and deliver innovative solutions to help our customers keep people safe.

Our primary customers are United States (U.S.) and allied government agencies and commercial entities in various sectors, including energy and transportation. In 2018, we employed approximately 105,000 people worldwide and generated net sales of \$53.8 billion. We are headquartered in Bethesda, Maryland, U.S., and we own or operate 590+ facilities in 50 U.S. states and 52 nations and territories.

Lockheed Martin's operating units are organized into four business areas dedicated to specific products and services: Aeronautics, Missiles and Fire Control, Rotary and Mission Systems, and Space Systems. Lockheed Martin's operations include over 590 facilities in 50 states throughout the U.S., and business locations in over 52 nations and territories internationally. Our employees also work with Lockheed Martin International, which supports products, technologies and services to meet global customers' national security and citizen services needs; and Enterprise Operations, comprised of headquarters personnel, business function personnel and enterprise-wide shared services centers.

Aeronautics \$21.2B, 40% of net sales: Research, design, development, manufacture, integration, sustainment, support and upgrade of advanced military aircraft, including combat and air mobility aircraft, unmanned air vehicles and related technologies.

Missiles and Fire Control \$8.5B, 16% of net sales: Design and development of air and missile defense systems; tactical missiles and air-to-ground precision strike weapon systems; logistics; fire control systems; mission operations support, readiness, engineering support and integration services; manned and unmanned ground vehicles; and energy management solutions.

Rotary and Mission Systems \$14.3B, 26% of net sales: Design, manufacture, service and support for various military and commercial helicopter, ship and submarine mission and combat systems, mission systems and sensors for rotary and fixed-wing aircraft, sea- and land-based missile defense systems, radar systems, the Littoral Combat Ship (LCS), simulation and training services and unmanned systems and technologies.

Space \$9.8B, 18% of net sales: Research and development, design, engineering and production of satellites, strategic and defensive missile systems and space transportation systems.

### 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
Row 1	November 1 2017	October 31 2018	No	<Not Applicable>

### C0.3

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

- Australia
- Canada
- Mexico
- New Zealand
- Poland
- United Kingdom of Great Britain and Northern Ireland
- United States of America

**C0.4**

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

- USD

**C0.5**

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**(C0.5) Select the option that describes the reporting boundary for which climate-related impacts on your business are being reported. Note that this option should align with your consolidation approach to your Scope 1 and Scope 2 greenhouse gas inventory.**

- Operational control

**C-T00.7/C-TS0.7**

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**(C-T00.7/C-TS0.7) For which transport modes will you be providing data?**

- Aviation

**C1. Governance**

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**C1.1**

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

- Yes

**C1.1a**

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

Position of individual(s)	Please explain
Board-level committee	Our Board of Directors (BoD) monitors the Corporation's adherence to our Code of Ethics and Business Conduct, with oversight of corporate responsibility, employee safety and health, environmental stewardship, ethical business practices and diversity and inclusion. The BoD is involved in ongoing strategic planning and review. Executive management provides updates on risks managed at the Corporate level. Business segment management provides updates on risks respective to their objectives. The BoD has oversight of risk drivers and mitigation unless delegated to a committee. In 2017, climate-related issues were addressed by the Ethics and Sustainability and the Strategic Affairs committee. In 2018, the committee was consolidated within the Nominating and Corporate Governance Committee (NCG). The NCG's mission now includes assisting the BoD in fulfilling oversight of ethical conduct, sustainability, environmental stewardship, corporate culture and employee health and safety.

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	Please explain
Scheduled – all meetings	Reviewing and guiding strategy Reviewing and guiding major plans of action Reviewing and guiding risk management policies Reviewing and guiding annual budgets Reviewing and guiding business plans Setting performance objectives Monitoring implementation and performance of objectives Overseeing major capital expenditures, acquisitions and divestitures Monitoring and overseeing progress against goals and targets for addressing climate-related issues	Lockheed Martin's Sustainability Governance Structure manages our Sustainability Management Plan (SMP). Its constituents include our: 1) Board of Directors; 2) Executive Leadership Team; 3) Sustainability Champions Network; and 4) Sustainability Working Group (SWG). The SWG is chaired by the Senior Vice President (SVP) of Ethics and Enterprise Assurance, who heads Lockheed Martin's Corporate Sustainability Office and acts as the Chief Sustainability Officer, the highest-level management position with responsibility for climate related issues. The Nominating and Corporate Governance (NCG) Committee as described above is responsible for assisting the Board of Directors in fulfilling its oversight responsibilities relating to the Corporation's ethical conduct, sustainability, environmental stewardship, corporate culture and employee health and safety. The NCG Committee reviews performance against the Sustainability Management Plan (SMP) a set of targets that correspond to objectives associated with our five core sustainability issues that include climate-related issues and corresponding goals addressing Total Cost of Ownership and Energy and Carbon Management as described in our 2018 Sustainability Report. The NCG Committee also approves the Corporation's annual Sustainability Report. In addition, the Audit Committee is responsible for assisting the Board in fulfilling its oversight responsibilities including relating to the financial condition of the Corporation and the integrity of the Corporation's financial statements. Within item 1A of our Form 10-K, an identified risk factor, "Environmental costs could affect our future earnings as well as the affordability of our products and services," includes environmental costs. It is noted that we could be affected by future regulations imposed or claims asserted in response to concerns over climate change, other aspects of the environment or natural resources.

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)	Responsibility	Frequency of reporting to the board on climate-related issues
Chief Sustainability Officer (CSO)	Both assessing and managing climate-related risks and opportunities	More frequently than quarterly



**(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).**

Lockheed Martin's Sustainability Governance Structure manages our Sustainability Management Plan (SMP). Its constituents include our 1) Board of Directors; 2) Executive Leadership Team; 3) Sustainability Champions Network; 4) Sustainability Working Group (SWG). The SWG is chaired by the SVP, Ethics and Enterprise Assurance (EEA), who heads Lockheed Martin's Corporate Sustainability Office and acts as the Chief Sustainability Officer, the highest-level management position with responsibility for climate-related issues.

As chair of the SWG and head of the Corporate Sustainability Office, the SVP of EEA (which includes enterprise risk; environment, health and safety; internal audit; ethics; and sustainability) reports directly to Lockheed Martin's Chairman, President and Chief Executive Officer (CEO) and to the Nominating and Corporate Governance Committee of the Board of Directors. The Corporate Sustainability Office coordinates with the Office of the General Counsel, the SVP of Corporate Enterprise Business Transformation, and the Chief Financial Officer (CFO), who also serves as the Chief Risk Officer (CRO). Certain climate-related risks to facilities are also monitored by the Treasury Risk Management and Business Continuity functions.

The SWG includes key functional executive leaders such as the vice president of Corporate Environment, Safety and Health (ESH) who leads the implementation of Lockheed Martin's environmental programs, including our Go Green 2020 strategy to achieve a 35% reduction in carbon emissions and a 25% reduction in energy usage by 2020, from a 2010 baseline. Lockheed Martin's Go Green 2020 strategy is included as part of our broader SMP goals. The vice president of Corporate ESH also chairs the ESH Leadership Council, which sets policies and direction for ESH-related issues. The ESH Leadership Council is comprised of ESH Directors from all business segments as well as functional representation from Global Supply Chain Operations, Corporate Engineering and Technology, Internal Audit, Finance, Business Operations, Human Resources, Government Affairs, Health and Wellness, and Legal. This organizational structure allows high leadership visibility into all environmental issues, including climate-related issues, while enabling cross-functional partnerships and action plans. The ESH Leadership Council maintains a functional scorecard that measures performance.

One of the scorecard's focus areas is our Go Green 2020 strategy, which includes performance objectives and tactics to achieve carbon and energy reductions. The ESH Leadership Council maintains direct responsibility for achieving these goals as the Corporate ESH function holds primary responsibility for the execution of Corporate-wide energy and carbon-related programs. The vice president of Corporate ESH reports to the Board of Directors on outcomes of the ESH Leadership Council and relevant ESH-related issues. Lockheed Martin views sustainability as complementing how we manage risks and opportunities based on long-term outcomes. In 2017, we placed Sustainability and Enterprise Risk Management (ERM) under one department to align their business relevancy and broaden each program's impact. In 2018, we realigned the Environment, Safety and Health department to be placed under the oversight of our SVP of EEA. This change has allowed both teams to benefit from their combined experience and optimize our efforts to comply with regulations and reduce our environmental footprint.

As a result of this strategic alignment, our risk assessments explicitly examine sustainability factors, the tracking of our sustainability goals informs risk mitigation plans more efficiently, and our overall reporting is better able to address relevant Environmental, Social and Governance (ESG) topics. Our risk assessments and sustainability performance inform scenario planning exercises for management teams, enhance business strategy elements such as human capital and manufacturing, and bolster our comprehensive risk controls, such as Corporate policies and internal audits. Additionally, our Corporate Internal Audit function periodically audits our sites and/or programs for conformance to our ESH-related internal standards and for compliance with legal requirements. These audits provide a check-and-balance approach to risk mitigation across the enterprise. ERM reports to the Board of Directors throughout the year. The audit process and audit results are reported to the Audit Committee on a quarterly basis. Enterprise Executive Champions and Risk Owners report the status of Risk Mitigation Action Plans to the Strategic Affairs Committee. Enterprise risk management is governed by the Integrated Risk Council (IRC), chaired by the CFO, who also serves as the CRO.

The Risks and Compliance Committee (RCC), chaired by the SVP, Ethics and Enterprise Assurance, is responsible for the execution of the Corporation's ERM program and reports to the IRC.

## C1.3

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

Yes

## C1.3a

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

#### Who is entitled to benefit from these incentives?

Corporate executive team

#### Types of incentives

Monetary reward

#### Activity incentivized

Emissions reduction target

#### Comment

Lockheed Martin's executive team and various business leaders that are responsible for achieving climate change and environmental sustainability targets receive financial incentives based on performance commitments. These commitments are measured on an annual basis and include performance towards our Go Green goals which include GHG emissions and energy reductions.

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#### Who is entitled to benefit from these incentives?

Environment/Sustainability manager

#### Types of incentives

Monetary reward

#### Activity incentivized

Emissions reduction target

#### Comment

Lockheed Martin's environmental/sustainability managers and various business leaders that are responsible for achieving climate change and environmental sustainability targets receive financial incentives based on performance commitments. These commitments are measured on an annual basis and include performance towards our Go Green goals which include GHG emissions and energy reductions.

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#### Who is entitled to benefit from these incentives?

Facilities manager

#### Types of incentives

Monetary reward

#### Activity incentivized

Energy reduction target

#### Comment

Lockheed Martin's facility managers that are responsible for achieving climate change and environmental sustainability targets receive financial incentives based on performance commitments. These commitments are measured on an annual basis and include performance towards our Go Green goals which include GHG emissions and energy reductions. Lockheed Martin's facility managers also receive recognition for energy efficiency or reduction projects by implementing projects such as improvements in HVAC systems, building control systems, lighting, building envelopes, etc. Effective management leading to reductions in energy and carbon are recognized through our Facilities Excellence Awards and Environmental, Safety and Health (ESH) Excellence Awards.

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#### Who is entitled to benefit from these incentives?

All employees

**Types of incentives**

Monetary reward

**Activity incentivized**

Behavior change related indicator

**Comment**

Lockheed Martin presented its annual 2018 Environment, Safety and Health (ESH) Excellence Awards to recognize individuals and teams that have made significant contributions through their dedication to improving business operations and performance. Employees are selected for the ESH Excellence Awards based on qualities such as superiority in customer satisfaction, leadership, application of technology, tools/processes that improve efficiency and productivity, benchmarking, best practices, and affordability. Furthermore, Lockheed Martin has partnered with SunPower Corporation since 2008 to provide employees a way to reduce their homes' carbon footprint using renewable energy generated from solar power. This special program, designed specifically for Lockheed Martin employees, enables savings on electricity bills and provides eligibility to receive rebates worth \$1,000 each for the purchase or lease of a SunPower System for employees' homes.

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**Who is entitled to benefit from these incentives?**

Corporate executive team

**Types of incentives**

Monetary reward

**Activity incentivized**

Energy reduction target

**Comment**

Lockheed Martin's executive team and various business leaders that are responsible for achieving climate change and environmental sustainability targets receive financial incentives based on performance commitments. These commitments are measured on an annual basis and include performance towards our Go Green goals which include GHG emissions and energy reductions.

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**Who is entitled to benefit from these incentives?**

Environment/Sustainability manager

**Types of incentives**

Monetary reward

**Activity incentivized**

Energy reduction target

**Comment**

Lockheed Martin's environmental/sustainability managers and various business leaders that are responsible for achieving climate change and environmental sustainability targets receive financial incentives based on performance commitments. These commitments are measured on an annual basis and include performance towards our Go Green goals which include GHG emissions and energy reductions.

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**Who is entitled to benefit from these incentives?**

Facilities manager

**Types of incentives**

Monetary reward

**Activity incentivized**

Emissions reduction project

**Comment**

Lockheed Martin's facility managers that are responsible for achieving climate change and environmental sustainability targets receive financial incentives based on performance commitments. These commitments are measured on an annual basis and include performance towards our Go Green goals which include GHG emissions and energy reductions. Lockheed Martin's facility managers also receive recognition for energy efficiency or reduction projects by implementing projects such as improvements in HVAC systems, building control systems, lighting, building envelopes, etc. Effective management leading to reductions in energy and carbon are recognized through our Facilities Excellence Awards and Environmental, Safety and Health (ESH) Excellence Awards.

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**Who is entitled to benefit from these incentives?**

Other, please specify (Non-management)

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**Types of incentives**

Recognition (non-monetary)

**Activity incentivized**

Emissions reduction target

**Comment**

Non-management incentives: All employees are eligible to receive non-monetary awards, based on individual performance that aligns to our core strategies of managing climate change issues.

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**Who is entitled to benefit from these incentives?**

Other, please specify (Non-management)

**Types of incentives**

Recognition (non-monetary)

**Activity incentivized**

Energy reduction project

**Comment**

Non-management incentives: All employees are eligible to receive non-monetary awards, based on individual performance that aligns to our core strategies of managing climate change issues.

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**Who is entitled to benefit from these incentives?**

Other, please specify (Non-management)

**Types of incentives**

Recognition (non-monetary)

**Activity incentivized**

Efficiency project

**Comment**

Non-management incentives: All employees are eligible to receive non-monetary awards, based on individual performance that aligns to our core strategies of managing climate change issues.

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**Who is entitled to benefit from these incentives?**

Other, please specify (Non-management)

**Types of incentives**

Recognition (non-monetary)

**Activity incentivized**

Efficiency target

**Comment**

Non-management incentives: All employees are eligible to receive non-monetary awards, based on individual performance that aligns to our core strategies of managing climate change issues.

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**Who is entitled to benefit from these incentives?**

Other, please specify (Non-management)

**Types of incentives**

Recognition (non-monetary)

**Activity incentivized**

Behavior change related indicator

**Comment**

Non-management incentives: All employees are eligible to receive non-monetary awards, based on individual performance that aligns to our core strategies of managing climate change issues.

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**Who is entitled to benefit from these incentives?**

Other, please specify (Non-management)

**Types of incentives**

Recognition (non-monetary)

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**Activity incentivized**

Environmental criteria included in purchases

**Comment**

Non-management incentives: All employees are eligible to receive non-monetary awards, based on individual performance that aligns to our core strategies of managing climate change issues

**Who is entitled to benefit from these incentives?**

Other, please specify (Non-management)

**Types of incentives**

Recognition (non-monetary)

**Activity incentivized**

Supply chain engagement

**Comment**

Non-management incentives: All employees are eligible to receive non-monetary awards, based on individual performance that aligns to our core strategies of managing climate change issues.

**C2. Risks and opportunities**

**C2.1**

**(C2.1) Describe what your organization considers to be short-, medium- and long-term horizons.**

	From (years)	To (years)	Comment
Short-term	1	4	The short-term time horizon is associated with the long-range plan for achieving certain sales and orders milestones over a three to four-year time period. The LRP is updated annually to reflect changes in the assumptions and business environment. This time horizon represents how Lockheed Martin assesses climate risks and opportunities.
Medium-term	4	10	The medium-term time horizon is associated with the duration measured by metrics and goals within the Sustainability Management Plan (SMP). The SMP tracks our sustainability performance ranging from 2 years to 10 years at inception. This time horizon represents how Lockheed Martin assesses climate risks and opportunities.
Long-term	10		The long-term time horizon is associated with climate risks and opportunities that extend beyond the short and medium term. At Lockheed Martin there is no defined upper boundary because climate change has no such boundary.

**C2.2**

**(C2.2) Select the option that best describes how your organization's processes for identifying, assessing, and managing climate-related issues are integrated into your overall risk management.**

Integrated into multi-disciplinary company-wide risk identification, assessment, and management processes

**C2.2a**

**(C2.2a) Select the options that best describe your organization's frequency and time horizon for identifying and assessing climate-related risks.**

	Frequency of monitoring	How far into the future are risks considered?	Comment
Row 1	Six-monthly or more frequently	>6 years	The Sustainability Working Group (SWG) is part of Lockheed Martin's Sustainability Governance Structure, which includes the Board of Directors. As part of the SWG, the vice president of Corporate, Environment, Safety and Health (ESH) leads the implementation of environmental programs related to climate change. Examples that consider risk beyond 10 years include ESH's facilitation of gated capital project funding which result in long-term infrastructure energy and carbon reductions, as well as renewable energy procurement such as a 17-year power purchase agreement.

**C2.2b**

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## **(C2.2b) Provide further details on your organization's process(es) for identifying and assessing climate-related risks.**

In 2018, the Corporate Sustainability Office initiated a study of climate-related risk drivers to business operations in the short, medium, and long-terms. At a Corporate level, our risk assessment process includes a senior leadership survey, a subject-matter expert survey, internal audit risk evaluation, global benchmark data and strategic planning assumptions and interviews with the Executive Leadership Team. Through this process, we identify and prioritize key risks. These are reported to the Audit Committee. Risks are prioritized based upon impact, likelihood, trends and the availability and effectiveness of controls. Surveys of leaders provide an indication of concerns from a risk universe, including climate-related risks, with varying degrees of potential size and scope. Survey findings are analyzed with risk data from our Treasury function to determine overlapping strategic and operational elements that warrant consideration in the overall risk assessment. Climate-related risks in global benchmark data and strategic planning assumptions are monitored by the Corporate Sustainability Office and provide direct input to the risk assessment process. Our assessment includes assumptions about business, industry, and economic risk factors associated with physical and transitional climate-related risks.

At an asset level, acute physical risks are managed by Lockheed Martin's Business Resiliency, Business Continuity, and Global Security and Crisis Management functions. Business Resiliency ensures that resiliency capabilities are addressed through Crisis Management, Business Continuity, information technology disaster recovery, and medical response to protect human life, safeguard assets and sustain critical operations. Business Continuity outlines the preparation needed in anticipation of significant incidents that may disrupt business operations. Crisis Management promotes preparedness and response with the goal of protecting employees against injury and minimizing damage to Lockheed Martin assets. Our Crisis Management program establishes a strategic framework that directs prompt mobilization of responsibilities and operational practices to protect employees and Lockheed Martin assets prior to, during, and after an emergency.

Furthermore, Corporate Environment, Safety and Health (ESH) function has developed and implemented the Environment, Safety and Health Management System (ESHMS) to ensure compliance for the Corporation, reduce operational ESH risks, and ensure continual improvement. ESHMS goes beyond compliance by providing a risk-based, systematic framework to evaluate the management and performance of ESH processes, programs, and tasks against established standards. Through the ESH risk and self-assessment process, our business locations (sites) are first profiled to define ESH program categories or requirements applicable to their operations. The applicable ESH categories are then assigned a relative risk assessment of high, medium or low. Based on these risk assessments, sites are required to conduct self-assessments, provided with checklists to evaluate compliance, and given mechanisms to track corrective actions. The ESHMS directs sites to complete corrective actions within a specified timeframe depending on the nature and severity of incidents and provides internal documentation tools that serve as the record of authority. Self-assessments are typically conducted annually for high risks, biannually for medium risks and at least every four years for low risks. The Corporate ESH function also implements a process to report incidents, ensure timely communication, assure that appropriate response processes are initiated, and prevent further incidents. If non-compliance is identified, systematic interim control, root cause, corrective and preventive action processes must be applied and monitored to prevent future occurrence. Additionally, our Corporate Internal Audit function periodically audits our sites and/or programs for conformance to our ESH-related internal standards and for compliance with legal requirements. These audits provide a check-and-balance approach to risk mitigation across the enterprise.

For the purposes of CDP, we define substantive impact as material issues that have the potential to disrupt our business operations. Our operations are subject to various environmental laws and regulations. While the extent of our financial exposure cannot be reasonably estimated in all cases, the costs of environmental compliance have not had (and we do not expect these costs will have), a material, adverse effect on our earnings, financial position and cash flow. In addition to regulatory requirements, natural disasters (e.g., floods, fires, hurricanes, etc.) have the potential to cause substantive impact. However, our Business Continuity management system framework proactively and adequately responds to business disruptions, identifies potential impacts, and maintains continuity of operations.

## **C2.2c**

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

	Relevance & inclusion	Please explain
Current regulation	Relevant, always included	The first step in our climate-related risk assessment process is to assess the relative impact faced by each risk type through an assessment score accounting for potential impacts to our supply chain, manufacturing operations, and business operations within each time horizon. Based on the aggregated scores we prioritize physical versus transitional risks. At the Corporate level, regularly scheduled Executive Leadership Council meetings are held by all business elements. These serve as a forum for assessing the impacts of current regulation and our compliance. At an asset level, LM's Corporate Environment, Safety and Health (ESH) function has developed and implemented the Environment, Safety and Health Management System (ESHMS) to ensure compliance for the Corporation, reduce operational ESH risks, and ensure continual improvement. The ESHMS goes beyond compliance by providing a risk-based, systematic framework to evaluate the management and performance of ESH processes, programs, and tasks against established standards. Through the ESHMS, our business locations (sites) are required to conduct self-assessments based on their respective risk assessment profiles, provided with checklists to evaluate compliance, and mechanisms to track corrective actions. The ESHMS directs sites to complete corrective action within a specified timeframe depending on the nature and severity of incidents and provides internal documentation tools that serve as the record of authority. The Corporate ESH function also implements a process to report incidents, ensure timely communication, assure that appropriate response processes are initiated, and prevent further incidents. If non-compliance is identified, systematic interim control, root cause, corrective and preventive action processes must be applied and monitored to prevent future occurrence. Additionally, our Corporate Internal Audit function periodically audits our sites and/or programs for conformance to our ESH-related internal standards and for compliance with legal requirements. These audits provide a check-and-balance approach to risk mitigation across the enterprise. The review of compliance with legal requirements may include emissions regulations, such as the US GHG Mandatory Reporting Rule, pursuant to which four of our largest facilities (Sunnyvale, Stratford, Fort Worth and Marietta) are required to report.
Emerging regulation	Relevant, always included	At the Corporate level, regularly scheduled Executive Leadership Council meetings are held by all business elements. Emerging regulations that are deemed to present an enterprise risk are identified through our risk assessment process and elevated as appropriate to senior executives and the Board. Furthermore, Lockheed Martin's Corporate Environment, Safety and Health (ESH) function tracks and provides analysis of impending new and revised environment, safety and health (ESH) legal requirements and other standards that could have an impact on the Corporation's operations and products. We provide three monthly forums for our business elements to learn and discuss trending ESH advocacy topics including international, U.S. domestic and California-specific events. Corporate ESH has also developed and implemented the Environment, Safety and Health Management System (ESHMS) to ensure compliance for the Corporation, reduce operational ESH risks, and ensure continual improvement. The ESHMS goes beyond compliance by providing a risk-based, systematic framework to evaluate the management and performance of ESH processes, programs and tasks against established standards. Through the ESHMS, our business locations (sites) are required to conduct self-assessments based on their respective risk assessment profiles, are provided with checklists to evaluate compliance, and given mechanisms to track corrective actions. The ESHMS directs sites to complete corrective actions. within a specified timeframe depending on the nature and severity of incidents and provides internal documentation tools that serve as the record of authority. The Corporate ESH function also implements a process to report incidents, ensure timely communication, assure that appropriate response processes are initiated, and prevent further incidents. If non-compliance is identified, systematic interim control, root cause, corrective and preventive action processes must be applied and monitored to prevent future occurrence. The review of emerging regulations may include emissions regulations, such as changes to California's Global Warming Solutions Act (AB32), which provides requirements for our Sunnyvale facility to participate in California's Cap and Trade program.
Technology	Relevant, always included	Lockheed Martin's risk assessment process includes a senior leadership survey, a subject-matter expert survey, internal audit risk evaluation, global benchmark data, strategic planning assumptions, and interviews with the Executive Leadership Team. Through this process, we identify and prioritize key risks. These are reported to the Audit and other Board committees. Risks are prioritized based upon impact, likelihood, trends and the availability and effectiveness of controls. Surveys of leaders provide an indication of top risk concerns including climate-related risks with varying degrees of impact. Survey findings are analyzed with risk data from our Treasury function to determine overlapping strategic and operational risk elements that warrant and provide direct input to the risk assessment process. Our assessment includes assumptions about business, industry, and economic risk factors associated with physical and transitional climate-related risks. We also consider feedback from functions such as Information Security, Global Supply Chain Operations and Human Resources. Our Business Continuity team manages Corporate-wide information technology disaster recovery, crisis management and pandemic planning activities. They have established a strategic framework and operational practices to continuously improve Lockheed Martin's resilience to disruption or loss in supplying products and services. The Business Continuity function is also responsible for developing and managing responses to some aspects of physical climate-related risks that pose a threat to business operations. As an example, this organization was one of many functions that played a critical role in reestablishing telecommunications infrastructure at our Aguadilla, Puerto Rico facility, which was impacted by Hurricane Maria. Lockheed Martin has developed a Technology Roadmap Initiative which aims to identify alternative products that will be needed in a long-term climate change scenario. We also have working groups exploring new markets and other opportunities for space instruments, rotary aircraft and other products that may emerge as a result of climate-related developments.
Legal	Relevant, always included	Lockheed Martin routinely engages with policy makers on matters of interest to the Corporation. Lockheed Martin's advocacy and engagement on specific policy issues is coordinated with internal stakeholders to ensure a consistent, Corporate-wide approach. Our policy engagement is managed by our Corporate Government Affairs organization. Our process to ensure consistency across Corporate functions and business elements on climate-related issues is to bring representative internal stakeholders into the Cross Corporate Sustainability Working Group, established specifically to ensure a coordinated, cohesive sustainability strategy and messaging. Lockheed Martin's Corporate Environment, Safety and Health (ESH) function tracks and provides analysis of new and revised environment, safety and health (ESH) legal requirements and other standards that could have an impact on the Corporation's operations and products. Corporate ESH has also developed and implemented the ESH Management System (ESHMS) which goes beyond compliance by providing a risk-based, systematic framework to evaluate the management and performance of ESH processes, programs, and tasks against established standards. The ESHMS directs our business locations (sites) to complete corrective action within a specified timeframe depending on the nature and severity of incidents and provides internal documentation tools that serve as the record of authority. The Corporate ESH function also implements a process to report incidents, ensure timely communication, assure that appropriate response processes are initiated, and prevent further incidents. If non-compliance is identified, systematic interim control, root cause, corrective and preventive action processes must be applied and monitored to prevent future occurrence. Additionally, our Corporate Internal Audit function periodically audits our sites and/or programs for conformance to our ESH-related internal standards and for compliance with legal requirements. These audits provide a check-and-balance approach to risk mitigation across the enterprise. An example of legal compliance includes emissions regulation, such as the U.S. Greenhouse Gas Mandatory Reporting Rule, pursuant to which four of our largest facilities (Sunnyvale, Stratford, Fort Worth and Marietta) are required to report.

	Relevance & inclusion	Please explain
Market	Relevant, always included	At Lockheed Martin we are in the process of assessing climate risks and opportunities. The first step in this process was to assess the relative impact faced by each risk type through an assessment score accounting for potential impacts to our supply chain, manufacturing operations, and business operations within each time horizon. Based on the aggregated scores we are prioritizing physical versus transitional risks. Lockheed Martin monitors our customers' analysis of climate-related risks they expect to confront in the near and long term. In some instances, these risks have been publicly shared by our customers. As part of our overall market assessment and strategic decision-making we assess the extent to which Lockheed Martin is and will be able to address the market's changing requirements associated with climate change. Opportunities to provide new products and/or services are considered along with risks that may impact demand for current products and/or services. As an example, the mission of Lockheed Martin's Ventures business element is to make strategic investments in companies that are developing disruptive, cutting-edge technologies in core businesses and new markets important to Lockheed Martin. Since 2007, we have invested more than \$100 million in startup companies. These emerging innovations have the potential to become foundational technologies that solve the complex challenges our customers face. Lockheed Martin Ventures includes energy and power systems within their areas of interest, as well as autonomous systems and robotics, cyber security, space technologies, advanced communications and sensors, undersea technologies, data analytics, artificial intelligence and machine learning, NextGen electronics, and advanced materials and manufacturing. In addition to providing a source of capital, Lockheed Martin Ventures provides partner companies with access to our world-class engineering talent, state-of-the-art technologies and access to the company's international business relationships and supply chain.
Reputation	Relevant, always included	At Lockheed Martin we are in the process of assessing climate risks and opportunities. The first step in this process was to assess the relative impact faced by each risk type through an assessment score accounting for potential impacts to our supply chain, manufacturing operations, and business operations within each time horizon. Based on the aggregated scores we are prioritizing physical versus transitional risks. Lockheed Martin's risk assessment process includes a senior leadership survey, a subject-matter expert survey, internal audit risk evaluation, global benchmark data, strategic planning assumptions, and interviews with the Executive Leadership Team. Through this process, we identify and prioritize key risks. These are reported to the Audit and other Board committees. Risks are prioritized based upon impact, likelihood, trends, and the availability and effectiveness of controls. Surveys of leaders provide an indication of top risk concerns including climate-related risks with varying degrees of impact. Survey findings are analyzed with risk data from our Treasury function to determine overlapping strategic and operational risk elements that warrant and provide direct input to the risk assessment process. Our assessment includes assumptions about business, industry, and economic risk factors associated with physical and transitional climate-related risks. We also consider feedback from functions such as Information Security, Global Supply Chain Operations and Human Resources. Reputation is currently a minor factor considered during assessment of climate-related risks. This is due to the non-consumer facing nature of our main products. However, we do consider reputation as it relates to major investors and our primary customers. In both cases we monitor evolving attitudes toward climate-related issues and the associated expectations that may impact how Lockheed Martin's actions and products are viewed.
Acute physical	Relevant, always included	Lockheed Martin's risk assessment process includes a senior leadership survey, a subject-matter expert survey, internal audit risk evaluation, global benchmark data, strategic planning assumptions, and interviews with the Executive Leadership Team. Through this process, we identify and prioritize key risks. These are reported to the Audit and other Board committees. Risks are prioritized based upon impact, likelihood, trends, and the availability and effectiveness of controls. Surveys of leaders provide an indication of top risk concerns including climate-related risks with varying degrees of impact. Survey findings are analyzed with risk data from our Treasury function to determine overlapping strategic and operational risk elements that warrant and provide direct input to the risk assessment process. Our assessment includes assumptions about business, industry, and economic risk factors associated with physical and transitional climate-related risks. We also consider feedback from functions such as Information Security, Global Supply Chain Operations and Human Resources. At an asset level, acute physical risks are managed by Lockheed Martin's Business Resiliency, Business Continuity, and Global Security and Crisis Management functions. Business Resiliency ensures that resiliency capabilities are addressed through Crisis Management, Business Continuity, information technology disaster recovery, and medical response to protect human life, safeguard assets and sustain critical operations. Business Continuity outlines the preparation needed in anticipation of significant incidents that may disrupt business operations. Crisis Management promotes preparedness and response with the goal of protecting employees against injury and minimizing damage to Lockheed Martin assets. Our Crisis Management program establishes a strategic framework that directs prompt mobilization of responsibilities and operational practices to protect employees and Lockheed Martin assets prior to, during, and after an emergency. As an example, these functions were critical in restoring operations to our facilities impacted by severe natural disasters in 2017 and 2018, such as our sites in Orlando, FL; Ocala, FL; Aguadilla, Puerto Rico; and Goleta, CA.
Chronic physical	Relevant, always included	At Lockheed Martin, we are in the process of assessing climate risks and opportunities. The first step in this process was to assess the relative impact faced by each risk type through an assessment score accounting for potential impacts to our supply chain, manufacturing operations, and business operations within each time horizon. Based on the aggregated scores we are prioritizing physical versus transitional risks. Lockheed Martin's risk assessment process includes a senior leadership survey, a subject-matter expert survey, internal audit risk evaluation, global benchmark data, strategic planning assumptions, and interviews with the Executive Leadership Team. Through this process, we identify and prioritize key risks. These are reported to the Audit and other Board committees. Risks are prioritized based upon impact, likelihood, trends, and the availability and effectiveness of controls. This includes property insurance capacity and costs at facilities with company assets in close proximity to climate-related weather hazards. Surveys of leaders provide an indication of top risk concerns including climate-related risks with varying degrees of impact. Survey findings are analyzed with risk data from our Treasury function to determine overlapping strategic and operational risk elements that warrant and provide direct input to the risk assessment process. Climate-related physical risks are also monitored through engagement with property and hazard insurers. Lockheed Martin's Corporate Environment, Safety and Health (ESH) function collaborates across all of our business segments to identify opportunities to mitigate the Corporation's contribution to climate-related risks. As an example, Corporate ESH coordinates a dedicated capital infrastructure fund, referred to as the Go Green gated capital program. This fund is primarily used to fund major energy or water-related efficiency projects, with the recipient business segment funding the capital depreciation. Prior to approval through Corporate management, Corporate ESH reviews each submitted project to ensure they meet the criteria established for use of this fund. In 2017, through the gated capital program, one of Lockheed Martin's facilities in Orlando, FL completed a 2 MW solar carport project that features over 6,600 solar panels and provides shade for close to 600 cars.

	Relevance & inclusion	Please explain
Upstream	Relevant, always included	At Lockheed Martin, we are in the process of assessing climate risks and opportunities. The first step in this process was to assess the relative impact faced by each risk type through an assessment score accounting for potential impacts to our supply chain, manufacturing operations, and business operations within each time horizon. Based on the aggregated scores we are prioritizing physical versus transitional risks. Lockheed Martin's Global Emergency Operations Center (GEOC) monitors, analyzes and communicates information on threats and events that could impact the safety and security of our personnel, facilities, and business operations. In 2017, we expanded our GEOC services to monitor select suppliers. In the first month of the pilot, GEOC analyzed more than 800,000 threats with the potential to impact approximately 5,000 supplier locations in over 40 countries. Through the Sustainable Supply Chain Management (SSCM) program, in 2017, we completed our third voluntary Supplier Sustainability Assessment for suppliers to report on their Environmental, Social and Governance (ESG) management systems and performance. In the environmental section of this annual survey, suppliers were asked a series of questions related to climate change risks, GHG emissions and water. In 2017, we expanded invitations to complete the survey from 166 to 299 suppliers, representing 48% of our supply chain spending. We selected a mix of small and large businesses with varying contract lengths and values, suppliers to our business travel program, and those who were prior participants in our Corporate Ethics Mentoring Program. Our methodology in the selection of suppliers for this voluntary survey prioritized suppliers of concern, or those deemed at higher risk to Lockheed Martin, as well as small businesses identified through our Ethics Mentoring Program. In addition to factoring in supplier spend and risk factors, other key internal stakeholders contributed input in shaping the supplier list. This past year, we expanded the number of recipients, enhanced the questions based on prior year stakeholder feedback, and integrated applicable survey questions from the International Aerospace Environmental Group (IAEG) industry-wide survey harmonization efforts.
Downstream	Relevant, always included	At Lockheed Martin, we are in the process of assessing climate risks and opportunities. The first step in this process was to assess the relative impact faced by each risk type through an assessment score accounting for potential impacts to our supply chain, manufacturing operations, and business operations within each time horizon. Based on the aggregated scores we are prioritizing physical versus transitional risks. In 2015, Lockheed Martin reassessed our sustainability issues from our formal Core Issues Assessment, which evaluated various sustainability factors based on their importance to our business and our stakeholders. Our Corporate Sustainability Office then convened internal and external stakeholders, including our customers. The Corporate Sustainability Office, in conjunction with our Sustainability Working Group of business leaders, refined the results from stakeholder feedback and clustered these issues into closely correlated topics, which resulted in the five Sustainability Core Issues and 26 performance measures outlines in Lockheed Martin's Sustainability Management Plan (SMP). To address customer-related risks and opportunities, we made commitments through our Resource Efficiency core issue within the SMP, to help our energy customers reduce their carbon emissions by at least twice the carbon impact of our business operations. Furthermore, as 85% of the life-cycle cost of products in our sector is decided during the design phase, we have formulated commitments around our Product Impact core issue. Specifically, we aim to: 1) Add criteria to fully identify cost drivers early in the product design cycle within each business segment's proposal planning and review processes; 2) Generate \$1 billion in product life-cycle cost reductions, resulting in lower resource consumption and reduced adverse impacts on health and the environment; and 3) Achieve \$4 billion in product sales with direct, measurable benefits to energy and advanced infrastructure resiliency.

C2.2d

## (C2.2d) Describe your process(es) for managing climate-related risks and opportunities.

At the Corporate level, climate-related risks and opportunities are identified, tracked and managed through our Sustainability Management Plan. An example of a transitional opportunity to develop or expand low emission goods and services is addressed through our SMP. Specifically, Lockheed Martin has committed to achieve \$4 billion in product sales with direct, measurable benefits to energy and advanced infrastructure resiliency by 2020. As of 2018, product sales that benefit energy and infrastructure resiliency totaled \$3 billion toward that 2020 goal. Additionally, through our corporate insurance purchasing program, we study risk evaluations and assessments offered by insurance carriers, related to climate-related weather hazards. Such risk data affects capacity, availability and pricing of certain insurance classes for business operations.

At an asset level, acute physical risks are managed by LM's Business Resiliency, Business Continuity, and Global Security and Crisis Management functions. Business Resiliency ensures that resiliency capabilities are addressed through Crisis Management, Business Continuity, information technology disaster recovery, and medical response to protect human life, safeguard assets and sustain critical operations. Business Continuity outlines the preparation needed in anticipation of significant incidents that may disrupt business operations. Crisis Management promotes preparedness and response with the goal of protecting employees against injury and minimizing damage to LM's assets. Our Crisis Management program establishes a strategic framework that directs prompt mobilization of responsibilities and operational practices to protect employees and Lockheed Martin assets prior to, during, and after an emergency. As an example, these functions were critical in restoring operations to our facilities impacted by severe natural disasters in 2017 and 2018, such as our sites in Orlando, FL; Ocala, FL; Aguadilla, Puerto Rico; and Goleta, CA.

Also at an asset level, Lockheed Martin's Environment, Safety and Health function (ESH) has developed and implemented the Environment, Safety and Health Management System (ESHMS) to ensure compliance for the Corporation, reduce operational ESH risks, and ensure continual improvement. The ESHMS goes beyond compliance by providing a risk-based, systematic framework to evaluate the management and performance of ESH processes, programs, and tasks against established standards. Through the ESH risk and self-assessment process, our business locations (sites) are first profiled to define ESH program categories or requirements applicable to their operations. The applicable ESH categories are then assigned a relative risk assessment of high, medium or low. Based on these risk assessments, sites are required to conduct self-assessments, provided with checklists to evaluate compliance, and given mechanisms to track corrective actions. The ESHMS directs sites to complete corrective actions within a specified timeframe depending on the nature and severity of incidents and provides internal documentation tools that serve as the record of authority. Self-assessments are typically conducted annually for high risks, biannually for medium risks and at least every four years for low risks. ESH also implements a process to report incidents, ensure timely communication, assure that appropriate response processes are initiated and prevent further incidents. If non-compliance is identified, systematic interim control, root cause, corrective and preventive action processes must be applied and monitored to prevent future occurrence. Additionally, our Internal Audit function periodically audits our sites and/or programs for conformance to our ESH-related internal standards and for compliance with legal regulations. These audits provide a check-and-balance approach to risk mitigation enterprise-wide.

An example of a transitional risk managed by ESH includes emissions reporting obligations, such as the U.S. GHG Mandatory Reporting Rule, pursuant to which four of our largest facilities (Sunnyvale, Stratford, Fort Worth and Marietta) are required to report.

An example of a physical opportunity managed by Corporate ESH includes the implementation of energy and water-related efficiency projects. Since 2010, a team of subject-matter experts from facilities, engineering, and production operations called the "Tiger Team" have been conducting in-depth analyses of energy and water systems across the Corporation to identify projects for implementation. In 2017, the Tiger Team conducted 12 structured improvement events resulting in energy and water savings through infrastructure and process/production optimizations. In 2018, Lockheed Martin avoided approximately \$29 million (compared to a 2010 baseline) in energy and water costs through the implementation of similar projects over the years.

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## 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

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**(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**

Transition risk

**Primary climate-related risk driver**

Policy and legal: Enhanced emissions-reporting obligations

**Type of financial impact**

<Not Applicable>

**Company- specific description**

Emissions reporting requirements could potentially impact Lockheed Martin through increased costs for compliance. An example of an emissions regulation that could potentially impact our business is the U.S. Greenhouse Gas (GHG) Mandatory Reporting Rule that requires reporting of GHG data and other relevant information from large sources and suppliers in the U.S. Four of Lockheed Martin's largest facilities (Sunnyvale, Stratford, Fort Worth and Marietta) are required to report GHG emissions under the U.S. GHG Mandatory Reporting Rule. Additionally, state regulations related to climate change and mandatory and/or voluntary GHG reporting impact our facilities.

**Time horizon**

Current

**Likelihood**

Virtually certain

**Magnitude of impact**

Low

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

Yes, a single figure estimate

**Potential financial impact figure (currency)**

37500

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

<Not Applicable>

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

<Not Applicable>

**Explanation of financial impact figure**

Regulatory risks are factored into our costs of doing business. Four of Lockheed Martin's largest facilities (Sunnyvale, Stratford, Fort Worth and Marietta) are required to report GHG emissions under the U.S. GHG Mandatory Reporting Rule. Non-compliance with the U.S. GHG Mandatory Reporting Rule could involve fines of up to \$37,500 per day. Although each of our four sites is in compliance with EPA's GHG Mandatory Reporting Rule, hypothetical non-compliance would result in over \$54,000,000 per year for all four sites combined.

**Management method**

Across the Corporation, we invested \$13.6 million to complete 53 energy-efficiency and GHG emissions reductions projects in 2018, which contributed towards a 22% energy reduction and a 36% reduction in attributed GHG emissions. In 2018, Lockheed Martin avoided approximately \$29 million (compared to a 2010 baseline) in energy and water costs through the implementation of similar projects over the years. Lockheed Martin incorporates our own products to optimize energy management through internally developed software, known as SEEview. Approximately 50 Lockheed Martin sites are monitored by SEEview. We have installed

SEEview along with over 850 real-time energy meters at our largest facilities, which provides near real-time situational analysis of utility use. Reduction of GHG emissions attributed to reductions in fuel use by these facilities would reduce the regulatory reporting burden; therefore, we prioritize many of our energy reduction projects at these locations as these reductions are preferable to burdensome reporting requirements. In addition to metering, over six Lockheed Martin sites were enrolled in energy demand response programs, which offer incentives to businesses that reduce energy use during times of peak demand, resulting in over \$86,000 in earned revenue for the Corporation in 2018.

#### **Cost of management**

13600000

#### **Comment**

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#### **Identifier**

Risk 2

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

Direct operations

#### **Risk type**

Physical risk

#### **Primary climate-related risk driver**

Acute: Increased severity of extreme weather events such as cyclones and floods

#### **Type of financial impact**

Increased operating costs (e.g., inadequate water supply for hydroelectric plants or to cool nuclear and fossil fuel plants)

#### **Company- specific description**

Climate change is directly impacting the strength and pace of storms and other weather-related events. The level of impact varies based on the location of our operations and supply chain and is not limited to just coastal regions. In addition to cyclones and flooding, other weather-related events such as tornado and wildfires will have a continued impact on our supply chain and operations. These impacts result in disruptions in manufacturing and the livelihoods of our workforce and families. In mid-September of 2017, Hurricane Maria, a Category 4 hurricane with 155 mph winds, destroyed infrastructure in Puerto Rico, causing power and communications outages and widespread flooding for the entire island, impeding transportation. Lockheed Martin's facility in Aguadilla, Puerto Rico was also impacted by Hurricane Maria as the site was closed over approximately a month and a half, due to loss of telecommunications. In 2017, Lockheed Martin was also directly impacted by hurricanes in Texas and Florida. In 2017 and 2018, winter storms and other events disrupted operations on the East Coast, and wildfires in Northern California impacted local communities near suppliers and operations sites. As risks increase so too will the cost of operations and the potential for delays. Future weather events are expected to grow stronger ,with greater impact.

#### **Time horizon**

Current

#### **Likelihood**

Unlikely

#### **Magnitude of impact**

Low

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

Yes, a single figure estimate

#### **Potential financial impact figure (currency)**

500000

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

<Not Applicable>

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

<Not Applicable>

#### **Explanation of financial impact figure**

Based on our experience following Hurricane Maria, we estimate the cost of another similar acute weather event to be approximately \$500,000. The total value exposed at our Aguadilla, Puerto Rico facility includes damage to infrastructure, machinery and equipment; losses from business interruption and payroll; incurred costs from debris removal; and extra expenses from emergency items such as generators, equipment rentals, etc. Total loss of the value exposed at this facility is unlikely because Lockheed Martin has rigorous standards to mitigate loss and damage.

#### **Management method**

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Acute physical risks are managed by Lockheed Martin's Business Resiliency, Business Continuity and Global Security and Crisis Management organizations. Lockheed Martin's Crisis Management Program establishes a strategic framework that directs prompt mobilization of responsibilities and operational practices to protect employees and Lockheed Martin assets prior to, during, and after an emergency. Various teams within Lockheed Martin including Crisis Management, Global Emergency Operations Center, Corporate Air, Facilities and Business Continuity and Recovery worked cross-functionally to provide relief to our employees in Puerto Rico. In October of 2017, Lockheed Martin's Crisis Management team utilized the LM-100J (the first flight of our new commercial freighter), to deliver a total of over 80,000 pounds of critical supplies to Lockheed Martin employees and the surrounding community. The Aguadilla site received minimal damage and was prepared with hurricane shelters, a fully operational generator and potable water. The greatest impact to the Aguadilla site was the loss of telecommunications, which was critical for a site that facilitates call center help desk operations. Thus, the closure of this site for over a month increased operating costs as the decrease in capacity resulted in work that had to be redirected to several other sites.

**Cost of management**

500000

**Comment**

In addition to formal management action, Lockheed Martin employees across the Corporation aided our Puerto Rico employees and the local community through monetary donations and supplies. Many of our facilities partnered with Lockheed Martin's Hispanic Organization for Leadership and Awareness (HOLA) employee group, collecting over 6 pallets (or more than 300 pounds) of supplies ranging from batteries, mosquito repellents, hygienic products, baby supplies and canned food. Through the donation of two LM-100J flights, at least 100 employees were able to take electric generators home, in addition to receiving a variety of other critical supplies. Puerto Rico employees were also eligible for financial assistance from Lockheed Martin's Employee Disaster Relief fund, which assists employees in federally declared disaster areas.

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**Identifier**

Risk 3

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

Direct operations

**Risk type**

Physical risk

**Primary climate-related risk driver**

Acute: Other

**Type of financial impact**

Reduced revenue from decreased production capacity (e.g., transport difficulties, supply chain interruptions)

**Company- specific description**

In December 2017, the Thomas Fire was one of the multiple wildfires that affected Southern California, burning over 280,000 acres of land. As a result of ashes, declining air quality and highway closures in the Santa Barbara transportation corridor, Lockheed Martin's facility in Goleta, CA closed its operations for 10 days and over 20 employees were either affected directly by evacuation zones or indirectly affected due to restricted mobility.

**Time horizon**

Current

**Likelihood**

Unlikely

**Magnitude of impact**

Low

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

Yes, a single figure estimate

**Potential financial impact figure (currency)**

90000

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

<Not Applicable>

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

<Not Applicable>

**Explanation of financial impact figure**

Due to the purchase of an emergency diesel powered generator to serve critical equipment during power loss events, we are

positioned to shield critical material from future loss.

#### Management method

Acute physical risks are managed by Lockheed Martin's Business Resiliency, Business Continuity and Global Security and Crisis Management organizations. Lockheed Martin's Crisis Management Program establishes a strategic framework that directs prompt mobilization of responsibilities and operational practices to protect employees and Lockheed Martin assets prior to, during, and after an emergency. During the Thomas Fire emergency which impacted Lockheed Martin's facility in Goleta, CA, pre-planning activities were critical in successful management of emergency response. The implementation of communications protocols and requirements practiced from business resiliency drills, fires that took place in prior years, as well as a 10- year continuity in the Crisis Management team enabled rapid situation assessment and response. In addition to ensuring the safety of employees, one management action was to purchase a diesel-powered generator (approximately \$90,000) to serve critical equipment during power loss events.

#### Cost of management

90000

#### Comment

Acute physical risks are managed by Lockheed Martin's Business Resiliency, Business Continuity and Global Security and Crisis Management organizations. Business Resiliency ensures that resiliency capabilities are addressed through crisis management, business continuity, information technology disaster recovery, and medical response to protect human life, safeguard assets and sustain critical operations. Business Continuity outlines the preparation needed in anticipation of significant incidents that may disrupt business operations. Crisis Management promotes preparedness and response with the goal of protecting employees against injury and minimizing damage to Lockheed Martin assets. Lockheed Martin's Crisis Management Program establishes a strategic framework that directs prompt mobilization of responsibilities and operational practices to protect employees and Lockheed Martin assets prior to, during, and after an emergency.

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#### Identifier

Risk 4

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

Direct operations

#### Risk type

Physical risk

#### Primary climate-related risk driver

Acute: Increased severity of extreme weather events such as cyclones and floods

#### Type of financial impact

Reduced revenue from decreased production capacity (e.g., transport difficulties, supply chain interruptions)

#### Company- specific description

In mid-September of 2017, Hurricane Irma (later downgraded to a tropical storm), flooded several northern Florida cities with heavy rain and high storm surge, cutting power to over 6.2 million homes or more than 60% of the state of Florida. With sustained winds of more than 65 miles per hour, Hurricane Irma caused thousands of trees to topple onto roads, homes and power lines. Lockheed Martin's facility in Ocala, FL, which is part of our Missiles and Fire Control business segment, was also impacted by the path of Irma as hurricane winds knocked trees and power lines onto the roads. During this time, power brownouts to traffic lights, businesses and residences occurred and the highway patrol requested all non-essential personnel to stay off the roads as linemen worked to make repairs.

#### Time horizon

Current

#### Likelihood

Unlikely

#### Magnitude of impact

Low

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

Yes, a single figure estimate

#### Potential financial impact figure (currency)

800000

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

<Not Applicable>

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

<Not Applicable>

**Explanation of financial impact figure**

Based on our experience following Hurricane Irma, we estimate the cost of another similar acute weather event to be approximately \$800,000. The total value exposed at our Ocala facility includes damage to infrastructure, machinery and equipment; losses from business interruption and payroll; incurred costs from debris removal; and extra expenses from emergency items such as generators, equipment rentals, etc. Total loss of the value exposed at this facility is unlikely because Lockheed Martin has rigorous standards to mitigate loss and damage.

**Management method**

Acute physical risks are managed by Lockheed Martin's Business Resiliency, Business Continuity, and Global Security and Crisis Management organizations. Lockheed Martin's Crisis Management Program establishes a strategic framework that directs prompt mobilization of responsibilities and operational practices to protect employees and Lockheed Martin assets prior to, during, and after an emergency. Due to the dangerous conditions surrounding Lockheed Martin's Ocala facility as a result of Hurricane Irma, the Senior Executives of our Missiles and Fire Control business segment closed down the facility in Ocala, FL, as employee safety was paramount. The labor costs associated with the site closure was approximately \$800,000.

**Cost of management**

800000

**Comment**

Acute physical risks are managed by Lockheed Martin's Business Resiliency, Business Continuity, and Global Security and Crisis Management organizations. Business Resiliency ensures that resiliency capabilities are addressed through crisis management, business continuity, information technology disaster recovery, and medical response to protect human life, safeguard assets and sustain critical operations. Business Continuity outlines the preparation needed in anticipation of significant incidents that may disrupt business operations. Crisis Management promotes preparedness and response with the goal of protecting employees against injury and minimizing damage to Lockheed Martin assets. Lockheed Martin's Crisis Management Program establishes a strategic framework that directs prompt mobilization of responsibilities and operational practices to protect employees and Lockheed Martin assets prior to, during, and after an emergency.

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**Identifier**

Risk 5

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

Direct operations

**Risk type**

Physical risk

**Primary climate-related risk driver**

Acute: Increased severity of extreme weather events such as cyclones and floods

**Type of financial impact**

Increased capital costs (e.g., damage to facilities)

**Company- specific description**

In mid-September of 2017, Hurricane Irma (later downgraded to a tropical storm), flooded several northern Florida cities with heavy rain and high storm surge, cutting power to over 6.2 million homes or more than 60% of the state of Florida. With sustained winds of more than 65 miles per hour, Hurricane Irma caused thousands of trees to topple onto roads, homes and power lines. Lockheed Martin's facility in Orlando, FL, which is part of our Missiles and Fire Control business segment, was also impacted by the path of Irma as hurricane winds affected various parts of the facility.

**Time horizon**

Current

**Likelihood**

Unlikely

**Magnitude of impact**

Low

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

Yes, a single figure estimate

**Potential financial impact figure (currency)**

300000

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

<Not Applicable>

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

<Not Applicable>

**Explanation of financial impact figure**

Based on our experience following Hurricane Irma, we estimate the cost of another acute weather event to be approximately \$300,000. The total value exposed at our Orlando facility includes damage to infrastructure, machinery and equipment; losses from business interruption and payroll; incurred costs from debris removal; and extra expenses from emergency items such as generators, equipment rentals, etc. Total loss of the value exposed at this facility is unlikely because Lockheed Martin has rigorous standards to mitigate loss and damage.

**Management method**

Acute physical risks are managed by Lockheed Martin's Business Resiliency, Business Continuity, and Global Security and Crisis Management organizations. Lockheed Martin's Crisis Management Program establishes a strategic framework that directs prompt mobilization of responsibilities and operational practices to protect employees and Lockheed Martin assets prior to, during, and after an emergency. Due to the hurricane winds and flooding caused by Hurricane Irma, repairs estimated at over \$300,000 were required to address the damages to Lockheed Martin's facility in Orlando, FL. These management actions included interior repairs to warehouse buildings, restoration of fire detection and security systems, repairs to ceilings and roofs from water damage, and emergency rentals of generator due to temporary losses of power.

**Cost of management**

300000

**Comment**

Acute physical risks are managed by Lockheed Martin's Business Resiliency, Business Continuity, and Global Security and Crisis Management organizations. Business Resiliency ensures that resiliency capabilities are addressed through crisis management, business continuity, information technology disaster recovery, and medical response to protect human life, safeguard assets and sustain critical operations. Business Continuity outlines the preparation needed in anticipation of significant incidents that may disrupt business operations. Crisis Management promotes preparedness and response with the goal of protecting employees against injury and minimizing damage to Lockheed Martin assets. Lockheed Martin's Crisis Management Program establishes a strategic framework that directs prompt mobilization of responsibilities and operational practices to protect employees and Lockheed Martin assets prior to, during, and after an emergency.

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**Identifier**

Risk 6

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

Direct operations

**Risk type**

Physical risk

**Primary climate-related risk driver**

Acute: Increased severity of extreme weather events such as cyclones and floods

**Type of financial impact**

Increased insurance claims liability arising from climate-related impacts

**Company- specific description**

Climate change is directly impacting the strength and pace of storms and other weather-related events. The level of impact varies based on the location of our operations and supply chain and is not limited to just coastal regions. In addition to cyclones and flooding, other weather-related events such as tornados and wildfires will have a continued impact on our supply chain and operations. These impacts result in disruptions in manufacturing and the livelihoods of our workforce and families. In 2017, Lockheed Martin was directly impacted by hurricanes in Texas, Florida, and Puerto Rico. In 2017 and 2018, winter storms and other events disrupted operations on the East Coast, and wildfires in Northern CA impacted local communities near suppliers and operations sites. As risks increase so too will the cost of operations and the potential for delays. Future weather events are expected to grow stronger, with greater impact.

**Time horizon**

Long-term

**Likelihood**

Virtually certain

**Magnitude of impact**

High

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**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**

No financial impacts have been estimated in association with potential risks from climate change.

**Management method**

**Cost of management**

**Comment**

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**Identifier**

Risk 7

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

Supply chain

**Risk type**

Physical risk

**Primary climate-related risk driver**

Acute: Increased severity of extreme weather events such as cyclones and floods

**Type of financial impact**

Reduced revenue from decreased production capacity (e.g., transport difficulties, supply chain interruptions)

**Company- specific description**

Climate change is directly impacting the strength and pace of storms and other weather-related events. The level of impact varies based on the location of our operations and supply chain and is not limited to just coastal regions. In addition to cyclones and flooding, other weather-related events such as tornados and wildfires will have a continued impact on our supply chain and operations. These impacts result in disruptions in manufacturing and the livelihoods of our workforce and families. In 2017, Lockheed Martin was directly impacted by hurricanes in Texas, Florida, and Puerto Rico. In 2017 and 2018, winter storms and other events disrupted operations on the East Coast, and wildfires in Northern CA impacted local communities near suppliers and operations sites. As risks increase so too will the cost of operations and the potential for delays. Future weather events are expected to grow stronger, with greater impact.

**Time horizon**

Long-term

**Likelihood**

Virtually certain

**Magnitude of impact**

Medium-high

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

No, we do not have this figure

**Potential financial impact figure (currency)**

<Not Applicable>

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

<Not Applicable>

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

<Not Applicable>

**Explanation of financial impact figure**

No financial impacts have been estimated in association with potential risks from climate change.

**Management method****Cost of management****Comment**

---

**Identifier**

Risk 8

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

Direct operations

**Risk type**

Physical risk

**Primary climate-related risk driver**

Acute: Increased severity of extreme weather events such as cyclones and floods

**Type of financial impact**

Increased insurance claims liability arising from climate-related impacts

**Company- specific description**

Climate change is directly impacting the strength and pace of storms and other weather-related events. The level of impact varies based on the location of our operations and supply chain and is not limited to just coastal regions. In addition to cyclones and flooding, other weather-related events such as tornados and wildfires will have a continued impact on our supply chain and operations. These impacts result in disruptions in manufacturing and the livelihoods of our workforce and families. In 2017, Lockheed Martin was directly impacted by hurricanes in Texas, Florida, and Puerto Rico. In 2017 and 2018, winter storms and other events disrupted operations on the East Coast, and wildfires in Northern CA impacted local communities near suppliers and operations sites. As risks increase so too will the cost of operations and the potential for delays. Future weather events are expected to grow stronger, with greater impact.

**Time horizon**

Medium-term

**Likelihood**

Virtually certain

**Magnitude of impact**

Medium-high

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

No, we do not have this figure

**Potential financial impact figure (currency)**

<Not Applicable>

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

<Not Applicable>

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

<Not Applicable>

**Explanation of financial impact figure**

No financial impacts have been estimated in association with potential risks from climate change.

**Management method****Cost of management****Comment**

---

**Identifier**

Risk 9

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

Supply chain

**Risk type**

Physical risk

---

**Primary climate-related risk driver**

Acute: Increased severity of extreme weather events such as cyclones and floods

**Type of financial impact**

Increased insurance claims liability arising from climate-related impacts

**Company- specific description**

Climate change is directly impacting the strength and pace of storms and other weather-related events. The level of impact varies based on the location of our operations and supply chain and is not limited to just coastal regions. In addition to cyclones and flooding, other weather-related events such as tornados and wildfires will have a continued impact on our supply chain and operations. These impacts result in disruptions in manufacturing and the livelihoods of our workforce and families. In 2017, Lockheed Martin was directly impacted by hurricanes in Texas, Florida, and Puerto Rico. In 2017 and 2018, winter storms and other events disrupted operations on the East Coast, and wildfires in Northern CA impacted local communities near suppliers and operations sites. As risks increase so too will the cost of operations and the potential for delays. Future weather events are expected to grow stronger, with greater impact.

**Time horizon**

Medium-term

**Likelihood**

Virtually certain

**Magnitude of impact**

Medium-high

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

No, we do not have this figure

**Potential financial impact figure (currency)**

<Not Applicable>

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

<Not Applicable>

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

<Not Applicable>

**Explanation of financial impact figure**

No financial impacts have been estimated in association with potential risks from climate change.

**Management method****Cost of management****Comment**

---

**Identifier**

Risk 10

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

Direct operations

**Risk type**

Physical risk

**Primary climate-related risk driver**

Acute: Increased severity of extreme weather events such as cyclones and floods

**Type of financial impact**

Reduced revenue from decreased production capacity (e.g., transport difficulties, supply chain interruptions)

**Company- specific description**

Climate change is directly impacting the strength and pace of storms and other weather-related events. The level of impact varies based on the location of our operations and supply chain and is not limited to just coastal regions. In addition to cyclones and flooding, other weather-related events such as tornados and wildfires will have a continued impact on our supply chain and operations. These impacts result in disruptions in manufacturing and the livelihoods of our workforce and families. In 2017, Lockheed Martin was directly impacted by hurricanes in Texas, Florida, and Puerto Rico. In 2017 and 2018, winter storms and other events disrupted operations on the East Coast, and wildfires in Northern CA impacted local communities near suppliers and operations sites. As risks increase so too will the cost of operations and the potential for delays. Future weather events are

expected to grow stronger, with greater impact.

**Time horizon**

Short-term

**Likelihood**

Virtually certain

**Magnitude of impact**

Medium-high

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

No, we do not have this figure

**Potential financial impact figure (currency)**

<Not Applicable>

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

<Not Applicable>

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

<Not Applicable>

**Explanation of financial impact figure**

No financial impacts have been estimated in association with potential risks from climate change.

**Management method**

**Cost of management**

**Comment**

---

**Identifier**

Risk 11

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

Direct operations

**Risk type**

Physical risk

**Primary climate-related risk driver**

Chronic: Rising sea levels

**Type of financial impact**

Increased capital costs (e.g., damage to facilities)

**Company- specific description**

Sea level rise poses a substantial risk to coastal communities and the operations of LM and suppliers near them. Although the effects are chronic, weather events will also be exacerbated as a result. Therefore, the impact may be both direct and indirect, in the form of asset isolation due to infrastructure closures. Repetitive impacts are expected to reduce the value of capital assets and may potentially lead to stranded assets. Impacts are dually expected to displace regional workforces as well.

**Time horizon**

Long-term

**Likelihood**

Very likely

**Magnitude of impact**

Medium-high

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

No, we do not have this figure

**Potential financial impact figure (currency)**

<Not Applicable>

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

<Not Applicable>

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

<Not Applicable>

**Explanation of financial impact figure**

No financial impacts have been estimated in association with potential risks from climate change.

**Management method****Cost of management****Comment**

---

**Identifier**

Risk 12

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

Supply chain

**Risk type**

Transition risk

**Primary climate-related risk driver**

Market: Increased cost of raw materials

**Type of financial impact**

<Not Applicable>

**Company- specific description**

Scarcity and carbon-based costs are expected to drive up the cost of materials, globally. As externalities are incorporated into products in the form of carbon pricing and/or cap and trade, manufacturers will especially begin to bear the burden of these costs from their supply chains. In some cases, the costs will be transferable to the consumer, however, in others the overall affordability of products will cause direct reductions in marginal profits. Material costs could drive competitive affordability with government contracts or push manufacturers to become more vertically integrated with their supply chains.

**Time horizon**

Long-term

**Likelihood**

Very likely

**Magnitude of impact**

Medium-high

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

No, we do not have this figure

**Potential financial impact figure (currency)**

<Not Applicable>

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

<Not Applicable>

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

<Not Applicable>

**Explanation of financial impact figure**

No financial impacts have been estimated in association with potential risks from climate change.

**Management method****Cost of management****Comment**

---

**Identifier**

Risk 13

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

Direct operations

---

**Risk type**

Transition risk

**Primary climate-related risk driver**

Policy and legal: Increased pricing of GHG emissions

**Type of financial impact**

<Not Applicable>

**Company- specific description**

In the long-term, it should be expected that placing a price on carbon will be a key driver towards integrating external costs into market supply and demand. Without proper near-term mitigation, such as renewable energy procurement and energy conservation/efficiency, the long-term impacts of internalizing these external costs will drive up affordability and the cost of goods sold. The risk is directly from regulation as current carbon markets are voluntary, but in the future, there may be regional shifts to include the cost of carbon (as well as other GHG emissions) in the cost of goods sold. Marginal profits may directly decline as a result.

**Time horizon**

Long-term

**Likelihood**

Very likely

**Magnitude of impact**

Medium-high

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

No, we do not have this figure

**Potential financial impact figure (currency)**

<Not Applicable>

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

<Not Applicable>

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

<Not Applicable>

**Explanation of financial impact figure**

No financial impacts have been estimated in association with potential risks from climate change.

**Management method****Cost of management****Comment****Identifier**

Risk 14

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

Supply chain

**Risk type**

Transition risk

**Primary climate-related risk driver**

Policy and legal: Increased pricing of GHG emissions

**Type of financial impact**

<Not Applicable>

**Company- specific description**

In the long-term, it should be expected that placing a price on carbon will be a key driver towards integrating external costs into market supply and demand. Without proper near-term mitigation, such as renewable energy procurement and energy conservation/efficiency, the long-term impacts of internalizing these external costs will drive up affordability and the cost of goods sold. The risk is directly from regulation as current carbon markets are voluntary, but in the future, there will be regional shifts to include the cost of carbon (as well as other GHG emissions) in the cost of goods sold. Marginal profits may directly decline as a result.

**Time horizon**

Long-term

**Likelihood**

Very likely

**Magnitude of impact**

Medium-high

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

No, we do not have this figure

**Potential financial impact figure (currency)**

<Not Applicable>

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

<Not Applicable>

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

<Not Applicable>

**Explanation of financial impact figure**

No financial impacts have been estimated in association with potential risks from climate change.

**Management method****Cost of management****Comment**

---

**Identifier**

Risk 15

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

Direct operations

**Risk type**

Transition risk

**Primary climate-related risk driver**

Technology: Costs to transition to lower emissions technology

**Type of financial impact**

<Not Applicable>

**Company- specific description**

Although the cost of renewable energy technologies has gone down considerably in recent years, there continues to be barriers to implementation based on capital budgeting constraints and project finance requirements. Traditional ROI selection criteria and specific hurdle rates often require that renewable energy and energy efficiency projects be overly competitive in order to even be considered. These dynamics create current to long-term risks by limiting the rate of implementation and delaying the long-term benefits of lower O&M, fuel, and regulatory costs. If additional risks, such as carbon pricing, shift from voluntary to regulation, then the added cost will apply throughout the life cycle of the product, from supply chain to manufacturing. Near-term shifts towards lower emission technologies is the most active step in mitigating future costs.

**Time horizon**

Current

**Likelihood**

Virtually certain

**Magnitude of impact**

Medium-high

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

No, we do not have this figure

**Potential financial impact figure (currency)**

<Not Applicable>

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

<Not Applicable>

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

<Not Applicable>

**Explanation of financial impact figure**

No financial impacts have been estimated in association with potential risks from climate change.

**Management method****Cost of management****Comment**

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**Identifier**

Risk 16

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

Direct operations

**Risk type**

Transition risk

**Primary climate-related risk driver**

Technology: Unsuccessful investment in new technologies

**Type of financial impact**

<Not Applicable>

**Company- specific description**

As innovation leads to new markets and offerings, not all ventures will succeed. Medium to long-term climate related risks that result from unsuccessful investments may result from changes in consumer preferences or outright program failure. Because climate risks require a variety of adaptation and mitigation options there will be a rush for first to market opportunities, and thus, highly accelerated innovation. Two key programs may struggle with these risks, however, for very different reasons. LM Energy, is a departure from a more traditional Aerospace and Defense business structure. As other companies begin to specialize in clean energy technologies there will be a need to offer a differentiated value to our customers. The resulting innovation will carry greater risk of failure. Our nuclear fusion research promotes a solution that no one has achieved and that could change the energy landscape in the future. With such a venture, the risk of failure is very high, but so are the returns.

**Time horizon**

Medium-term

**Likelihood**

Likely

**Magnitude of impact**

Medium-high

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

No, we do not have this figure

**Potential financial impact figure (currency)**

<Not Applicable>

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

<Not Applicable>

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

<Not Applicable>

**Explanation of financial impact figure**

No financial impacts have been estimated in association with potential risks from climate change.

**Management method****Cost of management****Comment**

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**Identifier**

Risk 17

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

Direct operations

**Risk type**

Transition risk

**Primary climate-related risk driver**

Technology: Unsuccessful investment in new technologies

**Type of financial impact**

<Not Applicable>

**Company- specific description**

As innovation leads to new markets and offerings, not all ventures will succeed. Medium to long-term climate related risks that result from unsuccessful investments may result from changes in consumer preferences or outright program failure. Because climate risks require a variety of adaptation and mitigation options there will be a rush for first to market opportunities, and thus, highly accelerated innovation. Two key programs may struggle with these risks, however, for very different reasons. LM Energy, is a departure from a more traditional Aerospace and Defense business structure. As other companies begin to specialize in clean energy technologies there will be a need to offer a differentiated value to our customers. The resulting innovation will carry greater risk of failure. Our nuclear fusion research promotes a solution that no one has achieved and that could change the energy landscape in the future. With such a venture, the risk of failure is very high, but so are the returns.

**Time horizon**

Long-term

**Likelihood**

Very likely

**Magnitude of impact**

Medium-high

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

No, we do not have this figure

**Potential financial impact figure (currency)**

<Not Applicable>

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

<Not Applicable>

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

<Not Applicable>

**Explanation of financial impact figure**

No financial impacts have been estimated in association with potential risks from climate change.

**Management method**

**Cost of management**

**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**

Resilience

**Primary climate-related opportunity driver**

Other

**Type of financial impact**

Other, please specify (Preservation of carbon credits)

**Company-specific description**

California's Global Warming Solutions Act (AB32), established in 2006, is a state law that requires the California Air Resources Board (CARB) to develop regulations and market mechanisms to reduce GHG emissions to 1990 levels by 2020, representing approximately 30% reduction statewide with mandatory caps beginning in 2012 for significant emissions sources. Since 2013, the mandatory cap has decreased approximately 2% per year and the state has distributed allowances (tradeable permits) equal to the emissions allowed under the cap. Sources regulated under this cap are required to surrender the allowances and offsets equal to their emissions at the end of each compliance period. Lockheed Martin's facility in Sunnyvale, CA has been a participant in AB32 since 2013. However, the consolidation of the facility into fewer buildings, as well as additional energy efficiency and emissions reductions projects enabled Sunnyvale to drop below the AB32 threshold in 2015. Since its participation in AB32, Sunnyvale has committed to investments in cleaner technology, tangible reductions in attributed GHG emissions, advocacy to preserve current AB32 requirements beyond 2020 and advocacy to preserve existing allocations and credits. These efforts have ultimately resulted in Sunnyvale's formal exit from the AB32 program in 2018.

**Time horizon**

Current

**Likelihood**

About as likely as not

**Magnitude of impact**

Low

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

Yes, a single figure estimate

**Potential financial impact figure (currency)**

8900000

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

<Not Applicable>

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

<Not Applicable>

**Explanation of financial impact figure**

Through successes in legislative advocacy and the compliance with AB32's objectives, Lockheed Martin's Space business segment was able to reduce attributed GHG emissions at the most favorable costs, avoid the potential loss of existing allotments, and secure partial state subsidies as well as subsidies for Sunnyvale's investment in green technology (i.e. 1 MW fuel cell system currently deployed at the site). From 2017 - 2022, these advocacy successes will enable monetary savings of approximately \$6.2 million through utility rebates and the preservation of credits. Furthermore, having the Cap and Trade structure in place with the 25,000 MTCO<sub>2</sub>e threshold may allow for an additional \$2.7 million in Cap and Trade or other regulatory cost avoidances through 2030.

**Strategy to realize opportunity**

Lockheed Martin's Space Environment, Safety and Health (ESH) team, Corporate Environment, Safety and Health (ESH) team as well as our Government Affairs function achieved successes by: 1) Advocating to keep California's Cap and Trade program beyond 2020; 2) Partnering with industry groups to ensure that the threshold of 25,000 MTCO<sub>2</sub>e per year was maintained; 3) Requesting CARB to continue the allowance of credits from fuel cell technology; and 4) Proving to CARB and California's Public Utility Commission (PUE) that the Aerospace industry and the Sunnyvale facility is Energy Intensive and Trade Exposed (EITE), which can lead to the cross-border movement of GHG emissions to other states. These advocacy successes contributed to the California governor's action in extending the Cap and Trade program to 2030 and preserving the 25,000 MTCO<sub>2</sub>e threshold. Furthermore, the successful demonstration of the industry as EITE status positively resulted in extension of the current industry assistance factor through 2017 and a reduction to 50% for the duration of the program. These efforts have ultimately resulted in Sunnyvale's formal

exit from the AB32 program in 2018.

### Cost to realize opportunity

402000

### Comment

The costs for our facility in Sunnyvale, CA to comply with the AB32 regulation included a one-time purchase of \$372,000 to cover projected future costs of emissions allowances for the cap and trade program, as well as a recurring annual cost of \$30,000 associated with compliance reporting and third-party verification.

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### Identifier

Opp2

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

Direct operations

### Opportunity type

Energy source

### Primary climate-related opportunity driver

Use of lower-emission sources of energy

### Type of financial impact

Reduced operational costs (e.g., through use of lowest cost abatement)

### Company-specific description

In 2018, Lockheed Martin completed our largest solar array to date. The solar field in our Moorestown, New Jersey facility consists of more than 7,000 panels which will offset five percent of the annual electric usage at this facility generating 3,375 MW hours per year. Through this project we will be able to reduce GHG emissions attributed to the Moorestown facility, save annual operational energy costs, and expand our on-site renewable energy projects. Since 2008, we have installed 13 on-site renewable energy systems for a total of 9.3 MW of capacity. In the US, a significant amount of water is used by utilities to generate electricity, creating a vital link between water usage and energy reliability. In 2018, we reduced electricity consumption by over 5.6 billion gallons of water compared to 2010. We avoided \$23.0 million in annual energy and water costs compared to 2010.

### Time horizon

Long-term

### Likelihood

Likely

### Magnitude of impact

Medium

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

Yes, a single figure estimate

### Potential financial impact figure (currency)

340000

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

<Not Applicable>

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

<Not Applicable>

### Explanation of financial impact figure

Lockheed Martin's solar carport in Moorestown, NJ is expected to produce 3,375 MW hours of electricity and save approximately \$340,000 in energy costs annually.

### Strategy to realize opportunity

Through our partnership with Pfister Energy, Lockheed Martin was able to install a 2.5 MW ground mount solar array. We are able to reduce the attributed emissions for Moorestown's facility, save annual operational energy costs and expand our on-site renewable energy footprint. Through the US EPA's Green Power Partnership On-Site Commitment, Lockheed Martin has made a pledge to increase our on-site renewable generation to 10 MW by the end of 2020. In 2018, a Lockheed Martin building in Fort Worth, TX, achieved ENERGY STAR® certification from the US EPA, demonstrating it performs better than 93 percent of peer buildings. Built in 1968, this building 200 is owned by the US Air Force and managed by Lockheed Martin. At more than 840,000 sq. ft., it is our largest ENERGY STAR-certified building. Our energy management approach leverages our energy engineers' expertise to achieve yearly reductions. To achieve certification, engineers implement energy efficiency measures at the site each year to keep pace with our Go Green program goal of a 25% energy reduction by 2020. Example measures include lighting, heating,

ventilation and air conditioning (HVAC) and green IT. The building has >300,000 control points to optimize performance. The system within this building has saved a cumulative \$2.3 million and more than 40,000,000 kilowatt hours (kWh) in energy since 2008.

#### **Cost to realize opportunity**

3600000

#### **Comment**

---

#### **Identifier**

Opp3

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

Customer

#### **Opportunity type**

Products and services

#### **Primary climate-related opportunity driver**

Development of climate adaptation and insurance risk solutions

#### **Type of financial impact**

Increased revenue through new solutions to adaptation needs (e.g., insurance risk transfer products and services)

#### **Company-specific description**

Lockheed Martin has developed the meteorological observation systems that have fueled vast improvements in weather forecasting. Our primary customers have been federal agencies including the National Oceanic and Atmospheric Administration (NOAA), the National Aeronautics and Space Administration (NASA), the United States Air Force (USAF) and the Federal Aviation Administration (FAA). Through a collaborative development and acquisition effort between NOAA and NASA, in November of 2016, Lockheed Martin completed and launched the first of four next-generation geostationary weather satellites, the Geostationary Operational Environmental Satellite-R Series (GOES-R), which will provide a major improvement in quality, quantity and timeliness of weather data collected over the Western Hemisphere. Now in geostationary orbit, NOAA has re-named it to GOES-16. The second, GOES-S, was launched March 1, 2018.

#### **Time horizon**

Long-term

#### **Likelihood**

Very likely

#### **Magnitude of impact**

High

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

Yes, a single figure estimate

#### **Potential financial impact figure (currency)**

1100000000

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

<Not Applicable>

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

<Not Applicable>

#### **Explanation of financial impact figure**

In 2008, Lockheed Martin won a \$1.1 billion contract to build GOES-R and GOES-S, two of the next-generation satellites in the GOES-R series. Together, the set of four GOES-R satellite series (GOES-R/S/T/U) will have an operation lifetime extending through 2036.

#### **Strategy to realize opportunity**

Through a collaborative development and acquisition effort between NOAA and NASA, in November of 2016, Lockheed Martin completed and launched the first of four next-generation geostationary weather satellites, the Geostationary Operational Environmental Satellite-R Series (GOES-R), which will provide a major improvement in quality, quantity and timeliness of weather data collected over the Western Hemisphere. In 2017, Lockheed Martin completed the assembly of the GOES-S weather satellite, the second of the four next-generation geostationary weather satellites, and is in the process of conducting critical mechanical and environmental testing on the spacecraft. Now in geostationary orbit, NOAA has re-named it to GOES-16. The second, GOES-S, was launched March 1, 2018. The GOES-R series satellites are funded, managed and will be operated by NOAA, enabling higher-resolution images of weather patterns and severe storms five times faster than today. These enhanced capabilities will contribute

towards more accurate and reliable weather forecasts, severe weather outlooks and warnings, maritime forecasts, seasonal predictions, drought outlooks and space weather predictions. These advanced prediction capabilities will in turn, enable avoidance of adverse impacts from weather events and inform solutions for climate adaptation needs.

#### **Cost to realize opportunity**

350000000

#### **Comment**

In addition to our GOES-R series satellites, Lockheed Martin's Space business segment's product portfolio includes spacecraft that contributes to deep-space exploration as well as advanced infrastructure resiliency for climate adaptation needs. These products include the Space Based Infrared System, the GPS III, and Orion. In 2017, we began construction of our Gateway Center - the most advanced satellite production facility in Lockheed Martin's history. This new \$350 million building will be where we produce next-generation satellites. The Gateway Center will bring rapidly configurable production lines and advanced test capabilities all under one roof. It is designed with the physical space and flexibility to build a spectrum of satellites simultaneously. We have also woven elements of the digital tapestry into the design of the building, including the use of robotics, additive manufacturing and virtual reality to accelerate the manufacturing processes and reduce costs.

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#### **Identifier**

Opp4

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

Customer

#### **Opportunity type**

Energy source

#### **Primary climate-related opportunity driver**

Use of lower-emission sources of energy

#### **Type of financial impact**

Reputational benefits resulting in increased demand for goods/services

#### **Company-specific description**

Tidal energy is produced by the surge of ocean water during the rise and fall of tides. Submerged rotors may harness the power of marine currents to drive generators, which in turn produce electricity. Although intermittency is a problem for wind and solar power, tidal currents provide a consistent source of kinetic energy as its cycles are influenced by the phases of the moon, allowing for inherent predictability. In 2015, Lockheed Martin was awarded a contract by global tidal energy leader Atlantis Resources Ltd. to produce and integrate major elements of a next-generation 1.5-megawatt tidal turbine, the AR1500, as Phase 1a of the MeyGen tidal energy project. In 2017, Atlantis Resources Ltd. deployed the first AR1500 tidal turbine with new Lockheed Martin technology off the coast of Scotland.

#### **Time horizon**

Medium-term

#### **Likelihood**

Likely

#### **Magnitude of impact**

Medium

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

Yes, a single figure estimate

#### **Potential financial impact figure (currency)**

2100000000

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

<Not Applicable>

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

<Not Applicable>

#### **Explanation of financial impact figure**

Through our Sustainability Management Plan, we have committed to achieving \$4 billion in annual product sales with direct, measurable benefits to energy and advanced infrastructure resiliency by 2020. In 2018, product sales that benefit energy and infrastructure resiliency have totaled at least \$3 billion. Lockheed Martin's tidal project has contributed towards this amount.

#### **Strategy to realize opportunity**

In 2015, Lockheed Martin was awarded a contract by global tidal energy leader Atlantis Resources Ltd. to produce and integrate

major elements of a next-generation 1.5-megawatt tidal turbine, the AR1500, as Phase 1a of the MeyGen tidal energy project. In 2017, Atlantis Resources Ltd. deployed the first AR1500 tidal turbine with new Lockheed Martin technology off the coast of Scotland. In addition to designing the turbine, Lockheed Martin developed, manufactured and delivered two innovative subsystems, the Yaw Drive System (YDS) and the Variable Pitch Systems (VPS), which enable the turbine to rotate autonomously around its base, such that it always faces into the tidal flow. Once completed, the MeyGen project – the world's largest tidal stream project under development – will deploy nearly 270 tidal turbines to generate approximately 400 MW of power, which is enough energy to power up to 175,000 homes, significantly reducing Scope 2 emissions. The MeyGen project will contribute to Scotland's goal of 100 percent renewable energy by 2020.

#### **Cost to realize opportunity**

0

#### **Comment**

The costs to realize this opportunity would be the labor costs for Lockheed Martin employees to implement this work, which we have not estimated at this time.

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#### **Identifier**

Opp5

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

Customer

#### **Opportunity type**

Products and services

#### **Primary climate-related opportunity driver**

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

#### **Type of financial impact**

Better competitive position to reflect shifting consumer preferences, resulting in increased revenues

#### **Company-specific description**

The mission of Lockheed Martin's Ventures business element is to make strategic investments in companies that are developing disruptive, cutting-edge technologies in core businesses and new markets important to Lockheed Martin. These areas of interest include energy and power systems, as well as autonomous systems and robotics, cyber security, space technologies, advanced communications and sensors, undersea technologies, data analytics, artificial intelligence and machine learning, NextGen electronics, and advanced materials and manufacturing.

#### **Time horizon**

Long-term

#### **Likelihood**

Likely

#### **Magnitude of impact**

Medium

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

Yes, a single figure estimate

#### **Potential financial impact figure (currency)**

100000000

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

<Not Applicable>

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

<Not Applicable>

#### **Explanation of financial impact figure**

Since 2007, we have invested more than \$100 million in startup companies.

#### **Strategy to realize opportunity**

The mission of Lockheed Martin's Ventures business element is to make strategic investments in companies that are developing disruptive, cutting-edge technologies in core businesses and new markets important to Lockheed Martin. Since 2007, we have invested more than \$100 million in startup companies. These emerging innovations have the potential to become foundational technologies that solve the complex challenges our customers face. Lockheed Martin Ventures includes energy and power systems within their areas of interest, as well as autonomous systems and robotics, cyber security, space technologies, advanced communications and sensors, undersea technologies, data analytics, artificial intelligence and machine learning, NextGen

electronics and advanced materials and manufacturing. In addition to providing a source of capital, Lockheed Martin Ventures provides partner companies with access to our world-class engineering talent, state-of-the-art technologies and access to the company's international business relationships and supply chain. By making strategic investments in energy and power systems, Lockheed Martin Ventures has helped accelerate the portfolio growth of our products, such as energy storage. As an example, Lockheed Martin's GridStar™ energy storage solution has two core offerings: the GridStar™ Lithium system for short and medium duration energy storage and the GridStar™ Flow system for long-duration energy storage.

**Cost to realize opportunity**

100000000

**Comment**

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**Identifier**

Opp6

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

Direct operations

**Opportunity type**

Resilience

**Primary climate-related opportunity driver**

Participation in renewable energy programs and adoption of energy-efficiency measures

**Type of financial impact**

Other, please specify (Reduced operational costs)

**Company-specific description**

Lockheed Martin's Corporate Energy, Environment, Safety and Health (EEH) function coordinates a dedicated capital infrastructure fund, referred as the Go Green gated capital program. This fund is primarily used to fund major energy projects with recipient business segment funding the capital depreciation. Prior to approval through Corporate management, Corporate ESH reviews each submitted project to ensure they meet the criteria established for use of this fund. Additional energy-related projects are funded at the site and business segment level, using both expense and normal business capital processes.

**Time horizon**

Medium-term

**Likelihood**

Very likely

**Magnitude of impact**

Medium

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

Yes, a single figure estimate

**Potential financial impact figure (currency)**

34000000

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

<Not Applicable>

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

<Not Applicable>

**Explanation of financial impact figure**

In 2018, Lockheed Martin completed 53 energy-efficiency and GHG emissions reductions projects, which contributed towards a 22% energy reduction and a 36% reduction in attributed GHG emissions. In 2018, Lockheed Martin avoided approximately \$29 million (compared to a 2010 baseline) in energy and water costs through the implementation of similar projects over the years.

**Strategy to realize opportunity**

In the U.S., a significant amount of water is used by utilities to generate electricity, creating a vital link between water usage and energy reliability. In 2018, reduced electricity consumption in our facilities indirectly saved more than 5.6 billion gallons of water compared to 2010. Since 2010, a team of experts including facilities and energy engineers called the Tiger Team has been conducting an in-depth analysis of energy systems across the company to create strategic "get to excellence" plans that are site-specific. In 2018, 12 structured improvement events were held for business segments to identify projects based on energy use and infrastructure sub-system optimization opportunities. These projects focus on increased performance standards for our buildings and have resulted in significant operational cost avoidance. In 2018, we achieved energy and water cost avoidances of \$29 million compared to 2010. Furthermore, Lockheed Martin has adopted the United States Green Building Council's (USGBC) Leadership in

Energy and Environmental Design (LEED) as the minimum standard for new construction, renovations and/or retrofit projects. LM Energy also enabled carbon emissions savings of 1,262,322 metric tonnes of CO2 equivalent (MTCO2e) for our customers vs. our operational emissions, net of RECs, of 819,548 MTCO2e. LM Energy enabled carbon emissions savings of 1,262,322 metric tonnes of MTCO2e for our customers vs. our operational emissions, net of RECs, of 819,548 MTCO2e.

**Cost to realize opportunity**

16000000

**Comment**

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**Identifier**

Opp7

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

Customer

**Opportunity type**

Products and services

**Primary climate-related opportunity driver**

Development and/or expansion of low emission goods and services

**Type of financial impact**

Increased revenue through demand for lower emissions products and services

**Company-specific description**

In 2017, Lockheed Martin's Energy business was selected to improve energy and water efficiency at federal facilities. Under the contract, Lockheed Martin is one of 21 companies selected to implement Energy Savings Performance Contract (ESPCs), which are designed to create federal infrastructure improvements and energy savings.

**Time horizon**

Medium-term

**Likelihood**

Likely

**Magnitude of impact**

Medium

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

Yes, a single figure estimate

**Potential financial impact figure (currency)**

2600000

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

<Not Applicable>

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

<Not Applicable>

**Explanation of financial impact figure**

Under the contract, Lockheed Martin is one of 21 companies selected to implement Energy Savings Performance Contract (ESPCs) designed to create federal infrastructure improvements and energy savings. The individual projects are part of an Indefinite Delivery, Indefinite Quantity (IDIQ) contract with a maximum value of \$55 billion shared across all contractors, and with a base period of five years and with one 18-month option. The potential financial impact represents an average of the \$55 billion contract among 21 companies and does not represent the true value of contract specifically delegated to Lockheed Martin.

**Strategy to realize opportunity**

As one of the largest implementers of energy efficiency projects in the U.S., Lockheed Martin Energy partners with government, industrial and commercial customers to deliver advanced energy technologies with guaranteed savings. Under previously awarded contracts, Lockheed Martin Energy has implemented and is developing numerous innovative projects, including an energy retrofit of the U.S. Embassy in Nicaragua that delivers savings of more than 50% in energy use and cost.

**Cost to realize opportunity**

0

**Comment**

The costs to realize this opportunity would be the labor costs for Lockheed Martin employees to implement this work, which we have not estimated at this time.

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**Identifier**

Opp8

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

Customer

**Opportunity type**

Products and services

**Primary climate-related opportunity driver**

Development and/or expansion of low emission goods and services

**Type of financial impact**

Increased revenue through demand for lower emissions products and services

**Company-specific description**

Lockheed Martin Energy is a line of business within Lockheed Martin that delivers comprehensive solutions across the energy industry, including demand response solutions, energy efficiency, energy storage, nuclear systems, tidal energy technologies and bioenergy generation. Lockheed Martin Energy develops turn-key energy storage systems for commercial, industrial and utility applications. Lockheed Martin's GridStar™ energy storage solution has two core offerings: the GridStar™ Lithium system for short and medium duration energy storage and the GridStar™ Flow system for long-duration energy storage. The GridStar™ Lithium system is an all-in-one solution that helps customers to reduce their bills, enables utilities to defer infrastructure upgrades, while integrating renewable energy. The GridStar™ Flow system is a coordination chemistry flow battery (CCFB) solution that provides long duration energy storage for large projects.

**Time horizon**

Long-term

**Likelihood**

Likely

**Magnitude of impact**

Medium

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

Yes, a single figure estimate

**Potential financial impact figure (currency)**

8000000

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

<Not Applicable>

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

<Not Applicable>

**Explanation of financial impact figure**

According to a 2017 report from the International Renewable Energy Agency (IRENA) called "Electricity Storage and Renewables: Costs and Markets to 2030", energy installation cost estimates range between \$200/kWh and \$840/kWh for lithium ion battery chemistries. Using the most conservative estimate based on this study, the 40 MWh of energy storage that Lockheed Martin deployed in 2017 would be worth approximately \$8,000,000.

**Strategy to realize opportunity**

In 2018, Lockheed Martin deployed 85 energy storage units in 30 locations, representing 24 MW, or 48 MWh of energy storage. Our GridStar™ product has been tested and certified to the rigorous UL 9540 standard. To develop our certified GridStar™ product, we employed robust development processes including incorporating industry and customer feedback and previous lessons learned into the design and development, in addition to conducting thorough design reviews and integration testing. LM Energy designed the GridStar™ system for ease of installation and compact footprint. GridStar™ is a factory-assembled, integrated energy storage system with AC output that dramatically simplifies installation and eliminates significant field integration, improving quality and safety. GridStar™ leads the industry with a footprint up to 50% smaller than the competition. Electric utilities and project developers also find value in our energy storage solutions through deferred costly upgrades to transmission and distribution infrastructure equipment, integration of intermittent renewable energy generation, addition of local flexible capacity and reduction of peak demand.

**Cost to realize opportunity**

0

**Comment**

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The costs to realize this opportunity would be the labor costs for Lockheed Martin employees to implement this work, which we have not estimated at this time.

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**Identifier**

Opp9

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

Direct operations

**Opportunity type**

Resource efficiency

**Primary climate-related opportunity driver**

Use of recycling

**Type of financial impact**

Other, please specify (Precious metals reclamation)

**Company-specific description**

Discarded gap and fastener material used in the production of Lockheed Martin's F-35 aircraft contains gold.

**Time horizon**

Current

**Likelihood**

About as likely as not

**Magnitude of impact**

Low

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

Yes, a single figure estimate

**Potential financial impact figure (currency)**

1400000

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

<Not Applicable>

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

<Not Applicable>

**Explanation of financial impact figure**

Through 2018, over 1,200 ounces of gold were recovered through our waste vendor from precious metal activity. Lockheed Martin receives an estimated 90% of the proceeds from the reclaimed gold, which as of 2017 is approximately \$1,400,000

**Strategy to realize opportunity**

Since 2013, Lockheed Martin's facility in Fort Worth, TX has been transporting gold-containing gap and fastener material used in the production of F-35 aircraft to a certified waste vendor for precious metals reclamation. This gold recovery replaces waste management costs with revenues while reducing mining-related environmental costs and impacts.

**Cost to realize opportunity**

0

**Comment**

In addition to replacing waste management costs and increasing revenue by reclaiming gold from the waste stream, there are significant environmental benefits to precious metal reclamation. The benefits of reintroducing gold back into the economy through reclamation include the offset of primary metal production and the reduction of externalities such as impact to resource use, human health, ecosystem quality and climate change. According to a life-cycle assessment conducted in 2015 on the specific impacts of the Fort Worth precious metal reclamation activity, environmental impact savings were estimated to be over \$95,000.

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**Identifier**

Opp10

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

Direct operations

**Opportunity type**

Energy source

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**Primary climate-related opportunity driver**

Participation in carbon market

**Type of financial impact**

Reduced exposure to GHG emissions and therefore less sensitivity to changes in cost of carbon

**Company-specific description**

Participation in carbon markets can take many forms. As a significant land owner in the United States, Lockheed Martin could leverage that ownership to establish carbon sinks (i.e., forests) or through technology. Energy efficiency and renewable energy technologies provide a strong defense against the burden of a carbon tax and create business development opportunities based on the climate-related risks of our current and future customer bases. Early, and incremental, adaptation to carbon taxes presents a near term opportunity in the cost of operations and the supply chain by building resiliency to regulatory shocks, should a market tax be implemented in the long-term.

**Time horizon**

Long-term

**Likelihood**

Likely

**Magnitude of impact**

High

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

No, we do not have this figure

**Potential financial impact figure (currency)**

<Not Applicable>

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

<Not Applicable>

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

<Not Applicable>

**Explanation of financial impact figure**

No financial impacts have been estimated at this time for this opportunity.

**Strategy to realize opportunity****Cost to realize opportunity****Comment**

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**Identifier**

Opp11

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

Direct operations

**Opportunity type**

Energy source

**Primary climate-related opportunity driver**

Use of new technologies

**Type of financial impact**

Reduced operational costs (e.g., through use of lowest cost abatement)

**Company-specific description**

Lockheed Martin has an unrivaled opportunity to design, develop, and innovate the use of new technologies addressing climate-related risk. As a leader in technology and innovation, LM is uniquely positioned to directly support customer missions through technical solutions. This may take the form of energy, product design, efficiency, manufacturing, and/or operations. New technologies are applicable across multiple time horizons due to the direct linkage to the current LM business model.

**Time horizon**

Medium-term

**Likelihood**

Very likely

**Magnitude of impact**

High

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

No, we do not have this figure

**Potential financial impact figure (currency)**

<Not Applicable>

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

<Not Applicable>

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

<Not Applicable>

**Explanation of financial impact figure**

No financial impacts have been estimated at this time for this opportunity.

**Strategy to realize opportunity****Cost to realize opportunity****Comment**

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**Identifier**

Opp12

**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

**Type of financial impact**

Reduced operating costs (e.g., through efficiency gains and cost reductions)

**Company-specific description**

Lockheed Martin has an unrivaled opportunity to design, develop, and innovate the use of new technologies addressing climate-related risk. As a leader in technology and innovation, LM is uniquely positioned to directly support customer missions through technical solutions. This may take the form of energy, product design, efficiency, manufacturing, and/or operations. New technologies are applicable across multiple time horizons due to the direct linkage to the current LM business model.

**Time horizon**

Long-term

**Likelihood**

Very likely

**Magnitude of impact**

High

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

No, we do not have this figure

**Potential financial impact figure (currency)**

<Not Applicable>

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

<Not Applicable>

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

<Not Applicable>

**Explanation of financial impact figure**

No financial impacts have been estimated at this time for this opportunity.

**Strategy to realize opportunity**

## Cost to realize opportunity

### Comment

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#### Identifier

Opp13

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

Direct operations

#### Opportunity type

Products and services

#### Primary climate-related opportunity driver

Shift in consumer preferences

#### Type of financial impact

Better competitive position to reflect shifting consumer preferences, resulting in increased revenues

#### Company-specific description

Consumer preferences should be expected to shift in the long-term. Although government contracts do have a level of certainty, the needs of our customers will be required to change as changes in the climate create new risks. Lockheed Martin will be well positioned to address these changes through a continued focus on customer solutions and innovation.

#### Time horizon

Long-term

#### Likelihood

Very likely

#### Magnitude of impact

High

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

No, we do not have this figure

#### Potential financial impact figure (currency)

<Not Applicable>

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

<Not Applicable>

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

<Not Applicable>

#### Explanation of financial impact figure

No financial impacts have been estimated at this time for this opportunity.

#### Strategy to realize opportunity

## Cost to realize opportunity

### Comment

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#### Identifier

Opp14

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

Direct operations

#### Opportunity type

Energy source

#### Primary climate-related opportunity driver

Use of supportive policy incentives

#### Type of financial impact

Reduced operational costs (e.g., through use of lowest cost abatement)

#### Company-specific description

Lockheed Martin may benefit from supporting policy incentives in the current and long-term. These benefits are a result of

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incentives reducing existing market barriers for clean tech and efficiency programs and making them more cost effective to LM operations directly and in relation to the customer costs associated to our products. The current nature of these incentive is one of uncertainty and not permanence. In the long-term, however, it should be expected that continued support will be very impactful to LM operations. The impacts of climate-related risks are expected to grow over time, which also indicates that incentive will shift to support need. Continued support for this opportunity will be necessary with that change.

**Time horizon**

Long-term

**Likelihood**

Very likely

**Magnitude of impact**

High

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

No, we do not have this figure

**Potential financial impact figure (currency)**

<Not Applicable>

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

<Not Applicable>

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

<Not Applicable>

**Explanation of financial impact figure**

No financial impacts have been estimated at this time for this opportunity.

**Strategy to realize opportunity**

**Cost to realize opportunity**

**Comment**

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**Identifier**

Opp15

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

Direct operations

**Opportunity type**

Products and services

**Primary climate-related opportunity driver**

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

**Type of financial impact**

Increased revenue through new solutions to adaptation needs (e.g., insurance risk transfer products and services)

**Company-specific description**

Driving innovation and R&D is integral to the long-term resilience of Lockheed Martin's business model. All time horizons are applicable to maintain a competitive advantage and grow the customer base. Climate-related risks will create opportunities across all sectors, and therefore continued innovation will be required to provide solutions.

**Time horizon**

Current

**Likelihood**

Virtually certain

**Magnitude of impact**

High

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

No, we do not have this figure

**Potential financial impact figure (currency)**

<Not Applicable>

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

<Not Applicable>

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

<Not Applicable>

**Explanation of financial impact figure**

No financial impacts have been estimated at this time for this opportunity.

**Strategy to realize opportunity****Cost to realize opportunity****Comment**

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**Identifier**

Opp16

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

Direct operations

**Opportunity type**

Products and services

**Primary climate-related opportunity driver**

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

**Type of financial impact**

Increased revenue through new solutions to adaptation needs (e.g., insurance risk transfer products and services)

**Company-specific description**

Driving innovation and R&D is integral to the long-term resilience of Lockheed Martin's business model. All time horizons are applicable to maintain a competitive advantage and grow the customer base. Climate-related risks will create opportunities across all sectors, and therefore continued innovation will be required to provide solutions.

**Time horizon**

Short-term

**Likelihood**

Very likely

**Magnitude of impact**

High

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

No, we do not have this figure

**Potential financial impact figure (currency)**

<Not Applicable>

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

<Not Applicable>

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

<Not Applicable>

**Explanation of financial impact figure**

No financial impacts have been estimated at this time for this opportunity.

**Strategy to realize opportunity****Cost to realize opportunity****Comment**

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**Identifier**

Opp17

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

Direct operations

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**Opportunity type**

Products and services

**Primary climate-related opportunity driver**

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

**Type of financial impact**

Increased revenue through new solutions to adaptation needs (e.g., insurance risk transfer products and services)

**Company-specific description**

Driving innovation and R&D is integral to the long-term resilience of Lockheed Martin's business model. All time horizons are applicable to maintain a competitive advantage and grow the customer base. Climate-related risks will create opportunities across all sectors, and therefore continued innovation will be required to provide solutions.

**Time horizon**

Medium-term

**Likelihood**

Very likely

**Magnitude of impact**

High

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

No, we do not have this figure

**Potential financial impact figure (currency)**

<Not Applicable>

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

<Not Applicable>

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

<Not Applicable>

**Explanation of financial impact figure**

No financial impacts have been estimated at this time for this opportunity.

**Strategy to realize opportunity****Cost to realize opportunity****Comment**

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**Identifier**

Opp18

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

Supply Chain

**Opportunity type**

Products and services

**Primary climate-related opportunity driver**

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

**Type of financial impact**

Increased revenue through new solutions to adaptation needs (e.g., insurance risk transfer products and services)

**Company-specific description**

Driving innovation and R&D is integral to the long-term resilience of Lockheed Martin's business model. All time horizons are applicable to maintain a competitive advantage and grow the customer base. Climate-related risks will create opportunities across all sectors, and therefore continued innovation will be required to provide solutions.

**Time horizon**

Medium-term

**Likelihood**

Very likely

**Magnitude of impact**

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High

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

No, we do not have this figure

**Potential financial impact figure (currency)**

<Not Applicable>

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

<Not Applicable>

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

<Not Applicable>

**Explanation of financial impact figure**

No financial impacts have been estimated at this time for this opportunity.

**Strategy to realize opportunity**

**Cost to realize opportunity**

**Comment**

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**Identifier**

Opp19

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

Direct operations

**Opportunity type**

Products and services

**Primary climate-related opportunity driver**

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

**Type of financial impact**

Increased revenue through new solutions to adaptation needs (e.g., insurance risk transfer products and services)

**Company-specific description**

Driving innovation and R&D is integral to the long-term resilience of Lockheed Martin's business model. All time horizons are applicable to maintain a competitive advantage and grow the customer base. Climate-related risks will create opportunities across all sectors, and therefore continued innovation will be required to provide solutions.

**Time horizon**

Long-term

**Likelihood**

Likely

**Magnitude of impact**

High

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

No, we do not have this figure

**Potential financial impact figure (currency)**

<Not Applicable>

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

<Not Applicable>

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

<Not Applicable>

**Explanation of financial impact figure**

No financial impacts have been estimated at this time for this opportunity.

**Strategy to realize opportunity**

**Cost to realize opportunity**

**Comment**

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**Identifier**

Opp20

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

Supply Chain

**Opportunity type**

Products and services

**Primary climate-related opportunity driver**

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

**Type of financial impact**

Increased revenue through new solutions to adaptation needs (e.g., insurance risk transfer products and services)

**Company-specific description**

Driving innovation and R&D is integral to the long-term resilience of Lockheed Martin's business model. All time horizons are applicable to maintain a competitive advantage and grow the customer base. Climate-related risks will create opportunities across all sectors, and therefore continued innovation will be required to provide solutions.

**Time horizon**

Long-term

**Likelihood**

Likely

**Magnitude of impact**

High

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

No, we do not have this figure

**Potential financial impact figure (currency)**

<Not Applicable>

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

<Not Applicable>

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

<Not Applicable>

**Explanation of financial impact figure**

No financial impacts have been estimated at this time for this opportunity.

**Strategy to realize opportunity****Cost to realize opportunity****Comment**

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**Identifier**

Opp21

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

Direct operations

**Opportunity type**

Energy source

**Primary climate-related opportunity driver**

Use of new technologies

**Type of financial impact**

Reduced operational costs (e.g., through use of lowest cost abatement)

**Company-specific description**

Lockheed Martin has an unrivaled opportunity to design, develop, and innovate the use of new technologies addressing climate-related risk. As a leader in technology and innovation, LM is positioned to directly support customer missions through technical solutions. This may take the form of energy, product design, efficiency, manufacturing, and/or operations. New technologies are applicable across multiple time horizons due to the direct linkage to the current LM business model.

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**Time horizon**

Long-term

**Likelihood**

Likely

**Magnitude of impact**

High

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

No, we do not have this figure

**Potential financial impact figure (currency)**

<Not Applicable>

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

<Not Applicable>

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

<Not Applicable>

**Explanation of financial impact figure**

No financial impacts have been estimated at this time for this opportunity.

**Strategy to realize opportunity****Cost to realize opportunity****Comment**

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**Identifier**

Opp22

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

Supply Chain

**Opportunity type**

Energy source

**Primary climate-related opportunity driver**

Use of new technologies

**Type of financial impact**

Reduced operational costs (e.g., through use of lowest cost abatement)

**Company-specific description**

Lockheed Martin has an unrivaled opportunity to design, develop, and innovate the use of new technologies addressing climate-related risk. As a leader in technology and innovation, LM is positioned to directly support customer missions through technical solutions. This may take the form of energy, product design, efficiency, manufacturing, and/or operations. New technologies are applicable across multiple time horizons due to the direct linkage to the current LM business model.

**Time horizon**

Long-term

**Likelihood**

Likely

**Magnitude of impact**

High

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

No, we do not have this figure

**Potential financial impact figure (currency)**

<Not Applicable>

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

<Not Applicable>

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

<Not Applicable>

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**Explanation of financial impact figure**

No financial impacts have been estimated at this time for this opportunity.

**Strategy to realize opportunity****Cost to realize opportunity****Comment**

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**Identifier**

Opp23

**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

**Type of financial impact**

Reduced operating costs (e.g., through efficiency gains and cost reductions)

**Company-specific description**

Innovation in manufacturing and supply chain logistics will create an opportunity for Lockheed Martin to reduce operational cost and enhance production. This may create opportunities for competitive advantage against peers in terms of product affordability, plus reductions in material use, including energy and water, may insulate operations from climate-related supply shocks and price fluctuations. Product offerings and innovation in manufacturing are also opportunities for new customer segments and growth in adjacent sectors. The LM Energy business will offer near-term opportunities to customers, and growth in sensory offerings, including semi-autonomous drones, will enhance data collection and improve process efficiency.

**Time horizon**

Long-term

**Likelihood**

Very likely

**Magnitude of impact**

High

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

No, we do not have this figure

**Potential financial impact figure (currency)**

<Not Applicable>

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

<Not Applicable>

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

<Not Applicable>

**Explanation of financial impact figure**

No financial impacts have been estimated at this time for this opportunity.

**Strategy to realize opportunity****Cost to realize opportunity****Comment**

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**Identifier**

Opp24

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

Direct operations

**Opportunity type**

Resource efficiency

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**Primary climate-related opportunity driver**

Use of more efficient production and distribution processes

**Type of financial impact**

Reduced operating costs (e.g., through efficiency gains and cost reductions)

**Company-specific description**

Innovation in manufacturing and supply chain logistics will create an opportunity for Lockheed Martin to reduce operational cost and enhance production. This may create opportunities for competitive advantage against peers in terms of product affordability, plus reductions in material use, including energy and water, may insulate operations from climate-related supply shocks and price fluctuations. Product offerings and innovation in manufacturing are also opportunities for new customer segments and growth in adjacent sectors. The LM Energy business will offer near-term opportunities to customers, and growth in sensory offerings, including semi-autonomous drones, will enhance data collection and improve process efficiency.

**Time horizon**

Medium-term

**Likelihood**

Very likely

**Magnitude of impact**

High

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

No, we do not have this figure

**Potential financial impact figure (currency)**

<Not Applicable>

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

<Not Applicable>

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

<Not Applicable>

**Explanation of financial impact figure**

No financial impacts have been estimated at this time for this opportunity.

**Strategy to realize opportunity****Cost to realize opportunity****Comment**

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**Identifier**

Opp25

**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

**Type of financial impact**

Reduced operating costs (e.g., through efficiency gains and cost reductions)

**Company-specific description**

Innovation in manufacturing and supply chain logistics will create an opportunity for Lockheed Martin to reduce operational cost and enhance production. This may create opportunities for competitive advantage against peers in terms of product affordability, plus reductions in material use, including energy and water, may insulate operations from climate-related supply shocks and price fluctuations. Product offerings and innovation in manufacturing are also opportunities for new customer segments and growth in adjacent sectors. The LM Energy business will offer near-term opportunities to customers, and growth in sensory offerings, including semi-autonomous drones, will enhance data collection and improve process efficiency.

**Time horizon**

Short-term

**Likelihood**

Very likely

**Magnitude of impact**

High

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

No, we do not have this figure

**Potential financial impact figure (currency)**

<Not Applicable>

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

<Not Applicable>

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

<Not Applicable>

**Explanation of financial impact figure**

No financial impacts have been estimated at this time for this opportunity.

**Strategy to realize opportunity****Cost to realize opportunity****Comment**

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**Identifier**

Opp26

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

Supply Chain

**Opportunity type**

Resource efficiency

**Primary climate-related opportunity driver**

Use of more efficient production and distribution processes

**Type of financial impact**

Reduced operating costs (e.g., through efficiency gains and cost reductions)

**Company-specific description**

Innovation in manufacturing and supply chain logistics will create an opportunity for Lockheed Martin to reduce operational cost and enhance production. This may create opportunities for competitive advantage against peers in terms of product affordability, plus reductions in material use, including energy and water, may insulate operations from climate-related supply shocks and price fluctuations. Product offerings and innovation in manufacturing are also opportunities for new customer segments and growth in adjacent sectors. The LM Energy business will offer near-term opportunities to customers, and growth in sensory offerings, including semi-autonomous drones, will enhance data collection and improve process efficiency.

**Time horizon**

Long-term

**Likelihood**

Very likely

**Magnitude of impact**

High

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

No, we do not have this figure

**Potential financial impact figure (currency)**

<Not Applicable>

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

<Not Applicable>

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

<Not Applicable>

**Explanation of financial impact figure**

No financial impacts have been estimated at this time for this opportunity.

**Strategy to realize opportunity****Cost to realize opportunity****Comment**

---

**Identifier**

Opp27

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

Supply Chain

**Opportunity type**

Resource efficiency

**Primary climate-related opportunity driver**

Use of more efficient production and distribution processes

**Type of financial impact**

Reduced operating costs (e.g., through efficiency gains and cost reductions)

**Company-specific description**

Innovation in manufacturing and supply chain logistics will create an opportunity for Lockheed Martin to reduce operational cost and enhance production. This may create opportunities for competitive advantage against peers in terms of product affordability, plus reductions in material use, including energy and water, may insulate operations from climate-related supply shocks and price fluctuations. Product offerings and innovation in manufacturing are also opportunities for new customer segments and growth in adjacent sectors. The LM Energy business will offer near-term opportunities to customers, and growth in sensory offerings, including semi-autonomous drones, will enhance data collection and improve process efficiency.

**Time horizon**

Medium-term

**Likelihood**

Very likely

**Magnitude of impact**

High

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

No, we do not have this figure

**Potential financial impact figure (currency)**

<Not Applicable>

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

<Not Applicable>

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

<Not Applicable>

**Explanation of financial impact figure**

No financial impacts have been estimated at this time for this opportunity.

**Strategy to realize opportunity****Cost to realize opportunity****Comment**

---

**Identifier**

Opp28

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

Supply Chain

**Opportunity type**

Resource efficiency

---

**Primary climate-related opportunity driver**

Use of more efficient production and distribution processes

**Type of financial impact**

Reduced operating costs (e.g., through efficiency gains and cost reductions)

**Company-specific description**

Innovation in manufacturing and supply chain logistics will create an opportunity for Lockheed Martin to reduce operational cost and enhance production. This may create opportunities for competitive advantage against peers in terms of product affordability, plus reductions in material use, including energy and water, may insulate operations from climate-related supply shocks and price fluctuations. Product offerings and innovation in manufacturing are also opportunities for new customer segments and growth in adjacent sectors. The LM Energy business will offer near-term opportunities to customers, and growth in sensory offerings, including semi-autonomous drones, will enhance data collection and improve process efficiency.

**Time horizon**

Short-term

**Likelihood**

Very likely

**Magnitude of impact**

High

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

No, we do not have this figure

**Potential financial impact figure (currency)**

<Not Applicable>

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

<Not Applicable>

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

<Not Applicable>

**Explanation of financial impact figure**

No financial impacts have been estimated at this time for this opportunity.

**Strategy to realize opportunity****Cost to realize opportunity****Comment**

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C2.5

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**(C2.5) Describe where and how the identified risks and opportunities have impacted your business.**

	Impact	Description
Products and services	Impacted for some suppliers, facilities, or product lines	Climate-related issues that have led to opportunities in Lockheed Martin's products and services include our Geostationary Operational Environmental Satellite-R Series (GOES-R) and the products and services provided by Lockheed Martin's Energy business. The GOES-R series satellites will provide higher-resolution images contributing towards more accurate and reliable weather forecasts, severe weather outlooks and warning, maritime forecasts, seasonal predictions, drought outlooks and space weather predictions. These advanced prediction capabilities will enable the ability to save lives in storm-threatened areas and inform solutions for climate adaptation needs. The magnitude of this product's impact is high, as in 2008, Lockheed Martin won a \$1.1 billion contract to build GOES-R and GOES-S, two of the next-generation satellites in the four satellite product series (GOES-R/S/T/U). Furthermore, we have the opportunity by answering the demand for energy and water efficiency, as in 2017, Lockheed Martin's Energy business was selected to improve energy and water efficiency at federal facilities. The magnitude of this impact is medium, as Lockheed Martin was one of 21 companies selected to implement Energy Savings Performance Contracts (ESPCs) under an Indefinite Delivery, Indefinite Quality (IDIQ) contract with a maximum value of \$55 billion shared across all contractors, and with a base period of five years with one 18-month option. Lockheed Martin Energy has multiple ESPC contracts underway in 2019 and 2020. In 2018 and 2017, Lockheed Martin's Energy business also deployed major elements of a next-generation 1.5 MW tidal turbine called the AR1500 as Phase 1a of Scotland's MeyGen tidal energy project. In 2018, Lockheed Martin deployed 85 energy storage units in 30 locations, representing 24MWh or 48 MWh of energy storage. Both our tidal energy project and our GridStar™ energy storage products are of medium impact, contributing towards \$3 billion of product sales in 2018 that benefit energy and infrastructure resiliency. This revenue is measured against our Sustainability Management Plan goal of achieving \$4 billion in annual product sales by 2020 with direct, measurable benefits to energy and advanced infrastructure resiliency.
Supply chain and/or value chain	Impacted for some suppliers, facilities, or product lines	Climate-related issues that have led to opportunities in Lockheed Martin's value chain include the reclamation of precious metals at the end of our product life-cycle. At our facility in Fort Worth, TX, gold-containing gap and fastener material used in the production of aircraft is transported to a certified waste vendor for precious metals reclamation. Although the magnitude of this impact is low, the gold recovery at the end of our value stream replaces waste management costs with revenues. Furthermore, according to a life-cycle assessment conducted in 2015 on this specific activity, the environmental impact savings from offsetting primary metal production and the reduction of externalities such as impact to resource use, human health, ecosystem quality and climate change were estimated to be over \$95,000.
Adaptation and mitigation activities	Impacted for some suppliers, facilities, or product lines	Natural disasters pose serious threats to communities and the power needed for our global operations and infrastructure. Lockheed Martin is developing a revolutionary, long-duration energy storage solution called GridStar® Flow, which will provide power for more than 12 hours, ensuring the most flexible resiliency solutions for government and commercial customers. GridStar® Flow was in the final stages of design and testing in late 2018. To continue providing sustainable solutions, we must imagine future needs and meet them. We are revolutionizing the way we see and respond to weather patterns with next-generation weather satellites built for NASA and the National Oceanic and Atmospheric Administration (NOAA). These spacecrafts transmit images around the clock, providing information from space to enable better decisions on Earth. Climate-related issues that led to risks to Lockheed Martin's adaptation and mitigation activities were exemplified by natural disasters and severe weather-related events such as the Thomas Fire, Hurricane Irma and Hurricane Maria, which impacted our facilities in Goleta, CA; Ocala, FL; Orlando, FL; and Aguadilla, Puerto Rico. Collaboration among Lockheed Martin's Business Resiliency, Business Continuity, and Global Security and Crisis Management organizations was critical in managing these acute physical risks and engaging in adaptation and mitigation activities. The magnitude of impacts of all these acute physical risks were low to the Corporation overall.
Investment in R&D	Impacted for some suppliers, facilities, or product lines	We conducted life-cycle assessment case studies on three products, identifying cost savings of \$764.5 million versus business-as-usual scenarios. These results bring our cumulative modeled life-cycle cost savings to \$1.34 billion, achieving our goal of \$1 billion by 2020. Climate-related issues that have led to opportunities in Lockheed Martin's investment in research and development include the strategy of our Ventures business element. The mission of Lockheed Martin's Ventures business element is to make strategic investments in companies that are developing disruptive, cutting-edge technologies in core businesses and new markets important to Lockheed Martin. The magnitude of this impact is medium, as we have invested more than \$100 million in start-up companies since 2007. These emerging innovations have the potential to become foundational technologies that solve the complex challenges our customers face. Lockheed Martin Ventures includes energy and power systems within its areas of interest, as well as autonomous systems and robotics, cyber security, space technologies, advanced communications and sensors, undersea technologies, data analytics, artificial intelligence and machine learning, NextGen electronics, and advanced materials and manufacturing. In addition to providing a source of capital, Lockheed Martin Ventures provides partner companies with access to our world-class engineering talent, state-of-the-art technologies and access to the company's international business relationships and supply chain.
Operations	Impacted	Lockheed Martin's Corporate Energy, Environment, Safety and Health (ESH) function coordinates a dedicated capital infrastructure fund, referred to as the Go Green gated capital program. This fund is primarily used to fund major energy projects, with the recipient business segment funding the capital depreciation. Prior to approval through Corporate management, Corporate ESH reviews each submitted project to ensure they meet the criteria established for use of this fund. Additional energy-related projects are funded at the site and business segment level, using both expense and normal business capital processes. The impact of our investments in energy and water-related infrastructure is medium, as in 2018, Lockheed Martin spent over \$13 million on completed projects and initiatives specifically related to energy and water efficiency. We completed 53 energy efficiency and carbon reduction products including HVAC, lighting, building control systems, renewable energy, and retro-commissioning. These projects result in an annual energy reduction of an estimated equivalent of 29 million kWh, with an estimated \$2.2 million in recurring annual cost avoidance. This contributed to a 22% energy reduction and a 36% reduction in attributed GHG emissions. In 2018, LM avoided \$29.3 million (compared to a 2010 baseline) in energy and water costs through the implementation of similar projects over the years. Lockheed Martin Energy enabled carbon emissions savings of 1,262,322 metric tonnes of carbon dioxide equivalent (MTCO2e) for our customers, compared to our operational emissions, net of RECs, of 819,548 MTCO2e. Climate-related issues that have led to opportunities in Lockheed Martin's operations include the installation of our largest solar array to date in Moorestown, New Jersey in 2018. The Moorestown solar field consists of more than 7,000 panels which will offset five percent of the annual electric usage at this facility. Through this project we will be able to reduce GHG emissions attributed to the Moorestown facility, save annual operational energy costs and expand our onsite renewable energy projects. Since 2008 we have installed 13 onsite renewable energy systems for a total of 9.3 MW of capacity. The impact of the Moorestown solar field is medium, as it is expected to produce 3,375 MW hours per year and save \$340,000 per year in energy costs.
Other, please specify	Impacted	In 2019, Lockheed Martin was recognized as a 2019 ENERGY STAR® Partner of the Year by the U.S. Environmental Protection Agency (EPA) and the U.S. Department of Energy. The annual award recognized the organizations with exemplary commitment and dedication to leadership in energy efficiency and the ENERGY STAR program. Our nine ENERGY STAR-certified buildings total 3.4 million square feet of buildings with green certifications contribute to our Go Green 2020 commitments to achieve 25% reduction in energy use and 35% reduction in carbon emissions by the year 2020, from a 2010 baseline.

**(C2.6) Describe where and how the identified risks and opportunities have been factored into your financial planning process.**

	Relevance	Description
Revenues	Impacted for some suppliers, facilities, or product lines	Climate-related issues that have led to opportunities for increased revenues include our Geostationary Operational Environmental Satellite-R Series (GOES-R) and the products and services provided by Lockheed Martin's Energy business. The GOES-R series satellites will provide higher-resolution images contributing towards more accurate and reliable weather forecasts, severe weather outlooks and warning, maritime forecasts, seasonal predictions, drought outlooks and space weather predictions. These advanced prediction capabilities will enhance the ability to save lives in storm-threatened areas and inform solutions for climate adaptation needs. The magnitude of this product's impact is high, as in 2008, Lockheed Martin won a \$1.1 billion contract to build GOES-R and GOES-S, two of the next-generation satellites in the four satellite product series (GOES-R/S/T/U). Furthermore, we have the opportunity to increase our revenue by answering the demand for energy and water efficiency, as in 2017, Lockheed Martin's Energy business was selected to improve energy and water efficiency at federal facilities. The magnitude of this impact is medium, as Lockheed Martin was one of 21 companies selected to implement Energy Savings Performance Contracts (ESPCs) under an Indefinite Delivery, Indefinite Quality (IDIQ) contract with a maximum value of \$55 billion shared across all contractors, and with a base period of five years with one 18-month option. In 2018 and 2017, Lockheed Martin's Energy business also deployed major elements of a next-generation 1.5 MW tidal turbine called the AR1500 as Phase 1a of Scotland's MeyGen tidal energy project. In 2018, Lockheed Martin deployed 85 energy storage units in 30 locations, representing 24MH or 48 MWhs of energy storage. Both our tidal energy project and our GridStar™ energy storage products are of medium impact, contributing towards \$3 billion of product sales in 2018 that benefit energy and infrastructure resiliency. This revenue is measured against our Sustainability Management Plan goal of achieving \$4 billion in annual product sales by 2020 with direct, measurable benefits to energy and advanced infrastructure resiliency.
Operating costs	Impacted for some suppliers, facilities, or product lines	Climate-related issues that have led to opportunities in Lockheed Martin's operating costs include the installation of our tenth solar array at our facility in Moorestown, NJ. This 2.5 MW solar solar field project is over 8 acres, and will reduce the environmental impact of the facility by saving 5 percent of its electric usage. Through this project, we will be able to reduce the GHG emissions attributed to the Moorestown facility, save annual operational energy costs, and expand our on-site renewable energy project. The impact of the solar field is medium, as it is expected to produce 3,375 MW hours per year and save \$340,000 per year in energy costs. Other Risks: Our operations are subject to and affected by a variety of federal, state, local and foreign environmental protection laws and regulations. We are involved in environmental remediation at some of our facilities, some of our former facilities, and at third-party-owned sites where we have been designated a potentially responsible party. We could also be affected by future regulations imposed or claims asserted in response to concerns over climate change, other aspects of the environment or natural resources. We have an ongoing, comprehensive sustainability program to reduce the effects of our operations on the environment. Other opportunities: • We implemented 53 energy efficiency and carbon reduction products including HVAC, lighting, building control systems, renewable energy, and retro-commissioning. These projects result in an annual energy reduction of an estimated equivalent of 29 million kWh, with an estimated \$2.2 million in recurring annual cost avoidance. • Eleven HVAC projects were completed, resulting in approximately an equivalent of 4.3 million kWh of energy and more than \$340,000 in recurring annual cost avoidance. • Thirty lighting projects were completed, resulting in approximately an equivalent of 8.6 million kWh of energy and more than \$900,000 in recurring annual cost avoidance. • Two building control system projects were completed in 2018, resulting in approximately an equivalent of 2.5 million kWh of energy and more than \$260,000 in recurring annual cost avoidance. The impact of these opportunities is medium. • We exceeded our U.S. Department of Energy Better Plants Program goal of 25 percent energy intensity reduction at our top 20 U.S. manufacturing facilities.
Capital expenditures / capital allocation	Impacted	Lockheed Martin's Corporate Environment, Safety and Health (ESH) function coordinates a dedicated capital infrastructure fund, referred as the Go Green gated capital program. This fund is primarily used to fund major energy projects with the recipient business segment funding the capital depreciation. Prior to approval through Corporate management, Corporate ESH reviews each submitted project to ensure they meet the criteria established for use of this fund. Additional energy-related projects are funded at the site and business segment level, using both expense and normal business capital processes. The impact of our investments in energy and water-related infrastructure is medium, as in 2018, Lockheed Martin spent over \$13 million on completed projects and initiatives specifically related to energy and water efficiency. We completed 53 energy-efficiency and GHG emissions reductions projects in 2018, which contributed towards a 22% energy reduction and a 36% reduction in attributed GHG emissions. In 2018, Lockheed Martin avoided approximately \$29.3 million (compared to a 2010 baseline) in energy and water costs through the implementation of similar projects over the years.
Acquisitions and divestments	Impacted for some suppliers, facilities, or product lines	Climate-related issues that may lead to potential acquisitions are exemplified through the strategy of our Ventures business element. The mission of Lockheed Martin's Ventures business element is to make strategic investments in companies that are developing disruptive, cutting edge technologies in core businesses and new markets important to Lockheed Martin. The magnitude of this impact is medium, as we have invested more than \$100 million in startup companies since 2007. These emerging innovations have the potential to become foundational technologies that solve the complex challenges our customers face. Lockheed Martin Ventures includes energy and power systems within its areas of interest, as well as autonomous systems and robotics, cyber security, space technologies, advanced communications and sensors, undersea technologies, data analytics, artificial intelligence and machine learning, NextGen electronics and advanced materials and manufacturing. In addition to providing a source of capital, Lockheed Martin Ventures provides partner companies with access to our world-class engineering talent, state-of-the-art technologies and access to the company's international business relationships and supply chain.
Access to capital	Not impacted	Although certain elements of Lockheed Martin's business segments have risks and opportunities related to climate change, we are a global security and aerospace company with main areas of focus in defense, space, intelligence, homeland security, and information technology, including cybersecurity. In 2018, 70% of our \$53.8 billion in net sales were from the U.S. Government, either as a prime contractor or subcontractor, 28% were from non-U.S. military customers, and 2% were from U.S. commercial and other customers. The identified risks and opportunities identified in C2.3 and C2.4 could have the potential to impact Lockheed Martin's access to capital in the future.

	Relevance	Description
Assets	Impacted for some suppliers, facilities, or product lines	Climate-related issues risks to Lockheed Martin assets were exemplified by natural disasters and severe weather-related events such as the Thomas Fire, Hurricane Irma and Hurricane Maria, which impacted our facilities in Goleta, CA; Ocala, FL; Orlando, FL and Aguadilla, Puerto Rico. Collaboration among Lockheed Martin's Business Resiliency, Business Continuity, and Global Security and Crisis Management organizations was critical in managing these acute physical risks and engaging in adaptation and mitigation activities. The magnitude of impacts of all these acute physical risks were low to the Corporation overall.
Liabilities	Impacted for some suppliers, facilities, or product lines	Climate-related issues that may lead to potential liabilities through increased costs for regulatory compliance, fines and penalties include environmental regulations such as the U.S. Greenhouse Gas (GHG) Mandatory Reporting Rule. Four of Lockheed Martin's largest facilities (Sunnyvale, Stratford, Fort Worth and Marietta) are required to report GHG emissions pursuant to the U.S. GHG Mandatory Reporting Rule. Non-compliance with the U.S. GHG Mandatory Reporting Rule could involve fines of up to \$37,500 per day. The impact of this regulation is low because we are in full compliance, although hypothetical non-compliance would result in over \$54,000,000 per year for all four sites combined. We have incurred and will continue to incur liabilities under various federal, state, local and foreign statutes for environmental protection and remediation. The extent of our financial exposure cannot in all cases be reasonably estimated at this time. Among the variables management must assess in evaluating costs associated with these cases and remediation sites generally are the status of site assessment, extent of the contamination, impacts on natural resources, changing cost estimates, evolution of technologies used to remediate the site, continually evolving environmental standards and cost allowability issues, including varying efforts by the U.S. Government to limit allowability of our costs in resolving liability at third party-owned sites. For information regarding these matters, including current estimates of the amounts that we believe are required for environmental remediation to the extent probable and estimable, see "Critical Accounting Policies - Environmental Matters" in Management's Discussion and Analysis of Financial Condition and Results of Operations and "Note 14 – Legal Proceedings, Commitments and Contingencies" included in our Notes to Consolidated Financial Statements.
Other	Please select	

### C3. Business Strategy

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#### C3.1

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**(C3.1) Are climate-related issues integrated into your business strategy?**

Yes

#### C3.1a

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

Yes, quantitative

C-AC3.1b/C-CE3.1b/C-CH3.1b/C-CO3.1b/C-EU3.1b/C-FB3.1b/C-MM3.1b/C-OG3.1b/C-PF3.1b/C-ST3.1b/C-TO3.1b/C-TS3.1b

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**(C-AC3.1b/C-CE3.1b/C-CH3.1b/C-CO3.1b/C-EU3.1b/C-FB3.1b/C-MM3.1b/C-OG3.1b/C-PF3.1b/C-ST3.1b/C-TO3.1b/C-TS3.1b) Indicate whether your organization has developed a low-carbon transition plan to support the long-term business strategy.**

Yes

#### C3.1c

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**(C3.1c) Explain how climate-related issues are integrated into your business objectives and strategy.**

Lockheed Martin's business strategy related to climate change has been influenced by our stakeholders including employees, academic institutions, investors, non-governmental organizations, customers, policy organizations, suppliers and analysts. In 2013, Lockheed Martin conducted a Core Issues Assessment through internal workshops and feedback from stakeholders to evaluate sustainability factors based on impacts to our value chain and importance to stakeholders. In late 2015, we reassessed our priority

sustainability issues based on the Corporation's evolving business portfolio and stakeholder values regarding the economic, social and environmental aspects of our business model. In specific lines of business, the U.S. National Oceanic Atmospheric Administration, the U.S. Navy, major electric utilities and other customers have shaped product development and features based on climate-related risks and opportunities.

Through our Core Issues Assessment, Lockheed Martin has developed a Sustainability Management Plan (SMP), which includes specific goals and performance initiatives that we monitor and voluntarily disclose. Within the SMP, two of our core issues, Product Impact and Resource Efficiency, relate specifically to our climate change strategy, including emissions and energy reductions.

**iii) What have been the most substantial business decisions made during the reporting year that have been influenced by the climate change driven aspects of the strategy (e.g. investment, location, procurement, mergers and acquisition (M&A), research and development (R&D). Both the business decision and the aspect of climate change that has influenced the business decision must be made clear in the answer;**

Lockheed Martin's Corporate Environment, Safety and Health (ESH) function coordinates a dedicated capital infrastructure fund, referred to as the Go Green gated capital program. This fund is primarily used to fund major energy or water-related efficiency projects, with the recipient business segment funding the capital depreciation. Prior to approval through Corporate management, Corporate ESH reviews each submitted project to ensure they meet the criteria established for use of this fund. In 2018, one of the most substantial business decisions was to approve funding through the gated capital program to complete a solar field at our facility in Moorestown, NJ, which is comprised of over 7,000 solar panels and is expected to produce 3,375 MWh/year. The implementation of these projects reduces our GHG emissions and strengthen our resiliency to climate-related risks.

**iv) What aspects of climate change have influenced the strategy (e.g. need for adaptation, regulatory changes, or opportunities to develop green business);**

Lockheed Martin's Corporate ESH function collaborates across all business segments to identify opportunities to mitigate the Corporation's contribution to climate-related risks. By funding major energy efficiency projects, we are able to reduce the operational impact for both our energy and carbon footprint.

**v) How the short-term strategy has been influenced by climate change;**

Through our biennial assessment of sustainability issues, we classified two tiers of priorities. Our short-term Tier 1 goals for our Resource Efficiency core issue combines energy use and GHG emissions factors. Specifically for Resource Efficiency, we aim for a 35% reduction in attributed carbon emissions and a 25% reduction in energy use by the year 2020, from a 2010 baseline; increase the square footage of facilities with green building certifications by 2020; increase annual renewable energy consumption by 2020; and help our energy customers reduce their carbon emissions by at least twice the carbon impact of our business operations by 2020. Our Tier 1 goals related to climate change for our Product Impact core issue are based around product total cost of ownership and global infrastructure needs. These specific goals for Product Impact include: adding design-to-cost analysis criteria to each business segment's proposal planning and review processes by 2020; generating \$1 billion in product life-cycle cost reductions resulting in lower resource consumption and reduced adverse impacts to health and the environment by 2020; and achieving \$4 billion in product sales with direct, measurable benefits to energy and advanced infrastructure resiliency.

**vi) How the long-term strategy has been influenced by climate change;**

We have developed long-term Tier 2 factors around our core issues that we manage and monitor as a secondary priority of our

sustainability strategy without setting new SMP goals. Our Tier 2 factor related to climate change is around product eco-innovation, which accounts for material efficiency, re-usability and use-phase emissions, and energy consumption through product design, development and maintenance. This goal emphasizes material selection and design in environmental footprint, as about 85% of the life-cycle cost of products in our sector is decided during the design phase.

**vii) How this is gaining a strategic advantage over your competitors;**

Lockheed Martin's approach to climate change in our business strategy may gain us a strategic advantage over our competitors through our governance structure, focus on stakeholder-relevant core issues, role in helping our customers achieve their climate-related goals and by evolving our business strategy to balance competing priorities and pass savings to our customers. Our governance structure keeps our SMP on track and ensures clear and transparent accountability as we adjust our strategy and portfolio to reflect our customers' needs, global trends, and research and development priorities when entering new commercial technology markets. As a defense contractor, we balance our customers' needs through efforts such as Design for Affordability, which is an initiative to reduce total life-cycle costs of our products while preserving and even enhancing mission capabilities. Furthermore, as our life-cycle-based assessments have estimated that approximately 70% of the GHG impacts of our products are in the customer-use phase, we have developed three SMP goals to address GHG reductions in our products to focus on the greatest area of our impact. We innovate renewable and high-efficiency energy systems that reduce costs and carbon emissions for our customers and when possible, we pilot energy-saving products at our facilities to reduce energy consumption and showcase the value of these solutions.

**viii) How the Paris Agreement has influenced the business strategy (e.g. the process of transition planning alongside the ratcheting of Intended Nationally Determined Contributions (INDCs));**

The Paris Agreement has not influenced our business strategy.

**C3.1d**

**(C3.1d) Provide details of your organization's use of climate-related scenario analysis.**

Climate-related scenarios	Details
Other, please specify (Lockheed Martin has utilized the Context Based Metric model for calculating Science Based Targets since 2014 for internal goal setting and analysis.)	The Context Based Metric model method is used under a variety of revenue and emissions growth scenarios to understand the relative impact of such scenarios on our ability to meet existing Go Green goals through 2020 and compare our performance to a select number of industry peers. In 2018, we applied an updated model from the Center for Sustainable Organizations that sets the global average temperature target at 1.5C instead of 2C. The scenarios used extend beyond 2050 and are based on a series of assumed growth rates in annual revenues and our ability to reduce our CO2e emissions footprint. The models are based on Scope 1 and 2 emissions only, and do include comparative data for select industry peers. Although the Context Based Metrics methodology is not defined within the TCFD guidance, Lockheed Martin is active in understanding how to apply the full scope of the TCFD guidance to assess and disclose climate related risk and opportunities, including a more robust application of scenario analysis. It is also important to note that even without the TCFD guidance, global climate related risks are considered worthy of internal analysis and integration within our business strategy.

**C-AC3.1e/C-CE3.1e/C-CH3.1e/C-CO3.1e/C-EU3.1e/C-FB3.1e/C-MM3.1e/C-OG3.1e/C-PF3.1e/C-ST3.1e/C-TO3.1e/C-TS3.1e**

**(C-AC3.1e/C-CE3.1e/C-CH3.1e/C-CO3.1e/C-EU3.1e/C-FB3.1e/C-MM3.1e/C-OG3.1e/C-PF3.1e/C-ST3.1e/C-TO3.1e/C-TS3.1e) Disclose details of your organization's low-carbon transition plan.**

## C4. Targets and performance

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### C4.1

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

Absolute target

### C4.1a

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

**Target reference number**

Abs 1

**Scope**

Scope 1+2 (location-based)

**% emissions in Scope**

100

**Targeted % reduction from base year**

35

**Base year**

2010

**Start year**

2012

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

1271358

**Target year**

2020

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

Yes, we consider this a science-based target, but this target has not been approved as science-based by the Science-Based Targets initiative

**% of target achieved**

100

**Target status**

Achieved

**Please explain**

Lockheed Martin's absolute target includes Scope 1 and 2 emissions of CO<sub>2</sub>, CH<sub>4</sub>, N<sub>2</sub>O, and HFC from the following sources: electricity, natural gas, chilled water, jet fuel, gasoline, diesel, propane, #2 fuel oil, and refrigerants. We define our Go Green year as a twelve-month period from November 1 through October 30 to align with our internal reporting requirements while taking into account time for utility company invoicing. Lockheed Martin takes a comprehensive approach to energy reduction and GHG management. When establishing our reduction targets we consider past performance, the goals of our primary customers, projected business growth and the material issues of our key stakeholders. We have also evaluated our performance through tools for science-based goal setting approaches including: 1) "Science-Based GHG Performance Model" developed by the Center for Sustainable Organizations (CSO); 2) "Sectoral Decarbonization Approach (SDA) published by the Science Based Targets Initiative (SBTI), Ecofys, CDP, World Wildlife Fund (WWF) and World Resources Institute (WRI); and 3) "The 3% Solution Calculator" developed by CDP, WWF and McKinsey & Company. The outcomes projected by these tools reflect that our targets and performance to date produce stronger results and are more aggressive than the science-based method.

## C4.2

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### (C4.2) Provide details of other key climate-related targets not already reported in question C4.1/a/b.

**Target**

Energy productivity

**KPI – Metric numerator**

Total energy consumption (MMBtu)

**KPI – Metric denominator (intensity targets only)**

(Net sales) \* (adjusted domestic price index)

**Base year**

2007

**Start year**

2007

**Target year**

2018

**KPI in baseline year**

0.4802

**KPI in target year**

0.3443

**% achieved in reporting year**

100

**Target Status**

Retired

**Please explain**

The Department of Energy's Better Plants Program partners with leading manufacturers and water utilities to improve energy efficiency and competitiveness in the industrial sector, enabling monetary savings in the process. In 2007, Lockheed Martin committed to a partnership under the Department of Energy's Better Plants Program, which requires annual reporting of our progress towards on energy intensity goal, based on calendar year data. Through this commitment, Lockheed Martin set a voluntary goal to reduce our energy intensity by 25% over a 10-year period. Lockheed Martin was recognized by the DOE in 2018 for the completion of our commitment to energy productivity.

**Part of emissions target**

The voluntary Department of Energy's Better Plants Program Partnership of reducing our energy intensity by 25% over a 10 year period complements our internal Go Green 2020 commitments to achieve 25% reduction in energy usage and 35% reduction in carbon emissions by the year 2020, from a 2010 baseline.

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

Other, please specify (DOE's Better Plants Program)

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**Target**

Other, please specify (On-site Renewables)

**KPI – Metric numerator**

Megawatt (MW)

**KPI – Metric denominator (intensity targets only)****Base year**

2014

**Start year**

2014

**Target year**

2020

**KPI in baseline year**

2.2

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**KPI in target year**

10

**% achieved in reporting year**

90

**Target Status**

Underway

**Please explain**

EPA's Green Power Partnership program provides a framework that includes credible usage benchmarks, market information, technical assistance and public recognition to companies and other organizations that use green power. In 2010, Lockheed Martin joined EPA's Green Power Partnership, committing to use green power for a portion of our annual electricity consumption. In 2014, Lockheed Martin committed to the Green Power Partnership's On-site Renewables Challenge which aimed to double the use of on-site green power generated by partners by the end of 2020. Through this challenge, Lockheed Martin has made a pledge to quadruple its on-site renewable generation to 10 MW by the end of 2020. As of 2018, we currently have over 9 MW of capacity of on-site renewable generation and are on track to meet this commitment.

**Part of emissions target**

Lockheed Martin's voluntary commitment to EPA Green Power Partnership's On-site Renewables Challenge to quadruple our on-site renewable generation to 10 MW by 2020 complements our internal Go Green 2020 commitments to achieve 25% reduction in energy usage and 35% reduction in carbon emissions by the year 2020, from a 2010 baseline.

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

Other, please specify (EPA Green Power Partnership, EPA's Green Power Partnership On-Site Renewables Challenge)

*EPA's Green Power Partnership On-Site Renewables Challenge*

---

**Target**

Renewable electricity consumption

**KPI – Metric numerator**

Kilowatt hours (kWh)

**KPI – Metric denominator (intensity targets only)****Base year**

2016

**Start year**

2016

**Target year**

2018

**KPI in baseline year**

303000000

**KPI in target year**

307000000

**% achieved in reporting year**

100

**Target Status**

Underway

**Please explain**

In 2018, as part of Lockheed Martin's Sustainability Management Plan, we committed to increasing our annual renewable energy consumption. As of 2018 year-end, we have achieved this goal through on-site renewable energy installations, renewable electricity procurement through a 17-year power purchase agreement (PPA) and the purchase of renewable energy certificates (RECs).

**Part of emissions target**

Lockheed Martin's commitment through our SMP to increase our annual renewable energy consumption complements our internal Go Green 2020 commitments to achieve a 35% reduction in carbon emissions and a 35% reduction in energy use by the year 2020, from a 2010 baseline.

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

No, it's not part of an overarching initiative

---

**Target**

Other, please specify (Green building footprint)

**KPI – Metric numerator**

Square foot

**KPI – Metric denominator (intensity targets only)****Base year**

2013

**Start year**

2013

**Target year**

2020

**KPI in baseline year**

1100000

**KPI in target year**

3400000

**% achieved in reporting year**

100

**Target Status**

Underway

**Please explain**

Since 2013, Lockheed Martin has committed to annually increasing the square footage of our facilities with green building certifications. We will continue to commit to this annual increase through 2020. As of 2018, we operated 20 Leadership in Energy and Environmental Design (LEED), 1 Building Research Establishment Environmental Assessment Methodology (BREEAM) and 9 Energy Star-certified buildings totaling over 3.4 million square feet of buildings with green certifications.

**Part of emissions target**

Lockheed Martin's commitment through our SMP to increase our green building footprint complements our internal Go Green 2020 commitments to achieve 25% reduction in energy usage and 35% reduction in carbon emissions by the year 2020, from a 2010 baseline.

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

No, it's not part of an overarching initiative

---

**Target**

Other, please specify (Reduce customers' emissions)

**KPI – Metric numerator**

Metric tons of carbon emissions equivalent (MTCO<sub>2e</sub>)

**KPI – Metric denominator (intensity targets only)****Base year**

2016

**Start year**

2016

**Target year**

2020

**KPI in baseline year**

1100000

**KPI in target year**

1650000

**% achieved in reporting year**

80

**Target Status**

Underway

---

**Please explain**

In 2018, through our Sustainability Management Plan, Lockheed Martin has committed to helping our energy customers reduce their carbon emissions by at least twice the carbon impact of our business operations. As of 2018, Lockheed Martin's Energy business enabled carbon emissions savings of 1.3 million MTCO2e for our customers, compared to our operational emissions of approximately 819,000 MTCO2e. By 2020, we are committed to achieving reductions of approximately 1,650,000 MTCO2e for our energy customers.

**Part of emissions target**

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

No, it's not part of an overarching initiative

**C4.3**

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

Yes

**C4.3a**

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

	Number of initiatives	Total estimated annual CO2e savings in metric tonnes CO2e (only for rows marked *)
Under investigation	0	0
To be implemented*	0	0
Implementation commenced*	1	0
Implemented*	52	11000
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 type**

Energy efficiency: Building fabric

**Description of initiative**

Insulation

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

1800

**Scope**

Scope 2 (location-based)

**Voluntary/Mandatory**

Voluntary

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

342000

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

3200000

**Payback period**

4 - 10 years

**Estimated lifetime of the initiative**

16-20 years

**Comment**

---

**Initiative type**

Energy efficiency: Building services

**Description of initiative**

Other, please specify (Building control systems do not directly reduce emissions; however they enable the management of building equipment to identify efficiency opportunities. For this reason, the payback period is not necessarily reflective of the ROI.)

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

1400

**Scope**

Scope 2 (location-based)

**Voluntary/Mandatory**

Voluntary

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

270000

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

175000

**Payback period**

4 - 10 years

**Estimated lifetime of the initiative**

6-10 years

**Comment**

Building control systems do not directly reduce emissions; however they enable the management of building equipment to identify efficiency opportunities. For this reason, the payback period is not necessarily reflective of the ROI.

---

**Initiative type**

Energy efficiency: Building services

**Description of initiative**

Other, please specify (Completed more than 35 different lighting upgrade projects to improve the efficiency of facility lighting systems. These are voluntary projects that help to reduce Scope 2 emissions by allowing facility managers to monitor and optimize energy use.)

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

4400

**Scope**

Scope 2 (location-based)

**Voluntary/Mandatory**

Voluntary

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

900000

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

5000000

**Payback period**

4 - 10 years

**Estimated lifetime of the initiative**

11-15 years

**Comment**

---

**Initiative type**

Energy efficiency: Building services

**Description of initiative**

Other, please specify (Completed building envelope projects including insulation and maintenance. These are voluntary projects that help to reduce Scope 2 emissions by maintaining conditions of a dry, heated or cooled indoor environment and facilitating climate control.)

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

2200

**Scope**

Scope 2 (location-based)

**Voluntary/Mandatory**

Voluntary

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

400000

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

1400000

**Payback period**

4 - 10 years

**Estimated lifetime of the initiative**

6-10 years

**Comment**

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**Initiative type**

Other, please specify (Green Project Finance - Completed the installation of a 2.5 MW DC groundmount solar system in Moorestown, NJ)

**Description of initiative**

<Not Applicable>

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

1200

**Scope**

Scope 2 (location-based)

**Voluntary/Mandatory**

Voluntary

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

340000

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

3400000

**Payback period**

1-3 years

**Estimated lifetime of the initiative**

21-30 years

**Comment**

Federal investment tax credits and other incentives have improved this payback.

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C4.3c

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

Method	Comment
Compliance with regulatory requirements/standards	Lockheed Martin's Corporate Environment, Safety and Health (ESH) function has developed and implemented the Environmental, Safety and Health Management System (ESHMS) which goes beyond compliance by providing a risk-based, systematic framework to evaluate the management and performance of ESH processes, programs, and tasks against established standards. Through the ESHMS, our business locations (sites) are required to conduct self-assessments based on their risk assessment profile, provided with checklists to evaluate compliance, and given mechanisms to track corrective actions. The ESHMS directs sites to complete corrective action within a specified timeframe depending on the nature and severity of incidents and provides internal documentation tools that serve as the record of authority. The Corporate ESH function also implements a process to report incidents, ensure timely communication, assure that appropriate response processes are initiated, and prevent further incidents. If non-compliance is identified, systematic interim control, root cause, corrective and preventive action processes must be applied and monitored to prevent future occurrence. Additionally, our Corporate Internal Audit function periodically audits our sites and/or programs for conformance to our ESH-related internal standards and compliance with legal regulations. These audits provide a check-and-balance approach to risk mitigation across the enterprise. All Lockheed Martin facilities are compliant with our internal Environment, Safety and Health Management System (ESHMS) requirements which align to globally recognized standards of management (e.g., ISO 14001). As of 2018, 42 Lockheed Martin facilities are currently certified to the new ISO 14001:2015 International Standard for Environmental Management Systems. The certification covers 16 non-U.S. sites (eight in the United Kingdom; eight sites in Australia), encompassing multiple business elements and stakeholder operations. In addition, 26 U.S. sites are ISO 14001:2015 certified.
Dedicated budget for energy efficiency	Lockheed Martin's Corporate Environment, Safety and Health (CESH) organization helps facilitate the funding of energy efficiency projects in addition to our business areas' facility improvements, which are allocated in their capital budgets. Each year, business functions are given the opportunity to submit projects across their sites for consideration, submitting project financials that include cost and estimated savings. Energy projects are assessed for return on investment (ROI) for approval and funding. We completed over 53 energy efficiency and GHG emissions reduction projects in 2018, resulting in a 22% energy reduction and 36% GHG reduction from 2010 to 2018, and avoiding an estimated \$29 million in costs. In 2018, Lockheed Martin spent approximately \$13 million on completed projects and initiatives specifically related to energy efficiency and conservation. Furthermore, Lockheed Martin has a dedicated budget for the purchase of green power (i.e. RECs) to reduce our emissions.
Partnering with governments on technology development	LM invests in climate change-related research and development to reflect our customers' interest in efficient technologies and services. We recognize the importance of aligning with the climate change related goals of our biggest government customer, the U.S. Department of Defense (DOD) such as those outlined in U.S. Executive Order (EO) 13693. The EO mandates that 25% of total energy used by the Federal government should be clean energy by 2025 and that 30% of total electric energy should be renewable. Consequently, the Army, Navy and Air Force have all set 1 GW capacity goals with differing time frames of achievement. Because of Lockheed Martin's government contracts, many of our sites are Government Owned Company Operated, categorized as Federal facilities subject to Federal requirements. Therefore, our strategy to bring renewable energy to Lockheed Martin facilities could potentially contribute towards the US DOD goals. Lockheed Martin's Energy business takes a comprehensive approach to apply our technology and expertise to different segments of the energy market including energy generation, management, storage and security. We have provided energy management and efficiency expertise to over 100 major Federal, state and commercial customers through smart grid product and services for utilities and energy management systems for individual buildings. Furthermore, Energy Savings Performance Contracts are used to help the federal government meet its energy efficiency, water conservation and renewable energy goals. Under the Federal Energy Management Energy Savings Performance Contract Program, Lockheed Martin is authorized to help the government reduce its energy costs and environmental impact through improved utility management decisions at federal sites. Additionally, our partnership with NASA to design and build the geostationary operational environmental satellite series (GOES-R) will provide NOAA scientists and managers with a 24-hour global stream of information used in preparation for events that will impact our climate, weather, and oceans. In 2016, information from GOES-R was used to provide the US National Weather Service with advanced severe weather prediction capabilities to save lives in storm-threatened areas and help meteorologists issue winter storm warnings and spring snow melt advisories. The second, GOES-S, was launched March 1, 2018.
Other (Go Green energy and carbon emission reduction goals)	Lockheed Martin's business areas are measured on their performance towards Go Green energy and carbon emission reduction goals. Since 2010, a team of experts including facilities and energy engineers called the Tiger Team has been conducting an in-depth analysis of energy systems across the company to create strategic "get to excellence" plans that are site-specific. In 2018, 12 team improvement sessions were held for business segments to identify projects based on energy use and infrastructure sub-system optimization opportunities. These projects focus on increased performance standards for our buildings and have resulted in significant operational cost avoidance. In 2018, we achieved energy and water cost avoidances of \$29 million compared to 2010. Furthermore, Lockheed Martin has adopted the United States Green Building Council's (USGBC) Leadership in Energy and Environmental Design (LEED) as the minimum standard for new construction, renovations, and/or retrofit projects. Lockheed Martin has a Green Buildings Corporate Functional Procedure that requires implementation of green building practices in the design, construction and operations of owned or commercially leased Lockheed Martin facilities. The design, construction or renovation of a facility requires the use of latest green-building technologies that meets the ANSI/ASHRAE/IESNA Standard 90.1, Energy Standard for Buildings Except Low-Rise Residential Buildings. For existing buildings, installation of equipment should be life cycle cost effective and reduce the energy consumption for the building. The purpose of this procedure is to establish requirements for implementing green building practices in the design, construction and operations of all Lockheed Martin facilities and to meet the Corporation's goals on increasing our green footprint. From our 2013 baseline year to 2018, Lockheed Martin more than tripled our green footprint through Energy Star®, LEED and BREEAM certifications.
Employee engagement	Throughout the year, Lockheed Martin encourages employee education and awareness regarding energy conservation initiatives including simple solutions such as turning off lights, computers and equipment; lowering thermostats; etc. We run an annual campaign during Energy Awareness Month every October in which hundreds of employees participate in energy reduction and conservation initiatives. Lockheed Martin also establishes "Green Zones," with employees in the same hallway or workstation area committing to an activity, such as turning off computers and lights when leaving for the day. Lockheed Martin Corporate Environment, Safety and Health (CESH) releases regular employee communications describing the importance of being conscious of energy usage and implementing projects that conserve energy. The current focus of emission reduction activities is on the largest energy consuming equipment within facilities (i.e., heating, ventilation and air conditioning (HVAC) systems and lighting). All employees are eligible for internal recognitions Spot Award and SRA's at management's discretion, recognizing excellent performance. Furthermore, Lockheed Martin presented the 2018 ESH Excellence Awards to select employees based on qualities such as superiority in customer satisfaction, leadership, application of technology, tools/processes that improve efficiency and productivity, benchmarking and best practices, and affordability.

C4.5

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

Yes

C4.5a

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

**Level of aggregation**

Group of products

**Description of product/Group of products**

Energy Efficiency and Comprehensive Energy Management Solutions Programs: As one of the largest implementers of energy efficiency projects in the U.S., Lockheed Martin's Energy business element (LM Energy) partners with government, industrial and commercial customers, offering systems and solutions to improve the transmission, distribution and usage of power to deliver energy savings. LM Energy implements award-winning commercial, industrial, utility and residential efficiency programs to ensure our customers conserve energy, increase operational efficiencies and maximize capital spending. LM Energy provides energy management solutions to 8 of the 10 largest utilities in the U.S., as well as to over 70 major utilities, commercial enterprises, and federal and state agencies worldwide. By 2018, LM Energy completed over 90,000 energy efficiency projects and processed more than \$225 million in incentives, saving customers approximately 1.7 million MWh and over 9 million therms of energy. These projects helped achieve a reduction of over 250 MW and more than 1.3 million MTCO<sub>2e</sub> for our customers, reducing their Scope 2 emissions. In addition, LM Energy helped our customers achieve nearly 1 GW of demand response and over 280M kWh of beneficial electrification. In 2018, Lockheed Martin deployed 85 energy storage units in 30 locations, representing 24MH or 48 MWhs of energy storage. Both our tidal energy project and our GridStar™ energy storage products are of medium impact, contributing towards \$3 billion of product sales in 2018 that benefit energy and infrastructure resiliency. This revenue is measured against our Sustainability Management Plan goal of achieving \$4 billion in annual product sales by 2020 with direct, measurable benefits to energy and advanced infrastructure resiliency. Industrial programs help customers achieve their goals of maximizing output while reducing manufacturing expenses through process improvements and strategic energy management initiatives, as well as plant modernization, process cost reduction, reliability and sustainability. For our Utility customer programs, 2018 single year gross energy savings were: 1,716,179,546 kWh; 9,189,704 therms.

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

Low-carbon product and avoided emissions

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

Other, please specify (EPA)

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

0.44

**Comment**

LM Energy Technology Innovation - The energy challenge, at its core, is an engineering challenge. And that's what we do best. We have the industry's best engineers and technologists focused on energy innovation. See our stories of innovation Advanced Manufacturing - Renewable energy generation concepts like ocean energy and bioenergy will only be successful if manufacturing enables their success. At Lockheed Martin, we're the leader in advanced manufacturing and materials from the laboratory to production. Systems Integration - The electrical grid is not a single system – it is multiple, complex systems connecting hundreds of distinct hardware and software technologies. From integrating aircraft, spacecraft, mission systems, command and control stations and more – Lockheed Martin has always been the world's best integrator of complex systems. Cybersecurity - No other energy company in the world has our cybersecurity credentials. Building on the most advanced technology developed for defense and intelligences markets, Lockheed Martin Energy applies multi-tiered cyber security architectures throughout its energy offerings. Scale & Stability - Lockheed Martin Energy has the financial capital and long-term commitment to partner with customers for decades. We're here for you today and into the future. Sustainability - Lockheed Martin Energy is a natural extension of Lockheed Martin's long commitment to sustainable business practice. Many of the solutions we're now offering to customers we've been using and developing internally for years. See how we're helping protect the environment. As one of the largest implementers of energy efficiency projects in the United States, we partner with government, industrial and commercial customers to deliver energy savings. We manage energy efficiency projects to ensure our customers conserve energy, increase operational efficiencies and maximize capital spending. Commercial sector programs focus on building and tenant improvements, real estate value appreciation, lease value appreciation, and energy and technology discriminators in the marketplace. Industrial programs help customers achieve their goals of maximizing output while reducing manufacturing expenses through process improvements and strategic energy management initiatives as well as plant modernization, process cost reduction, reliability and sustainability.

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**C5. Emissions methodology**

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**C5.1**

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

**Scope 1**

**Base year start**  
November 1 2009

**Base year end**  
October 31 2010

**Base year emissions (metric tons CO2e)**  
346734

**Comment**

**Scope 2 (location-based)**

**Base year start**  
November 1 2009

**Base year end**  
October 31 2010

**Base year emissions (metric tons CO2e)**  
1096826

**Comment**

Our combined Scope 1 and 2 emissions for our baseline year are calculated using the location-based method, net of carbon from RECs, which we consider to be a market-based accounting method at the time of our base year's calculation. However, as reported in 4.1a, our combined Scope 1 and 2 (market-based) emissions are 1,271,358 MTCO2e (346,734 Scope 1 MTCO2e + 1,096,826 Scope 2 MTCO2e – 172,202 MTCO2e avoided from RECs)

**Scope 2 (market-based)**

**Base year start**

**Base year end**

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

**Comment**

We are reporting a Scope 2, market-based figure

**C5.2**

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**(C5.2) Select the name of the standard, protocol, or methodology you have used to collect activity data and calculate Scope 1 and Scope 2 emissions.**

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

**C6. Emissions data**

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**C6.1**

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

**Reporting year**

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

291522

**Start date**

November 1 2017

**End date**

October 31 2018

**Comment**

Lockheed Martin's GHG reduction target is to reduce absolute Scope 1 & 2 emissions by 35% by 2020 measured from a 2010 baseline. We report emissions data for our largest active 81 facilities in the United States, United Kingdom, Poland, Canada, Australia and Mexico. The combined Scope 1 and 2 emissions data in our Sustainability Report was calculated using The Greenhouse Gas Protocol's market-based methodology for scope 2, which reflects emissions net of unbundled RECs, off-site power Purchase Agreements and on-site renewable energy generation.

**C6.2**

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

**Row 1**

**Scope 2, location-based**

We are reporting a Scope 2, location-based figure

**Scope 2, market-based**

We are reporting a Scope 2, market-based figure

**Comment**

**C6.3**

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

**Reporting year**

**Scope 2, location-based**

673108

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

527766

**Start date**

November 1 2017

**End date**

October 31 2018

**Comment**

**C6.4**

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

No

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**(C6.5) Account for your organization's Scope 3 emissions, disclosing and explaining any exclusions.****Purchased goods and services****Evaluation status**

Relevant, calculated

**Metric tonnes CO2e**

7700000

**Emissions calculation methodology**

In 2016, we conducted an analysis to estimate the environmental impacts across our entire value chain. We completed an economic input-output life cycle assessment (EIO-LCA) of our supply chain, our own facilities, and the use of our most material products and services to understand and prioritize the environmental issues that may have the most impact on our business. This LCA is a comprehensive analysis of our overall footprint, including the emissions attributed to our supply chain associated with purchased goods and services. For this category, we compiled 12 months of supplier spend, assigned a NAICS classification to each vendor and estimated the global warming potentials from multiple environmental and social impact categories.

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

100

**Explanation**

Our Scope 3 emissions for this category increased between reporting year 2017 and 2018. The overall increase is a result of the growth in our employee population causing more business travel and employee commuting than in 2017. In addition, the impacts of national recycling markets have increased the amount of material having to be sent to landfill.

**Capital goods****Evaluation status**

Relevant, calculated

**Metric tonnes CO2e**

370000

**Emissions calculation methodology**

In 2016, we conducted an analysis to estimate the environmental impacts across our entire value chain. We completed an economic input-output life cycle assessment (EIO-LCA) of our supply chain, our own facilities, and the use of our most material products and services to understand and prioritize the environmental issues that may have the most impact on our business. This LCA is a comprehensive analysis of our overall footprint, including the emissions attributed to our supply chain associated with purchased goods and services. For this category, we compiled 12 months of supplier spend, assigned a NAICS classification to each vendor and estimated the global warming potentials from multiple environmental and social impact categories.

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

Our Scope 3 emissions for this category increased between reporting year 2017 and 2018. The overall increase is a result of the growth in our employee population causing more business travel and employee commuting than in 2017. In addition, the impacts of national recycling markets have increased the amount of material having to be sent to landfill.

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

### Evaluation status

Relevant, calculated

### Metric tonnes CO2e

90000

### Emissions calculation methodology

Lockheed Martin calculated the estimates of the transportation and distribution loss associated with the delivery of electricity and natural gas from the utility to our facilities. We calculated the transmission and distribution (T&D) losses associated with electricity using the country-specific factors provided by World Bank, "Electric power transmission and distribution losses (% of output), 2011-2015." T&D losses associated with natural gas were calculated using the 4.7% loss factor provided by the EIA.

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

100

### Explanation

Our Scope 3 emissions for this category decreased because we used less electricity and natural gas in reporting year 2015 than in reporting year 2014. Decreased overall electricity and natural gas usage led to decreased losses in transportation and distribution.

## Upstream transportation and distribution

### Evaluation status

Relevant, calculated

### Metric tonnes CO2e

0

### Emissions calculation methodology

This source contains upstream transportation of materials to and from our facilities from 16 of our largest transportation vendors representing approximately 79% of our total transportation by spend. Lockheed Martin directly contacts our transportation vendors to receive information about their emissions. Emissions associated with all FedEx Ground, Express and Freight deliveries to Lockheed Martin facilities are provided in an annual report by FedEx. Other transportation vendors provided MTCO2e/Year or Miles Travelled/Year associated with Lockheed Martin shipments. If the transportation vendor did not directly provide emissions data, we utilized EPA's SmartWay emission rates for vendors and applied these rates to their Miles Travelled/Year. EPA's SmartWay Partners fleet emissions rates are found at: <https://www3.epa.gov/smartway/forpartners/performance.htm>

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

100

### Explanation

Last year, Lockheed Martin estimated emissions associated with upstream transportation from 5 of our largest transportation vendors representing approximately 43% of our total transportation by spend. This year, we increased the proportion of transportation vendors in this metric to 15 vendors representing 79% of our total transportation by spend. Our Scope 3 emissions for this category decreased for two main reasons; firstly, in contrast to last year's estimates, we received more primary data directly from our transportation vendors instead of using our calculations to allocate emissions. Secondly, we changed the methodology of how we allocate our transportation vendors' emissions to Lockheed Martin's Scope 3 emissions. Previously, if the transportation vendor was unable to provide a direct report of carbon emissions, we would allocate their emissions by revenue or through estimations of mileage data, miles per gallon and a diesel fuel emissions factor. This year, we used EPA SmartWay emissions rates for our transportation vendors and applied these rates to miles traveled per year, which is a more accurate methodology than used in previous years.

## Waste generated in operations

### Evaluation status

Relevant, calculated

### Metric tonnes CO2e

11000

### Emissions calculation methodology

Emissions associated with operational waste generation are calculated using the U.S. EPA's WARM calculator. These emissions are reported as part of Scope 3 GHG emissions. The EPA WARM calculator also estimates Lockheed Martin's avoided emissions derived from recycling initiatives, which are approximately 77,395 MTCO2e.

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

### Explanation

Emissions associated with operational waste generation are calculated using the U.S. EPA's WARM calculator. Positive emissions are reported as part of Scope 3 GHG emissions. This methodology also allows Lockheed Martin to estimate avoided emissions which are approximately 11,000 MTCO2e resulting from recycling initiatives. Our Scope 3 emissions for this category decreased because of an increase in recycling and a decrease in total waste generation. Because there is less waste being landfilled and incinerated, there are less emissions associated with operational waste generation. The Waste Reduction Model (WARM) was created by the U.S. Environmental Protection Agency (EPA) to help solid waste planners and organizations estimate GHG emission reductions from several different waste management practices. WARM is available in a Web-based calculator format and as a Microsoft Excel spreadsheet. Both versions of WARM are available on EPA's Web site at <http://www.epa.gov/warm>.

## Business travel

### Evaluation status

Relevant, calculated

### Metric tonnes CO2e

170000

### Emissions calculation methodology

Rental car mileage data are obtained from our corporate approved car rental agency. Airline emissions are obtained from our corporate travel provider. The emissions are calculated based on the GHG protocol. NOTE: This data includes air travel for all of Lockheed Martin's business areas plus additional services such as business relocation and recruiting.

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

100

### Explanation

Our Scope 3 emissions for this category increased because of increased business travel this year.

## Employee commuting

### Evaluation status

Relevant, calculated

### Metric tonnes CO2e

210000

### Emissions calculation methodology

Emissions associated with employee commuting are estimated using a zip code analysis of the distance between our employees' home and assigned work location, for U.S. employees only. Telecommuters are not included in this estimate. The total daily distance is multiplied by an estimated 240 work days per year. We assume an average of 23.4 mpg based on U.S. Energy Information Administration "Annual Energy Review 2012, Table 2.8 Motor Vehicle Mileage, Fuel Consumption, and Fuel Economy, Selected Years, 1949-2012, Miles per Gallon for All Vehicles in 2013." We estimate the emissions from the total miles travelled per year using the EPA Mandatory Reporting Rule gasoline emission factor for MTCO2.

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

100

### Explanation

Our Scope 3 emissions for this category decreased because of a decrease in the number of employees who commuted and an increase in telecommuters from last year. Furthermore last year, we used an estimate of 17.5 MPG based on EIA's 2011 Annual Energy Review. This year we used an update figure of 23.4 MPG to estimate emissions from employee commuting, based on EIA's 2012 Annual Energy Review.

## Upstream leased assets

### Evaluation status

Not relevant, explanation provided

### Metric tonnes CO2e

<Not Applicable>

### Emissions calculation methodology

<Not Applicable>

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

<Not Applicable>

### Explanation

Leased assets are included in Lockheed Martin's Scope 1 and 2 emissions data in accordance with the operational control boundary.

## Downstream transportation and distribution

### Evaluation status

Not relevant, explanation provided

### Metric tonnes CO2e

<Not Applicable>

### Emissions calculation methodology

<Not Applicable>

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

<Not Applicable>

### Explanation

Lockheed Martin manages the delivery of products and services directly to the customer and expenses are tracked and reported under the upstream transportation and distribution category. The amount of deliveries of products handled by the customer is extremely small and is considered de minimus for Scope 3 reporting purposes.

## Processing of sold products

### Evaluation status

Not relevant, explanation provided

### Metric tonnes CO2e

<Not Applicable>

### Emissions calculation methodology

<Not Applicable>

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

<Not Applicable>

### Explanation

Lockheed Martin primarily acts as the final point in the manufacturing and assembly of products before delivery to the customer. This category would apply to our upstream supply chain.

## Use of sold products

### Evaluation status

Relevant, calculated

### Metric tonnes CO2e

22000000

### Emissions calculation methodology

In 2016, we conducted an analysis to estimate the environmental impacts across our entire value chain. We completed an economic input-output life cycle assessment (EIO-LCA) of our supply chain, our own facilities, and the use of our most material products and services to understand and prioritize the environmental issues that may have the most impact on our business. This LCA is a comprehensive analysis of our overall footprint, including the emissions attributed to our supply chain associated with purchased goods and services. For this category, we compiled 12 months of supplier spend, assigned a NAICS classification to each vendor and estimated the global warming potentials from multiple environmental and social impact categories.

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

100

### Explanation

Lockheed Martin has conducted an analysis to estimate the environmental impacts across our entire value chain. We completed an economic input-output life cycle assessment (EIO-LCA) of our supply chain, our own facilities, and the use of select products and services to understand and prioritize the environmental issues that may have the most impact on our business.

## End of life treatment of sold products

### Evaluation status

Not relevant, explanation provided

### Metric tonnes CO2e

<Not Applicable>

### Emissions calculation methodology

<Not Applicable>

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

<Not Applicable>

### Explanation

Because of sensitive technology and impact to national security, end-of-life treatment is tightly dictated by the customer. Our platforms are typically durable goods with extremely long lifespans of decades or more.

## Downstream leased assets

### Evaluation status

Relevant, not yet calculated

### Metric tonnes CO2e

<Not Applicable>

### Emissions calculation methodology

<Not Applicable>

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

<Not Applicable>

### Explanation

Lockheed Martin maintains several LMC-owned properties with portions of the space leased to other tenants. We currently do not have emissions data for these tenants and are gathering information on this category for future reporting.

## Franchises

### Evaluation status

Not relevant, explanation provided

### Metric tonnes CO2e

<Not Applicable>

### Emissions calculation methodology

<Not Applicable>

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

<Not Applicable>

### Explanation

Lockheed Martin does not own or operate any franchises.

## Investments

### Evaluation status

Not relevant, explanation provided

### Metric tonnes CO2e

<Not Applicable>

### Emissions calculation methodology

<Not Applicable>

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

<Not Applicable>

### Explanation

Lockheed Martin is not a financial institution and therefore does not meet the relevancy as stated in the Corporate Value Chain (Scope 3) Accounting and Reporting Standard.

## Other (upstream)

### Evaluation status

Not relevant, explanation provided

### Metric tonnes CO2e

<Not Applicable>

### Emissions calculation methodology

<Not Applicable>

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

<Not Applicable>

### Explanation

Not relevant, explanation provided

## Other (downstream)

### Evaluation status

Not relevant, explanation provided

### Metric tonnes CO2e

<Not Applicable>

### Emissions calculation methodology

<Not Applicable>

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

<Not Applicable>

### Explanation

Not relevant, explanation provided

## C6.7

---

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

Yes

## C6.7a

---

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

**Row 1**

**Emissions from biologically sequestered carbon (metric tons CO2)**

11263

**Comment**

The Lockheed Martin facility in Owego, New York operates a combined heat and power system (back pressure turbine) fuelled by biomass that provides self-generation of electric power using the existing main steam system. The metric tonnes of CO2e released in 2018 were calculated based on the volume of wood burned (10,939 tons) with an estimated moisture content of 37%. Calculations were performed according to U.S. 40 CFR 98 - Greenhouse Gas Reporting, Tables A-1 (Global Warming Potentials), C-1 (Default CO2 Emission Factors and High Heat Values for Various Types of Fuel) and C-2 (Default CH4 and N2O Emission Factors for Various Types of Fuel).

## C6.10

---

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

**Intensity figure**

9.19

**Metric numerator (Gross global combined Scope 1 and 2 emissions)**

964891

**Metric denominator**

full time equivalent (FTE) employee

**Metric denominator: Unit total**

105000

**Scope 2 figure used**

Location-based

**% change from previous year**

11.4

**Direction of change**

Decreased

**Reason for change**

Lockheed Martin's employee population increased to 105,000. Also, during this period, our total Scope 1 and 2 emissions decreased due to emissions reductions activities and energy efficiency initiatives at our facilities; therefore, the intensity metric of MTCO2e per FTE employee decreased. We exceeded our U.S. Department of Energy Better Plants Program goal of 25 percent energy intensity reduction at our top 20 U.S. manufacturing facilities.

---

**Intensity figure**

0.0137

**Metric numerator (Gross global combined Scope 1 and 2 emissions)**

964891

**Metric denominator**

square foot

**Metric denominator: Unit total**

70300000

**Scope 2 figure used**

Location-based

**% change from previous year**

5.52

**Direction of change**

Decreased

**Reason for change**

Lockheed Martin's square footage decreased by about 22% from 2017 to 2018 while Scope 1 and 2 carbon emissions also decreased over the same period. We are consolidating facilities where possible to support cost reduction initiatives. Reduction in carbon emissions is also partially due to energy reduction initiatives and efficiency improvements within our manufacturing facilities, data centers and offices. For example, we implemented 53 energy efficiency and carbon reduction products including HVAC, lighting, building control systems, renewable energy, and retro-commissioning. These projects result in an annual energy reduction of an estimated equivalent of 29 million kWh, with an estimated \$2.2 million in recurring annual cost avoidance. Eleven HVAC projects were completed, resulting in approximately an equivalent of 4.3 million kWh of energy and more than \$340,000 in recurring annual cost avoidance. Thirty lighting projects were completed, resulting in approximately an equivalent of 8.6 million kWh of energy and more than \$900,000 in recurring annual cost avoidance. Two building control system projects were completed in 2018, resulting in approximately an equivalent of 2.5 million kWh of energy and more than \$260,000 in recurring annual cost avoidance. Approximately 1,000 meters are used across 50 sites to manage and track energy demand and consumption.

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## C7. Emissions breakdowns

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## C7.1

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

Yes

### C7.1a

---

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

Greenhouse gas	Scope 1 emissions (metric tons of CO2e)	GWP Reference
CO2	284155	IPCC Second Assessment Report (SAR - 100 year)
CH4	201	IPCC Second Assessment Report (SAR - 100 year)
N2O	456	IPCC Second Assessment Report (SAR - 100 year)
HFCs	6710	IPCC Second Assessment Report (SAR - 100 year)

## C7.2

---

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

Country/Region	Scope 1 emissions (metric tons CO2e)
Australia	0
Canada	1629
Mexico	0
Poland	1486
United Kingdom of Great Britain and Northern Ireland	183
United States of America	288484

## C7.3

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**(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)
Aeronautics	124250
Enterprise Operations	16356
Missiles and Fire Control	21319
Rotary and Mission Systems	74695
Space	55162

**(C-CE7.4/C-CH7.4/C-CO7.4/C-EU7.4/C-MM7.4/C-OG7.4/C-ST7.4/C-TO7.4/C-TS7.4) Break down your organization’s total gross global Scope 1 emissions by sector production activity in metric tons CO2e.**

	Gross Scope 1 emissions, metric tons CO2e	Net Scope 1 emissions , metric tons CO2e	Comment
Cement production activities	<Not Applicable>	<Not Applicable>	<Not Applicable>
Chemicals production activities	<Not Applicable>	<Not Applicable>	<Not Applicable>
Coal production activities	<Not Applicable>	<Not Applicable>	<Not Applicable>
Electric utility generation activities	<Not Applicable>	<Not Applicable>	<Not Applicable>
Metals and mining production activities	<Not Applicable>	<Not Applicable>	<Not Applicable>
Oil and gas production activities (upstream)	<Not Applicable>	<Not Applicable>	<Not Applicable>
Oil and gas production activities (downstream)	<Not Applicable>	<Not Applicable>	<Not Applicable>
Steel production activities	<Not Applicable>	<Not Applicable>	<Not Applicable>
Transport OEM activities		<Not Applicable>	
Transport services activities	<Not Applicable>	<Not Applicable>	<Not Applicable>

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)	Purchased and consumed electricity, heat, steam or cooling (MWh)	Purchased and consumed low-carbon electricity, heat, steam or cooling accounted in market-based approach (MWh)
Australia	1018	1018	1275	0
Canada	2281	2281	15203	0
Mexico	751	751	1482	0
Poland	8052	8052	10470	0
United Kingdom of Great Britain and Northern Ireland	2275	2275	5520	0
United States of America	658732	512988	1558403	307378

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 emissions (metric tons CO2e)	Scope 2, market-based emissions (metric tons CO2e)
Aeronautics	231413	213449
Enterprise Operations	37677	15335
Missiles and Fire Control	130483	130061
Rotary and Mission Systems	127928	109690
Space	145606	59230
Information Systems & Global Solutions	0	0

**C-CE7.7/C-CH7.7/C-CO7.7/C-MM7.7/C-OG7.7/C-ST7.7/C-TO7.7/C-TS7.7**

**(C-CE7.7/C-CH7.7/C-CO7.7/C-MM7.7/C-OG7.7/C-ST7.7/C-TO7.7/C-TS7.7) Break down your organization's total gross global Scope 2 emissions by sector production activity in metric tons CO2e.**

	Scope 2, location-based, metric tons CO2e	Scope 2, market-based (if applicable), metric tons CO2e	Comment
Cement production activities	<Not Applicable>	<Not Applicable>	<Not Applicable>
Chemicals production activities	<Not Applicable>	<Not Applicable>	<Not Applicable>
Coal production activities	<Not Applicable>	<Not Applicable>	<Not Applicable>
Metals and mining production activities	<Not Applicable>	<Not Applicable>	<Not Applicable>
Oil and gas production activities (upstream)	<Not Applicable>	<Not Applicable>	<Not Applicable>
Oil and gas production activities (downstream)	<Not Applicable>	<Not Applicable>	<Not Applicable>
Steel production activities	<Not Applicable>	<Not Applicable>	<Not Applicable>
Transport OEM activities			
Transport services activities	<Not Applicable>	<Not Applicable>	<Not Applicable>

**C-TO7.8**

**(C-TO7.8) Provide primary intensity metrics that are appropriate to your indirect emissions in Scope 3 Category 11: Use of sold products from transport.**

**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	1805	Increased	0.2	In 2018, we increased our renewable energy consumption by 3,632 MWh, as compared to 2017. Through our market-based emissions calculations, we determined that this renewable energy use translated to an 1,805 MTCO2e reduction. Given that our total Scope 1 and Scope 2 (market-based) emissions in 2017 was 844,373 MTCO2e, the change in our renewable energy consumption represented a 0.2% decrease in total Scope 1 and Scope 2 (market-based) emissions from 2017 to 2018 (1,805 MTCO2e / 844,373 MTCO2e = 0.2%).
Other emissions reduction activities	72315	Decreased	7	Lockheed Martin's absolute Scope 1 and 2 emissions have decreased from 2017 to 2018 due to projects and initiatives that improve energy efficiency and reduce consumption. These projects and initiatives include building services, processes, and building fabric efficiency improvements at facilities over which we have operational control. We calculate our emissions reductions by comparing our change in Scope 1 and 2 emissions from 2017 to 2018. In 2017, our Scope 1 (291,523) and 2 (745,682) emissions totaled 1,037,205 MTCO2e and in 2018, our Scope 1 (291,782) and 2 (673,108) emissions totaled 964,890 MTCO2e. The difference in our emissions from 2017 to 2018 is 72,315 MTCO2e, which we attribute to emissions reductions activities because there were no other significant changes as a result of divestment, acquisitions, mergers; or changes in output, methodology, boundary, and physical operating conditions. Therefore, we arrive at a 7% decrease in total Scope 1 and 2 emissions from 2017 to 2018 through $(72,315/1,037,205)*100 = 6.97\%$ .
Divestment	0	No change	0	
Acquisitions	0	No change	0	
Mergers	0	No change	0	
Change in output	0	No change	0	
Change in methodology	0	No change	0	
Change in boundary	0	No change	0	
Change in physical operating conditions	0	No change	0	
Unidentified	0	No change	0	
Other	0	No change	0	

**C7.9b**

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

Market-based

**C8. Energy**

**C8.1**

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

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

**C8.2**

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

	Indicate whether your organization undertakes this energy-related activity
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	No
Consumption of purchased or acquired cooling	Yes
Generation of electricity, heat, steam, or cooling	Yes

**C8.2a**

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

	Heating value	MWh from renewable sources	MWh from non-renewable sources	Total MWh
Consumption of fuel (excluding feedstock)	HHV (higher heating value)	31333	1482031	1513364
Consumption of purchased or acquired electricity	<Not Applicable>	294933	1565763	1860696
Consumption of purchased or acquired heat	<Not Applicable>	<Not Applicable>	<Not Applicable>	<Not Applicable>
Consumption of purchased or acquired steam	<Not Applicable>	<Not Applicable>	<Not Applicable>	<Not Applicable>
Consumption of purchased or acquired cooling	<Not Applicable>	0	26590	26590
Consumption of self-generated non-fuel renewable energy	<Not Applicable>	12445	<Not Applicable>	12445
Total energy consumption	<Not Applicable>	338711	3074384	3413095

**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	No
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	Yes

**C8.2c**

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

**Fuels (excluding feedstocks)**

Natural Gas

**Heating value**

HHV (higher heating value)

**Total fuel MWh consumed by the organization**

1171937

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

0

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

981998

**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**

189939

**Comment**

---

**Fuels (excluding feedstocks)**

Distillate Oil

**Heating value**

HHV (higher heating value)

**Total fuel MWh consumed by the organization**

23571

**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**

0

**Comment**

---

**Fuels (excluding feedstocks)**

Propane Liquid

**Heating value**

HHV (higher heating value)

**Total fuel MWh consumed by the organization**

38903

**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**

0

**Comment**

---

**Fuels (excluding feedstocks)**

Jet Gasoline

---

**Heating value**

HHV (higher heating value)

**Total fuel MWh consumed by the organization**

219845

**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**

&lt;Not Applicable&gt;

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

0

**Comment**

---

**Fuels (excluding feedstocks)**

Motor Gasoline

**Heating value**

HHV (higher heating value)

**Total fuel MWh consumed by the organization**

16721

**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**

&lt;Not Applicable&gt;

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

0

**Comment**

---

**Fuels (excluding feedstocks)**

Diesel

**Heating value**

HHV (higher heating value)

**Total fuel MWh consumed by the organization**

11054

**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**

&lt;Not Applicable&gt;

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

0

**Comment**

---

**Fuels (excluding feedstocks)**

Wood

**Heating value**

HHV (higher heating value)

**Total fuel MWh consumed by the organization**

31333

**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**

&lt;Not Applicable&gt;

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

31333

**Comment**

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**C8.2d**

---

**(C8.2d) List the average emission factors of the fuels reported in C8.2c.****Diesel****Emission factor**

0.00271

**Unit**metric tons CO<sub>2</sub>e per liter**Emission factor source**U.S. EPA Mandatory Reporting Rule, 40 CFR 98 Subpart C, Table C-1, C-2 (converted from MTCO<sub>2</sub>e per gallon to MTCO<sub>2</sub>e per liter)**Comment**

Lockheed Martin's diesel consumption is related to mobile combustion (e.g. use of various vehicles across our facilities) and does not apply to our energy consumption in CDP's predefined fields of electricity, heat, steam, cogeneration/trigeneration.

**Distillate Oil****Emission factor**

0.00271

**Unit**metric tons CO<sub>2</sub>e per liter**Emission factor source**U.S. EPA Mandatory Reporting Rule, 40 CFR 98 Subpart C, Table C-1, C-2 (converted from MTCO<sub>2</sub>e per gallon to MTCO<sub>2</sub>e per liter)**Comment**

Lockheed Martin's propane liquid consumption may be used for heating purposes and in our labs. Although we track total consumption, we are unclear of all its consumption purposes across our facilities.

## Jet Gasoline

### Emission factor

0.00258

### Unit

metric tons CO<sub>2</sub>e per liter

### Emission factor source

U.S. EPA Mandatory Reporting Rule, 40 CFR 98

### Comment

Lockheed Martin's aviation gasoline consumption

## Motor Gasoline

### Emission factor

0.00233

### Unit

metric tons CO<sub>2</sub>e per liter

### Emission factor source

U.S. EPA Mandatory Reporting Rule, 40 CFR 98 Subpart C, Table C-1, C-2 (converted from MTCO<sub>2</sub>e per gallon to MTCO<sub>2</sub>e per liter)

### Comment

Lockheed Martin's motor gasoline consumption is related to mobile combustion (e.g., use of various vehicles across our facilities) and does not apply to our energy consumption in CDP's predefined fields of electricity, heat, steam, cogeneration/trigeneration.

## Natural Gas

### Emission factor

0.05311

### Unit

metric tons CO<sub>2</sub>e per million Btu

### Emission factor source

U.S. EPA Mandatory Reporting Rule, 40 CFR 98 Subpart C, Table C-1, C-2

### Comment

## Propane Liquid

### Emission factor

0.00152

### Unit

metric tons CO<sub>2</sub>e per liter

### Emission factor source

U.S. EPA Mandatory Reporting Rule, 40 CFR 98 Subpart C, Table C-1, C-2 (converted from MTCO<sub>2</sub>e per gallon to MTCO<sub>2</sub>e per liter)

### Comment

Lockheed Martin's propane liquid consumption may be used for heating purposes and in our labs. Although we track total consumption, we are unclear of all its consumption purposes across our facilities.

## Wood

### Emission factor

93.8

### Unit

kg CO<sub>2</sub> per million Btu

### Emission factor source

U.S. EPA Mandatory Reporting Rule, 40 CFR 98 Subpart C, Table C-1, C-2

### Comment

## C8.2e

---

**(C8.2e) 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	67127	67127	12445	12445
Heat	0	0	0	0
Steam	0	0	0	0
Cooling	0	0	0	0

## C8.2f

---

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

**Basis for applying a low-carbon emission factor**

Energy attribute certificates, Renewable Energy Certificates (RECs)

**Low-carbon technology type**

Solar PV

Other low-carbon technology, please specify (Lockheed Martin purchases green power in the form of RECs and also produces renewable energy through on-site generation, including biomass, solar and wind.)

**Region of consumption of low-carbon electricity, heat, steam or cooling**

Other, please specify (United States: RMPA, RFCW, SRTV, NYLI, SRSO)

**MWh consumed associated with low-carbon electricity, heat, steam or cooling**

231268

**Emission factor (in units of metric tons CO2e per MWh)**

0

**Comment**

Lockheed Martin purchases green power in the form of RECs and also produces renewable energy through on-site generation, including biomass, solar and wind.

---

**Basis for applying a low-carbon emission factor**

Off-grid energy consumption from an on-site installation or through a direct line to an off-site generator owned by another company

**Low-carbon technology type**

Solar PV

Biomass (including biogas)

**Region of consumption of low-carbon electricity, heat, steam or cooling**

Other, please specify (United States: CAMX, ERCT, FRCC, RFCE, NYUP, NEWE)

**MWh consumed associated with low-carbon electricity, heat, steam or cooling**

12445

**Emission factor (in units of metric tons CO2e per MWh)**

0

**Comment**

Lockheed Martin purchases green power in the form of RECs and also produces renewable energy through on-site generation, including biomass, solar and wind.

---

**Basis for applying a low-carbon emission factor**

Power Purchase Agreement (PPA) with energy attribute certificates

**Low-carbon technology type**

Solar PV

Wind

**Region of consumption of low-carbon electricity, heat, steam or cooling**

Other, please specify (United States: SRVC)

**MWh consumed associated with low-carbon electricity, heat, steam or cooling**

63665

**Emission factor (in units of metric tons CO2e per MWh)**

0

**Comment**

Replacement wind RECs provided for a solar PPA

---

C-TO8.4

---

(C-TO8.4) Provide any efficiency metrics that are appropriate for your organization's transport products and/or services.

**Activity**

Aviation

**Metric figure**

**Metric numerator**

Please select

**Metric denominator**

<Not Applicable>

**Metric numerator: Unit total**

**Metric denominator: Unit total**

**% change from previous year**

**Please explain**

---

**Activity**

Aviation

**Metric figure**

**Metric numerator**

Please select

**Metric denominator**

<Not Applicable>

**Metric numerator: Unit total**

**Metric denominator: Unit total**

**% change from previous year**

**Please explain**

---

## C9. Additional metrics

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### C9.1

---

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

**Description**

Energy usage

**Metric value**

78

**Metric numerator**

9,112,000

**Metric denominator (intensity metric only)**

11,645,807

**% change from previous year**

1

**Direction of change**

Increased

**Please explain**

---

Energy use decreased from our 2010 baseline by 22%. Our 2020 target is 25%.

---

**Description**

Energy usage

**Metric value**

307378

**Metric numerator**

**Metric denominator (intensity metric only)**

**% change from previous year**

1

**Direction of change**

Increased

**Please explain**

We consumed 307,378 megawatt hours (MWh) of clean energy, comprising 294,933 MWh of renewable energy certificates (RECs) and 12,445 MWh of on-site energy generation. In 2017, we consumed 303,746 MWh of renewable energy.

---

**Description**

Other, please specify (Green Buildings)

**Metric value**

3400000

**Metric numerator**

**Metric denominator (intensity metric only)**

**% change from previous year**

43

**Direction of change**

Increased

**Please explain**

We operated 20 Leadership in Energy and Environmental Design (LEED), 1 Building Research Establishment Environmental Assessment Methodology (BREEAM) and 9 Energy Star-certified buildings totaling 3.4 million square feet of green buildings, an increase of 42 percent over our adjusted 2017 total.

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**Description**

Other, please specify (Customer Carbon Savings)

**Metric value**

1.54

**Metric numerator**

1262322

**Metric denominator (intensity metric only)**

819548

**% change from previous year**

0

**Direction of change**

No change

**Please explain**

Lockheed Martin Energy enabled carbon emissions savings of 1,262,322 metric tonnes of carbon dioxide equivalent (MTCO<sub>2</sub>e) for our customers, compared to our operational emissions, net of RECs, of 819,548 MTCO<sub>2</sub>e.

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**(C-TO9.3/C-TS9.3) Provide tracking metrics for the implementation of low-carbon transport technology over the reporting year.**

C-TO9.6/C-TS9.6

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**(C-TO9.6/C-TS9.6) What is your investment in research and development (R&D), equipment, products and services and which part of it would you consider a direct investment in the low-carbon transition?**

**Activity**

Aviation

**Investment start date**

**Investment end date**

**Investment area**

Please select

**Technology area**

Please select

**Investment maturity**

Please select

**Investment figure**

**Low-carbon investment percentage**

Please select

**Please explain**

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C10. Verification

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C10.1

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**(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

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

**Scope**

Scope 1

**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**

2018 DNV GL Assurance Statement.pdf

**Page/ section reference**

5

**Relevant standard**

ISO14064-3

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

100

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**Scope**

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**

2018 DNV GL Assurance Statement.pdf

**Page/ section reference**

5

**Relevant standard**

ISO14064-3

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

100

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**C10.1b**

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

**Scope**

Scope 3- all relevant categories

**Verification or assurance cycle in place**

Annual process

**Status in the current reporting year**

Complete

**Attach the statement**

2018 DNV GL Assurance Statement.pdf

**Page/section reference**

5-6

**Relevant standard**

ISO14064-3

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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

**C10.2a**

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

Disclosure module verification relates to	Data verified	Verification standard	Please explain
C8. Energy	Progress against emissions reduction target	AA1000	2018 DNV GL Assurance Statement.pdf

**C11. Carbon pricing**

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**C11.1**

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

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

**C11.2**

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

No

**C11.3**

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**(C11.3) Does your organization use an internal price on carbon?**  
No, and we do not currently anticipate doing so in the next two years

## C12. Engagement

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### C12.1

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**(C12.1) Do you engage with your value chain on climate-related issues?**  
Yes, our suppliers  
Yes, our customers  
Yes, other partners in the value chain

### 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**

Other, please specify (Supplier Sustainability Assessment)

**% of suppliers by number**

31

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

64

**% Scope 3 emissions as reported in C6.5**

64

**Rationale for the coverage of your engagement**

Through the Sustainable Supply Chain Management (SSCM) program, in 2018 we completed our fourth voluntary Supplier Sustainability Assessment for suppliers to report on their Environmental, Social and Governance (ESG) management systems and performance. In the environmental section of this annual survey, suppliers are asked a series of questions related to climate change risks, GHG emissions and water. In order to enhance our understanding of potential sustainability-driven risk and opportunities within our tier one supply base, we conduct an annual supplier sustainability assessment. In 2018, we expanded invitations to complete the survey from 299 to 352 suppliers, representing 64% of our supply chain spending. We incentivize suppliers to respond to this survey by providing respondents with a benchmarking report that compares their input with those of other survey participants, providing an actionable resource that enables them to address findings. Suppliers are also incentivized as the survey provides opportunities for increased engagement through resources such as the Department of Energy's Better Plants Program.

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

Lockheed Martin's voluntary annual Supplier Sustainability Assessment provides insights across a diverse set of suppliers, enhancing our understanding of our first-tier supplier's established environmental, social and governance (ESG) oriented practices. By analyzing supplier responses, we contribute valuable perspectives to our key internal stakeholders by helping them to identify risks and opportunities across our supply chain. Furthermore, supply chain respondents to our survey are provided with a benchmarking report comparing their input with other respondents, providing an actionable resource that enables them to address findings. Lockheed Martin's Sustainable Supply Chain Management program measures the success of the Supplier Sustainability Assessment partly through suppliers increased overall participation, increased proportion of fully completed surveys and through the value of providing additional visibility into supply chain risks and opportunities. We measure the success of this survey through increased overall participation, increased proportion of fully completed surveys and through the value of additional visibility into supply chain risks and opportunities. In 2018, 31% submitted fully completed surveys; 67% were small business and 79% of eligible respondents took advantage of the new FastTrack option. The success of this survey is also qualitatively measured through positive supplier reactions, as peer Aerospace and Defense companies have provided positive feedback. Our methodology in the selection of suppliers for this voluntary survey prioritized suppliers of concern, or those deemed at higher risk to Lockheed Martin as well as small businesses identified through our Ethics Mentoring Program. In addition to factoring in supplier spend and risk factors, other key internal stakeholders contributed input in shaping the supplier list. This past year, we expanded the number of recipients, enhanced the questions based on prior year stakeholder feedback, and integrated the applicable survey questions from the International Aerospace Environmental Group (IAEG) industry-wide survey harmonization efforts.

**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**

Education/information sharing

**Details of engagement**

Run an engagement campaign to education customers about your climate change performance and strategy

**% of customers by number**

100

**% Scope 3 emissions as reported in C6.5**

72

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

Lockheed Martin voluntarily publishes a comprehensive annual Sustainability Report which is available externally to the public, including all of our customers. In 2015, Lockheed Martin reassessed our sustainability issues through a formal Core Issues Assessment which evaluated various sustainability factors based on their importance to our business and As of 2017, Lockheed Martin's progress against the Resource Efficiency metric of our SMP has resulted in: 1,300,000 MTCO<sub>2e</sub> of savings for our customers, compared to our operational emissions of 844,374 MTCO<sub>2e</sub>. Page 102 stakeholders. Our Corporate Sustainability Office convened internal and external stakeholders and worked in conjunction with our Sustainability Working Group of business leaders to refine the results from stakeholder feedback and cluster these issues into closely correlated topics. These efforts resulted in the five Sustainability Core Issues and 26 performance measures outlined in Lockheed Martin's Sustainability Management Plan (SMP). Through the SMP outlined in our Sustainability Report, we describe how we capitalize on opportunities related to Resource Efficiency and strive to drive sustainable elements into Product Impact. For our Resource Efficiency metric, the scope of our engagement is limited to our energy customers. For our Product Impact metric, our commitment pertains to all customers and our product portfolio overall. Through the Resource Efficiency metrics of our SMP, we commit to helping our energy customers reduce their carbon emissions by at least twice the carbon impact of our business operations by 2020. Through the Product Impact metric of our SMP, we commit to: 1) Adding design-to-cost analysis criteria to each business segment's proposal planning and review processes by 2020; 2) Generating \$1 billion in product life-cycle cost reductions, resulting in lower resource consumption and reduced adverse impacts on human health and the environment; and 3) Achieving \$4 billion in product sales with direct, measurable benefits to energy and advanced infrastructure resiliency.

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

Lockheed Martin voluntarily published a comprehensive annual Sustainability Report which is available externally to the public, including our customers. Every year, we engage our suppliers on sustainability and climate-related issues through our regularly updated Supplier Wire newsletter and website (<https://www.lockheedmartin.com/en-us/suppliers.html>). As of 2018, Lockheed Martin's progress against the Product Impact metric of our SMP has resulted in: 1) The deployment of several design-to-cost training modules to business and product development teams and the further integration of design-to-cost into senior review criteria; 2) The identification of \$764.5 million in cost savings as compared to a business-as-usual scenario, through life-cycle assessment cases on three products; and 3) The achievement of \$3 billion in product sales that directly benefit energy and infrastructure resiliency. Scope 3 emissions related to our Product Use category are 72% of our total Scope 3 emissions.

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### **Type of engagement**

Education/information sharing

### **Details of engagement**

Share information about your products and relevant certification schemes (i.e. Energy STAR)

### **% of customers by number**

100

### **% Scope 3 emissions as reported in C6.5**

25

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

In 2019, Lockheed Martin was recognized as a 2019 ENERGY STAR® Partner of the Year by the U.S. Environmental Protection Agency (EPA) and the U.S. Department of Energy. The annual award recognized the organizations with exemplary commitment and dedication to leadership in energy efficiency and the ENERGY STAR program, demonstrating its commitment to: 1) Measuring, tracking and benchmarking energy performance; 2) Implementing the ENERGY STAR® framework to improve energy performance; and 3) Educating our staff and the public about our partnership and achievements with ENERGY STAR®.

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

Lockheed Martin participates in the ENERGY STAR® Partner program by attending the annual ENERGY STAR® Industrial Partner Meeting and by engaging in quarterly meetings of the ENERGY STAR® Aerospace Working Group. This working group is a knowledge sharing platform which convenes peers from aerospace companies to share best practices and discuss barriers and opportunities in energy management. Scope 3 emissions related to our Purchased Goods and Services category are 25% of our total Scope 3 emissions.

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## **C12.1c**

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

Lockheed Martin has a comprehensive Sustainable Supply Chain Management (SSCM) program that partners with our supply base to reduce adverse environmental impacts, to promote human rights, health, safety and ethical behavior, and to enable responsible supplier growth and raise standards. Through our SSCM program, in 2018 we conducted an annual supplier sustainability assessment prioritized to survey ~350 Lockheed Martin suppliers. Suppliers are selected based on a number of criteria: high sales with our company, participation in a current or previous supplier ethics mentoring program, travel and transportation vendors (e.g. airlines), and small businesses with significant spend. These 350 suppliers represent approximately 64% of total 2017 supplier spend. Compared with the last issuance of our sustainability assessments, this is a 19% increase in amount of supplier spend captured in the responses. In the environmental section of the assessment, suppliers were asked a series of questions related to GHG emissions and climate change, including:

- Whether they have responded to Climate Change CDP
- If they have identified any climate change-related risks in their operations or supply chain that have the potential to generate substantial change in business operations, revenue or expenditure? If these risks directly impact their business with Lockheed Martin
- Company's total Scope 1 & 2 GHG emissions in MT CO2e

If they have Environmental, Safety and Health Management programs that include Energy Use Reduction, GHG Emissions Reduction or Air Emissions Reduction (such as NOx, SOx and particulates)?

- The success of these assessments is measured by the completion/response rate of the suppliers, as well as a detailed analysis of the responses. A cross-functional team within Lockheed Martin analyzes supplier responses and determines if follow-up with any suppliers based on their response is necessary. This engagement with suppliers enhances our overall understanding of our supplier's sustainability maturity and landscape.
- Lockheed Martin has been a proud member of the U.S. Department of Energy's (DOE) Better Plants Program (BPP) since 2010. The BPP is a voluntary program in which manufacturers and industrial-scale energy-using organizations commit to reduce energy consumption by 25% over a 10-year period. Through the BPP, companies sign a pledge with the Department of Energy to reduce energy consumption over the next several years, and in turn receive free assistance to help set energy saving goals, develop energy management plans, and track and report progress. The DOE now extends the program to its largest participants' suppliers through the cohorts, so small businesses can take advantage of the program's financial assistance to set energy saving goals, develop energy management plans and track and report progress. In 2015, Lockheed Martin invited 34 of our top small businesses to join the BPP through its supplier cohort initiative. Seven of our suppliers joined the Better Plants Program and their participation will help us understand our upstream energy footprint, reduce GHG emissions in our value chain and potentially lead to more affordability for our customers.

In the aerospace and defense industry, product development cycles and product lifespans can last years and even decades. This means that the materials we select today, must be viable for many years in the future.

To help us identify chemicals of potential concern used in our supply chain, Lockheed Martin has collaborated with industry partners to develop the standard IPC-1754: Materials and Substances Declaration for the Aerospace, Defense and Other Industries, which was in 2018. IPC-1754 establishes requirements for exchanging product and process material and substance data between suppliers and customers. Lockheed Martin is working through IAEG (International Aerospace Environmental Group), of which Lockheed Martin is a member, and IPC® (Association Connecting Electronics Industries) to develop resources to support the use of the standard, thus promoting improved efficiencies and data quality. We also provide a case study on our work on IPC 1754 and increasing transparency in chemical reporting on pg. 20 of our 2018 Sustainability Report

[https://www.lockheedmartin.com/content/dam/lockheed-martin/eo/documents/sustainability/Lockheed\\_Martin\\_Sustainability\\_Report\\_Full\\_2018.pdf](https://www.lockheedmartin.com/content/dam/lockheed-martin/eo/documents/sustainability/Lockheed_Martin_Sustainability_Report_Full_2018.pdf).

## **C12.3**

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

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

## **C12.3a**

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

Focus of legislation	Corporate position	Details of engagement	Proposed legislative solution
Cap and trade	Support with minor exceptions	California's Global Warming Solutions Act (AB32) established in 2006 is a state law that requires the California Air Resources Board (CARB) to develop regulations and market mechanisms to reduce GHG emissions to 1990 levels by 2020, representing approximately 30% reduction state wide with mandatory caps beginning in 2012 for significant emissions sources. Since 2013, the mandatory cap has decreased approximately 2% per year and the state has distributed allowances (tradeable permits) equal to the emissions allowed under the cap. Sources regulated under this cap are required to surrender the allowances and offsets equal to their emissions at the end of each compliance period. Lockheed Martin's facility in Sunnyvale, CA has been a participant in AB32 since 2013. However, the consolidation of the facility into fewer buildings, as well as additional energy efficiency and emissions reductions projects enabled Sunnyvale to drop below the AB32 threshold in 2015. Since its participation in AB32, Sunnyvale has committed to investments in cleaner technology, tangible reductions in GHG emissions, advocacy to preserve current AB32 requirements beyond 2020 and advocacy to preserve existing allocations and credits. These efforts have resulted in Sunnyvale's projected formal exit from the AB32 program in 2018. Lockheed Martin's Space business segment's Environment, Safety and Health (ESH) team, Corporate Environment, Safety and Health (ESH) team as well as our Government Affairs function achieved successes by: 1) Advocating to keep California's Cap and Trade program beyond 2020; 2) Partnering with industry groups to ensure that the 25,000 MTCO2e/year threshold was maintained; 3) Requesting CARB to continue the allowance of credits from fuel cell technology; and 4) Proving to CARB and California's Public Utility Commission (PUE) that the Aerospace industry and the Sunnyvale facility is Energy Intensive and Trade Exposed (EITE), which can lead to cross-border movement of GHG emissions to other states.	These advocacy successes contributed toward the California governor's action to extend the Cap and Trade program to 2030 and preserve the 25,000 MTCO2e threshold. Furthermore, the successful demonstration of the industry as EITE status positively resulted in extension of the current industry assistance factor through 2017 and a reduction to 50% for the duration of the program. Through successes in legislative advocacy and the compliance with AB32's objectives, Lockheed Martin's Space business segment was able to reduce GHG emissions at the most favorable costs, avoid the potential loss of existing allotments and secure partial state subsidies as well as subsidies for Sunnyvale's investment in green technology (i.e., 1 MW fuel cell system currently deployed at the site). From 2017 - 2022, these advocacy successes will enable monetary savings of approximately \$6.2 million through utility rebates and the preservation of credits. Furthermore, having the Cap and Trade structure in place with the 25,000 MTCO2e threshold may allow for an additional \$2.7 million in Cap and Trade or other regulatory cost avoidances through 2030.

**C12.3b**

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

Yes

**C12.3c**

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

**Trade association**

International Aerospace Environmental Group (IAEG)

**Is your position on climate change consistent with theirs?**

Consistent

**Please explain the trade association's position**

IAEG does not have a formal stated position on climate change. IAEG is a global group of aerospace companies coming together to promote the development of voluntary consensus standards addressing environmental concerns such as chemical material declarations and reporting requirements and to create a forum for dialog on optional industry approaches for implementation of environmental requirements. IAEG is an unaffiliated trade association self-governed by its Members through IAEG's Board of Directors and Executive Committee. IAEG's goal is to create the leading global forum for voluntary consensus standards and best practice sharing on the key environmental issues impacting our members, resulting in a progressive and balanced approach to environmental requirements incorporating the high aspirations of all our stakeholders in the context of the practicalities of a complex global business. <http://www.iaeg.com/about/>

**How have you influenced, or are you attempting to influence their position?**

Lockheed Martin serves on the the IAEG Board of Directors and actively participates in the working groups within IAEG including: Greenhouse Gas Management & Reporting, Chemical Reporting, Replacement Technologies, and REACH authorizations. Lockheed Martin is actively engaged in the development of the Aerospace Greenhouse Gas Supplemental Guidance and works with the aerospace industry to improve the accuracy and consistency of GHG reporting. Lockheed Martin is actively engaged with the International Aerospace Environmental Group (IAEG) to develop GHG guidance for the aerospace industry and their suppliers. The group released its GHG Reporting Guidance for the Aerospace Industry, a voluntary consensus standard for aerospace companies in 2014, to supplement the GHG Protocol's Corporate Standard. The guidance provides industry-relevant clarification

and direction for GHG accounting and reporting to promote consistency and accuracy in GHG emissions reporting to facilitate transparency within the industry and value chain and enable relevant benchmarks and comparisons. The guidance has been adopted by many aerospace companies and continues to be enhanced to keep up with the pace of changing standards and methodologies. We are active participants in external industry efforts related to developing chemical reporting resources to aid companies with chemical data collection improvements to enhance compliance and risk management programs. This includes active participation on: IAEG Chemical Reporting work group (WG1) – Deputy WG Lead, and Communications sub-team lead IPC 2-18k committee – developed IPC-1754 Materials and Substances Declaration Standard for the Aerospace, Defense, and Other Industries AIA Chemicals sub-committee and AIA Rapid Response Network AIA NAS 411-1 working group (customer-specific effort) Lockheed Martin is invested in the adoption of the IPC-1754 standard and the supply chain engagement necessary for the standard to be successful. We want our suppliers to be aware that this was developed by the aerospace and defense industry and is aimed at creating efficiencies for chemical declarations across the supply chain.

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#### **Trade association**

American Council on Renewable Energy (ACORE)

#### **Is your position on climate change consistent with theirs?**

Consistent

#### **Please explain the trade association's position**

ACORE is dedicated to building a secure and prosperous America with clean, renewable energy. ACORE provides a common educational platform for a wide range of interests in the renewable energy community, focusing on technology, finance, policy, and market development. ACORE convenes thought leadership forums and creates energy industry partnerships to communicate the economic, security and environmental benefits of renewable energy.

#### **How have you influenced, or are you attempting to influence their position?**

Lockheed Martin actively engages with ACORE on renewable energy education and speaks at various ACORE events to promote the use and development of renewable energy technology. Lockheed Martin and ACORE are partnering with NASCAR Green, the sustainability arm of the National Association for Stock Car Auto Racing, Inc., to deliver educational content about the benefits of renewable energy, sustainability and energy security to millions of fans.

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#### **Trade association**

Aerospace Industries Association (AIA)

#### **Is your position on climate change consistent with theirs?**

Consistent

#### **Please explain the trade association's position**

The AIA does not have a formal stated position on climate change; however, it has stated the need for a comprehensive energy policy using a central/federal framework. It also emphasizes that the debate should be based on facts and science.

#### **How have you influenced, or are you attempting to influence their position?**

Lockheed Martin is an active participant of various AIA subcommittees including the Environmental, Health & Safety Committee where we are able to express informed views to shape the strategic direction of the group.

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#### **Trade association**

National Association of Manufacturers (NAM)

#### **Is your position on climate change consistent with theirs?**

Mixed

#### **Please explain the trade association's position**

The NAM's stated position is a commitment to protecting the environment through greater environmental sustainability, increased energy efficiency and conservation, and reducing greenhouse gas emissions believed to be associated with global climate change. Its policy is also that the establishment of federal climate change policies to reduce greenhouse gas emissions, whether legislative or regulatory, must be done in a thoughtful, deliberative and transparent process that ensures a competitive level playing field for U.S. companies in the global marketplace. Therefore, the NAM opposes any federal or state government actions regarding climate change that could adversely affect the international competitiveness of the U.S. marketplace economy. Any climate change policies should focus on cost-effective reductions, be implemented in concert with all major emitting nations, and take into account all greenhouse sources and sinks. The NAM believes that federal climate policies generally should pre-empt state policies. NAM also states that as users of 1/3 of the nation's energy, manufacturers depend on an affordable and reliable energy supply to remain competitive in a global economy. Manufacturers support an energy strategy that embraces all forms of domestic energy production while expanding existing conservation and efficiency efforts. Oil, natural gas and clean coal remain essential contributors to America's energy security, but that manufacturers must also invest in other energy sources such as nuclear, alternative fuels, renewable energy; as well as energy efficiency. America must expand access to our domestic energy supply in order to meet current needs for affordable energy. Manufacturers also continue to lead the way in investing in energy efficiency and advancing

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sustainability efforts that positively impact manufacturing and the industry's contributions to environmental protection, economic performance and the social well-being of the employees, communities, customers and consumers they serve.  
<http://www.nam.org/Issues/Energy-and-Environment/>

**How have you influenced, or are you attempting to influence their position?**

Our corporate focus on EPA regulations is to ensure that best available science is used to support any requirements. We publicly state our focus on renewable energy technology and support of the Federal government to meet its energy efficiency, alternative energy, and energy security objectives.

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**Trade association**

US Chamber of Commerce

**Is your position on climate change consistent with theirs?**

Mixed

**Please explain the trade association's position**

The Chamber's stated position on climate change is to: Promote the U.S. Chamber's core principles on climate change, specifically that any legislation or regulation introduced must: 1. Preserve American jobs and competitiveness of U.S. industry; 2. Provide an international, economy-wide solution, including developing nations; 3. Promote accelerated development and deployment of greenhouse gas reduction technology; 4. Reduce barriers to the development of climate friendly energy sources; and 5. Promote energy conservation and efficiency. <https://www.uschamber.com/issue-brief/climate-change>

**How have you influenced, or are you attempting to influence their position?**

We continue to actively engage with the Chamber and openly express our corporate views on the importance of energy efficiency and technology developments. In 2013, Lockheed Martin was awarded the U.S. Chamber's Corporate Citizenship Award in the "Best Environmental Stewardship" category. This award was for our efforts to design energy efficiency programs for commercial and government customers, helping them achieve both environmental stewardship and responsible growth. Leading by example, Lockheed Martin has helped federal, state, and regional energy organizations, utilities, and its own operations implement more than \$100 million in energy efficiencies. The benefits of these initiatives were publicly highlighted by the Chamber and are available on its website.

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**Trade association**

American Center for Life Cycle Assessment

**Is your position on climate change consistent with theirs?**

Unknown

**Please explain the trade association's position**

ACLCA does not have a formal stated position on climate change. ACLCA is a non-profit membership organization that brings together diverse organizations with a stake in the implementation and application of LCA. ACLCA also produces the LCA annual conference—the largest LCA meeting in North America—along with monthly webinars, member newsletter, certification programs, and active Industry, Education, Policy, Product Category Rule (PCR) and Certification Committees.

**How have you influenced, or are you attempting to influence their position?**

Since 2015, Lockheed Martin has served on the ACLCA board and has actively participated in multiple committees and working groups. This includes the Industry, Outreach, and Policy Committees, and the Life Cycle Thinking Working Group.

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**Trade association**

US Sustainable Purchasing Leadership Council

**Is your position on climate change consistent with theirs?**

Consistent

**Please explain the trade association's position**

The Sustainable Purchasing Leadership Council is a non-profit organization whose mission is to support and recognize purchasing leadership that accelerates the transition to a prosperous and sustainable future. The Council's programs and community of practice will help institutional purchasers to: • Prioritize opportunities to influence the social, environmental and economic life cycle impacts of purchased goods and services, • Identify existing leadership standards and approaches that address these priorities, • Benchmark progress toward goals, and • Receive recognition for advancement. <https://www.sustainablepurchasing.org/about/>

**How have you influenced, or are you attempting to influence their position?**

Lockheed Martin plays an active role in the US Sustainable Purchasing Leadership Council (SPLC) to support our goal of becoming a US leader in sustainable procurement. The SPLC platform is one of only a few forums world-wide focused entirely on supply chain sustainability, where members bring to the table common problems and work collectively to devise solutions with global applicability. As a member of the Founders Circle, we provide financial and technical support for the Council, and advise on its pilot rating system.

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**Trade association**

Alliance to Save Energy

**Is your position on climate change consistent with theirs?**

Consistent

**Please explain the trade association's position**

The Alliance to Save Energy promotes energy efficiency worldwide to achieve a healthier economy, a cleaner environment and energy security. To achieve this mission, the Alliance: ■Leads worldwide energy efficiency initiatives in policy advocacy, research, education, technology deployment and communications that impact all sectors of the economy ■Provides vision and activism which includes active and engaged members of Congress, leaders from business, the public interest sector and academia ■Initiates and participates in public-private partnerships, collaborative efforts and strategic alliances to optimize resources and expand its sphere of influence ■Executes its mission through a team of recognized energy efficiency experts and professionals

**How have you influenced, or are you attempting to influence their position?**

Lockheed Martin serves on the Board of Directors for the Alliance to Save Energy. Its mission to promote worldwide energy efficiency directly aligns with our efforts to increase operational energy efficiency at our facilities worldwide as well as to develop and implement renewable energy technologies and efficiency services that support public-private partnerships and the advancement of collaboration in the global energy space.

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**Trade association**

Association of Climate Change Officers (ACCO)

**Is your position on climate change consistent with theirs?**

Consistent

**Please explain the trade association's position**

The mission of ACCO is to define, develop and support the functions, resources and communities necessary for effective organizational leadership in addressing climate-related risks and opportunities. ACCO enables all organizations to be more sustainable by building enterprise capacity and empowering leadership to respond to climate change.

**How have you influenced, or are you attempting to influence their position?**

Lockheed Martin is very engaged in ACCO-led initiatives and currently sponsors an ACCO Fellow to lead our renewable energy development. We speak on numerous panels and give presentations on how Lockheed Martin is responding to climate change through energy efficiency initiatives, business resiliency efforts and development of energy-related solutions for our customers. We also engage with ACCO to better understand and support our U.S. government customers in their efforts to respond to climate-related issues.

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**Trade association**

National Association for Environmental Management (NAEM)

**Is your position on climate change consistent with theirs?**

Consistent

**Please explain the trade association's position**

The National Association for Environmental Management is a professional association that empowers corporate leaders to advance environmental stewardship, create safe and healthy workplaces, and promote global sustainability. NAEM connects a network of Environmental, Health and Safety, and Sustainability decision-makers to provide peer-led educational conferences and an activity community to share best practices for today's EHS and Sustainability management challenges.

**How have you influenced, or are you attempting to influence their position?**

Lockheed Martin participates in NAEM by connecting with other leaders, utilizing their benchmarking programs to identify trends in strong EHS and Sustainability programs, and engaging in professional development events.

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**Trade association**

Chemical Users Coalition (CUC)

**Is your position on climate change consistent with theirs?**

Consistent

**Please explain the trade association's position**

The Chemical Users Coalition is a group of companies who use chemicals in the production of a wide range of industrial, commercial and consumer products. CUC members share common perspectives on environmental, health and safety policies, drawn from their common experience of being chemical users. Furthermore, CUC members share a common vision about the importance of aligning technological innovation and environmental performance for a sustainable society.

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**How have you influenced, or are you attempting to influence their position?**

Lockheed Martin participates in CUC to promote chemical management policies that integrate best available information in risk assessments, develop processes for transparent policies, and determine risk management strategies that provide protection of health and the environment.

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**Trade association**

Manufacturers' Alliance for Productivity & Innovation (MAPI)

**Is your position on climate change consistent with theirs?**

Consistent

**Please explain the trade association's position**

The Manufacturers' Alliance for Productivity & Innovation connects manufacturing executives by providing executive education programs, live meetings and forums to share best practices, discuss solutions to common challenges and become better leaders. Members leverage best practices around a variety of issues including environmental management, personnel health, and corporate and facility-based safety concerns.

**How have you influenced, or are you attempting to influence their position?**

Lockheed Martin engages with MAPI to leverage the experiences of its members and best practices. We participate in MAPI meetings to discuss solutions to shared challenges such as complying with US RoHS & REACH (SVHC), setting and reporting environmental targets, and changing the safety culture.

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**C12.3d**

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

Yes

**C12.3e**

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

Lockheed Martin continues to evaluate opportunities to expand our renewable energy footprint. Ten business cases for on-site renewable energy generation were completed by all business segments, with four approved for capital funding through the end of 2015. We have also pledged to quadruple our on-site renewable generation to 10 MW by the end of 2020 through EPA's Green Power Partnership (GPP) and are currently exploring potential on- and off-site renewable energy opportunities that span multiple technology types and Power Purchase Agreements (PPA). In 2015, Lockheed Martin partnered with an American Climate Change Officers (ACCO) Fellow to examine the business case for renewable energy procurement at both the corporate and individual site level, and to develop a renewable energy strategy for the Corporation. The objectives of this business case were to examine decreasing renewable energy prices, available federal and state tax incentives, the potential creation of a long-term hedge against volatility in the energy market, opportunities to support our Lockheed Martin Energy business, and align with our largest customer, the U.S. Federal Government, in their aggressive renewable energy goals. These efforts continue to culminate as Lockheed Martin is anticipated to become an off-taker of solar-generated electricity in a 17-year PPA expected to produce 30 MW.

Furthermore, as a member of ACCO, Lockheed Martin partnered with Duke University to produce a report titled "Assessing Climate Change Vulnerability Across Lockheed Martin United States Facilities and Supply Chain Locations". The objective of this project was to assess the climate change vulnerabilities of the company's major facilities in the U.S., as well as its Tier 1 and Tier 2 suppliers for one component of the C-130 military transport aircraft project. The project sought to provide Lockheed Martin with a practical and user-friendly instrument designed for decision-makers, and to:

- 1) Identify climate-change related regional risk factors
- 2) Determine potential disruption vulnerabilities in existing facilities and supply chains
- 3) Prioritize potential vulnerabilities and resulting investment targets
- 4) Recommend adaptation strategies
- 5) Provide vulnerability criteria to consider when establishing options at new facilities and selecting suppliers

Lockheed Martin has also been a member of the U.S. Department of Energy's (DOE) Better Plants Program (BPP) since 2010. The BPP is a voluntary program in which manufacturers and industrial-scale energy-using organizations commit to reduce energy consumption by 25% over a 10-year period. Through the BPP, companies sign a pledge with the DOE to reduce energy consumption over the next several years, and in turn benefit from DOE technical support to implement cost-effective energy efficiency improvements that save energy and improve competitiveness. The DOE now extends the program to its largest participants' suppliers through the cohorts, so small businesses can take advantage of the program's financial assistance to set energy saving goals, develop energy management plans and track and report progress. In 2015, Lockheed Martin invited 34 of our small businesses to join the BPP through its supplier cohort initiative. Seven of our suppliers joined the Better Plants Program and their participation will help us understand our upstream energy footprint, reduce GHG emissions in our value chain and potentially lead to more affordability for our customers. We exceeded our broader-based program level target/goal for energy intensity reduction of 25% over 10yrs (or 2.5% per year) using 2007 as our base year, with a total reduction of 28.3%, which exceeding our target by 3.3%. Now the DOE's BPP has extended an invite for LMC to join their Higher-level Challenge level.

## C12.3f

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

Lockheed Martin routinely engages with policy makers on matters of interest to the Corporation. Lockheed Martin engagement on specific policy issues is coordinated with internal stakeholders to ensure consistency. Our policy engagement goes through our Government Affairs organization to ensure that we are in alignment with our overall climate change strategy. The process we have in place to ensure consistency across our corporate functions, business areas and different geographies is to bring representative areas into a Cross Corporate Sustainability Working Group for a cohesive sustainability strategy. Lockheed Martin also participates in a wide array of trade associations and coalitions, often sector specific or cross-sector in nature. Membership decisions in sector trade associations are not typically driven by one singular policy issue, but by multiple factors. Lockheed Martin seeks to engage on the policy issues that drive its membership in a particular trade association. Moreover, while trade associations tend to operate on a consensus basis, few do not require unanimity to adopt formal positions. When we engage in any trade association on climate change or related issues, we represent our positions and interests as reflected in the climate change strategy outlined in this report. The funding provided to research organizations such as the MIT Energy Initiative, aligns with our overall climate change strategy by providing sound science and objective analysis for global issues, such that we develop products and services that help our customers respond to climate change concerns.

## C12.4

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

**Publication**

In voluntary communications

**Status**

Complete

**Attach the document**

**Page/Section reference**

305-1, 305-2, 305-3, 305-4, 305-5

**Content elements**

Governance

Strategy

Risks & opportunities

Emissions figures

Emission targets

Other metrics

**Comment**

This is our seventh year using the Global Reporting Initiative (GRI) framework, the world's most widely used sustainability reporting framework. This report has been prepared in accordance with the GRI Standards: Core Option.

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**Publication**

In voluntary sustainability report

**Status**

Complete

**Attach the document**

Lockheed\_Martin\_Sustainability\_Report\_Full\_2018.pdf

2018 DNV GL Assurance Statement.pdf

**Page/Section reference**

Pgs. 36-38

**Content elements**

Governance

Strategy

Risks & opportunities

Emissions figures

Emission targets

Other metrics

**Comment**

Lifecycle-based assessments show that within our direct business operations, the biggest environmental impact relates to energy use and GHG emissions. Our largest overall GHG challenge is our products' environmental footprint during the customer-use phase, which represents nearly 70 percent of our impact. As we create solutions for sustainable energy consumption and production, we have a responsibility to operate our own facilities in the same manner. This is why we reduce our operational footprint, resulting in industry-leading outcomes.

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## C14. Signoff

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

Our approver will be the Senior Vice President of Ethics and Enterprise Assurance, Leo S. Mackay, Jr. He is a C-suite level executive that reports directly to our CEO and is a direct peer of the CFO. The SVP also reports to the Nominating and Corporate Governance Committee of the Board of Directors. This committee oversees issues related to environment and sustainability issues. The SVP has five functions under his purview aligned to create integrated assurance for the corporation: Sustainability, Enterprise Risk Management, Environment, Safety and Health (ESH), Ethics and Internal Audit.

Please refer to the leadership structure of our website (<https://www.lockheedmartin.com/en-us/who-we-are/leadership-governance.html>).

## C14.1

**(C14.1) Provide details for the person that has signed off (approved) your CDP climate change response.**

	Job title	Corresponding job category
Row 1	Senior Vice President, Ethics and Enterprise Assurance, who reports directly to Lockheed Martin's CEO and Board of Directors and is a direct peer of the CFO.	Chief Financial Officer (CFO)

## Submit your response

**In which language are you submitting your response?**

English

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

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

**Please confirm below**

I have read and accept the applicable Terms