

C0. Introduction

C0.1

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

Cree is an innovator of Wolfspeed® power and radio frequency (RF) semiconductors and lighting class LEDs. Cree's Wolfspeed product families include silicon carbide materials, power-switching devices and RF devices targeted for applications such as electric vehicles, fast charging, inverters, power supplies, telecom and military and aerospace. Cree's LED product families included blue and green LED chips, high-brightness LEDs and lighting-class power LEDs targeted for indoor and outdoor lighting, video displays, transportation and specialty lighting applications. In 2020, Cree announced the divestiture of its LED business, which was finalized in March 2021.

C0.2

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

	Start date	End date	Indicate if you are providing emissions data for past reporting years	Select the number of past reporting years you will be providing emissions data for
Reporting year	January 1 2020	December 31 2020	No	<Not Applicable>

C0.3

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

China
China, Hong Kong Special Administrative Region
Finland
Germany
India
Japan
Malaysia
Republic of Korea
Sweden
Taiwan, Greater China
United States of America

C0.4

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

USD

C0.5

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

Operational control

C1. Governance

C1.1

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

Yes

C1.1a

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

Position of individual(s)	Please explain
Director on board	Our Board of Directors is responsible for all Sustainability matters at Cree, including climate change, through our Governance and Nominations Committee (https://investor.cree.com/static-files/a6447b2e-8b82-4ddb-8563-064aab5079a2). Our CEO, who is also a Board member, is ultimately also responsible for climate-related issues impacting the company because he has oversight of departments within Cree, including those that manage climate-related issues (e.g., Environment, Health and Safety, Sustainability, Emergency Management, Product Development, Operations, etc.). More information about our CEO's role with the Board of Directors can be found on our website (http://investor.cree.com/board-directors). The Board of Directors helps guide our Sustainability strategy, including goals/targets development. We are working toward finalizing corporate Sustainability goals, which will include a climate change-related goal to help further reduce our greenhouse gas impacts. The goals are planned to be released toward the end of 2021.

C1.1b

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

Frequency with which climate-related issues are a scheduled agenda item	Governance mechanisms into which climate-related issues are integrated	Scope of board-level oversight	Please explain
Scheduled – some meetings	Reviewing and guiding strategy Monitoring implementation and performance of objectives Overseeing major capital expenditures, acquisitions and divestitures Other, please specify (Reviewing and guiding sustainability/corporate responsibility strategy)	<Not Applicable>	Sustainability-related information is presented to our Board of Directors at least once per year, which covers a range of topics, including environmental performance (GHG emissions/climate change, water, etc.) and social responsibility efforts. Our Board of Directors also discusses climate change risks as important matters arise because our manufacturing facilities are not located in areas that are typically directly impacted by climate-related events (e.g., tropical storms, droughts, etc.). Indirectly, our Board discusses climate-related opportunities often, as our business, and more specifically our products, are designed to reduce energy usage and therefore, greenhouse gas emissions, which directly affect climate change. For example, our Board helps guide our business strategy, part of which focuses on the development of silicon carbide products that enable auto manufacturers to reach their goals of electric vehicle production and adoption around the world. The Board of Directors also help guide our Sustainability strategy, including goals/targets development. We are working toward finalizing corporate Sustainability goals, which will include a climate change-related goal to help further reduce our greenhouse gas impacts. The goals are planned to be released toward the end of 2021.

C1.2

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

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

C1.2a

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

Our Board of Directors is responsible for all Sustainability matters at Cree, including climate change, through our Governance and Nominations Committee. Sustainability-related information is presented to our Board of Directors at least once per year by our Senior Vice President of Legal & General Counsel, which covers a range of topics, including environmental performance (GHG emissions/climate change, water, etc.) and social responsibility efforts.

The group with responsibility for climate-related issues, and that develops Sustainability and climate-related content to be presented to the Board of Directors, consists of Cree employees from various departments, including Environment, Health and Safety, Corporate Sales and Marketing and Legal. When relevant, we also engage with employees from the Operations and Investor Relations departments. Our Legal and Corporate Sales and Marketing departments report directly to the CEO. Our Environment, Health and Safety department reports to the Operations department, which reports to the CEO. Our Investor Relations group reports to the Finance department, which reports to the CEO.

The titles of employees involved in the group include the Senior Vice President of Legal & General Counsel; Vice President Legal, Chief Compliance Officer; Vice President Corporate Marketing; Global Environment, Health & Safety Director; and Environmental Engineer. Climate-related issues are monitored by this committee because it is a multi-disciplinary group that represents all of Cree's business units (power and radio frequency) and provides different perspectives of how climate change could potentially affect Cree's product sales and financial performance, reputation, direct operations and supply chain. On a day to day basis, the individuals of this committee work with their departments to address climate-related issues. For example, our Environment, Health & Safety department is responsible for corporate Sustainability initiatives and compliance with health, safety, and environmental regulations.

C1.3

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

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

C1.3a

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

Entitled to incentive	Type of incentive	Activity incentivized	Comment
Management group	Non-monetary reward	Efficiency project	At Cree's Durham facility, incentives are provided to employees for attainment of targets related to production yield. Production yield has a direct correlation to the energy usage and GHG emissions from the facility and impacts our yield goal. Improving yield throughout the production process results in fewer wasted materials, lower usage of GHGs, and reduced costs. Employees were rewarded non-monetary benefits or awards. This incentive program has become part of Cree's culture and day to day activity.
All employees	Monetary reward	Energy reduction project	Cree's research and development employees are responsible for developing energy efficient, long-lasting, and innovative products. Their compensation is tied to continuing to develop these products.
All employees	Non-monetary reward	Behavior change related indicator	Historically, Cree's CEO has hosted "thank you" events to recognize employees for a job well done on various projects, including environmental related projects. For example, a "thank you" event was held for Cree's waste reduction and recycling initiatives (which affect our Scope 3 GHG emissions) and for employee involvement in developing Cree's sustainability report (which contains information about Cree's GHG emissions and risks and opportunities due to climate change). We have every intention of resuming such events post COVID-19.

C2. Risks and opportunities

C2.1

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

Yes

C2.1a

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

	From (years)	To (years)	Comment
Short-term	0	1	Our short-term horizon was chosen to be 0-1 years because our budgets are currently established on a shorter-term time frame.
Medium-term	1	10	Our medium-term horizon was chosen to be 1-10 years based on our anticipated timeline for our current capacity expansion efforts that are planned to be completed in 2024.
Long-term	10	100	Our long-term horizon is not currently aligned with other business practice time horizons.

C2.1b

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

We define a substantive financial or strategic impact as something that will cause significant impact to our business both internally (i.e., our direct operations) or externally (i.e., our upstream and downstream value chain). We use \$1 Million USD to establish a threshold for substantive financial impact when determining potential impacts due to climate change.

C2.2

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

Value chain stage(s) covered

Direct operations

Risk management process

Integrated into multi-disciplinary company-wide risk management process

Frequency of assessment

More than once a year

Time horizon(s) covered

Short-term
Medium-term
Long-term

Description of process

Risk management at Cree is a process undertaken by all functions within the business, including a review of risks related to financial and market performance, operational performance, emergency preparedness and response, environment, health and safety compliance, among other areas. Cree assesses and prioritizes risks based on impacts to our business and products, our employees, the communities in which we operate, and our customers. Cree also assesses and prioritizes risks based on regulatory impacts. In addition, Cree has established a formal Enterprise Risk Management program in order to identify, assess, prioritize and manage key enterprise risks. Climate-related risks and opportunities are discussed and addressed as part of this program. Our Finance, Internal Audit, Legal, and Investor Relations departments identify and assess both domestic and international business risks, financial risks, and market risks. These risks, as well as environmental compliance risks, are reviewed as part of financial disclosure requirements (e.g., US SEC Form 10-K). Situationally, departments including Environment, Health and Safety, Corporate Sales and Marketing, Legal, Operations, and Investor Relations, among others, assess Cree-specific physical and transitional risks and opportunities due to climate change. Potential physical climate change risks to major facilities have been reviewed, including sea level rise flooding, susceptibility to and preparation for high intensity storms, increased rainfall, drought, and water stress and availability. Both company-level and asset level physical and transitional risks have been considered. We have also considered raw material sourcing issues, and distribution channel impacts that could result from global climate-related impacts. We use \$1 Million USD to establish a threshold for substantive financial impact when determining potential impacts due to climate change. Cree uses a materiality assessment to review and prioritize sustainability topics, including corporate governance, products, environmental protection (including climate change), social responsibility, and economic performance. Cree's senior management have been interviewed to discuss which aspects are most relevant for Cree's future success. We also conducted outreach to external stakeholders (e.g., customers, suppliers) to understand which aspects they believe are most important for Cree's future success. The results from the materiality assessment guide us toward which areas to focus on in the future. Cree's Environment, Health & Safety department is responsible for maintaining our ISO 14001 certifications. Cree's ISO 14001 environmental management systems involve assessing environmental impacts of our manufacturing operations, including those that impact or are impacted by climate change. ISO 14001 defines an environmental aspect as an element of an organization's activities, products, or services that has or may have an impact on the environment. Our significant impacts for each site covered under an ISO 14001 certification are determined using a ranking system. Each environmental aspect (e.g., greenhouse gas emissions, energy usage) is ranked from 0 through 4 based on each of the following criteria: Severity, Magnitude, Probability, Frequency, Controllability, Business Impact and Regulatory. Each aspect receives a total score and the highest scores designate what our significant impacts are, which we focus on in more detail in our environmental management systems. Cree has also established a corporate-wide goal to manage climate-related risks. Cree joined The Climate Group's EP100 initiative, which is a global, collaborative initiative of influential businesses that pledge to double their energy productivity. We met our first EP100 goal for our lighting products in 2017. Cree's new strategic focus is to build a powerhouse semiconductor company around our power and radio frequency products and a new corporate-wide EP100 goal was developed in 2019, where we proposed to double our energy productivity in terms of revenue per MWh of energy consumed in manufacturing. We are also working toward finalizing corporate Sustainability goals, which will include a climate change-related goal to help further reduce our greenhouse gas impacts. The goals are planned to be released toward the end of 2021.

Value chain stage(s) covered

Upstream

Risk management process

Integrated into multi-disciplinary company-wide risk management process

Frequency of assessment

Annually

Time horizon(s) covered

Short-term
Medium-term
Long-term

Description of process

Situationally, departments including Environment, Health and Safety, Corporate Sales and Marketing, Legal, Operations (Procurement), and Investor Relations, among others, assess Cree-specific physical and transitional risks and opportunities due to climate change. During our climate-related risk assessments we have considered the affect climate change could have on the suppliers of our raw materials. We rely on global suppliers for raw materials, who depending on their location, may be subject to various supply constraints, including those due to climate change. In an instance where Cree depends on a number of limited source supplier for certain raw materials, components, services and equipment used in the manufacturing of our products, climate change-related risks could affect Cree. For example, chronic drought or flooding could increase instability in regions of the world that supply critical raw materials, causing business interruption. We use \$1 Million USD to establish a threshold for substantive financial impact when determining potential impacts due to climate change. Cree also assesses upstream risks by calculating our upstream Scope 3 GHG emissions, which helps us better understand our impact. Our Procurement department also manages both physical and transitional risks and opportunities in our supply chain. Our dedicated staff, Supplier Code of Conduct, Purchase Order Terms and Conditions, and Responsible Minerals Sourcing Policy help Cree manage potential supply chain risks, including those associated with climate change. Where possible, Cree seeks to obtain goods and services from local suppliers in the locations where Cree conducts business, which helps to reduce our risk of business interruptions when climate-related issues may arise and lowers transportation emission impacts.

Value chain stage(s) covered

Downstream

Risk management process

Integrated into multi-disciplinary company-wide risk management process

Frequency of assessment

Annually

Time horizon(s) covered

Short-term
Medium-term
Long-term

Description of process

Situationally, departments including Environment, Health and Safety, Corporate Sales and Marketing, Legal, Operations, and Investor Relations, among others, assess Cree-specific physical and transitional risks and opportunities due to climate change. During our climate-related risk assessments we have considered the affect climate change could have on our business downstream. We feel that climate change is a potential opportunity for us because our products are specifically designed to reduce energy consumption and GHG emissions compared to incumbent technologies. However, since climate-related events could cause delays in product distribution, there are commercial risks associated with delivering our products in a timely manner. We use \$1 Million USD to establish a threshold for substantive financial impact when determining potential impacts due to climate change. Cree also assesses downstream risks by calculating our downstream Scope 3 GHG emissions, which helps us better understand our impact. Our Corporate Sales and Marketing department manages Cree's climate-related transitional risks and opportunities, including those related to our product sales, our reputation, market projections, and consumer preferences. Cree assesses market trends and technology advancements to suggest what our business focus should be. For example, we have shifted our strategic focus toward our semiconductor business due to the anticipated increased adoption of energy efficient

C2.2a

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

	Relevance & inclusion	Please explain
Current regulation	Relevant, always included	Situationally, departments including Environment, Health and Safety, Corporate Sales and Marketing, Legal, Operations, and Investor Relations, among others, assess Cree-specific risks and opportunities due to climate change. Current regulation is relevant and has been included in our assessments. However, the current regulation that applies to Cree only requires reporting of greenhouse gas emissions to the US EPA, which is done annually in accordance with such regulation. Our GHG emissions are included in our climate-related risk assessments, specifically when we discuss our risks associated with regulations that could emerge because of the data collected from US EPA's Greenhouse Gas Reporting Program reporting requirements (e.g., carbon taxes, GHG emission threshold regulations). Through calculating emissions for EPA, we also assess our GHG emission impacts and how they compare to our competitors' impacts. The data from US EPA's Greenhouse Gas Reporting Program are available to the public. Having high direct GHG emissions per revenue or production can put us at a reputational risk for stakeholders like customers, investors and organizations that rate/score us based on our ESG performance. Assessing these risks pushes Cree to establish goals. Cree joined the EP100 initiative in 2017. In 2019, we updated our corporate-wide EP100 goal, which is to double our energy productivity in terms of revenue per MWh of energy consumed in manufacturing by 2040, using 2017 as our baseline. We are also working toward finalizing corporate Sustainability goals, which will include a climate change-related goal to help further reduce our greenhouse gas impacts. The goals are planned to be released toward the end of 2021.
Emerging regulation	Relevant, always included	Situationally, departments including Environment, Health and Safety, Corporate Sales and Marketing, Legal, Operations, and Investor Relations, among others, assess Cree-specific risks and opportunities due to climate change. We have considered emerging regulation as both a risk and opportunity in our climate-related risk assessments. For example, we have discussed how regulations assigning a cost of carbon would potentially impact our production costs and operations. We could reduce our Scope 1 GHG emissions and reduce our carbon taxes by adding fluorinated gas abatement. We are currently exploring abatement technologies for our facilities and in 2020 and 2021 began installing abatement devices at our Durham, NC, USA and RTP, NC, USA facilities. We have also considered the potential impacts to Cree's business due to the proposed EPA HFC-phasedown rule associated with the AIM Act. It is more difficult to change manufacturing inputs since our products rely on the use of very specific inputs. Changing the types and amounts of gases used in our manufacturing processes could greatly compromise product quality. However, our power and radio frequency products substantially reduce the amount of customer energy consumption and associated GHGs emitted. If a carbon tax system is established in the future, we will be able to provide energy efficient, less-emissive, and long-lasting products to meet customer needs. Carbon taxes may also enable us to gain new customers seeking products that emit less GHGs to lower their carbon tax payments. Assessing these risks also pushes Cree to establish goals. Cree joined the EP100 initiative in 2017. In 2019, we updated our corporate-wide EP100 goal, which is to double our energy productivity in terms of revenue per MWh of energy consumed in manufacturing by 2040, using 2017 as our baseline. We are also working toward finalizing corporate Sustainability goals, which will include a climate change-related goal to help further reduce our greenhouse gas impacts. The goals are planned to be released toward the end of 2021.
Technology	Relevant, always included	Situationally, departments including Environment, Health and Safety, Corporate Sales and Marketing, Legal, Operations, and Investor Relations, among others, assess Cree-specific risks and opportunities due to climate change. We have considered technology as both a risk and opportunity in our climate-related risk assessments. Through our energy efficient products, our success is tied, in part, to efforts to reduce product energy usage and resulting greenhouse gas emissions, which directly affect climate change. Our power products enable other energy efficient technologies (e.g., renewable energy, electric vehicles) to develop, and we have discussed the risks associated with the timely adoption and scale of these technologies.
Legal	Relevant, always included	Situationally, departments including Environment, Health and Safety, Corporate Sales and Marketing, Legal, Operations, and Investor Relations, among others, assess Cree-specific risks and opportunities due to climate change. Various departments throughout Cree ensure we are maintaining compliance with all laws, including those related to climate change. To date, legal issues have not been a significant climate change risk or opportunity for Cree, however Cree continues to monitor future regulations as discussed in the emerging regulation section (e.g., we have discussed how regulations assigning a cost of carbon would potentially impact our production costs and operations and have explored new projects to reduce the use of fluorinated gases with high GWPs in our manufacturing processes).
Market	Relevant, always included	Situationally, departments including Environment, Health and Safety, Corporate Sales and Marketing, Legal, Operations, and Investor Relations, among others, assess Cree-specific risks and opportunities due to climate change. We have considered market risks in our climate-related risk assessments. The market for energy efficient products affects our business because our products reduce product energy usage and greenhouse gas emissions, which directly affect climate change. Market projections affect us because we are investing in our power division to meet the anticipated demand for technologies that use our power products (e.g., renewable energy, electric vehicles). BloombergNEF estimates there are currently over 12 million passenger EVs on the road and this number will continue to rise. There are risks associated with production planning based on the market for energy efficient technologies. If we project too low then we would not be able to meet demand and lose our competitive advantage. If we project demand to be too high, then we risk investing in unnecessary capital to develop our facilities.
Reputation	Relevant, always included	Situationally, departments including Environment, Health and Safety, Corporate Sales and Marketing, Legal, Operations, and Investor Relations, among others, assess Cree-specific risks and opportunities due to climate change. We have considered reputation in our climate-related risk assessments because our reputation is directly tied to producing products that reduce product energy usage and greenhouse gas emissions. We have considered risks from climate change and how they would affect customer satisfaction and our external reputation. We also have considered operational risks and how they affect our internal reputation with current and future employees. We also assess our GHG emission impacts and how they compare to our competitors' impacts. The data from US EPA's Greenhouse Gas Reporting Program and Sustainability Report are available to the public. Having high direct GHG emissions per revenue or production can put us at a reputational risk for stakeholders like customers, investors and organizations that rate/score us based on our ESG performance. Assessing these risks pushes Cree to establish goals. Cree joined the EP100 initiative in 2017. In 2019, we updated our corporate-wide EP100 goal, which is to double our energy productivity in terms of revenue per MWh of energy consumed in manufacturing by 2040, using 2017 as our baseline. We are also working toward finalizing corporate Sustainability goals, which will include a climate change-related goal to help further reduce our greenhouse gas impacts. The goals are planned to be released toward the end of 2021.
Acute physical	Relevant, always included	Situationally, departments including Environment, Health and Safety, Corporate Sales and Marketing, Legal, Operations, and Investor Relations, among others, assess Cree-specific risks and opportunities due to climate change. We have considered acute physical risks in our climate-related scenario analyses. Cree has assessed potential risks to major facilities due to climate change, including flooding from sea level rise, susceptibility to and preparation for high intensity storms, increased rainfall, drought, and water stress and availability. Acute physical risks are also incorporated into Cree's business continuity plan, which takes into consideration potential risks that could cause a significant business interruption.
Chronic physical	Relevant, always included	Situationally, departments including Environment, Health and Safety, Corporate Sales and Marketing, Legal, Operations, and Investor Relations, among others, assess Cree-specific risks and opportunities due to climate change. We have considered chronic physical risks in our climate-related scenario analyses. We have assessed how shifts in climate could affect our facilities and supply chain in the long term. For example, sea level rise could impact the ports used for shipment of raw materials and products around the world. Chronic physical risks are also incorporated into Cree's business continuity plan, which takes into consideration potential risks that could cause a significant business interruption.

C2.3

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

Yes

C2.3a

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

Identifier

Risk 1

Where in the value chain does the risk driver occur?

Direct operations

Risk type & Primary climate-related risk driver

Emerging regulation	Carbon pricing mechanisms
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Primary potential financial impact

Increased indirect (operating) costs

Climate risk type mapped to traditional financial services industry risk classification

<Not Applicable>

Company-specific description

Regulations assigning a cost of carbon would potentially impact our production costs, but ultimately improve business for energy efficient products.

Time horizon

Long-term

Likelihood

About as likely as not

Magnitude of impact

Medium-high

Are you able to provide a potential financial impact figure?

Yes, an estimated range

Potential financial impact figure (currency)

<Not Applicable>

Potential financial impact figure – minimum (currency)

23000000

Potential financial impact figure – maximum (currency)

55000000

Explanation of financial impact figure

We estimate that a carbon tax on our Scope 1 and 2 GHG emissions could be up to \$55 million annually. We chose dollar amounts per ton based on the location of our major operations (i.e., United States) and the United States government's estimated social cost of greenhouse gases.

Cost of response to risk

6600000

Description of response and explanation of cost calculation

We estimate about \$1-3 million in capital costs for adding on abatement technologies, with an estimated \$100,000-300,000 in annual operation costs. Abatement technologies may also result in additional environmental impacts and costs, including increased energy consumption and waste generation. Our project to eliminate the use of one of our greenhouse gases with a high GWP in one of our processes is estimated to cost approximately \$3,300,000. We could reduce our Scope 1 GHG emissions and reduce our carbon taxes by adding abatement technologies. We are currently exploring options for abatement at our facilities and in 2020 and 2021 began installing abatement devices at our Durham, NC, USA and RTP, NC, USA facilities. Changing the types and amounts of fluorinated gases used in our manufacturing processes could compromise product quality. In our operations, we have improved yield for our power and radio frequency applications which improves production efficiency (e.g., electricity and GHGs used per unit of product). We have an incentive program to increase manufacturing yield, resulting in fewer wasted materials, lower usage of GHGs in the manufacturing process, and reduced costs. Production yield has a direct correlation to GHG emissions from the facility and impacts the goal we set for our EP100 energy productivity target (revenue/ MWh electricity consumed). To further address risks like this, our research and development staff and operations staff work to develop process improvements, including those that reduce GHG emissions. In 2019, we began planning for a project to eliminate the use of one of our greenhouse gases with a high GWP in one of our manufacturing processes. In 2020, this project entered the testing phase and is planned to start transitioning over to full production in 2021.

Comment

We estimate about \$1-3 million in capital costs for adding on abatement technologies, with an estimated \$100,000-300,000 in annual operation costs. Abatement technologies may also result in additional environmental impacts and costs, including increased energy consumption and waste generation. Our project to eliminate the use of one of our greenhouse gases with a high GWP in one of our processes is estimated to cost approximately \$3,300,000.

Identifier

Risk 4

Where in the value chain does the risk driver occur?

Upstream

Risk type & Primary climate-related risk driver

Market	Other, please specify (raw material scarcity)
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Primary potential financial impact

Other, please specify (Business/manufacturing disruption)

Climate risk type mapped to traditional financial services industry risk classification

<Not Applicable>

Company-specific description

Many critical raw materials are sourced from areas of the world vulnerable to instability as a result of drought and other climate-related issues.

Time horizon

Long-term

Likelihood

About as likely as not

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

A decrease in the supply of one or more of our raw materials would result in a severe cost to our supply chain and business interruption. Depending on the material, it could stop production.

Cost of response to risk

0

Description of response and explanation of cost calculation

We would potentially need to find other suppliers in this situation. Our dedicated staff, Cree's Supplier Code of Conduct and Responsible Minerals Sourcing Policy help to manage potential risks in our supply chain. We have dedicated staff whose compensation is tied to managing potential risks in our supply chain. We do not anticipate additional management costs beyond current salary compensation.

Comment

We have dedicated staff whose compensation is tied to managing potential risks in our supply chain. We do not anticipate additional management costs beyond current salary compensation.

Identifier

Risk 6

Where in the value chain does the risk driver occur?

Downstream

Risk type & Primary climate-related risk driver

Technology	Unsuccessful investment in new technologies
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Primary potential financial impact

Other, please specify (Reduced support for new technologies)

Climate risk type mapped to traditional financial services industry risk classification

<Not Applicable>

Company-specific description

Local utilities in some of the areas we operate are not adopting policies that promote the economical adoption of renewable energy sources. We also see a risk with utilities not upgrading their grid system to be able to accept and manage renewable energy. These issues affect continued adoption of our technologies.

Time horizon

Medium-term

Likelihood

More likely than not

Magnitude of impact

Medium

Are you able to provide a potential financial impact figure?

No, we do not have this figure

Potential financial impact figure (currency)

<Not Applicable>

Potential financial impact figure – minimum (currency)

<Not Applicable>

Potential financial impact figure – maximum (currency)

<Not Applicable>

Explanation of financial impact figure

The financial implications for this risk affecting our direct operations and product sales is currently unknown.

Cost of response to risk

200000

Description of response and explanation of cost calculation

We have dedicated staff to manage our facilities' electricity systems and interactions with local utilities and policy makers. We estimate \$200,000 annual salary costs for these positions.

Comment

We have dedicated staff to manage our facilities' electricity systems and interactions with local utilities and policy makers.

Identifier

Risk 7

Where in the value chain does the risk driver occur?

Direct operations

Risk type & Primary climate-related risk driver

Chronic physical	Other, please specify (Water stress/availability)
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Primary potential financial impact

Increased indirect (operating) costs

Climate risk type mapped to traditional financial services industry risk classification

<Not Applicable>

Company-specific description

We require ultra-pure water for our manufacturing processes. Water availability and quality issues due to climate change could affect our manufacturing operations and product quality. Depending on the facility, we use either or both of the WRI Aqueduct and the WWF Water Risk Filter tools to assess our facilities' overall water risks. All our facilities were analyzed for water stress using the WRI Aqueduct tool. Based on CDP's guidance, we consider areas with water stress to be those locations with the risk category "High (40-80%)" or "Extremely High (>80%)" for baseline water stress. Based on that criteria, six of our small leased facilities are located in areas with the risk category "High" or "Extremely High." These offices use small amounts of water and represent only 0.03% of our total 2020 global water withdrawals. One of our North Carolina manufacturing facilities is located in an area with the risk category "High." Its 2020 water withdrawals represent approximately 12.8% of our total 2020 global water withdrawals. We understand the potential for these risks but do not yet have a financial impact calculated. However, we feel the impacts could be substantive (i.e., could be more than \$1 million depending on the event). We purchase water directly from the municipality and work closely with them to communicate water demand. Both Cree's Durham and Huizhou sites have water recycle systems to offset municipal water purchases and reduce the consumption of water. We continuously explore options for water recycle improvements to help offset the expected increase in water withdrawals as we expand.

Time horizon

Long-term

Likelihood

About as likely as not

Magnitude of impact

Low

Are you able to provide a potential financial impact figure?

No, we do not have this figure

Potential financial impact figure (currency)

<Not Applicable>

Potential financial impact figure – minimum (currency)

<Not Applicable>

Potential financial impact figure – maximum (currency)

<Not Applicable>

Explanation of financial impact figure

We understand the potential for these risks but do not yet have a financial impact calculated. However, we feel the impacts could be substantive (i.e., could be more than \$1 million depending on the event).

Cost of response to risk

10000000

Description of response and explanation of cost calculation

Our Durham, NC, USA site operates a water recycle system to offset municipal water purchases and reduce the consumption of water. We continuously explore options for water recycle improvements to help offset the expected increase in water withdrawals as we expand. We are also working toward finalizing corporate Sustainability goals, which will include a water-related goal to help further reduce our water impacts. The goals are planned to be released toward the end of 2021. The reservoirs in the area from which we receive water were man-made to provide flood control and water supply to the Raleigh/Durham/Research Triangle Park area, and specifically designed to provide sufficient water even in severe drought situations. The state of North Carolina requires local governments to apply for allocations of water supply storage, which includes their current water supply sources, projected water needs and alternative water sources. Allocations are made based on different timelines, including 20-year and 30-year water need projections. We purchase water directly from the municipality and work closely with them to communicate changes in water demand. Cree also has a business continuity plan, which takes into consideration potential risks that could cause a significant business interruption and describes strategies for how we mitigate and respond to major events. Cree also has a crisis response team, which is comprised of key Cree personnel in different departments throughout the company, that reviews possible solutions in the event of a situation that could cause a significant business interruption. We estimate the cost of response to be a range from \$0 to \$10,000,000. The cost of response represents the operating costs required to install, operate and maintain our current or future water recycle systems at our Durham, NC, USA facility. Only our Durham, NC, USA facility is included in this estimate as our Huizhou, China facility, which also operates a water recycle system, was divested as part of the sale of our LED business in 2021. The estimate also includes estimated salaries for employees who work directly with our onsite water recycle system and employees who work with the municipality regarding our water demand. All crisis response members are Cree employees and we do not anticipate extra costs beyond current salary compensation for these employees.

Comment

We operate onsite recycle systems, a business continuity plan and crisis response team to manage water-related risks.

Identifier

Risk 8

Where in the value chain does the risk driver occur?

Downstream

Risk type & Primary climate-related risk driver

Technology	Other, please specify (slower adoption of technologies due to global issues)
------------	--

Primary potential financial impact

Other, please specify (slower adoption of technologies due to global issues)

Climate risk type mapped to traditional financial services industry risk classification

<Not Applicable>

Company-specific description

The impact of the global COVID-19 pandemic has certainly affected every aspect of life, including industries such as Cree's. As impactful as the pandemic has been in 2020 and 2021 we are hopeful that the impacts are truly short-term, thereby not impacting our medium-term or long-term objectives. Our power and radio frequency products are used in applications such as renewable energy, EVs and EV charging. Highlighting this fact, BloombergNEF's Electric Vehicle Outlook 2020 Report anticipated global passenger vehicle sales to drop by 23% in 2020. They also reported that EV sales in 2020 dropped and global auto sales may not recover to 2019 levels until 2025. However, according to an International Energy Agency 2020 study, EVs are expected to fare better than the overall car market. BloombergNEF's Electric Vehicle Outlook 2021 Report disclosed the number of EVs on the road is planned to rise from 12 million EVs to 54 million EVs by 2025. Since COVID-19 stay at home orders resulted in short-term improvements in global air quality, people have seen the effects of reducing combustion-based transportation first hand, which we foresee as being an opportunity for increasing EV demand in the future.

Time horizon

Short-term

Likelihood

Very likely

Magnitude of impact

Medium

Are you able to provide a potential financial impact figure?

No, we do not have this figure

Potential financial impact figure (currency)

<Not Applicable>

Potential financial impact figure – minimum (currency)

<Not Applicable>

Potential financial impact figure – maximum (currency)

<Not Applicable>

Explanation of financial impact figure

The financial implications for this risk affecting our direct operations or product sales is currently unknown.

Cost of response to risk

0

Description of response and explanation of cost calculation

Cree continues to invest to ensure its employees are safe from the pandemic at our facilities. As we are in the middle of this pandemic, these costs have not been totaled. During the COVID-19 pandemic, we have continued to operate the company globally. We have a robust business continuity plan that balances employee safety with the ability to get our products to market, run logistics and manage the supply chain from multiple locations with a wide range of suppliers and partners. We remain committed to delivering to our customers, and our sales teams are available to support them as always, along with our dedicated engineering and support staff. Cree also has a crisis response team, which is comprised of key Cree personnel in different departments throughout the company, that reviews possible solutions in the event of a situation that could cause a significant business interruption.

Comment

Cree continues to invest to ensure its employees are safe from the pandemic at our facilities. During the COVID-19 pandemic, we have continued to operate the company globally.

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?

Downstream

Opportunity type

Energy source

Primary climate-related opportunity driver

Participation in carbon market

Primary potential financial impact

Increased revenues resulting from increased demand for products and services

Company-specific description

Cree may potentially benefit from carbon tax changes because we have always focused our priorities on improving the design and energy efficiency of our products. Our power and radio frequency products substantially reduce the amount of customer energy consumption and associated GHGs emitted compared to incumbent technologies. If a carbon tax system is established in the future, we will be able to provide energy efficient, less-emissive, and long-lasting products to meet customer needs. Carbon taxes may also enable us to gain new customers seeking products that emit less GHGs in order to lower their carbon tax payments.

Time horizon

Long-term

Likelihood

About as likely as not

Magnitude of impact

High

Are you able to provide a potential financial impact figure?

Yes, a single figure estimate

Potential financial impact figure (currency)

1500000000

Potential financial impact figure – minimum (currency)

<Not Applicable>

Potential financial impact figure – maximum (currency)

<Not Applicable>

Explanation of financial impact figure

The potential financial impact is reported on an annualized basis. We expect an increase in demand for our power and radio frequency products. Our power and radio frequency products greatly reduce power loss, resulting in less electricity wasted (and thus fewer GHGs emitted). We anticipate our power and radio frequency revenue to increase from \$470.7 million in FY2020 to approximately \$1.5 billion by FY2024.

Cost to realize opportunity

328200000

Strategy to realize opportunity and explanation of cost calculation

In 2019 we announced plans invest up to \$720 million over five years in the expansion of our silicon carbide (SiC) capacity, which will generate up to a 30-fold increase in SiC wafer fabrication capacity and 30-fold increase in SiC materials production. We also announced our plans to build a brand new, state-of-the-art, automotive-qualified 200mm-capable wafer fabrication facility in Marcy, New York, complemented by our mega materials factory expansion currently underway at our Durham headquarters. The new fabrication facility will be a bigger, highly-automated factory with greater output capability. In addition, Cree's research and development employees are responsible for developing energy efficient, long-lasting, and innovative products. We will continue to innovate for the future and develop industry-leading energy efficient products. We are constantly developing new technologies and creating new markets for our products. We invest significant resources in research and development (\$184.2 million in fiscal year 2020). Research and development costs listed here are for all of Cree's product types produced in 2020 (LED, power, and radio frequency). The cost to realize opportunity value is reported on an annualized basis and includes the \$720 million over 5 years and annual \$184.2 million for R&D.

Comment

We will continue to innovate for the future and develop industry-leading energy efficient products. We are constantly developing new technologies and creating new markets for our products.

Identifier

Opp2

Where in the value chain does the opportunity occur?

Downstream

Opportunity type

Resilience

Primary climate-related opportunity driver

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

Primary potential financial impact

Increased revenues resulting from increased demand for products and services

Company-specific description

Cree may potentially benefit from product efficiency programs because we have always focused our priorities on improving the design and energy efficiency of our products. Cree is transparent regarding product efficiency and information about our products' efficiency can be found on our website. Our power products can also be used in renewable energy applications, including solar power systems. Solar power systems designed around Cree's silicon carbide (SiC) power devices offer huge efficiency gains and permit smaller system size, weight and cost.

Time horizon

Medium-term

Likelihood

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)

1500000000

Potential financial impact figure – minimum (currency)

<Not Applicable>

Potential financial impact figure – maximum (currency)

<Not Applicable>

Explanation of financial impact figure

The potential financial impact is reported on an annualized basis. We expect an increase in demand for our power and radio frequency products. Our power and radio frequency products greatly reduce power loss, resulting in less electricity wasted (and thus fewer GHGs emitted). We anticipate our power and radio frequency revenue to increase from \$470.7 million in FY2020 to approximately \$1.5 billion by FY2024.

Cost to realize opportunity

328200000

Strategy to realize opportunity and explanation of cost calculation

In 2019 we announced plans invest up to \$720 million over five years in the expansion of our silicon carbide (SiC) capacity, which will generate up to a 30-fold increase in SiC wafer fabrication capacity and 30-fold increase in SiC materials production. We also announced our plans to build a brand new, state-of-the-art, automotive-qualified 200mm-capable wafer fabrication facility in Marcy, New York, complemented by our mega materials factory expansion currently underway at our Durham headquarters. The new fabrication facility will be a bigger, highly-automated factory with greater output capability. In addition, Cree's research and development employees are responsible for developing energy efficient, long-lasting, and innovative products. We will continue to innovate for the future and develop industry-leading energy efficient products. We are constantly developing new technologies and creating new markets for our products. We invest significant resources in research and development (\$184.2 million in fiscal year 2020). Research and development costs listed here are for all of Cree's product types produced in 2020 (LED, power, and radio frequency). The cost to realize opportunity value is reported on an annualized basis and includes the \$720 million over 5 years and annual \$184.2 million for R&D.

Comment

We will continue to innovate for the future and develop industry-leading energy efficient products. We are constantly developing new technologies and creating new markets for our products.

Identifier

Opp5

Where in the value chain does the opportunity occur?

Downstream

Opportunity type

Products and services

Primary climate-related opportunity driver

Shift in consumer preferences

Primary potential financial impact

Increased revenues resulting from increased demand for products and services

Company-specific description

Cree may benefit from changes in consumer/customer behavior because we have always focused our priorities on improving the design and energy efficiency of our products. We believe that our power and radio frequency products appeal to the growing number of eco-conscious consumers and commercial customers who want energy efficient, less-emissive, and long-lasting products. We believe we will be able to meet the growing demand for energy efficient products resulting from changes in customer preferences.

Time horizon

Medium-term

Likelihood

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)

1500000000

Potential financial impact figure – minimum (currency)

<Not Applicable>

Potential financial impact figure – maximum (currency)

<Not Applicable>

Explanation of financial impact figure

The potential financial impact is reported on an annualized basis. We expect an increase in demand for our power and radio frequency products. Our power and radio frequency products greatly reduce power loss, resulting in less electricity wasted (and thus fewer GHGs emitted). We anticipate our power and radio frequency revenue to increase from \$470.7 million in FY2020 to approximately \$1.5 billion by FY2024.

Cost to realize opportunity

328200000

Strategy to realize opportunity and explanation of cost calculation

In 2019 we announced plans invest up to \$720 million over five years in the expansion of our silicon carbide (SiC) capacity, which will generate up to a 30-fold increase in SiC wafer fabrication capacity and 30-fold increase in SiC materials production. We also announced our plans to build a brand new, state-of-the-art, automotive-qualified 200mm-capable wafer fabrication facility in Marcy, New York, complemented by our mega materials factory expansion currently underway at our Durham headquarters. The new fabrication facility will be a bigger, highly-automated factory with greater output capability. In addition, Cree's research and development employees are responsible for developing energy efficient, long-lasting, and innovative products. We will continue to innovate for the future and develop industry-leading energy efficient products. We are constantly developing new technologies and creating new markets for our products. We invest significant resources in research and development (\$184.2 million in fiscal year 2020). Research and development costs listed here are for all of Cree's product types produced in 2020 (LED, power, and radio frequency). The cost to realize opportunity value is reported on an annualized basis and includes the \$720 million over 5 years and annual \$184.2 million for R&D.

Comment

We will continue to innovate for the future and develop industry-leading energy efficient products. We are constantly developing new technologies and creating new markets for our products.

Identifier

Opp6

Where in the value chain does the opportunity occur?

Downstream

Opportunity type

Resource efficiency

Primary climate-related opportunity driver

Use of more efficient modes of transport

Primary potential financial impact

Increased revenues resulting from increased demand for products and services

Company-specific description

Cree foresees an increased demand for more efficient forms of transportation, including electric vehicles. Many automotive companies are increasingly investing in the electric vehicle market and our power products can be used in electric vehicles. Our Silicon Carbide MOSFETs, for example, enable faster, more efficient charging and increase power density of the electric circuits. Our silicon carbide (SiC) products allow electric vehicles to go farther, charge faster, and perform better. In 2020 we released the Wolfspeed® 650V silicon carbide MOSFETs, delivering a wider range of industrial applications and enabling the next generation of Electric Vehicle (EV) onboard charging, data centers, and other renewable systems with industry-leading power efficiency. The new devices, which use Cree's industry-leading, third generation C3M™ MOSFET technology, deliver up to 20 percent lower switching losses than competing silicon carbide MOSFETs and provide the lowest on-state resistances for higher efficiency and power dense solutions. End users benefit from lower total cost of ownership in a variety of applications through the more efficient use of power, reduced cooling requirements, and industry-leading reliability. Compared to silicon, our new 650V silicon carbide MOSFETs deliver 75 percent lower switching losses and a 50 percent decrease in conduction losses which results in a potential 300 percent increase in power density.

Time horizon

Medium-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)

1500000000

Potential financial impact figure – minimum (currency)

<Not Applicable>

Potential financial impact figure – maximum (currency)

<Not Applicable>

Explanation of financial impact figure

The potential financial impact is reported on an annualized basis. We expect an increase in demand for our power and radio frequency products. Our power and radio frequency products greatly reduce power loss, resulting in less electricity wasted (and thus fewer GHGs emitted). We anticipate our power and radio frequency revenue to increase from \$470.7 million in FY2020 to approximately \$1.5 billion by FY2024.

Cost to realize opportunity

328200000

Strategy to realize opportunity and explanation of cost calculation

In 2019 we announced plans invest up to \$720 million over five years in the expansion of our silicon carbide (SiC) capacity, which will generate up to a 30-fold increase in SiC wafer fabrication capacity and 30-fold increase in SiC materials production. We also announced our plans to build a brand new, state-of-the-art, automotive-qualified 200mm-capable wafer fabrication facility in Marcy, New York, complemented by our mega materials factory expansion currently underway at our Durham headquarters. The new fabrication facility will be a bigger, highly-automated factory with greater output capability. In addition, Cree's research and development employees are responsible for developing energy efficient, long-lasting, and innovative products. We will continue to innovate for the future and develop industry-leading energy efficient products. We are constantly developing new technologies and creating new markets for our products. We invest significant resources in research and development (\$184.2 million in fiscal year 2020). Research and development costs listed here are for all of Cree's product types produced in 2020 (LED, power, and radio frequency). The cost to realize opportunity value is reported on an annualized basis and includes the \$720 million over 5 years and annual \$184.2 million for R&D.

Comment

We will continue to innovate for the future and develop industry-leading energy efficient products. We are constantly developing new technologies and creating new markets for our products.

C3. Business Strategy

C3.1

(C3.1) Have climate-related risks and opportunities influenced your organization's strategy and/or financial planning?

Yes

C3.1b

(C3.1b) Does your organization intend to publish a low-carbon transition plan in the next two years?

	Intention to publish a low-carbon transition plan	Intention to include the transition plan as a scheduled resolution item at Annual General Meetings (AGMs)	Comment
Row 1	Yes, in the next two years	No, we do not intend to include it as a scheduled AGM resolution item	We are working toward finalizing corporate Sustainability goals, which will include a climate change-related goal to help further reduce our greenhouse gas impacts. The goals are planned to be released toward the end of 2021. We plan to develop a low-carbon transition plan that is in line with our GHG emissions reduction goal.

C3.2

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

Yes, qualitative

C3.2a

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

Climate-related scenarios and models applied	Details
IRENA	<p>Cree reviewed all climate-related scenarios on the list provided by CDP and eliminated options that heavily relied on carbon sequestration as a technology that is not progressing as rapidly as the scenarios require. Other scenarios were eliminated based on whether they included global carbon taxes. Where we operate, we do not feel global carbon taxes are perceived as being realistic in the next 10 years, which is the timeframe we used during our analysis. We also chose the IRENA scenario because it is in line with limiting global temperature rise to 1.5 degrees Celsius. Cree used IRENA because we feel that it is a scenario that could reasonably occur in the future and because it promotes energy efficiency measures and increased adoption of renewable energy, which aligns with our business focus and strategy. We assessed our strengths, weaknesses, opportunities, and threats in the IRENA scenario for all Cree operations and our supply chain on a long-term (10 year) timeframe because the IRENA climate-scenario considers CO2 emissions reductions by 2050. Even though IRENA is projected to 2050, the impacts within the next 10 years are significant with existing technologies. The results of Cree's IRENA scenario analysis exercise include: Strengths: The energy efficiency impacts of our current products can help with the energy efficiency needs specified in the IRENA scenario. Developing energy efficient products is part of our everyday culture and what motivates our employees. Our products also allow for the development of other energy efficient products (e.g., renewable energy, electric vehicles). Our research and development drives innovation and speed to market for energy efficient products in the marketplace. Cree is vertically integrated which helps minimize our supply chain risks. Weaknesses: Our planning processes are typically shorter than the 10 year time frame used in this analysis. Electricity is a large input to our manufacturing process and we currently only purchase renewable energy directly at our Morgan Hill facility, which represents a small amount compared to other Cree's manufacturing sites' electricity usage. Any use of renewable energy at our other facilities is based on our electric utilities' energy mix. Opportunities: Cree's power and radio frequency products allow other industries to develop leading energy efficient products in applications such as renewable energy, wireless communication, electric vehicles, and electric vehicle charging. In the IRENA scenario, all these technology changes will be required to reduce CO2 emissions. Regulation in the form of carbon taxes could increase demand for our products and could offset increases in operational cost from the tax. In our operations, we could diversify our energy supply by implementing renewable energy at our sites to replace our current electricity from non-renewable sources. The increased adoption of energy efficient transportation will require increased electrification and improvements in the world's current energy grid. The current state of our energy grid will not support the large anticipated shift to electric vehicle adoption and we believe that our products can enable improvements in the energy grid. Threats: It is possible that other more energy efficient technologies not yet developed could replace ours, putting our business at risk. If the impacts due to climate change worsen, Cree could experience supply chain disruptions due to extreme weather events and/or climate shifts. Energy grid capacity constraints could affect the adoption of new technologies that use our products. The results from the IRENA analysis reinforce our new strategy toward significant investment in our power and radio frequency division. The market for energy efficient products (i.e., renewable energy, electric vehicles) is expected to expand and our products are more efficient than existing technologies.</p>

C3.3

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

	Have climate-related risks and opportunities influenced your strategy in this area?	Description of influence
Products and services	Yes	Climate change opportunities have influenced our strategy regarding our products. Cree was founded upon the premise that our silicon carbide (SiC) based technology for power and radio frequency (RF) devices could fundamentally change the efficiency of energy use around the world. Our mission is to lead the innovation and commercialization of SiC and gallium nitride (GaN), liberating designers to invent power and wireless systems for a responsible, energy efficient future. Our power and RF products allow other industries to develop leading energy efficient products in applications such as renewable energy, wireless communication and electric vehicles. Our RF products help enable the transition to 5G, which requires the transmission of more data at faster speeds with greater precision. Smart cities, smart manufacturing, autonomous vehicles and connected transportation can all be realized through the availability of 5G. Our products can achieve the greater bandwidth and efficiency that 5G requires. We have always focused our priorities on improving the energy efficiency of our products, which in turn have a lower impact on the environment and climate change. The products we produce and sell globally actually result in a net positive impact on climate change. Our LED, power and RF products sold in 2020 will save approximately 327 million MWh and 125 million metric tons CO2e over their estimated lifetimes compared to less efficient alternative products (e.g., silicon-based power products, silicon- or gallium arsenide-based RF products).
Supply chain and/or value chain	Yes	Our climate change risks have influenced our strategy regarding our supply chain. Situationally, various departments including Environment, Health and Safety, Corporate Sales and Marketing, Legal, Operations, and Investor Relations, among others, assess Cree-specific physical and transitional risks and opportunities due to climate change. During our climate-related risk assessments we have considered the affect climate change could have on the suppliers of our raw materials. We rely on global suppliers for raw materials, who depending on their location, may be subject to various supply constraints, including those due to climate change. In an instance where Cree depends on a number of limited source supplier for certain raw materials, components, services and equipment used in the manufacturing of our products, climate change-related risks could affect Cree. Cree also assesses upstream supply chain risks by calculating our upstream Scope 3 GHG emissions, which helps us better understand our impact. Our Purchasing division manages both physical and transitional risks and opportunities in our supply chain. Our dedicated staff, Supplier Code of Conduct, Purchase Order Terms and Conditions, and Responsible Minerals Sourcing Policy help Cree manage potential supply chain risks, including those associated with climate change. Where possible, Cree seeks to obtain goods and services from local suppliers in the locations where Cree conducts business, which helps to reduce our risk of business interruptions when climate-related issues may arise and lowers transportation emission impacts.
Investment in R&D	Yes	Our climate change opportunities have influenced our strategy regarding our investment in R&D. Climate change is inherently integrated into our business objectives and strategy. Cree is a market-leading innovator of semiconductor products for power and radio frequency applications. Cree was founded upon the premise that our silicon carbide (SiC) based technology for power devices and radio frequency devices could fundamentally change the efficiency of electricity use around the world. We invest significant resources in R&D. Cree's research and development employees are responsible for developing energy efficient, long-lasting, and innovative products. We will continue to innovate for the future and develop industry-leading energy efficient products. We are constantly developing new technologies and creating new markets for our products.
Operations	Yes	Our climate change risks and opportunities have influenced our strategy regarding our operations. We have improved yield by increasing the size of the SiC wafers produced which yields more product per the same amount of input (e.g., electricity and GHGs used in the production process). Our manufacturing departments collect metrics for production and product mix including energy efficiency and product yield. These metrics are then used to fuel internal decisions regarding process operations, product design, sales goals, etc. We have an incentive program to increase manufacturing yield, resulting in fewer wasted materials, lower usage of GHGs in the manufacturing process, and reduced costs. Our business strategy has also enabled us to join The Climate Group's EP100 initiative in 2017. Our new strategic focus is to build a powerhouse semiconductor company around our power and RF products and a new corporate-wide EP100 goal was developed in 2019, where we proposed to double our energy productivity in terms of revenue per MWh of energy consumed in manufacturing. We are also working toward finalizing corporate Sustainability goals, which will include a climate change-related goal to help further reduce our greenhouse gas impacts. The goals are planned to be released toward the end of 2021. The foreseen increased demand for energy efficient technologies like renewable energy and electric vehicles due to their impacts on energy efficiency and climate change, further supports our focus and strategy. In 2019 we announced plans invest up to \$720 million in the expansion of our silicon carbide (SiC) capacity, which will generate up to a 30-fold increase in SiC wafer fabrication capacity and 30-fold increase in SiC materials production. We also announced our plans to build a new wafer fabrication facility in Marcy, New York, complemented by our expansion currently underway at our headquarters. We also use a materiality assessment to review and prioritize sustainability objectives. Product innovation (including improvements in energy efficiency) and energy efficiency of operations have been identified as two of the most important aspects by both internal and external stakeholders. Our EHS department collects environmental metrics and works with other departments, including production and facilities, to ensure regulatory compliance and environmental operational efficiency.

C3.4

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

	Financial planning elements that have been influenced	Description of influence
Row 1	Revenues Indirect costs Capital expenditures Acquisitions and divestments Access to capital	<p>Revenues: Our identified risks have not impacted our revenue financial planning in the short-term since our risks are more on a medium-term or long-term time frame. Our climate change opportunities are impacted because we foresee an increase in demand for our power and radio frequency products in the short-, medium-, and long-term. Our power and radio frequency products greatly reduce power loss, resulting in less electricity wasted (and thus fewer GHGs emitted) compared to incumbent technologies. In 2020, these opportunities have allowed us to bring new products to market, contributing to an increase in our power and radio frequency revenue. We anticipate our power and radio frequency revenue could increase from \$470.7 million in FY2020 to about \$1.5 billion in FY2024. Indirect costs: Our operating costs are currently established in our budgets on a short-term time frame. Our identified risks have not yet greatly impacted our operating cost planning process since our risks are on a medium-term or long-term time frame. Our manufacturing operations heavily rely on the use of electricity. We have not seen major changes in fuel or electricity costs and do not anticipate major changes in the short-term and medium-term. However, in 2019 we developed a new corporate-wide EP100 goal, which is to double our energy productivity in terms of revenue per MWh of energy consumed in manufacturing by 2040, using 2017 as our baseline. Since we foresee an increase in demand for our power and radio frequency products, in 2020 and beyond we are targeting the conversion of the majority of our Wolfspeed power production from 100mm to either 150mm or 200mm substrates. Because we aimed to make the transition in a cost-effective and timely manner, in many cases we relied on contractors for production capacity, logistics support and certain administrative functions including hosting of certain information technology software applications. These added functions affect our operating costs. Capital expenditures: Our opportunities have been factored into our capital expenditures planning, as we foresee an increase in demand for our energy efficient power and radio frequency products and as a result plan to invest in expanding our operations in the short-term. Further investment in our power and radio frequency division requires an increase in capital expenditures. At our existing sites, Cree has increased production capacity by adding new equipment and infrastructure to meet the increased demand for our products. In 2019 we announced plans invest up to \$720 million in the expansion of our silicon carbide (SiC) capacity, which will generate up to a 30-fold increase in SiC wafer fabrication capacity and 30-fold increase in SiC materials production to meet the expected market growth by 2024. We also announced our plans to establish a SiC corridor on the East Coast of the United States with the creation of the world's largest SiC fabrication facility. Our plans include building a brand new, state-of-the-art, automotive-qualified 200mm-capable wafer fabrication facility in Marcy, New York, complemented by our mega materials factory expansion currently underway at our Durham headquarters. The new fabrication facility will be a bigger, highly-automated factory with greater output capability. The plan enables 25 percent increased capacity with lower net capital expenditures. Our expansion plan marks Cree's largest investment to date in fueling our Wolfspeed silicon carbide and GaN on silicon carbide business. Access to capital: Our identified risks have not yet impacted our access to capital since they are on a medium-term or long-term time frame. We anticipate our climate change opportunities to be impacted because we foresee an increase in demand for our energy efficient LED, power and radio frequency products in the short-, medium- and long-term. In 2019 we announced plans invest up to \$720 million in the expansion of our silicon carbide (SiC) capacity, which will generate up to a 30-fold increase in SiC wafer fabrication capacity and 30-fold increase in SiC materials production to meet the expected market growth by 2024. We also announced our plans to establish a SiC corridor on the East Coast of the United States with the creation of the world's largest SiC fabrication facility. Our plans include building a brand new, state-of-the-art, automotive-qualified 200mm-capable wafer fabrication facility in Marcy, New York, complemented by our mega materials factory expansion currently underway at our Durham headquarters. The new fabrication facility will be a bigger, highly-automated factory with greater output capability. The plan enables 25 percent increased capacity with lower net capital expenditures. Our expansion plan marks the Cree's largest investment to date in fueling our Wolfspeed silicon carbide and GaN on silicon carbide business. Acquisitions and Divestments: Our identified risks have not yet impacted our acquisitions planning but our climate change opportunities have been impacted in the short-term. We are expanding our power and radio frequency division due to increased demand, and in 2018 we acquired Infineon's RF Power Business for approximately € 345 million. This acquisition allows Cree's wireless market opportunity to expand, especially in terms of positioning our products to enable faster 4G networks and being on the forefront of providing products to transition to 5G. To further our strategy to create a more focused, powerhouse semiconductor company, we divested our Lighting Products business unit in 2019 for approximately \$310 million before tax impacts. In 2020, we announced the divestiture of our LED business unit for approximately \$300 million; this sale was finalized in 2021. Both transactions have provided significant resources to help accelerate the growth of our power and radio frequency division.</p>

C3.4a

(C3.4a) Provide any additional information on how climate-related risks and opportunities have influenced your strategy and financial planning (optional).

All information on how climate-related risks and opportunities have influenced our strategy and financial planning has been captured throughout section C3. Business Strategy.

C4. Targets and performance

C4.1

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

Intensity target

C4.1b

(C4.1b) Provide details of your emissions intensity target(s) and progress made against those target(s).

Target reference number

Int 2

Year target was set

2019

Target coverage

Business activity

Scope(s) (or Scope 3 category)

Scope 1+2 (location-based)

Intensity metric

Other, please specify (Revenue/MWh)

Base year

2017

Intensity figure in base year (metric tons CO2e per unit of activity)

1909

% of total base year emissions in selected Scope(s) (or Scope 3 category) covered by this intensity figure

98

Target year

2040

Targeted reduction from base year (%)

0

Intensity figure in target year (metric tons CO2e per unit of activity) [auto-calculated]

1909

% change anticipated in absolute Scope 1+2 emissions

-10

% change anticipated in absolute Scope 3 emissions

0

Intensity figure in reporting year (metric tons CO2e per unit of activity)

1742

% of target achieved [auto-calculated]

<Not Applicable>

Target status in reporting year

Underway

Is this a science-based target?

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

Target ambition

<Not Applicable>

Please explain (including target coverage)

Cree joined the EP100 initiative in 2017. In 2019, we updated our corporate-wide EP100 goal, which is to double our energy productivity in terms of revenue per MWh of energy consumed in manufacturing by 2040, using 2017 as our baseline. Because our goal is output per energy and increasing that metric will result in us achieving our goal (i.e., this is not a reduction goal), we cannot enter a targeted reduction from base year (%) because our progress will show an incorrect trend. Our baseline metric was 1909 (revenue/MWh) in 2017 and our figure in the 2040 target year is 3818 (revenue/MWh). We achieved a metric of 2099 (revenue/MWh) in 2019, which equates to achieving 55% of our target. In 2020, we achieved a metric of 1742 (revenue/MWh). The decline was caused by the divestiture of our LED business. Our total energy consumption (MWh) decreased in 2020 compared to 2019, even with including our LED business in 2020 energy use, but our last quarter relevant to the metric did not include LED revenue, causing our total revenue for the year to decline. Because the revenue value decreased, it caused our EP100 metric to also decrease in 2020. We are also working toward finalizing corporate Sustainability goals to reflect our power and radio frequency focus, which will include a climate change-related goal to help further reduce our greenhouse gas impacts. The goals are planned to be released toward the end of 2021.

C4.2

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

No other climate-related targets

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	1	36000
To be implemented*	3	674300
Implementation commenced*	2	101600
Implemented*	4	12006565
Not to be implemented	0	0

C4.3b

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

Initiative category & Initiative type

Other, please specify	Other, please specify (sold energy efficient products)
-----------------------	--

Estimated annual CO2e savings (metric tonnes CO2e)

12000000

Scope(s)

Scope 3

Voluntary/Mandatory

Voluntary

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

0

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

655600000

Payback period

<1 year

Estimated lifetime of the initiative

Ongoing

Comment

Our LED, power and radio frequency products sold in 2020 will save approximately 327 million MWh and 125 million metric tons CO2e over their estimated lifetimes compared to less efficient alternative products (e.g., silicon-based power products, silicon- or gallium arsenide-based radio frequency products). Since there are no estimated annual monetary savings and different product types will realize energy and GHG savings over different time frames, we cannot accurately choose a payback period. The value reported in estimated annual CO2e savings is the 125 million metric tons CO2e saved over our products' estimated lifetimes converted to an estimated annualized value.

Initiative category & Initiative type

Transportation	Other, please specify (COVID-19 travel restrictions)
----------------	--

Estimated annual CO2e savings (metric tonnes CO2e)

2446

Scope(s)

Scope 3

Voluntary/Mandatory

Mandatory

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

4000000

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

0

Payback period

<1 year

Estimated lifetime of the initiative

1-2 years

Comment

During the COVID-19 pandemic, we continued to operate the company globally, but due to travel restrictions were unable to travel for business purposes during most of 2020. In 2019, we began the transition to a new software as our primary communication and collaboration solution to allow for easier communication, fewer emails and an improved chat function and document collaboration capability, which enabled our employees to easily collaborate with each other and external stakeholders, instead of traveling to meet in person, during the COVID-19 pandemic. We foresee some of our business travel to return (e.g., customer visits) but feel that with some of the advances made in 2020, we may no longer need employees to travel for certain activities (e.g., use of phone/video chatting for employees at different Cree locations, conferences and trainings offered virtually).

Initiative category & Initiative type

Energy efficiency in production processes	Other, please specify (equipment elimination)
---	---

Estimated annual CO2e savings (metric tonnes CO2e)

19

Scope(s)

Scope 2 (location-based)

Voluntary/Mandatory

Voluntary

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

138000

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

430000

Payback period

1-3 years

Estimated lifetime of the initiative

Ongoing

Comment

In 2020 we made changes to one of our gas distribution systems at our Durham, NC, USA facility, which resulted in an annual reduction of about 53,000 kWh or 19 metric tons CO2e.

Initiative category & Initiative type

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

Estimated annual CO2e savings (metric tonnes CO2e)

4100

Scope(s)

Scope 2 (market-based)

Voluntary/Mandatory

Voluntary

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

0

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

0

Payback period

<1 year

Estimated lifetime of the initiative

Ongoing

Comment

In 2020, based on information from the utility, the electricity grid mix at our North Carolina facilities consisted of more nuclear and renewable energy sources, causing our Scope 2 (market based) emissions to decrease by about 4100 metric tons CO2e in 2020 compared to 2019 emissions.

C4.3c

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

Method	Comment
Compliance with regulatory requirements/standards	Our products are designed to meet or exceed the energy efficiency standards that have been adopted around the world. These standards have helped drive adoption of our products.
Employee engagement	We want to ensure that all employees work in a safe and healthy environment. We also direct our employee efforts and financial support to community engagement events and organizations. Our GHG impact is summarized and presented to manufacturing leadership and on internal communications to employees to promote awareness of Cree's direct and indirect emissions.
Financial optimization calculations	Reductions in energy usage and emissions correlate to money saved for our business.
Dedicated budget for energy efficiency	We have always focused our priorities on improving the design and energy efficiency of our products. We will continue to innovate for the future and develop the most efficient products.
Dedicated budget for low-carbon product R&D	We are constantly developing new technologies and creating new markets for our products.

C4.5

(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

(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

Company-wide

Description of product/Group of products

Cree's LED chips, LED components, LED modules, power products, and radio frequency products are energy efficient.

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

Avoided emissions

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

Other, please specify (internal product data)

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

100

% of total portfolio value

<Not Applicable>

Asset classes/ product types

<Not Applicable>

Comment

Our LED, power and radio frequency products sold in 2020 will save approximately 327 million MWh and 125 million metric tons CO2e over their estimated lifetimes compared to less efficient alternative products (e.g., silicon-based power products, silicon- or gallium arsenide-based radio frequency products). Our power products are more energy efficient than competing brands. Replacing a silicon diode with our silicon carbide Schottky diode hard-switched insulated-gate bipolar transistor (IGBT) application reduces switching losses in the diode by 80 percent, while switching losses in the IGBT drop 50 percent.

C5. Emissions methodology

C5.1

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

Scope 1

Base year start

January 1 2019

Base year end

December 31 2019

Base year emissions (metric tons CO2e)

247202

Comment

We established a new baseline with 2019 emissions because this was the first year we included all global facilities (owned and leased manufacturing facilities, R&D-only facilities, sales offices and warehouses) in our data for energy consumption and GHG emissions. We also divested our Lighting Products business unit operations in 2019, which are excluded from our 2019 emissions, so that we can establish a new baseline for our LED, power and radio frequency operations.

Scope 2 (location-based)

Base year start

January 1 2019

Base year end

December 31 2019

Base year emissions (metric tons CO2e)

166055

Comment

We established a new baseline with 2019 emissions because this was the first year we included all global facilities (owned and leased manufacturing facilities, R&D-only facilities, sales offices and warehouses) in our data for energy consumption and GHG emissions. We also divested our Lighting Products business unit operations in 2019, which are excluded from our 2019 emissions, so that we can establish a new baseline for our LED, power and radio frequency operations.

Scope 2 (market-based)

Base year start

January 1 2020

Base year end

December 31 2020

Base year emissions (metric tons CO2e)

123200

Comment

Previously our market-based Scope 2 emissions only included emissions from owned Cree US manufacturing facilities. Our 2020 market-based Scope 2 emissions now include all of our global facilities and as a result, we have established a new market-based Scope 2 emissions baseline using 2020 emissions.

C5.2

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

Defra Environmental Reporting Guidelines: Including streamlined energy and carbon reporting guidance, 2019

IEA CO2 Emissions from Fuel Combustion

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

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

US EPA Mandatory Greenhouse Gas Reporting Rule

US EPA Emissions & Generation Resource Integrated Database (eGRID)

C6. Emissions data

C6.1

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

Reporting year

Gross global Scope 1 emissions (metric tons CO2e)

280566

Start date

<Not Applicable>

End date

<Not Applicable>

Comment

C6.2

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

Row 1

Scope 2, location-based

We are reporting a Scope 2, location-based figure

Scope 2, market-based

We are reporting a Scope 2, market-based figure

Comment

C6.3

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

Reporting year

Scope 2, location-based

152808

Scope 2, market-based (if applicable)

123200

Start date

<Not Applicable>

End date

<Not Applicable>

Comment

C6.4

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

No

C6.5

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

Purchased goods and services

Evaluation status

Relevant, calculated

Metric tonnes CO2e

2454354

Emissions calculation methodology

Our purchased goods and services emissions were calculated using spend-based Greenhouse Gas Protocol (Quantis) factors.

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

0

Please explain

Our purchased goods and services emissions were calculated using spend-based Greenhouse Gas Protocol (Quantis) factors.

Capital goods

Evaluation status

Relevant, calculated

Metric tonnes CO2e

317591

Emissions calculation methodology

Our capital goods emissions were calculated using spend-based Greenhouse Gas Protocol (Quantis) factors.

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

0

Please explain

Our capital goods emissions were calculated using spend-based Greenhouse Gas Protocol (Quantis) factors.

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

Evaluation status

Relevant, calculated

Metric tonnes CO₂e

37737

Emissions calculation methodology

The emissions reported here contain emissions from fuel-and-energy related activities from purchased fuel and electricity for all of Cree's global locations. The emissions also include T&D losses for all of Cree's global locations. The emissions due to purchased fuel and electricity were calculated using Cree's actual fuel and electricity amounts and Greenhouse Gas Protocol (Quantis) factors and DEFRA factors, respectively. Cree calculated US facilities' T&D losses using US EPA EGRID factors and international facilities' T&D losses using World Development Indicators data.

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

0

Please explain

The emissions reported here contain emissions from fuel-and-energy related activities from purchased fuel and electricity for all of Cree's global locations. The emissions also include T&D losses for all of Cree's global locations. The emissions due to purchased fuel and electricity were calculated using Cree's actual fuel and electricity amounts and Greenhouse Gas Protocol (Quantis) factors and DEFRA factors, respectively. Cree calculated US facilities' T&D losses using US EPA EGRID factors and international facilities' T&D losses using World Development Indicators data.

Upstream transportation and distribution

Evaluation status

Relevant, calculated

Metric tonnes CO₂e

5926

Emissions calculation methodology

The emissions reported here contain emissions from our upstream transportation and distribution. We used transportation emission factors from EPA's Center for Corporate Climate Leadership GHG Emission Factors Hub.

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

0

Please explain

The emissions reported here contain emissions from our upstream transportation and distribution. We used transportation emission factors from EPA's Center for Corporate Climate Leadership GHG Emission Factors Hub.

Waste generated in operations

Evaluation status

Relevant, calculated

Metric tonnes CO₂e

2670

Emissions calculation methodology

The emissions reported here include emissions from the disposal and transportation of all chemical waste and solid waste from Cree's global facilities. Cree used EPA WARM emission factors to calculate emissions from waste disposal. Cree used emission factors EPA's Center for Corporate Climate Leadership GHG Emission Factors Hub to calculate the emissions associated with the transportation of waste.

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

0

Please explain

The emissions reported here include emissions from the disposal and transportation of all chemical waste and solid waste from Cree's global facilities. Cree used EPA WARM emission factors to calculate emissions from waste disposal. Cree used emission factors EPA's Center for Corporate Climate Leadership GHG Emission Factors Hub to calculate the emissions associated with the transportation of waste.

Business travel

Evaluation status

Relevant, calculated

Metric tonnes CO₂e

551

Emissions calculation methodology

We used US EPA's Scope 3 Inventory Guidance to calculate our emissions from business travel. We used emission factors from EPA's Center for Corporate Climate Leadership GHG Emission Factors Hub.

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

0

Please explain

We used US EPA's Scope 3 Inventory Guidance to calculate our emissions from business travel. We used emission factors from EPA's Center for Corporate Climate Leadership GHG Emission Factors Hub.

Employee commuting

Evaluation status

Relevant, calculated

Metric tonnes CO₂e

1278

Emissions calculation methodology

We used US EPA's Scope 3 Inventory Guidance to calculate our emissions from employee commuting. We used emission factors from EPA's Center for Corporate Climate Leadership GHG Emission Factors Hub. Using EPA eGRID emission factors, we also include estimated GHG emissions from employees who are home-based (i.e., do not travel to one of our offices and work from home) and employees who worked from home due to COVID-19 restrictions. For our employees who are home-based and who worked from home due to COVID-19 restrictions, we included T&D losses from their use of electricity using US EPA EGRID factors. At some locations, Cree has onsite electric vehicle (EV) charging stations that are available for all employees to use. Data associated with our employees' use of our EV charging stations versus using combustion engine vehicles has also been incorporated into this calculation.

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

0

Please explain

We used US EPA's Scope 3 Inventory Guidance to calculate our emissions from employee commuting. We used emission factors from EPA's Center for Corporate Climate Leadership GHG Emission Factors Hub. Using EPA eGRID emission factors, we also include estimated GHG emissions from employees who are home-based (i.e., do not travel to one of our offices and work from home) and employees who worked from home due to COVID-19 restrictions. For our employees who are home-based and who worked from home due to COVID-19 restrictions, we included T&D losses from their use of electricity using US EPA EGRID factors. At some locations, Cree has onsite electric vehicle (EV) charging stations that are available for all employees to use. Data associated with our employees' use of our EV charging stations versus using combustion engine vehicles has also been incorporated into this calculation.

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>

Please explain

This category is not relevant because we do not have any upstream leased assets.

Downstream transportation and distribution

Evaluation status

Relevant, calculated

Metric tonnes CO₂e

1436

Emissions calculation methodology

The emissions reported here contain emissions from our downstream transportation and distribution. We used transportation emission factors from EPA's Center for Corporate Climate Leadership GHG Emission Factors Hub.

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

0

Please explain

The emissions reported here contain emissions from our downstream transportation and distribution. We used transportation emission factors from EPA's Center for Corporate Climate Leadership GHG Emission Factors Hub.

Processing of sold products

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>

Please explain

This category is relevant but not yet calculated.

Use of sold products

Evaluation status

Relevant, calculated

Metric tonnes CO₂e

179600000

Emissions calculation methodology

The product use emissions include the emissions associated with the energy required to use Cree products sold in 2020 over their estimated lifetimes. The emissions also include T&D losses for the electricity required to use Cree products sold in 2020 over their estimated lifetimes. Although our products are sold and used globally, we used EPA eGRID emission factors to estimate emissions associated with electricity consumed by our products and from T&D losses. For Cree products used in automotive applications, as a worst case assumption (i.e., assuming no vehicles are EVs), gasoline CO₂e emissions were calculated using emission factors from EPA's Center for Corporate Climate Leadership GHG Emission Factors Hub.

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

0

Please explain

The product use emissions include the emissions associated with the energy required to use Cree products sold in 2020 over their estimated lifetimes. The emissions also include T&D losses for the electricity required to use Cree products sold in 2020 over their estimated lifetimes. Although our products are sold and used globally, we used EPA eGRID emission factors to estimate emissions associated with electricity consumed by our products and from T&D losses. For Cree products used in automotive applications, as a worst case assumption (i.e., assuming no vehicles are EVs), gasoline CO₂e emissions were calculated using emission factors from EPA's Center for Corporate Climate Leadership GHG Emission Factors Hub.

End of life treatment of sold products

Evaluation status

Relevant, calculated

Metric tonnes CO₂e

11

Emissions calculation methodology

Our product end of life emissions are the emissions associated with disposing of our products and packaging sold in 2020 at the end of their lives. EPA WARM emission factors were used and as a worst case, we assumed that all products and packaging were disposed of in a landfill.

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

0

Please explain

Our product end of life emissions are the emissions associated with disposing of our products and packaging sold in 2020 at the end of their lives. EPA WARM emission factors were used and as a worst case, we assumed that all products and packaging were disposed of in a landfill.

Downstream 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>

Please explain

This category is not relevant because all of our downstream leased assets are included in our Scope 1 and 2 emissions.

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>

Please explain

This category is not relevant because Cree does not have 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>

Please explain

This category is not relevant to Cree's business operations because Cree is neither an investor company nor a company that provides financial services.

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>

Please explain

This category is not relevant because we do not believe we have any additional upstream activities that would result in GHG emissions.

Other (downstream)

Evaluation status

Relevant, calculated

Metric tonnes CO₂e

13889

Emissions calculation methodology

The majority of our products are manufactured at our production facilities located in the US and China. We also use contract manufacturers for certain products and aspects of product fabrication, assembly and packaging. Emissions from our contract manufacturers were calculated using spend-based Greenhouse Gas Protocol (Quantis) factors.

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

0

Please explain

The majority of our products are manufactured at our production facilities located in the US and China. We also use contract manufacturers for certain products and aspects of product fabrication, assembly and packaging. Emissions from our contract manufacturers were calculated using spend-based Greenhouse Gas Protocol (Quantis) factors.

C6.7

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

No

C6.10

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

Intensity figure

0.00048

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

433374

Metric denominator

unit total revenue

Metric denominator: Unit total

903900000

Scope 2 figure used

Location-based

% change from previous year

22.9

Direction of change

Increased

Reason for change

Our Scope 1 and 2 emissions per revenue increased in 2020 compared to 2019 because of product mix changes and revenue changes due to shifting our focus toward our power and RF products.

C7. Emissions breakdowns

C7.1

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

Yes

C7.1a

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

Greenhouse gas	Scope 1 emissions (metric tons of CO2e)	GWP Reference
CO2	12948	IPCC Fourth Assessment Report (AR4 - 100 year)
CH4	62	IPCC Fourth Assessment Report (AR4 - 100 year)
N2O	3861	IPCC Fourth Assessment Report (AR4 - 100 year)
HFCs	14068	IPCC Fourth Assessment Report (AR4 - 100 year)
PFCs	74204	IPCC Fourth Assessment Report (AR4 - 100 year)
SF6	152708	IPCC Fourth Assessment Report (AR4 - 100 year)
NF3	4203	IPCC Fourth Assessment Report (AR4 - 100 year)
Other, please specify (Heat Transfer Fluids (HTF))	15012	IPCC Fourth Assessment Report (AR4 - 100 year)
Other, please specify (Refrigerants)	3500	IPCC Fourth Assessment Report (AR4 - 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)
United States of America	280445
China	38
China, Hong Kong Special Administrative Region	47
Finland	1
Germany	9
India	2
Japan	7
Malaysia	3
Republic of Korea	2
Sweden	10
Taiwan, Greater China	1

C7.3

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

- By business division
- By facility
- By activity

C7.3a

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

Business division	Scope 1 emissions (metric ton CO2e)
LED	83086
Power and RF	197480

C7.3b

(C7.3b) Break down your total gross global Scope 1 emissions by business facility.

Facility	Scope 1 emissions (metric tons CO2e)	Latitude	Longitude
Durham, NC, USA	103312	35.899478	-78.842384
RTP, NC, USA	166154	35.916052	-78.872103
Morgan Hill, CA, USA	9524	37.144353	-121.653201
Huizhou, China	11	23.012883	114.348197
Durham (warehouse), NC, USA	145	35.926622	-78.851328
Albany, NY, USA	1116	42.690401	-73.832215
Fayetteville, AR, USA	131	36.042318	-94.168059
Mesa, AZ, USA	12	33.384033	-111.809181
Shanghai, China	7	31.233199	121.383499
Shenzhen, China	17	22.533077	114.069196
Beijing, China	3	39.994741	116.404222
Hong Kong	47	22.427915	114.210908
Munich, Germany	9	48.284908	11.5627
Kista, Sweden	10	59.403996	17.948059
Oulu, Finland	1	65.050092	25.586842
Tokyo, Japan	7	35.655863	139.75668
Suwon, South Korea	2	37.270794	127.068162
Penang, Malaysia	3	5.336597	100.292554
Taipei, Taiwan	1	25.008056	121.483988
Gurgaon, India	2	28.425027	77.068393
Sanford, NC, USA	43	35.449556	-79.143388
Utica, NY, USA	8	43.102664	-75.224287

C7.3c

(C7.3c) Break down your total gross global Scope 1 emissions by business activity.

Activity	Scope 1 emissions (metric tons CO2e)
Manufacturing (note: some manufacturing operations have offices and warehouses on the same property. In this situation, these operations/buildings have been included in the Manufacturing category)	279133
Offices (including R&D-only facilities and sales offices)	1246
Warehouses	187

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 for in Scope 2 market-based approach (MWh)
United States of America	110201	80593	312435	169460
China	41916	41916	61871	0
China, Hong Kong Special Administrative Region	496	496	767	0
Germany	57	57	152	0
Sweden	4	4	174	0
Finland	4	4	18	0
Japan	51	51	111	0
Republic of Korea	14	14	27	0
Malaysia	23	23	35	0
Taiwan, Greater China	13	13	23	0
India	29	29	40	0

C7.6

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

By business division

By facility

By activity

C7.6a

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

Business division	Scope 2, location-based (metric tons CO2e)	Scope 2, market-based (metric tons CO2e)
LED	65999	59463
Power and RF	86809	63738

C7.6b

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

Facility	Scope 2, location-based (metric tons CO2e)	Scope 2, market-based (metric tons CO2e)
Durham, NC, USA	93804	68665
RTP, NC, USA	14454	10581
Morgan Hill, CA, USA	391	0
Huizhou, China	41610	41610
Durham (warehouse), NC, USA	590	432
Albany, NY, USA	50	50
Fayetteville, AR, USA	636	636
Mesa, AZ, USA	79	79
Shanghai, China	82	82
Shenzhen, China	195	195
Beijing, China	29	29
Hong Kong	496	496
Munich, Germany	57	57
Kista, Sweden	4	4
Oulu, Finland	4	4
Tokyo, Japan	51	51
Suwon, South Korea	14	14
Penang, Malaysia	23	23
Taipei, Taiwan	13	13
Gurgaon, India	29	29
Sanford, NC, USA	174	127
Utica, NY, USA	23	23

C7.6c

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

Activity	Scope 2, location-based (metric tons CO2e)	Scope 2, market-based (metric tons CO2e)
Manufacturing (note: some manufacturing operations have offices and warehouses on the same property. In this situation, these operations/buildings have been included in the Manufacturing category)	150895	121492
Offices (including R&D-only facilities and sales offices)	1149	1149
Warehouses	764	559

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?

Increased

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	4491	Decreased	1	Our Morgan Hill, CA, USA facility purchases electricity from renewable sources, saving an estimated 391 metric tons CO2e in 2020 compared to if the facility had bought all electricity from non-renewable resources (using the EPA eGRID2019 California State Output Emission Rate). Also, in 2020 the electricity grid mix at our North Carolina facilities used more nuclear and renewable energy sources, based on information provided by our supplier, causing our Scope 2 (market based) emissions to decrease by about 4100 metric tons CO2e in 2020 compared to 2019 emissions.
Other emissions reduction activities	19	Decreased	0.004	In 2020 we made changes to one of our gas distribution systems at our Durham, NC, USA facility, which resulted in an annual reduction of about 53,000 kWh or 19 metric tons CO2e.
Divestment	0	No change	0	We did not have any divestments in 2020. In 2020, Cree announced the divestiture of its LED business, which was finalized in early 2021.
Acquisitions	0	No change	0	We did not have any acquisitions in 2020.
Mergers	0	No change	0	We did not undergo any mergers in 2020.
Change in output	32232	Increased	7.4	Cree's usage of fuel and fluorinated gases in its manufacturing processes changed in 2020 compared to 2019 due to changes in output and product mix, causing our Scope 1 emissions to change.
Change in methodology	6200	Decreased	1.4	We incorporated updated emission factors in 2020, leading to about a reduction of 6200 metric tons CO2e in Scope 2 location based emissions (e.g., new EPA eGRID2019 were available for use for our 2020 emissions inventory. This reduction for US facilities was calculated using electricity use and eGRID 2018 factors versus new eGRID 2019 factors).
Change in boundary	0	No change	0	We did not change our boundary in 2020.
Change in physical operating conditions	0	No change	0	We did not change our physical operating conditions in 2020.
Unidentified	0	No change	0	We have not identified any unidentified reasons for any change in our GHG emissions
Other	7489	Decreased	1.7	Our total electricity use at two of our manufacturing facilities decreased, resulting in an estimated decrease in 7,489 metric tons CO2e in 2020 compared to 2019 electricity use.

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?

Location-based

C8. Energy

C8.1

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

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

C8.2

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

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

C8.2a

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

	Heating value	MWh from renewable sources	MWh from non-renewable sources	Total (renewable and non-renewable) MWh
Consumption of fuel (excluding feedstock)	HHV (higher heating value)	0	71350	71350
Consumption of purchased or acquired electricity	<Not Applicable>	29593	346059	375652
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>	<Not Applicable>	<Not Applicable>	<Not Applicable>
Consumption of self-generated non-fuel renewable energy	<Not Applicable>	<Not Applicable>	<Not Applicable>	<Not Applicable>
Total energy consumption	<Not Applicable>	29593	417409	447002

C8.2b

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

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

C8.2c

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

Fuels (excluding feedstocks)

Diesel

Heating value

HHV (higher heating value)

Total fuel MWh consumed by the organization

215

MWh fuel consumed for self-generation of electricity

<Not Applicable>

MWh fuel consumed for self-generation of heat

<Not Applicable>

MWh fuel consumed for self-generation of steam

<Not Applicable>

MWh fuel consumed for self-generation of cooling

<Not Applicable>

MWh fuel consumed for self-cogeneration or self-trigeneration

<Not Applicable>

Emission factor

74.21

Unit

kg CO2e per million Btu

Emissions factor source

US EPA Mandatory Greenhouse Gas Reporting Regulations - 40 CFR 98 Subpart C, Table C-1 and C-2

Comment

Fuels (excluding feedstocks)

Natural Gas

Heating value

HHV (higher heating value)

Total fuel MWh consumed by the organization

70835

MWh fuel consumed for self-generation of electricity

<Not Applicable>

MWh fuel consumed for self-generation of heat

<Not Applicable>

MWh fuel consumed for self-generation of steam

<Not Applicable>

MWh fuel consumed for self-generation of cooling

<Not Applicable>

MWh fuel consumed for self-cogeneration or self-trigeneration

<Not Applicable>

Emission factor

53.11

Unit

kg CO2e per million Btu

Emissions factor source

US EPA Mandatory Greenhouse Gas Reporting Regulations - 40 CFR 98 Subpart C, Table C-1 and C-2

Comment

Fuels (excluding feedstocks)

Motor Gasoline

Heating value

HHV (higher heating value)

Total fuel MWh consumed by the organization

173

MWh fuel consumed for self-generation of electricity

<Not Applicable>

MWh fuel consumed for self-generation of heat

<Not Applicable>

MWh fuel consumed for self-generation of steam

<Not Applicable>

MWh fuel consumed for self-generation of cooling

<Not Applicable>

MWh fuel consumed for self-cogeneration or self-trigeneration

<Not Applicable>

Emission factor

70.47

Unit

kg CO2e per million Btu

Emissions factor source

US EPA Mandatory Greenhouse Gas Reporting Regulations - 40 CFR 98 Subpart C, Table C-1 and C-2

Comment

Fuels (excluding feedstocks)

Propane Gas

Heating value

HHV (higher heating value)

Total fuel MWh consumed by the organization

126

MWh fuel consumed for self-generation of electricity

<Not Applicable>

MWh fuel consumed for self-generation of heat

<Not Applicable>

MWh fuel consumed for self-generation of steam

<Not Applicable>

MWh fuel consumed for self-generation of cooling

<Not Applicable>

MWh fuel consumed for self-cogeneration or self-trigeneration

<Not Applicable>

Emission factor

61.71

Unit

kg CO2e per million Btu

Emissions factor source

US EPA Mandatory Greenhouse Gas Reporting Regulations - 40 CFR 98 Subpart C, Table C-1 and C-2

Comment

C8.2e

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

Sourcing method

Standard product offering by an energy supplier supported by energy attribute certificates

Low-carbon technology type

Other, please specify (Third-party company supplies renewable energy through the local utility's grid)

Country/area of consumption of low-carbon electricity, heat, steam or cooling

United States of America

MWh consumed accounted for at a zero emission factor

2224

Comment

According to information from our utility, all the electricity purchased at our Morgan Hill, CA, USA facility comes from renewable sources (e.g., Solar, Wind, Hydropower) and a third-party company supplies renewable energy through the local utility's grid.

Sourcing method

Other, please specify (Grid mix and emission factors provided by local utility)

Low-carbon technology type

Other, please specify (Solar, Wind, Hydropower, Nuclear)

Country/area of consumption of low-carbon electricity, heat, steam or cooling

United States of America

MWh consumed accounted for at a zero emission factor

167236

Comment

We use electricity mix data and emission factors provided by our utility at our North Carolina, USA locations to understand the amount of renewable and carbon-free (nuclear) electricity we purchase. We use this information to calculate our market based Scope 2 emissions.

C9. Additional metrics

C9.1

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

Description

Energy usage

Metric value

327

Metric numerator

million MWh

Metric denominator (intensity metric only)

Not applicable

% change from previous year

6,5

Direction of change

Decreased

Please explain

We have always focused our priorities on improving the energy efficiency of our products, which in turn have a lower impact on the environment and climate change. The products we produce and sell globally actually result in a net positive impact on climate change. Our LED, power and RF products sold in 2020 will save approximately 327 million MWh and 125 million metric tons CO₂e over their estimated lifetimes compared to less efficient alternative products (e.g., silicon-based power products, silicon- or gallium arsenide-based RF products). The energy savings of our sold products decreased slightly in 2020 compared to the 350 million MWh of estimated savings in 2019 due to product mix differences in 2019 versus 2020.

C10. Verification

C10.1

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

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

C10.1a

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

Verification or assurance cycle in place

Annual process

Status in the current reporting year

Complete

Type of verification or assurance

Limited assurance

Attach the statement

Cree_Trinity Assurance Statement_CY2020 20210726.pdf

Page/ section reference

Pages 1-3 (all pages)

Relevant standard

ISAE3000

Proportion of reported emissions verified (%)

99

C10.1b

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

Scope 2 approach

Scope 2 location-based

Verification or assurance cycle in place

Annual process

Status in the current reporting year

Complete

Type of verification or assurance

Limited assurance

Attach the statement

Cree_Trinity Assurance Statement_CY2020 20210726.pdf

Page/ section reference

Pages 1-3 (all pages)

Relevant standard

ISAE3000

Proportion of reported emissions verified (%)

99

C10.1c

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

Scope 3 category

Scope 3: Upstream transportation and distribution

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

Cree_Trinity Assurance Statement_CY2020 20210726.pdf

Page/section reference

Pages 1-3 (all pages)

Relevant standard

ISAE3000

Proportion of reported emissions verified (%)

100

Scope 3 category

Scope 3: Downstream transportation and distribution

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

Cree_Trinity Assurance Statement_CY2020 20210726.pdf

Page/section reference

Pages 1-3 (all pages)

Relevant standard

ISAE3000

Proportion of reported emissions verified (%)

100

Scope 3 category

Scope 3: Waste generated in operations

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

Cree_Trinity Assurance Statement_CY2020 20210726.pdf

Page/section reference

Pages 1-3 (all pages)

Relevant standard

ISAE3000

Proportion of reported emissions verified (%)

100

C10.2

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

Yes

C10.2a

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

Disclosure module verification relates to	Data verified	Verification standard	Please explain
C8. Energy	Energy consumption	Our third party data verification followed their standard assurance methodology and approach for external verification of sustainability data, in part based on the [International Standard on Assurance Engagements (ISAE) 3000, Assurance Engagements Other Than Audits or reviews of Historical Financial Information (2012), suitably adapted.	Refer to the attached Assurance Statement. We received limited assurance of our total energy consumption (MWh) data. Cree_Trinity Assurance Statement_CY2020 20210726.pdf

C11. Carbon pricing

C11.1

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

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

C11.2

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

No

C11.3

(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

C12.1

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

Yes, our customers

Yes, other partners in the value chain

C12.1b

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

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

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

99

Portfolio coverage (total or outstanding)

<Not Applicable>

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

All Cree customers can view information about our products and operations on our website, which is publicly available. Information regarding the energy efficiency of our products can be found throughout our website (www.wolfspeed.com). Further information about our products' energy efficiency, REACH and RoHS declarations and how to dispose of our products at the end of their lives is communicated to our customers in our Sustainability Reports (<https://www.wolfspeed.com/company/sustainability/>). Information about Cree's carbon footprint and climate change risks and opportunities can be found in the Energy and GHG Emissions section of our Sustainability Reports, TCFD reports and our CDP Climate Change surveys (<https://www.wolfspeed.com/company/sustainability/>).

Impact of engagement, including measures of success

To better inform our customers, we are committed to transparency of our GHG emissions and climate strategy. Being transparent about our products and operations helps maintain positive relationships and develop new relationships with our customers.

Type of engagement

Other, please specify (Customer surveys)

Details of engagement

Other, please specify (Responding to customer surveys)

% of customers by number

25

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

0

Portfolio coverage (total or outstanding)

<Not Applicable>

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

Many of our customers request that we fill out surveys, which often contain questions about our environmental performance (Cree's Scope 1 and 2 emissions). Cree also engages with customers about climate-related information through annual completion of CDP Climate Change and CDP Supply Chain.

Impact of engagement, including measures of success

Being transparent about our products and operations when completing customer surveys helps maintain positive relationships with our customers. The percent of Scope 3 emissions as reported in C6.5 is reported as 0 because at this time we are not able to allocate emissions based on exact products sold to the customers that request us to fill out environmental performance surveys.

C12.1d

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

All interested parties (e.g., customers, investors, community members) can view information about our products and operations on our website, which is publicly available. Information regarding the energy efficiency of our products can be found throughout our website (www.wolfspeed.com). Information about our products' energy efficiency, REACH and RoHS declarations, and how to dispose of our products at the end of their lives is communicated on our website and in our annual Sustainability Report (<https://www.wolfspeed.com/company/sustainability/>). Information about Cree's carbon footprint and climate change risks and opportunities can be found in the Energy and GHG Emissions and TCFD sections of our Sustainability Reports and our CDP Climate Change surveys (<https://www.wolfspeed.com/company/sustainability/>). Cree also engages with investors and customers about climate-related information through annual completion of CDP Climate Change and CDP Supply Chain. When requested, Cree also engages directly with investors on a variety of Sustainability and climate-related topics, including the energy and GHG emissions savings of the use of our products compared to incumbent technologies.

C12.3

(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?

Trade associations

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

Semiconductor Industry Association

Is your position on climate change consistent with theirs?

Consistent

Please explain the trade association's position

The Semiconductor Industry Association's (SIA) position on climate change and greenhouse gas emissions is available on their website. As noted by the SIA, the U.S. semiconductor industry is responsible for a fraction of one percent of U.S. greenhouse gas (GHG) emissions, according to the EPA's GHG Reporting Program data. Although the industry contributes only a very small amount of GHG emissions, SIA and its members have been engaged in ongoing efforts to reduce these emissions.

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

Cree is an active member of the Semiconductor Industry Association. We have not attempted to influence their position because we are aligned with their position on climate-related issues.

C12.3f

(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?

Our mission is to lead the innovation and commercialization of SiC and gallium nitride (GaN), liberating designers to invent power and wireless systems for a responsible, energy efficient future. Our power and radio frequency division has grown into a world-renowned commercial supplier of the fastest, most efficient semiconductor components ever available, enabling greater efficiency and performance, smaller systems and lower costs. Cree's power and radio frequency products allow other industries to develop leading energy efficient products in applications such as renewable energy, wireless communication and electric vehicles. When choosing activities, we ensure they are in line with our company mission internally and externally. Future activities will be driven by our corporate Sustainability goals, which will include a climate change-related goal to help further reduce our greenhouse gas impacts. The goals are planned to be released toward the end of 2021. We have not directly engaged with policy makers on climate-related issues as they relate to our power and radio frequency products, which is our new strategic focus. We choose to engage with other organizations, such as PowerAmerica and the Semiconductor Industry Association (SIA), for example, instead of directly engaging with policy makers. We plan to continue to support Cree's own efforts as well as support other organizations' efforts to ensure the growth of the semiconductor industry while also considering climate change issues going forward.

C12.4

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

Publication

In voluntary sustainability report

Status

Underway – previous year attached

Attach the document

2020_TCFD_Report.pdf

Page/Section reference

Pages 1-2 (all pages)

Content elements

Governance
Strategy
Risks & opportunities
Emissions figures
Emission targets
Other metrics

Comment

We have published a separate TCFD report

Publication

In voluntary sustainability report

Status

Underway – previous year attached

Attach the document

Cree_WolfSpeed_Sustainability_Report_2020.pdf

Page/Section reference

Pages 3, 58, 61-67, 80-82, 84-85

Content elements

Governance
Strategy
Risks & opportunities

Emissions figures
Emission targets
Other metrics

Comment

Our annual sustainability report contains various climate change-related information

Publication

In voluntary communications

Status

Complete

Attach the document

Environmental Training.pdf

Page/Section reference

Pages 1-5 (all pages)

Content elements

Emissions figures
Emission targets
Other metrics

Comment

We provide environmental training to our employees, which includes information about energy and GHG emissions. The training attached is an example of training we provide and only contains the information relevant to this survey. All pages of the training are not included in this attachment for confidentiality reasons.

Publication

In voluntary sustainability report

Status

Underway – previous year attached

Attach the document

2020_Data_Report.pdf

Page/Section reference

Pages 2-5

Content elements

Emissions figures
Other metrics

Comment

Our annual sustainability data report contains various climate change-related data

Publication

In other regulatory filings

Status

Complete

Attach the document

2020 EPA GHG Report.pdf

Page/Section reference

Pages 1-18 (all pages)

Content elements

Emissions figures

Comment

We annually report our Scope 1 GHG emissions from semiconductor manufacturing for our facilities subject to the US EPA Mandatory Greenhouse Gas Reporting Rule.

C15. Signoff

C-FI

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

C15.1

(C15.1) Provide details for the person that has signed off (approved) your CDP climate change response.

	Job title	Corresponding job category
Row 1	President and CEO	Director on board