Advanced Micro Devices, Inc - Climate Change 2021



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C0.1

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

AMD is a global semiconductor company that designs and delivers: x86 microprocessors for servers, notebooks, workstations, and desktop PCs and x86 microprocessors with integrated graphics for notebook and desktop PCs; Graphics processing units (GPUs) for notebooks, desktop PCs, workstations, and the data center; and Embedded and semi-custom processors for game consoles, displays, thin clients, storage systems, and more.

Founded in 1969 as a Silicon Valley start-up, the AMD journey began with dozens of employees focused on leading-edge semiconductor products. From those modest beginnings, AMD has grown into a global company achieving many important industry firsts along the way. We are proud of our culture of bold technology bets, ambitious product roadmaps, deep partnerships, and excellence in execution. We operate in over 35 locations worldwide (https://www.amd.com/en/corporate/locations), including engineering facilities, sales and business service sites, and corporate offices.

C0.2

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

	Start date	End date		Select the number of past reporting years you will be providing emissions data for
teporting ear	January 1 2020	December 31 2020	No	<not applicable=""></not>

C0.3

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

Canada

China

India Singapore

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

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

Position of	Please explain
individual(s	
Board-level	The highest level of ESG oversight, including climate-related issues, at AMD is the AMD Board of Directors, which receives reports from and engages with management at least quarterly on ESG
committee	issues, practices and reporting. In 2020, the AMD Board formally added oversight of ESG to the Nominations and Governance Committee who receives additional updates for further engagement.
	Climate-related briefings on strategy and goal performance are scheduled for the full Board of Directors at least annually. The Nominations and Governance Committee receives additional updates as
	matters arise for further engagement.

C1.1b

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

Frequency with which climate-	Governance mechanisms into	Scope of	Please explain
related issues are a scheduled	which climate-related issues are	board-level	
agenda item	integrated	oversight	
Scheduled – some meetings	Reviewing and guiding strategy Monitoring implementation and performance of objectives	<not Applicable></not 	Climate-related briefings on strategy and performance objectives are scheduled for the full Board of Directors at least annually. The Nominations and Governance Committee receives additional updates as matters arise for further engagement.

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	, ,	_	Frequency of reporting to the board on climate-related issues
Corporate responsibility committee		Both assessing and managing climate-related risks and opportunities	<not applicable=""></not>	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).

The AMD Executive Team (AET) receives regular updates, at least monthly, on ESG matters including at least annual briefings on climate goals and progress. AET members actively participate in setting ESG strategic priorities and goals for their departments, while providing the necessary company investments and resources to demonstrate progress.

The AMD ESG Executive Steering Committee is responsible for overseeing progress on the company's ESG priorities, goals, and disclosures while regularly communicating with the AET. The Committee is comprised of cross-functional leaders (Director level or higher) from Finance, Global Operations, Human Resource, Investor Relations, Legal, Public Affairs, and other departments.

Climate-related issues are managed by the Corporate Responsibility team, which resides within the Public Affairs department. The CR team works closely with supply chain, product engineers, regulatory affairs and EHS to coordinate initiatives related to energy use and GHG emissions across the company's value chain. Meetings are held regularly with each group, either bi-weekly, monthly or quarterly, to identify issues and opportunities as well as track progress related to reducing energy use and/or GHG emissions.

The Public Affairs team consists of:

- Corporate Vice President, Government Affairs and Corporate Responsibility Oversight of CR, Government Affairs, and Community Affairs, and co-leads the cross-functional energy efficiency team at AMD
- Director of Corporate Responsibility Leads climate strategy and initiatives, including supply chain environmental impacts, renewable energy sourcing, and product energy/carbon footprinting.
- Senior Manager of Corporate Responsibility Leads CR reporting and communications (reporting frameworks, website, etc)
- Manager of Corporate Responsibility Coordinates supply chain responsibility (including supplier risk assessment, audits, and training), assists in responses to external inquiries, and manages the AMD employee "Go Green" program
- Senior Manager of Regulatory Affairs Monitors global product energy efficiency regulations and works with engineers and business units to inform product designs
- Head of Community Affairs Leads employee volunteerism and participates on the Advisory Board for Employee Resource Groups, which provides funds to initiatives like the employee "Go Green" program.

Additional staff in other departments have roles/responsibilities related to CR initiatives, including Engineering (product energy efficiency), Quality/Legal/Sales (customer responses), Global Operations (supplier business reviews), and EHS (building operations).

CDP

(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	L	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 inventivized	Comment
All employees	Monetary reward	Behavior change related indicator	AMD occasionally rewards employees who organize Earth Week and other volunteer events with "Spotlight Awards" that include a cash incentive.
All employees	Non- monetary reward	Behavior change related indicator	The AMD Go Green Program incentivizes employees to take personal sustainability actions at home, while commuting and at work. Examples include discounts on home solar panels and public transit passes in the US, or the annual EcoChallenge

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
-1	(years)		
Short-	0	3	Annual targets, year over year comparisons, and next year planning and proposals are part of our short-term strategies and execution.
term			
Medium-	3	5	This time frame aligns with our standard goal setting period and re-evaluation of the environmental strategy
term			
Long-	5	15	AMD looks at frameworks like science-based targets and the SDGs to align with longer-term risk factors and considerations, such as the IPCC recommendation to reduce GHG by
term			50% by 2030 in order to stay below a 1.5 degree Celsius threshold

C2.1b

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

In the context of climate-related considerations, AMD views 'substantive financial or strategic impacts' as material changes, either positive or negative, to the business, financial condition or operations.

We look at corporate responsibility through the lens of environment, social and governance (ESG) issues, which allows us to prioritize where we need to focus our efforts to have the most impact and operationalize our goals into the business. In 2020, we conducted a materiality assessment to seek and listen to external and internal stakeholder input. That assessment identified current or potential ESG impacts on our business, and from AMD on stakeholders and society. Advancing product energy efficiency, helping customers reduce emissions, reducing energy/emissions impacts in the supply chain, and having access to renewable energy were all examples of material risks and opportunities. In addition, acute physical risks to AMD operations, supply chain and product logistics have been identified due to extreme weather events such as floods, heat waves and freezes.

C2.2

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

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

For 2020, we expanded our GHG inventory to encompass more of our scope 3 emissions and thereby further inform our assessment of climate-related risks and opportunities. For Purchased Goods and Services (category 1), emissions from silicon wafer foundries and outsourced assembly and test (OSAT) were calculated using scope 1 and 2 emissions collected from top suppliers. Emissions are allocated to AMD products from wafer manufacturing and final assembly manufacturing using a manufacturing index to account for product complexity, size, and volume. Emissions from other vendors including marketing, professional services, real estate, software providers, telecom and networking providers and other semiconductor manufacturing services are calculated following a spend-based method. Silicon wafer foundry operations represent the bulk of AMD's supply chain environmental impacts and spend, so close examination is conducted through quarterly supplier business reviews (SBRs) to evaluate risks and progress on AMD's supplier goals (2014-2020), which include science-based targets approved by the Science-based Targets Initiative. In 2019, AMD issued GLOBALFOUNDRIES (New York, USA) renewable energy credits to help reduce their scope 2 emissions associated with manufacturing AMD wafers. In 2020 we continued discussions regarding their renewable energy procurement strategy. Another example is AMD continuing to work with our major manufacturing foundry, TSMC in 2020 to understand how they are managing elevated water risks through conservation, reuse and backup sourcing options. Beyond wafer foundries, OSAT factories have the next largest environmental impact in our supply chain. These factories provide AMD their climate-related data annually and undergo an assessment from AMD's Corporate Responsibility team. For example, in 2020, AMD engaged several final assembly sites to conduct an audit by the Responsible Business Alliance (which includes Environmental Management Systems) and provide ISO 14001 EMS certification and water risk mitigation plans. The Responsible Business Alliance (RBA) is the world's largest industry coalition dedicated to corporate social responsibility in supply chains, with a high degree of focus on environmental responsibility in supply chains. In 2021, AMD was elected by peers to its Board of Directors. In addition to wafer foundries and OSATs, all remaining direct manufacturing suppliers must annually confirm acknowledgment of AMD's requirements that include applicable laws and regulations, publicly adopt the RBA Code of Conduct (or similar), complete a self-assessment questionnaire and have an account in the RBA-ONLINE. Additional recommended actions include disclosing to CDP and issuing a public CR report (e.g., GRI, TCFD). At AMD, we take a risk-based approach to managing our supply chain environmental impacts, including energy and emissions, by focusing on factories with the highest energy use and emissions. We have goals for our suppliers to set public emission reduction goals and source renewable energy, and we use supplier scorecards and business reviews as accountability measures against these expectations. We also work with our manufacturing suppliers to ensure that they know our expectations and help ensure that they are aware of resources available to them. Although not often required, we are willing to escalate matters within reporting structures to help implement compliance with AMD's supplier code of conduct, which includes priorities in environmental matters.

Value chain stage(s) covered

Downstream

Risk management process

Integrated into multi-disciplinary company-wide risk management process

Frequency of assessment

More than once a year

Time horizon(s) covered

Short-term

Medium-term

Long-term

Description of process

A cross-functional Energy Efficiency team, led by AMD's Corporate Vice President of Government Affairs and Corporate Responsibility, and including product engineers, meets bi-weekly or monthly to discuss short- and medium-term risks. Semi-annually or annually, the team focuses time on longer-term risk considerations. Potential transitional risks are evaluated based on potential financial and/or reputational impacts from developing product energy efficiency regulations and standards for computers and servers (e.g., Energy Star, EPEAT, California PC energy regulation). AMD works with industry organizations like ITI/GreenGrid, Digital Europe, SPEC and others to give input and collaborate on specifications. For example, AMD's Server Benchmark & Government Energy Standards Strategist serves as Chair of the Green Grid and SPEC to help coordinate consistency and quality across server regulations. Product engineers on the energy efficiency team provide the necessary information to inform product research and design, as well as AMD's climate risk assessment.

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

Description of process

Every quarter, a cross-functional team (including EHS, Legal, Engineering, Corporate Responsibility, and Regulatory Affairs) participates in an EHS risk assessment process that includes identifying and disclosing potential EHS risks that could have a material impact to AMD. To prepare for such transitional risks, AMD has crisis management plans in place for global and site emergencies and business interruptions. This includes a global business continuity team, as well as local Site Management teams at critical AMD locations. Facilities and EHS teams have site management responsible for day-to-day risk management associated with local environmental regulations, permits and company operational requirements. In instances of severe weather events, appropriate corporate and local teams will quickly evaluate risks and communicate necessary actions to keep our employees safe.

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

	Relevance	Please explain
	inclusion	
Current regulation	Relevant, always included	A cross-functional team comprised of AMD's Corporate Vice President of Government Affairs and Corporate Responsibility and product engineers meets bi-weekly or monthly to discuss product energy efficiency regulations and coordinate related product designs. AMD's Senior Manager of EHS monitors building regulations and works with Facilities / EHS staff to ensure compliance. AMD also has a cross-functional Compliance team (including Corporate Responsibility, Global Operations, Legal, Product Quality, and Sales) to track compliance with current regulations. The team meets approximately every quarter and briefs executives on key initiatives. In addition, an annual corporate responsibility risk assessment is conducted that includes climate related considerations with suppliers, operations, and products.
Emerging regulation	Relevant, always included	Tracking emerging regulations, particularly product energy efficiency (bi-monthly), is part of AMD's climate-related risk assessment strategy. AMD's Senior Manager of Regulatory Affairs and AMD's Senior Manager of EHS work with product design engineers, business units, or Facility site leaders, on emerging regulations. In addition, AMD has a cross-functional Compliance team to track emerging regulations. Team members meet regularly, at least every quarter, to brief executives on key initiatives.
Technology	Relevant, always included	Climate risks are part of our ongoing assessment work with external expert advisor, Ceres, including the role of our technology in addressing or contributing to climate-related impacts. At least annually, Ceres helps us convene a stakeholder group comprised of customers, investors, and others to evaluate the role, risks and opportunities of AMD technology, including climate-related impacts. We also work with customers on case studies highlighting innovative approaches to reducing energy use or using AMD-powered high-performance computing applications to better understand climate change.
Legal	Relevant, always included	At least every quarter, AMD reviews legal risks related to energy and climate as part of a EHS risk assessment and disclosure process. If a new legal requirement emerges, our legal team works with the appropriate department and subject matter experts to assess the risk or impact and identify a plan for conforming to the requirement.
Market	Relevant, always included	Customer expectations and general market changes and predictions related to product energy efficiency are included in bi-weekly meetings, and in longer-term climate risks assessment. Doing so helps to better inform product development, partnerships and marketing approaches. For example, AMD engages in dialogs with customers on matters related to energy efficiency and climate in order to inform our product design and other environmental initiatives.
Reputation	Relevant, always included	Reputation risks are considered when evaluating our climate-related strategy, initiatives and goals. Our customers and ESG-minded shareholders expect AMD to demonstrate a commitment and progress toward climate-related efforts and targets. For example, AMD was the first semiconductor company to have climate goals approved by the Science-based Targets initiative (SBT), which concluded in 2020. Our new 2025 and 2030 goals, informed by reputational factors, include science-based targets for AMD operations as well as product energy efficiency and supplier renewable energy. In addition, our Public Affairs, Communications and PR teams monitor public articles and comments on product energy efficiency that could provide insight into positive or negative changes to reputation. These findings help to inform our climate risk assessments.
Acute physical	Relevant, always included	More frequent extreme weather events, such as hurricanes and heat waves or related wildfires, can affect our employees and potentially impact business operations and productivity. Recent examples include a prolonged freeze in Texas and wildfires and the accompanying smoke in California. We recognize the impact climate change and associated extreme weather events pose to our operations and/or supplier operations, and the need to be transparent and proactive about managing those risks. For example, our business continuity planning team considers such risks when developing contingency preparations such as the potential IT infrastructure needs for a larger remote workforce and dual sourcing strategies for key supply chain components.
Chronic physical	Relevant, always included	More prolonged impacts from climate change, such as long drought periods, can affect our employees and potentially impact business operations or productivity. We utilize the WRI Aqueduct tool to gauge both chronic and acute risks. Examples include "high water risks" locations with water shortages, including such as India where we have research and development offices (Hyderabad and Bengaluru) and Taiwan where one of our primary silicon wafer manufacturing suppliers is located. For our India sites, we utilize rainwater harvesting in our facilities and irrigation, with over 16.5 million liters of water reused in 2020 and more than 45 million liters since 2017. In Taiwan, our supplier provides quarterly updates on water conservation efforts and metrics, along with other climate indicators, and annually provides water contingency plans.

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

Aguta physical Ingressed coverity and frequency of extreme weather events such as evelenes and fleeds	
Acute physical Increased severity and frequency of extreme weather events such as cyclones and floods	

Primary potential financial impact

Increased capital expenditures

Climate risk type mapped to traditional financial services industry risk classification

<Not Applicable>

Company-specific description

AMD has operations and employees in regions that have experienced severe weather-related events, such as prolonged heat waves and freezing in Texas and wildfires in California. For example, the wildfires in California in 2020 resulted in public advisories for citizens to temporarily stay at home for protection from wildfire smoke. Also, the historic freeze in Texas during 2021 compromised aspects of building infrastructure that required repairs.

Time horizon

Short-term

Likelihood

Likely

Magnitude of impact

Low

CDP

Are you able to provide a potential financial impact figure?

No, we do not have this figure

Potential financial impact figure (currency)

<Not Applicable>

Potential financial impact figure - minimum (currency)

<Not Applicable>

Potential financial impact figure - maximum (currency)

<Not Applicable>

Explanation of financial impact figure

Financial impact not available

Cost of response to risk

Description of response and explanation of cost calculation

Specific cost figures are not available

Comment

Identifier

Risk 2

Where in the value chain does the risk driver occur?

Upstream

Risk type & Primary climate-related risk driver

Acute physical

Increased severity and frequency of extreme weather events such as cyclones and floods

Primary potential financial impact

Other, please specify (Increased risk of expected availability for manufacturing parts and/or services)

Climate risk type mapped to traditional financial services industry risk classification

<Not Applicable>

Company-specific description

Extreme weather events can disrupt the ability of our suppliers to deliver expected manufacturing parts and / or services. As examples in 2020, typhoons and a heat wave affecting Taipei and elsewhere impacted AMD suppliers' ability to provide expected production support for a limited time period. The risk was managed by following our risk mitigation plans that include ensuring adequate inventory sourcing from multiple suppliers.

Time horizon

Short-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

Financial impact not available

Cost of response to risk

Description of response and explanation of cost calculation

Specific cost figures are not available.

Comment

Identifier

Risk 3

Where in the value chain does the risk driver occur?

Downstream

Risk type & Primary climate-related risk driver

Acute physical

Increased severity and frequency of extreme weather events such as cyclones and floods

Primary potential financial impact

Other, please specify (Increased risk of product delivery timing)

Climate risk type mapped to traditional financial services industry risk classification

<Not Applicable>

Company-specific description

Extreme weather events can disrupt the ability of our logistics suppliers to deliver products as expected. As examples in 2020, typhoons affecting Taipei and elsewhere, sandstorm in Beijing, and floods in China and Indonesia affected the freight of AMD product shipping, thereby impacting product delivery for a limited time period. AMD works with logistics vendors to mitigate risks, such as identifying alternate routes.

Time horizon

Short-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

Financial impact not available

Cost of response to risk

Description of response and explanation of cost calculation

Specific cost figures are not available

Comment

C2.4

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

C2.4a

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

Identifier

Opp1

Where in the value chain does the opportunity occur?

Downstream

Opportunity type

Products and services

Primary climate-related opportunity driver

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

Primary potential financial impact

Increased revenues resulting from increased demand for products and services

Company-specific description

The remarkable energy efficiency and performance advances in computing since the birth of the modern microprocessor can be largely attributed to Moore's Law—the doubling of the number of transistors on a chip about every two years as manufacturing technology advances allow for smaller and smaller transistors. However, the energy-related benefits that flow from Moore's Law are slowing down. This stems from the fact that the miniaturization of transistors is now bumping against physical limits, affecting the design parameters of processors. AMD is at the forefront of devising technical solutions for improved performance and energy efficiency. AMD is drawing on the historical method—that is, the introduction of leading 7 nanometer manufacturing technologies for greater transistor density— and is developing new processor architectures, power efficient technologies, and power management techniques toward the goal of increasing the energy efficiency of our products and, in turn, the energy efficiency of devices that incorporate our products. These capabilities represent a business opportunity and area for differentiation that benefits users of our products, original equipment manufacturing (OEM) customers, partners, investors, employees and society at large. For example, AMD's award-winning "25x20" energy efficiency initiative (www.amd.com/25x20) exceeded the goal of a 25x increase in energy efficiency from 2014-2020 in AMD processors for mobile devices, achieving a 31.7x increase. This represents a trend that outpaces the historical efficiency gains predicted by Moore's Law by 2x. As a result, an AMD-based computer in 2020 consumes 80% less typical use energy (defined by Energy Star) and completes a task in 84% less time (defined by benchmarks Cinebench and 3D Mark). Using a car analogy, this rate of improvement is like a car with 100 horsepower and a 300 KM range in 2014 turning into a car with 500 horsepower and a 1890 KM range in 2020.

Time horizon

Medium-term

Likelihood

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

While the financial impact is not quantified, the projected growth in the semiconductor market combined with increased demand from consumer, business and government buyers for energy efficient products presents financial opportunities for AMD. According to the U.S. Semiconductor Industry Association 2021 Databook, worldwide semiconductor sales increased from \$204.4 billion in 2000 to \$440.4 billion in 2020, a compound annual growth rate increase of 6.8 percent per year.

Cost to realize opportunity

Strategy to realize opportunity and explanation of cost calculation

The strategy process begins in early product design by identifying aggressive performance per watt targets aimed at meeting the compute needs identified in the market while minimizing power consumption. One way AMD approaches this strategy is to design processors for typical use, instead of peak use, since most devices are in idle mode the vast majority of the time. Through advanced power management features, AMD chips can let the system (e.g., computer) go into idle mode for duration as brief as the time between keystrokes, thereby achieving very low power levels when high performance is not required. AMD also partners with other companies and stakeholders on efficient product designs, e.g., the design of the "Frontier" exascale supercomputer which is planned for release in 2021. AMD's investment in overall R&D for 2020 was \$1.98B USD, and a portion of R&D goes toward advancing product energy efficiency. Progress on meeting performance per watt targets is tracked throughout product development, and the results (e.g., benchmark performance numbers and Energy Star typical energy consumption) are demonstrated to customers. At the corporate level, a cross-functional energy efficiency team meet biweekly or monthly to identify and address challenges or opportunities related to energy efficiency.

Comment

Identifier

Opp2

Where in the value chain does the opportunity occur?

Upstream

Opportunity type

Resource efficiency

Primary climate-related opportunity driver

Use of more efficient production and distribution processes

Primary potential financial impact

Reduced indirect (operating) costs

Company-specific description

In AMD's supply chain, we aim to deliver high-quality products with manufacturing processes that are environmentally responsible and efficient. Each year we communicate our expectations to our manufacturing suppliers for conformance to the Responsible Business Alliance (RBA) Code of Conduct, which includes environmental standards and recently added a GHG reduction goal requirement. In addition, AMD incorporates into our manufacturing supplier expectations industry benchmarking with the Semiconductor Industry Association. This benchmarking includes, for instance, energy use and GHG emissions from outsourced wafer foundry and final assembly operations, based on an industry standard manufacturing index. AMD gathers the required data from these suppliers (quarterly for foundries, annually for final assembly) and compares it to the industry average to identify how suppliers are performing. If below the industry average, AMD may hold a supplier business review (SBR) to understand the challenges and help identify improvement opportunities Because silicon wafer manufacturing represents the bulk of AMD's environmental footprint within our supply chain, we also partner with our foundry suppliers on "best-in-class" goals designed to outperform industry averages and demonstrate efficient manufacturing practices. The goals include maintaining GHG emissions (scope 1) below 75% of the industry average, and maintaining electricity use 40% below the industry average. An industry standard "manufacturing index" (equals square centimetres of silicon x masking layers x wafers per year) is used to compare the energy use and GHG emissions per MI of AMD wafer suppliers to the Semiconductor Industry Association (SIA) average. AMD's supplier risk analysis also covers all direct manufacturing suppliers, which represents approximately 80% of our total annual supply chain spend. The process analyses energy use and carbon emissions, as well as other performance metrics. We work with manufacturing suppliers as necessary to validate and enhan

Time horizon

Medium-term

Likelihood

More likely than 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

While the financial impact is not quantified, increased efficiency in supplier manufacturing operations presumably reduces supplier overhead costs with savings potentially

shared with customers such as AMD, reinvested into improved manufacturing technology or processes, returned to shareholders, or used for other business value.

Cost to realize opportunity

Strategy to realize opportunity and explanation of cost calculation

Our Supply Chain Responsibility (SCR) Program, a collaboration between the Public Affairs / Corporate Responsibility team and Global Operations teams, utilizes a strategy framework following a plan/do/check/act management system approach. Each year all manufacturing suppliers must acknowledge receiving an assurance letter outlining AMD's expectations (e.g., RBA code of conduct adoption, data sharing, etc). Once the necessary data is gathered, AMD conducts a risk analysis to identify prioritized suppliers on key issues. Supplier business reviews (SBRs) are held to discuss any gaps or concerns and lead to implementation of future actions such as training, audits, corrective action plans, or acknowledgements of good performance. The average social and environmental audit score of AMD suppliers is 39% higher than the industry average. Specific to climate matters, AMD focuses on silicon wafer manufacturing operations because those represent the majority of environmental impacts in our supply chain. Each quarter, AMD meets with these suppliers to review performance under AMD's supplier environmental goals (2014-2020), which are approved by the Science-based Targets Initiative. While the cost associated with this strategy is not quantified, it would be limited to staff time on the Supply Chain Responsibility Program and associated environmental goals for wafer manufacturing.

Comment

Identifier

Opp3

Where in the value chain does the opportunity occur?

Direct operations

Opportunity type

Resource efficiency

Primary climate-related opportunity driver

Other, please specify (Use of more energy efficient AMD processors in servers for data centers reduces the data center manager's total cost of ownership and offers the choice to purchase fewer servers for a given compute performance score (measured by SPECrate®2017_int).)

Primary potential financial impact

Reduced indirect (operating) costs

Company-specific description

In AMD's own data center, our Information Technology department upgraded servers from the first generation of AMD EPYC processors to the second generation. We saw a 67% performance gain while consuming the same amount of power. Conversely, we achieved a reduction in power use by 40% while achieving the same performance. In a comparable data center, the potential to reduce power could lead to electricity savings of about 5,800 Mwh per year – enough to power about 700 homes in the United States - and equal to about \$428,000 USD.

Time horizon

Short-term

Likelihood

Virtually certain

Magnitude of impact

Lov

Are you able to provide a potential financial impact figure?

Yes, a single figure estimate

Potential financial impact figure (currency)

428000

Potential financial impact figure - minimum (currency)

<Not Applicable>

Potential financial impact figure - maximum (currency)

<Not Applicable>

Explanation of financial impact figure

Due to constant evolution of our data center, we use a hypothetical model of a data center filled with first generation EPYC processors. When we upgrade the first generation EPYC processors to second generation, we can see the saving of 667kW, which translates to \$428,000 USD annual savings in electricity cost.

Cost to realize opportunity

Strategy to realize opportunity and explanation of cost calculation

Upgrading servers from first generation of AMD EPYC processors to the second generation EPYC processors.

Comment

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?

1	Intention to include the transition plan as a scheduled resolution item at Annual General Meetings (AGMs)	Comment
No, we do not intend to publish a low-carbon transition plan in the next two years		AMD is setting new SBTs through 2030 aligned with the Paris goals and a 1.5 degree scenario. We will continue to research and assess our targets over the next two years.

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	Details
applied RCP 2.6	For absolute scopes 1 and2 reductions, we applied the assumptions, inputs and analytical methods in the "3% Solution: Driving Profits Through Carbon Reductions" publication from CDP and WWF. For example, applying a 3% reduction per year over the goal timeframe equates to approximately a 20% absolute reduction, which is what AMD selected as our goal. Our strategy has been to stay on-track with the 3% annual reductions in GHG through energy use reductions where possible, and procurement of renewable energy. For the normalized supply chain and product use goals, we worked with the Science-based Targets Initiative to follow the RCP 2.6 scenario analysis to assess whether our 2020 targets were expected to deliver the necessary energy use and emissions reductions. For example, the AMD 25x20 Energy Efficiency goal for processors in mobile devices was based on a strategy to improve power management and chip architecture each year so that in 2020, the annual power consumption of an AMD-based laptop would be 1/5th of the amount compared to one in 2014. Our CEO and CTO approved the goal, and we had a cross-functional team that met bi-weekly or monthly to track progress and discuss opportunities to advance product energy efficiency. In light of the successful achievement of that six-year goal, the team has now turned its attention to similar priorities across additional product lines. The supply chain goal focused on reducing energy use and GHG emissions from our silicon wafer manufacturing suppliers remains 40% and 75%, respectively, below the industry average. We are focused on wafer manufacturing because it represents about two-thirds of our supply chain spend and GHG emissions. Each quarter, we meet with our foundry
	period in Britady average. We are focused on Water Institution Burchards in Spend and

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		Climate-related risks (weather), opportunities (market share) and other factors (regulations) related to product energy efficiency influenced AMD's strategy from 2014-2020 to accelerate product energy efficiency. We declared the topic a strategic focus area in 2014 and set science-based targets to mitigate AMD's role in staying well below a 2-degree Celsius increase. In 2014, our Chief Technology Officer and Executive Vice President announced a goal to increase the energy efficiency in our processors for mobile devices by 25x from 2014 to 2020. In 2020, we announced that we not only met, but exceeded the goal by reaching 31.7x increase.
Supply chain and/or value chain		In 2014, to mitigate climate-risks in our supply chain (based on a well below a 2 degree Celsius - RCP 2.6 -scenario analysis), AMD made the strategic decision to partner with our silicon wafer manufacturing suppliers on bold science-based targets approved by the SBTi, spanning 2014-2020. The collaboration strengthened AMD's ability to identify opportunities to improve resource efficiency and deepen supplier relationships. For example, in 2020 scope 1 emissions for wafer manufacturing were 73% below the industry average, and electricity use was 28% below the industry average.
Investment in R&D	Yes	Among other topics, AMD prioritizes product energy efficiency, which is included in AMD's overall research and development investment. That total amounted to \$1.98 billion USD for 2020, a 28% increase from 2019.
Operations		Climate-related considerations for AMD operations influenced AMD's strategy from 2014-2020, including setting a science-based target to reduce absolute GHG emissions from operations by 20%. Through conservation projects (e.g., equipment upgrades or efficiency projects) and sourcing renewable energy credits (green-e certified wind RECs), we were able to exceed our goal, achieving a 38% reduction in scope 1+2 GHG from 2014-2020.

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
Ro 1	v Revenues Indirect costs Capital expenditures	Financial planning for climate-related risks/opportunities occurs on an annual basis with quarterly and monthly reviews. As a case study for financial planning related to revenues, in 2014 AMD identified a financial opportunity in gaining competitive positioning in the notebook market segment by increasing product energy efficiency. The company set a bold goal, supported with financial planning each year over the 2014-2020 timeframe, to increase energy efficiency in notebook processors by 25x by 2020 (www.amd.com/25x20). In 2020, AMD exceeded the goal by reaching 31.7x. According to Statistica market share data, AMD notebook processor market share in Q3'14 was 10.9%, and in Q3'20 it was 19.7%. (https://www.statistac.om/statistics/1130315/worldwide-x86-intel-amd-laptop-market-share/) For capital expenditures, AMD is a non-manufacturing company and leases office building space; thus, large, related capital projects are limited. Equipment for R&D operations and lighting upgrades are important to our company and receive capital allocation based on annual financial planning. For example, budgeted 2020 capital improvement projects at our Canada site in Markham, Ontario included a new lighting control system, HVAC improvements and cooling tower motor replacements that amounted to 84,341 Kwhlyr in electricity savings. For indirect costs, AMD sources renewable energy credits (RECs), representing ~28% of global energy use in 2020. Fluctuations in REC costs per MWh and amount needed for our scope 1+2 goal are considered in the annual and quarterly financial planning process. For indirect costs, AMD sources renewable energy credits (RECs), representing ~28% of global energy use in 2020. Fluctuations in REC costs per MWh and amount needed for our scope 1+2 goal are considered in the annual and quarterly financial planning process.

C3.4a

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

C4. Targets and performance

C4.1

(C4.1) Did you have an emissions target that was active in the reporting year? Both absolute and intensity targets

C4.1a

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

Target reference number

Abs 1

Year target was set

2014

Target coverage

Company-wide

Scope(s) (or Scope 3 category)

Scope 1+2 (location-based)

Base year

2014

Covered emissions in base year (metric tons CO2e)

52183

Covered emissions in base year as % of total base year emissions in selected Scope(s) (or Scope 3 category)

100

Target year

2020

Targeted reduction from base year (%)

20

Covered emissions in target year (metric tons CO2e) [auto-calculated]

41746.4

Covered emissions in reporting year (metric tons CO2e)

32251

% of target achieved [auto-calculated]

190.981737347412

Target status in reporting year

Achieved

Is this a science-based target?

Yes, and this target has been approved by the Science-Based Targets initiative

Target ambition

Well-below 2°C aligned

Please explain (including target coverage)

In 2020, performance against our 20% GHG reduction goal by 2020 for scope 1 and 2 emissions was a 38% reduction from the 2014 goal baseline. We have reduced energy use by 17 percent since 2014. In 2020, AMD sourced 34 million kwh in renewable energy certificates (RECs) in the U.S. (Green-E certified wind) and China (iRECs wind) which represented 28% of global energy use, enough to power approximately 4,420 homes in the U.S. for a year (based on EPA's Greenhouse Gas Equivalency calculator) AMD is announcing a new SBT for operations in August 2021.

C4.1b

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

Target reference number

Int 1

Year target was set

2014

Target coverage

Other, please specify (Supply chain silicon wafer manufacturing (scope 1 of suppliers; scope 3 for AMD))

Scope(s) (or Scope 3 category)

Scope 3: Purchased goods & services

silicon wafer manufacturing

Intensity metric

Other, please specify (MTCO2e per production index at 75% below the industry average)

Base year

2014

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

11.8

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

3.5

Target year

2020

Targeted reduction from base year (%)

42

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

6 844

% change anticipated in absolute Scope 1+2 emissions

% change anticipated in absolute Scope 3 emissions

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

7.4

% of target achieved [auto-calculated]

88.7812752219532

Target status in reporting year

Expired

Is this a science-based target?

Yes, and this target has been approved by the Science Based Targets initiative

Target ambition

Well-below 2°C aligned

Please explain (including target coverage)

This is a goal that compares MTCO2e of scope 1 GHG emissions from our supplier wafer manufacturing (per AMD manufacturing index) to the industry average. The goal is to be 75% better than the industry average by 2020. Performance in 2020 was 73% better than the average, just short of our 2020 goal. We are unable to estimate changes in absolute reductions, or target year values, since this is a rolling year over year intensity based goal dependent on AMD production levels and overall fab loading (MI), as well as the industry average for the year.

Target reference number

Int 2

Year target was set

2014

Target coverage

Other, please specify (Supply chain silicon wafer manufacturing (electricity use of suppliers; part of AMD's scope 3))

Scope(s) (or Scope 3 category)

Scope 3: Purchased goods & services

Intensity metric

Other, please specify (per production index at 40% below the industry average)

Base year

2014

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

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

Target year

2020

Targeted reduction from base year (%)

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

<Calculated field>

% change anticipated in absolute Scope 1+2 emissions

% change anticipated in absolute Scope 3 emissions

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

% of target achieved [auto-calculated]

<Not Applicable>

Target status in reporting year

Expired

Is this a science-based target?

Yes, and this target has been approved by the Science Based Targets initiative

Target ambition

Well-below 2°C aligned

Please explain (including target coverage)

This 2014-2020 goal compares electricity (kwh) consumption from our supplier wafer manufacturing emissions (per AMD manufacturing index) to the industry average. The goal is to be 40% or better compared to the industry average by 2020. Performance in 2020 was 28% better than the average, short of our goal. We are unable to estimate changes in absolute reductions since this is an intensity based goal dependent on AMD production levels and overall fab loading (MI).

Target reference number

Int 3

Year target was set

2014

Target coverage

Other, please specify (Mobile processors)

Scope(s) (or Scope 3 category)

Scope 3: Use of sold products

Intensity metric

Other, please specify (compute performance per watt of energy consumed)

Base year

2014

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

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

76

Target year

2020

Targeted reduction from base year (%)

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

<Calculated field>

% change anticipated in absolute Scope 1+2 emissions

% change anticipated in absolute Scope 3 emissions

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

% of target achieved [auto-calculated]

<Not Applicable>

Target status in reporting year

Achieved

Is this a science-based target?

Yes, and this target has been approved by the Science Based Targets initiative

Target ambition

Well-below 2°C aligned

Please explain (including target coverage)

This energy efficiency goal is to improve compute performance per watt of energy consumed from our mobile APU processors by 25 times by 2020, from 2014. The numerator is compute performance based on commonly utilized benchmark scores. The denominator is annual typical energy consumption as defined by ENERGY STAR 6.1 for notebook computers. In 2020, AMD exceeded the goal, reaching 31.7x. We are unable to estimate changes in absolute reductions in scope 3 emissions since this is an intensity goal and dependent on volume and mix of product sales, however the reduction in electricity use per APU mobile products is 84%.

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		
To be implemented*		
Implementation commenced*		
Implemented*	6	18042
Not to be implemented		

C4.3b

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

Initiative category & Initiative type

Low-carbon energy consumption	Wind	
-------------------------------	------	--

Estimated annual CO2e savings (metric tonnes CO2e)

18028

Scope(s)

Scope 2 (market-based)

Voluntary/Mandatory

Voluntary

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

n

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

35000

Payback period

No payback

Estimated lifetime of the initiative

1-2 years

Comment

AMD procured 34,340 mwh of RECs in 2020, amounting to approximately 18,028 MTCO2e savings

Initiative category & Initiative type

Energy efficiency in buildings Lighting

Estimated annual CO2e savings (metric tonnes CO2e)

2.9

Scope(s)

Scope 2 (location-based)

Voluntary/Mandatory

Voluntary

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

2714

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

Payback period

Please select

Estimated lifetime of the initiative

3-5 years

Comment

We upgraded the Lighting Control System in our Markham Canada offices to allow for reduction of light to provide lower light levels as needed for employees and reduces amount of energy in lighting.

Initiative category & Initiative type

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

Estimated annual CO2e savings (metric tonnes CO2e)

10.1

Scope(s)

Scope 2 (location-based)

Voluntary/Mandatory

Voluntary

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

9280

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

Payback period

1-3 years

Estimated lifetime of the initiative

Please select

Comment

We replaced 12 split HVAC units with more efficient models, 5 roof top units, and 3 heaters

Initiative category & Initiative type

Energy efficiency in buildings Motors and drives

Estimated annual CO2e savings (metric tonnes CO2e)

0.9

Scope(s)

Scope 2 (location-based)

Voluntary/Mandatory

Voluntary

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

841

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

Payback period

4-10 years

Estimated lifetime of the initiative

Please select

Comment

Replaced two cooling tower motors with more energy efficient models.

C4.3c

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

Method	Comment	
Employee engagement	AMD Go Green Teams globally explore methods for reducing resource use and making proposals to the appropriate corporate function.	
Internal finance mechanisms	AMD's Facility and EHS teams identify conservation projects and utilize company budgeting processes, along with external government incentives. Consideration of the estinemissions reductions, resource use, and monetary savings are utilized in conjunction with our existing finance mechanisms.	
Dedicated budget for other emissions reduction activities	AMD has dedicated budget for purchasing renewable energy credits	

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

Group of products

Description of product/Group of products

The AMD mobile APU product line combined powerful graphics and compute processing into one single chip. In this product line, typical use energy consumption and associated use phase emissions decreased 84% from 2014-2020, based on AMD testing and ENERGY STAR typical energy consumption use case. In the same time-frame, the average time to complete a computing task (a measure of performance) reduced by 80%.

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

Low-carbon product

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

Evaluating the carbon-reducing impacts of ICT

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

% of total portfolio value

<Not Applicable>

Asset classes/ product types

<Not Applicable>

Comment

Revenue percentage is not available

Level of aggregation

Group of products

Description of product/Group of products

AMD EPYC server processors can help reduce energy use and GHG emissions and may require fewer servers to achieve a given server performance score (i.e., SPECrate®2017_int_base)

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

Low-carbon product and avoided emissions

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

Evaluating the carbon-reducing impacts of ICT

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

% of total portfolio value

<Not Applicable>

Asset classes/ product types

<Not Applicable>

Comment

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 2014 Base year end December 31 2014 Base year emissions (metric tons CO2e) Comment Scope 2 (location-based) Base year start January 1 2014 Base year end December 31 2014 Base year emissions (metric tons CO2e) 67175 Does not account for 18,849 MTCO2e in RECs (green e certified, US wind) Scope 2 (market-based) Base year start January 1 2014 Base year end December 31 2014 Base year emissions (metric tons CO2e) 48686 Comment Does account for 20,353 MTCO2e in RECs (green e certified, US wind) C5.2 (C5.2) Select the name of the standard, protocol, or methodology you have used to collect activity data and calculate emissions. The Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard (Revised Edition) C6. Emissions data 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) 2335 Start date <Not Applicable> <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

AMD procured 34,025 MWh of U.S. Green-e Certified RECs and China I-RECs in 2020

C6.3

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

Reporting year

Scope 2, location-based

44985

Scope 2, market-based (if applicable)

29916

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

1278479

Emissions calculation methodology

Emissions from foundries and OSAT are calculated using scope 1 and 2 emissions collected from top suppliers. Emissions are allocated to AMD products from wafer manufacturing and final assembly manufacturing using a manufacturing index to account for product complexity, size, and volume. Emissions from other vendors including marketing, professional services, real estate, software providers, telecom and networking providers and other semiconductor manufacturing services are calculated following a spend-based method.

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

51

Please explain

Emissions from foundries and OSAT are calculated using scope 1 and 2 emissions collected from top suppliers. Emissions are allocated to AMD products from wafer manufacturing and final assembly manufacturing using a manufacturing index to account for product complexity, size, and volume. Emissions from other vendors including marketing, professional services, real estate, software providers, telecom and networking providers and other semiconductor manufacturing services are calculated following a spend-based method.

Capital goods

Evaluation status

Relevant, calculated

Metric tonnes CO2e

0

Emissions calculation methodology

Emissions from capital goods are calculated following a spend-based method and are already included the disclosed figure in Category 1: Purchased goods and services.

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

0

Please explain

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

Evaluation status

Relevant, calculated

Metric tonnes CO2e

12565

Emissions calculation methodology

"Well-to-tank" (WTT) emissions are calculated using fuel and electricity data from our sites globally and emission factors from DEFRA and IEA.

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

0

Please explain

Upstream transportation and distribution

Evaluation status

Relevant, calculated

Metric tonnes CO2e

39448

Emissions calculation methodology

More than half of the upstream transportation and distribution emissions are based on a supplier-specific data reported by two of our shipping providers. The remainder of the emissions are calculated following a spend-based method to fill in the gaps.

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

55

Please explain

Waste generated in operations

Evaluation status

Relevant, calculated

Metric tonnes CO2e

48

Emissions calculation methodology

Waste data is collected from our sites and emissions are calculated using DEFRA factors per waste type

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

0

Please explain

Business travel

Evaluation status

Relevant, calculated

Metric tonnes CO2e

2429

Emissions calculation methodology

Employee travel after mid-March 2020 was extremely limited due to COVID-19 travel protocols. Therefore a prorated value from 2019 (2.5 months) of travel emissions was applied.

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

100

Please explain

Employee commuting

Evaluation status

Relevant, calculated

Metric tonnes CO2e

2788

Emissions calculation methodology

Employee commutes after mid-March 2020 were extremely limited due to COVID-19 workplace protocols. Therefore a prorated value from 2019 (2.5 months) of commute emissions was applied.

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

0

Please explain

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

AMD doesn't have upstream leased assets

Downstream transportation and distribution

Evaluation status

Not relevant, explanation provided

Metric tonnes CO2e

<Not Applicable>

Emissions calculation methodology

<Not Applicable>

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

<Not Applicable>

Please explair

This is not relevant as emissions associated with transportation and distribution of AMD's intermediate products between the point of sale and our business customers are already captured in Category 4: upstream transportation and distribution.

Processing of sold products

Evaluation status

Not relevant, explanation provided

Metric tonnes CO2e

<Not Applicable>

Emissions calculation methodology

<Not Applicable>

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

<Not Applicable>

Please explain

AMD intermediate products represent a negligible percentage of the intended final products by weight. Emissions associated with assembly is minimal and not relevant.

Use of sold products

Evaluation status

Relevant, calculated

Metric tonnes CO2e

4217421

Emissions calculation methodology

Use of sold products emissions are calculated based on total sales volume, average product energy consumption, and average product lifetime for each product category. IEA emission factors are weighted by sales and used to calculate emissions. In 2020, AMD expanded the scope of our product lines included in use phase emissions calculations in order to better reflect our product portfolio.

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

0

Please explain

End of life treatment of sold products

Evaluation status

Relevant, calculated

Metric tonnes CO2e

1475

Emissions calculation methodology

End of life treatment emissions are calculated based on total weight of sold products. The EPA factor for combustion of mixed electronics is applied this value to calculate emissions

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

0

Please explain

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

AMD doesn't have downstream leased assets

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

AMD doesn't have 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

AMD has a joint venture related to manufacturing (OSAT), which is already accounted for in Category 1: Purchased goods and services.

Other (upstream)

Evaluation status

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

Other (downstream)

Evaluation status

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

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

3.3

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

32251

Metric denominator

Other, please specify (gC02e/\$ revenue)

Metric denominator: Unit total

9763000000

Scope 2 figure used

Market-based

% change from previous year

45

Direction of change

Decreased

Reason for change

Lower emissions, higher revenue

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
HFCs	730	IPCC Fifth Assessment Report (AR5 – 100 year)
Other, please specify (HFEs (Ethers and Halogenated Ethers))	153	IPCC Fifth Assessment Report (AR5 – 100 year)
CO2	1453	IPCC Fifth Assessment Report (AR5 – 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	494
Canada	974
Singapore	814
India	53

C7.3

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

By facility

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
Singapore	814	1.330112	103.916352
Austin	93	30.251594	-97.864048
Hyderabad	18	16.141236	79.758842
Bangalore	35	12.969195	77.749941
Atlanta	43	34.05149	-84.0713
Santa Clara	356	37.38234	-121.97519
Other	2		
Markham	974	43.8561	79.337

C7.5

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

Country/Region	1	1 ' '	1	Purchased and consumed low-carbon electricity, heat, steam or cooling accounted for in Scope 2 market-based approach (MWh)
Canada	2680	2680	25549	0
Singapore	6333	6333	16714	0
India	7005	7005	9584	0
China	7225	990	10654	10162
United States of America	11183	23900	59277	23864
Other, please specify (Remaining offices around the globe)	1811	1811	1922	0

C7.6

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

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)
Singapore	6333	6333
Austin	10505	10753
Markham	2680	2680
Shanghai	5929	0
Hyderabad	4420	4420
Bangalore	2585	2585
Atlanta	11183	0
Other sites combined	2211	3145
Santa Clara	1183	1183

C7.9

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

Decreased

C7.9a

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

	Change in emissions (metric tons CO2e)	Direction of change	Emissions value (percentage)	Please explain calculation
Change in renewable energy consumption	2855	Increased	8.9	Estimate from reduced renewable energy use in 2020
Other emissions reduction activities	1023	Decreased	3.2	Scope 1 emission reduction initiatives resulted in 3.2% decrease from 2019- 2020
Divestment		<not applicable=""></not>		
Acquisitions		<not applicable=""></not>		
Mergers		<not applicable=""></not>		
Change in output		<not applicable=""></not>		
Change in methodology		<not applicable=""></not>		
Change in boundary		<not applicable=""></not>		
Change in physical operating conditions	1832	Decreased	5.4	Changes likely related to remote vs onsite workforce in 2020
Unidentified		<not applicable=""></not>		
Other		<not applicable=""></not>		

C7.9b

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

Market-based

C8. Energy

C8.1

(C8.1) What percentage of your total operational spend in the reporting year was on energy? More than 0% but less than or equal to 5%

C8.2

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

	Indicate whether your organization undertook this energy-related activity in the reporting year
Consumption of fuel (excluding feedstocks)	Yes
Consumption of purchased or acquired electricity	Yes
Consumption of purchased or acquired heat	No
Consumption of purchased or acquired steam	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)	Unable to confirm heating value	0	6656	6656
Consumption of purchased or acquired electricity	<not applicable=""></not>	34025	83043	117069
Consumption of purchased or acquired heat	<not applicable=""></not>	<not applicable=""></not>	<not applicable=""></not>	<not applicable=""></not>
Consumption of purchased or acquired steam	<not applicable=""></not>	<not applicable=""></not>	<not applicable=""></not>	<not applicable=""></not>
Consumption of purchased or acquired cooling	<not applicable=""></not>	<not applicable=""></not>	<not applicable=""></not>	<not applicable=""></not>
Consumption of self-generated non-fuel renewable energy	<not applicable=""></not>	<not applicable=""></not>	<not applicable=""></not>	<not applicable=""></not>
Total energy consumption	<not applicable=""></not>	34035	89699	123725

C8.2b

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

	Indicate whether your organization undertakes this fuel application
Consumption of fuel for the generation of electricity	Yes
Consumption of fuel for the generation of heat	Yes
Consumption of fuel for the generation of steam	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)

Natural Gas

Heating value

LHV (lower heating value)

Total fuel MWh consumed by the organization

6631

MWh fuel consumed for self-generation of electricity

U

MWh fuel consumed for self-generation of heat

0

MWh fuel consumed for self-generation of steam

<Not Applicable>

MWh fuel consumed for self-generation of cooling

<Not Applicable>

MWh fuel consumed for self-cogeneration or self-trigeneration

<Not Applicable>

Emission factor

0.18

Unit

kg CO2e per KWh

Emissions factor source

IPCC

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

Unbundled energy attribute certificates, Renewable Energy Certificates (RECs)

Low-carbon technology type

Wind

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

24178

Comment

US Green-E Wind RECs

Sourcing method

Unbundled energy attribute certificates, International REC Standard (I-RECs)

Low-carbon technology type

Wind

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

China

MWh consumed accounted for at a zero emission factor

10162

Comment

China iRECs

C9. Additional metrics

C9.1

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

C10. Verification

C10.1

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

	Verification/assurance status
Scope 1	Third-party verification or assurance process in place
Scope 2 (location-based or market-based)	Third-party verification or assurance process in place
Scope 3	No third-party verification or assurance

C10.1a

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

Verification or assurance cycle in place

Annual process

Status in the current reporting year

Complete

Type of verification or assurance

Limited assurance

Attach the statement

AMD emissions verification statement v2.0 ISSUED 210630.pdf

Page/ section reference

Pages 1-2

Relevant standard

ISO14064-3

Proportion of reported emissions verified (%)

100

C10.1b

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

Scope 2 approach

Scope 2 market-based

Verification or assurance cycle in place

Annual process

Status in the current reporting year

Complete

Type of verification or assurance

Limited assurance

Attach the statement

AMD emissions verification statement v2.0 ISSUED 210630.pdf

Page/ section reference

Pages 1-2

Relevant standard

ISO14064-3

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? No, we do not verify any other climate-related information reported in our CDP disclosure

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?

C11.3

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

No, but we 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 suppliers

Yes, our customers

C12.1a

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

Type of engagement

Information collection (understanding supplier behavior)

Details of engagement

Collect climate change and carbon information at least annually from suppliers

% of suppliers by number

33

% total procurement spend (direct and indirect)

70

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

50

Rationale for the coverage of your engagement

AMD prioritizes our highest spend and highest environmental impact suppliers for engagement on climate maters. This namely includes our wafer foundries and final assembly suppliers

Impact of engagement, including measures of success

AMD set best-in-class goals with foundry suppliers, and have demonstrated scope 1 GHG from wafer manufacturing is 73% better than the industry average

Comment

C12.1b

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

Type of engagement

Education/information sharing

Details of engagement

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

% of customers by number

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

50

Portfolio coverage (total or outstanding)

<Not Applicable>

$\label{please explain the rationale for selecting this group of customers and scope of engagement$

In 2020, AMD actively promoted our 25x20 energy efficiency initiatives to customers through various outlets, including face-to-face customer meetings, commercial product promotion events with enterprise customers, social media campaigns, and more. In addition to broad engagement, meetings with specific customers sharing AMD's commitment to climate protection were held to discuss collaborative opportunities around increased product energy efficiency.

Impact of engagement, including measures of success

The majority of AMD's major (top tier) customers have been directly engaged on AMD's climate strategies and/or energy efficiency initiative, leading to deeper customer relationships and a better understanding of AMD's commitment. Another quantitative measure of success is the nearly 16,000 views of our 25x20 video. The estimated percent of total scope 3 emissions includes the estimated portion of AMD's reported product use emissions that apply to the stated initiative.

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?

Direct engagement with policy makers

Trade associations

Funding research organizations

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

Focus of	of Corporate Details of engagement		Proposed legislative solution	
legislation	position			
Energy efficiency		specifications establishing market requirements for computer and server energy consumption in the 2020 time-frame. Similar engagement is occurring in other jurisdictions, e.g. the E.U.'s eco-design regulations for	Proposed legislative solution is power/ energy limits for computers and servers, and performance per watt criteria for servers that allows for current families of products as well as future technology improvements to which AMD has committed.	

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

Information Technology Industry Council (ITI) ITIC/The Green Grid

Is your position on climate change consistent with theirs?

Consistent

Please explain the trade association's position

ITI supports government policies with the intent of mitigating and adapting to climate change, and doing so with increased public/private partnership: ITI supported concluding, and implementing, a climate change agreement at COP 21 that takes a strong step forward toward a vibrant, low-carbon, and sustainable future, as well as creating a transparent platform for countries to make and track national emissions reduction commitments. ITI has supported additional national strategies and legislation that encourage intelligent efficiency solutions enabled by information technology. In 2021, ITI updated their climate statement - https://www.itic.org/dotAsset/bdea5021-62f7-4503-bb72-7970f061bf2d.pdf

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

AMD's Corporate Vice President of Public Affairs continues to hold influential positions, which has included serving on the Board of Directors, and she received the Gary Fazzino Award for Extraordinary Service for "demonstrated and consistent leadership and exemplary service in promoting innovation and technology."

C12.3d

(C12.3d) Do you publicly disclose a list of all research organizations that you fund?

No

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?

AMD's Public Affairs and Corporate Responsibility (CR) team oversees AMD's climate protection strategy. AMD's Public Affairs CVP oversees public policy and trade association advocacy to ensure that it is aligned with AMD's climate change goals. AMD public policy staff engages in the development of international standards that include metrics for measuring the energy consumption or GHG emissions associated with ICT products, e.g., EPEAT computer and server standards in conjunction with the Green Electronics Council. AMD's Director of CR works with organizations like Science-based Targets Initiative to ensure AMD's climate goals are sufficiently aggressive and 3rd party validated. AMD engineering and public policy staff engage in associations like the Green Grid on the development of more energy efficient products and associated metrics. AMD has a cross-functional internal energy efficiency team, with representation from the business units, engineering, strategy group, marketing, communications, legal and Public Policy teams to promote energy efficient products and awareness. Members of the Public Policy team use this forum to identify the environmental benefits associated with decreased power consumption and improved energy efficiency in our products, and to include this information in external communications. AMD also has a communications process in place with AMD design and engineering teams to routinely inform them of upcoming or anticipated product energy regulations. AMD also uses cross-functional teams, with representation from the business units, engineering, legal and public policy groups to address anticipated product regulations. AMD staff is also engaged in support of procurement programs intended to mitigate climate change impacts such as ENERGY STAR and EPEAT, and cross-functional teams support the qualification of ICT products that are powered by AMD semiconductors to these standards. AMD also utilizes an external corporate responsibility advisory group, Ceres, to engage representatives of NGOs, go

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-cr-download full report.pdf

Page/Section reference

pages 33-41 (Planet section)

Content elements

Strategy

Emissions figures

Emission targets

Other metrics

Comment

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	Director of Corporate Responsibility	Environment/Sustainability manager

SC. Supply chain module

SC0.0

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

Our goal is to deliver high-quality products while ensuring that working conditions throughout our supply chain are safe, that workers are treated with respect and dignity and that manufacturing processes are environmentally responsible. We believe that the most effective and efficient way to achieve these goals is by placing responsibility with the entities that have authority to institute and manage robust programs—our suppliers. AMD incorporates corporate responsibility expectations into the same business processes we use for all supplier performance – the supplier business reviews (SBR). The SBR is the forum where senior leaders from both companies come together to discuss a broad range of topics relevant to our business relationship. Corporate responsibility is an integral part of these relationships and thus included in the SBR for AMD's top-tier suppliers. To assure that our responsibility standards are being accomplished, we set clear expectations, ask our suppliers to report on their performance during SBRs and review third-party audit information. For more information, please visit https://www.amd.com/en/corporate-responsibility

SC0.1

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

	Annual Revenue
Row 1	9730000000

SC0.2

(SC0.2) Do you have an ISIN for your company that you would be willing to share with CDP?

No

CDP

SC1.1

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

SC1.2

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

SC1.3

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

Allocation challenges	Please explain what would help you overcome these challenges
Diversity of product lines makes accurately accounting for each product/product line cost ineffective	A feasible and accurate methodology to account for product type and associated emission estimates per customer, as well as region of manufacturing, and region of use phase.
Other, please specify (AMD does not operate manufacturing sites)	A feasible and accurate methodology for allocating our scope 3 emissions from manufacturing to specific suppliers

SC1.4

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

SC1.4a

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

Support customer requests on an as-needed basis and further refine a methodology.

SC2.1

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

SC2.2

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

SC4.1

(SC4.1) Are you providing product level data for your organization's goods or services? No, I am not providing data

Submit your response

In which language are you submitting your response?
English

Please confirm how your response should be handled by CDP

m submitting to	Public or Non-Public Submission	Are you ready to submit the additional Supply Chain questions?
	Public	Yes, I will submit the Supply Chain questions now
es		stors Public

Please confirm below

I have read and accept the applicable Terms