

VMware's CDP Climate Change Questionnaire 2022

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C0. Introduction

C0.1

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

VMware, Inc. ("VMware") originally pioneered the development and application of virtualization technologies with x86 server-based computing, separating application software from the underlying hardware, and then evolved to become the private cloud and mobility management leader. Building upon that leadership, VMware is focused on becoming the multi-cloud leader. Information technology ("IT") driven innovation continues to disrupt markets and industries. Technologies emerge faster than organizations can absorb, creating increasingly complex environments. Organizations' IT departments and corporate divisions are working at an accelerated pace to harness new technologies, platforms and cloud models, ultimately guiding businesses and their product teams through a digital transformation. To take on these challenges, we are helping customers drive their multi-cloud strategy by providing the multi-cloud platform for all applications, enabling digital innovation and enterprise control. Our multi-cloud portfolio, spanning application modernization, cloud management, cloud infrastructure, networking, security and anywhere workspaces, forms a flexible, consistent digital foundation on which customers can build, run, manage, connect and protect their mission-critical workloads.

We incorporated in Delaware in 1998 and were acquired by EMC Corporation in 2004. In August 2007, we conducted an initial public offering of our Class A common stock but remained majority-owned by EMC. In September 2016, Dell Technologies Inc. acquired EMC and we became a majority-owned subsidiary of Dell. On November 1, 2021, we became a standalone company following our spin-off from Dell.

On May 26, 2022, VMware entered into an Agreement and Plan of Merger with Broadcom Inc. providing for the acquisition of VMware by Broadcom. Completion of the merger is expected to occur during Broadcom's fiscal year 2023 and is subject to requisite stockholder and regulatory approvals and satisfaction of closing conditions. VMware will continue to operate as an independent public company until completion of the merger. Forward looking statements made in this report reflect the current views of VMware management regarding its operations as an independent public company and do not take into account potential changes in VMware's business and operations following completion of the merger. Actual results may differ materially



and are subject to further risks and uncertainties described in VMware's most recent reports on Form 10-K and Form 10-Q and current reports on Form 8- K that VMware may file with the U.S. Securities and Exchange Commission (SEC) from time to time.

Our fiscal year is the 52 or 53 weeks ending on the Friday nearest to January 31 of each year. We refer to our fiscal year ending February 3, 2023 and fiscal years ended January 28, 2022 and January 29, 2021 as "fiscal 2023," "fiscal 2022," and "fiscal 2021," respectively. Fiscal 2023 is a 53-week fiscal year, while fiscal 2022 and fiscal 2021 were each 52-week fiscal years. For the purpose of our GHG emissions inventory, we follow the start of the month - February 1, 2021 to January 31, 2022.

Total revenue in fiscal 2022 increased 9% to \$12.9 billion. Total revenue is comprised of license revenue of \$3.1 billion, subscription and software-asa-service ("SaaS") revenue of \$3.2 billion and services revenue of \$6.5 billion. As customers shift from our on-premises offerings to our subscription and SaaS offerings, license revenue and software maintenance revenue has and may continue to be lower and subject to greater fluctuation in the future, resulting from a higher proportion of our sales occurring through our subscription and SaaS offerings.

Our corporate headquarters are located at 3401 Hillview Avenue, Palo Alto, California, and we have 111 offices worldwide. On March 5, 2022, VMware announced it was suspending all business operations in Russia.

For more details, please reference VMware's annual report on Form 10-K for the year ended January 28, 2022. <u>https://ir.vmware.com/websites/vmware/English/5010/us-sec-filing.html?shortDesc=Annual%20Report&format=html&secFilingId=a2cc9d22-7367-4548-a985-cf96d6feae60</u>

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	
Reporting year	February 1, 2021	January 31, 2022	No	

C0.3

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

VMware, Inc CDP Climate Change Questionnaire 2022



Argentina Armenia Australia Austria Belgium Brazil Bulgaria Canada Chile China Colombia Costa Rica Czechia Denmark Egypt France Germany Hungary India Indonesia Ireland Israel Italy Japan Malaysia Mexico

Netherlands

New Zealand

Norway

Pakistan

VMware, Inc CDP Climate Change Questionnaire 2022



Peru Philippines Poland Portugal Republic of Korea Russian Federation Saudi Arabia Singapore South Africa Spain Sweden Switzerland Taiwan, China Thailand Turkey United Arab Emirates United Kingdom of Great Britain and Northern Ireland United States of America Viet Nam

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



C0.8

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

Indicate whether you are able to provide a unique identifier for your organization	Provide your unique identifier
Yes, an ISIN code	US9285634021

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
Board-level committee	Explanation of how responsibility is related to climate issues: Board level oversight of ESG (Environmental, Social & Governance), including climate related issues, includes full Board of Directors (Board or BOD) annual oversight of ESG topics as well as focused oversight responsibilities by Board committees, including the Nominating and Related Persons Transactions Committee (Governance Committee), the Audit Committee and the Compensation Committee. The Governance Committee is responsible for overall oversight of VMware's ESG programs including environmental sustainability, and ESG disclosure. The Audit Committee oversees enterprise risk, SEC filings cybersecurity and data privacy. The Compensation Committee oversees annual executive officer performance objectives incorporating ESG goals.



The Governance, Audit and Compensation committees report to the Board at the regularly scheduled Board meetings on the matters reviewed by the committees since the preceding Board meeting. Senior management annually presents ESG Strategy to the full Board. The Board reviews the ESG annual operating plan and budgets as part of the company's overall annual corporate operating plan (AOP) review and approval. Our Governance, Compensation and Audit committees are comprised solely of independent directors within the meaning of the applicable SEC and New York Stock Exchange rules and regulations.

In 2020, the full Board reviewed VMware's ESG Strategy, also called the 2030 Agenda, presented by ESG Executive Sponsors and included it as part of its approval of VMware's annual operating plan. The 2030 Agenda was launched to demonstrate our commitment to corporate responsibility for the next decade. We are setting out a 10-year commitment to reach 30 goals by 2030 for creating a more sustainable, equitable and secure world. This ESG strategy is focused on driving three outcomes: Sustainability, Equity and Trust. Sustainability is core to our values and future success. As a global corporate citizen, we have an opportunity to innovate for a more resilient world by decarbonizing digital infrastructure across our customer ecosystem, supply chain and operations. Through our collective efforts to drive net zero emissions, radical efficiency and sustainable innovation, VMware aims to help accelerate a future where our public clouds are zero-carbon and powered by renewable energy.

C1.1b

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

Frequency with which climate-related issues are a scheduled agenda item	Governance mechanisms into which climate-related issues are integrated	Please explain
Scheduled – some meetings	Reviewing and guiding strategy	Strong corporate governance is essential to achieving long-term sustained business value. To guide integration of ESG into VMware's operations and performance management, VMware is implementing an ESG governance structure comprised of internal leadership and members of our executive staff to guide integration of ESG into VMware's operations and performance management. Our governance structure includes the full Board annual oversight of ESG topics as well as focused oversight responsibilities with the Governance, Audit and Compensation committees. In early 2021, we established a new ESG Office to ensure cross-company



	alignment, a strategic focus, as well as to measure and track the progress against our 30 goals
	that make up our 2030 Agenda. We report our progress annually using widely recognized
	guidelines for ESG reporting and transparency.

C1.1d

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

	Board member(s) have competence on climate-related issues
Row 1	Not assessed

C1.2

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

Name of the position(s) and/or committee(s)	Responsibility	Frequency of reporting to the board on climate-related issues
Other C-Suite Officer, please specify ESG Executive Sponsors – Chief Technology Officer, Chief People Officer, Chief Financial Officer, and General Counsel	Both assessing and managing climate- related risks and opportunities	Annually
Environment/ Sustainability manager	Both assessing and managing climate- related risks and opportunities	Not reported to the board
Sustainability committee \mathcal{P}_2	Both assessing and managing climate- related risks and opportunities	Not reported to the board

 \mathcal{P}^1 Vice President of ESG Office

 \mathcal{P}^{2} VMware's ESG Senior Leadership Council



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).

ESG Executive Sponsors

i) Responsibility description: Established in 2020 to embed ESG goals into our business, Executive Sponsors aim to integrate ESG goals: accelerating a low carbon future by decarbonizing digital infrastructure across our customer ecosystem, supply chain and operations. They provide leadership and executive management authority on ESG issues by connecting strategic planning to operations and ESG to business strategies and risk responses; assessing new/emerging ESG-related risks/opportunities; and ensuring a program is in place to identify, assess, manage and monitor ESG risks. The Exec Sponsors - specifically CPO, CFO & GC - report to the Governance Committee of the Board with CEO support. The Governance Committee will bring ESG topics to the full BOD annually. VP of Internal Audit is responsible for implementing a process for independent review and assessment of ESG processes and results, with reporting to Board-level Audit Committee as work occurs.

ii) Role descriptions:

-CFO considers potential sustainability impacts on financial risk & long-term financial performance

-CPO for potential sustainability impacts on employee experience, culture, talent acquisition, retention & development

-CTO for potential sustainability impacts on long-term technical agenda

-GC provides guidance to understand/navigate issues that may arise, external reporting on ESG performance

ESG Leadership Council

i) Responsibility description: Established in 2020 to integrate ESG goals into our business, the Council aims to develop ESG fluency and operationalize ESG strategy within business units (including climate change efforts to drive net zero emissions, radical efficiency, zero-carbon clouds, and sustainable innovation). Designated by Executives, they hold strategic and operational responsibility to advance ESG priorities and define metrics/measures.
 Meetings are scheduled around ESG Executive Sponsor discussions, long-range planning, quarterly oversight and annual operating plan processes.
 The Council aims to meet quarterly to provide oversight on progress against annual priorities and ESG CEO Scorecard, and annually for cross-functional strategy setting and planning to support Management and Board commitments.

ii) Role description:

·SVP/VP, Product for sustainability impacts on products

·SVP/VP, Go-to Market considers sustainability impacts on customers/partners

·SVP/VP, Operations for operations, human capital, supply chain, communications, public policy and external reporting on ESG performance



Vice President of ESG Office

i) Description of responsibilities: The VP of ESG oversees the development and operationalization of our sustainability strategy to support long-term value creation by building a more equitable, sustainable & resilient digital future for our stakeholders. VP of ESG reports directly to and meets regularly with our CTO. Placing the VP in the Office of the CTO was a strategic move made in 2016 to align sustainability and ESG objectives with our technical roadmap and business strategy.

ii) Role descriptions:

VP of ESG and the ESG Office are trusted advisors to business functions for driving environmental sustainability, social impact and ESG governance - including long-term strategy goals such as net zero for global operations and supply chain, intrinsic sustainability goals through zero-carbon clouds and workload carbon efficiency.

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
Chief Executive Officer (CEO)	Monetary reward	Behavior change related indicator	To incentivize ESG progress, including climate-related goals, our executive compensation planning incorporated ESG goals as part of the Compensation Committee's holistic evaluation of performance under our Annual Executive Bonus Program in FY22.
			Our 2030 Agenda ESG goals (climate included) are embedded in our CEO scorecard, for the Executive



	Officer Bonus calculation for FY22. The executive officers include all ESG Executive Sponsors - Chief
	Financial Officer (CFO), Chief People Officer (CPO), Chief Technology Officer (CTO), and General
	Counsel (GC) as well as the EVP, Worldwide Sales. The progress against goals is regularly reported
	internally through leadership meetings.

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	Time horizons are aligned to internal audit and enterprise risk management processes for climate-related risks
Medium-term	1	3	Time horizons are aligned to internal audit and enterprise risk management processes for climate-related risks
Long-term	3	6	Time horizons are aligned to internal audit and enterprise risk management processes for climate-related risks

C2.1b

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

i) When assessing climate-related risks, VMware assesses impacts to our business through a limited set of financial and business impact criteria. When establishing an internal financial definition for substantive financial impact, VMware considers if an impact affects enterprise valuation, would be considered financially material, and would affect internal financial planning. From a business impact lens, we are expanding alignment to internal audit and risk management processes, in which climate-related risk is considered similar to other risks. Each year we review the list of climate risks with



potential business and financial impacts for continued relevance, updating and editing as needed. For climate-related risks, we focus primarily on risks associated with potential disruptions to and increased costs of business operations, including sales, support and product development. An example is the risk of product non-performance, since our products generally have the potential to deliver positive climate impact, such as reducing energy needs and facilitating a better remote work experience. Risks are prioritized, based on agreed potential substantive financial or strategic impact, and evaluated further.

ii) For CDP reporting purposes only, VMware defines "substantive financial or strategic impact" as an impact that has the potential to affect total revenue by >1% or free cash flow by >3% with consideration of the context of a given issue to determine substantive impact. For the FY22 reporting year, VMware revenue was \$12.85B and free cash flow was \$3.97B; therefore, substantive financial impact for the purposes of CDP would translate to \$128.5M+ for revenue and \$119.1M+ for free cash flow. This definition of substantive impact is not necessarily a conclusive definition for any other purpose.

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

Annually

Time horizon(s) covered

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



Description of process

We are continuing to develop processes for assessing and managing climate-related transition and physical risks/opportunities that could have a substantive financial or strategic impact. Our VP of ESG develops and communicates our sustainability strategy and collaborates with VP of Internal Audit to integrate climate risk/opportunities from direct operations into the risk assessment process. The Audit Committee has primary oversight for enterprise risk, periodically reviewing practices and

policies for risk assessment/management with senior management team and overseeing internal audit. Internal audit reviews the effectiveness of our risk management and control framework; ensures risk management activities are integrated, consistent and managed at a level commensurate with the risk; recommends, tracks and reports on risk management framework progress; and assists executives to assure significant risks are identified/managed with risk benefit trade-offs to protect assets and stockholder value. Internal audit is responsible for assurance/risk advisory services (maturity assessments/risk profiling/raising awareness) and performs annual compliance risk assessments for identified/emerging risks, company-wide, across the value chain, and across short/medium/long-term time horizons. They use an integrated multidimensional model to evaluate/prioritize risks and climate-related issues.

VMware global business continuity management conducts annual business impact analysis (BIA) in collaboration with senior leadership of lines of business to document key risks and continuity strategies to operations. Risks are prioritized by potential substantive financial or strategic impact. Our risk evaluation considers potential strategic, customer, legal, stakeholder and regulatory impacts; and our vulnerabilities include rate of change, scale, experience and concern.

To supplement the enterprise risk processes, in 2021 we conducted an extensive company-wide assessment of climate-related risks to better understand VMware's risk exposure. Six functional groups with responsibilities across VMware's value chain evaluated identified relevant climate-related risks on their potential impact and VMware's current vulnerability. The likelihood of physical risks impacting VMware was assessed via scenario analysis due to the temporal uncertainty of physical climate risks in the face of climate change. Specifically for climate-related risks, VMware's climate screening and scenario analyses provide the data used to prioritize risk mitigation efforts. Scenario analysis allows for VMware to understand across different future climate worlds how climate risks interconnect with other enterprise risks and understand the proportional impact of climate risks in the context of other risks.

The operational risk assessment process is ongoing; pertinent risks arise and are flagged by Risk Management, Physical Security & Resiliency, Emergency Response, and Crisis Management. Potential operational risks associated with climate change are mitigated by the Workplace, Crisis Management, Physical Security & Resiliency teams, through the implementation of disaster recovery, crisis management and business



continuity planning.

To respond to climate-related risks and opportunities, Internal Audit meets with Physical Security & Resiliency (PSR) annually. PSR improves our response/preparedness/resiliency to natural or man-made disasters and unites business continuity, technology recovery, emergency response, and crisis management programs under a collaborative governance framework to effectively manage risks to our people and business. PSR focuses on risk mitigation strategies for key business interruption risks identified by Internal Audit including natural disasters. PSR's objectives are to develop Crisis Management Plans for top risks, drive organizational awareness, and provide stronger governance across related programs like Business Continuity, Disaster Recovery, Crisis Management and Safety and Security. The highest level of management responsible for the Physical Security & Resiliency program is the Chief Security Officer, who meets with the Board as needed.

A case study of how we apply our risk assessment process to climate-related physical risk is demonstrated by our Crisis Management & PSR teams, which assess and identify climate-related extreme weather events, such as fires, floods and storms, that can impact business operations/productivity in the short term. PSR and Internal Audit regularly exchange information on existing/emerging operational risks via a Risk Register. In 2021, 222 physical risk incidents were identified globally ranging from cyclone, earthquake, and extreme rainfall, to bush fires. Our Team Resiliency Plans for all people managers across functions support teams and manage such events. These plans are created to be used when a manager becomes aware of events and/or emergencies that may disrupt business operations or put their team in harm's way. This planning helps provide team members and other stakeholders respond to disruptive events with strategies like transfer time-sensitive task to unimpacted employees or advising the team to work remotely.

A case study of how we apply our operational risk assessment process to climate-related transitional risk is demonstrated by our response to sourcing electricity through renewable energy to avoid potential market risks of price increases of fossil fuel-based electricity. We maintained our 100% renewable energy (RE) status in 2021 (since 2019) and our RE commitment is a key part of our SBT for Scope 2 emissions in the short/medium term. We realize the importance of a progressive RE procurement strategy and we are moving beyond purchasing RE credits where possible. We are also developing a region-specific renewable electricity program that includes virtual power purchase agreements in mature markets where VMware has a significant presence, such as the U.S. and Europe.

Another transitional risk response is related to RE transition of upstream colocation service providers. We are a member of the Clean Energy Buyers Association (CEBA) whose goal is to accelerate the transformation of the energy industry to RE by making it easy/accessible for corporations to procure RE for our and our suppliers' operations. With a platinum membership, we participate in CEBA's supply chain initiative to magnify our progress on our own supply chain strategy to include a broader coalition of companies. We identify supply chain work as vital as



we depend on colocation/cloud partners for hosted services that must also transition to RE. For example, the Colocation Selection Criteria Checklist includes Sustainability as a criterion and the colocation evaluation matrix for RFPs are rated for sustainability. The Data Center Operations and Sourcing teams have engaged to help one of the colocation data centers to accept a 50% RE target by 2025.

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	As VMware operates in several regions and has expanded our global presence, we must stay aware of climate-related local, state or national governmental regulations in various markets. Current regulation risks, which may be influenced by climate issues, are considered relevant and included in our enterprise risk management identification and assessment processes conducted by our Internal Audit team. As one example, the offices that VMware operates in the European Union are subject to strict environmental regulations, such as Streamlined Energy and Carbon Reporting (SECR) and Energy Savings Opportunity Scheme (ESOS) (https://www.gov.uk/guidance/energy-savings-opportunity-scheme-esos). In the UK, large companies have reporting obligations under SECR starting in 2020. As a large company, VMware UK Ltd is legally required to report under a number of UK/ international frameworks, including the new SECR scheme. From financial years beginning on or after 1st April 2019, qualifying large UK companies will need to include the following information within (or alongside) their Directors' Report annually – GHG emissions, Total kWh energy use, energy efficiency actions taken during the reporting period. VMware filed 2020 financial statements in October 2021 which included the first SECR disclosures as part of the Directors' Report. Such regulations in different markets could impact our operations by potentially requiring capital investments or other operational modifications.
		modifications.



Emerging regulation	Relevant, always included	 Emerging regulation risks, which may be influenced by climate issues, are relevant and included in our enterprise risk management identification and assessment processes conducted by our Internal Audit team. Our policy engagement activities are coordinated through our VP of Global Government Relations and Public Policy. This individual is on the board of directors and as well as serves as the Vice-Chair of the Finance Committee of the Information Technology Industry Council (ITI), allowing VMware to assess emerging regulation risks and to weigh in on ITI's policy positions. An example of an emerging regulation we consider is a carbon tax. The likelihood of a carbon tax in the US is reviewed annually and the impact on our operations is assessed so that VMware is prepared for any potential financial or operational impacts.
Technology	Relevant, always included	 Technological risks, which may be influenced by climate issues, are relevant and included in our enterprise risk management identification and assessment processes conducted by our Internal Audit team. We consider the risks presented by technology and the rapid developments within the field from a business strategy perspective, as well as a competitive one. For example, one of VMware's competitive advantages is the energy efficiency benefits we offer customers through our virtualization technologies and cloud services. Our Software-Defined Data Center (SDDC) suite of products enable customers to reduce their energy expenditures and minimize their carbon footprints. If a competitor develops technology or sustainability solutions to surpass our current energy efficiency benefits, we risk falling behind in this fast-moving field.
Legal	Relevant, always included	 Legal risks, which may be influenced by climate issues, are relevant and included in our enterprise risk management identification and assessment processes conducted by our Internal Audit team. We believe that legal risk is low as we are a software company with limited climate-related liability risks. We believe that our exposure to litigation related to our climate-related performance and disclosure is very low; and legal risk due to breach of fiduciary duty to manage climate related risks is not relevant. The legal risk due to noncompliance with current climate regulation is also low and we are evaluating the potential impact of proposed new disclosure requirements. From financial years beginning on or after 1st April 2019, qualifying large UK companies will need to include the following



		 information within (or alongside) their Directors' Report annually – GHG emissions, Total kWh energy use, energy efficiency actions taken during the reporting period. VMware filed 2020 financial statements in October 2021 which included the first SECR disclosures as part of the Directors' Report. Given the proposed SEC proposed rules to enhance and standardize climate-related disclosures for investors, failing on mandatory climate-related reporting is a legal risk. An ESG disclosure Working Group has been formed to monitor the developments and ensure our preparedness to meet any upcoming regulation.
		For FY22, we have reported on our environmental, social & governance performance in our Annual Report on Form 10-K (to the SEC). We expanded our qualitative sections on ESG, Environmental Sustainability and Diversity Equity and Inclusion (DEI), in our Annual Report on Form 10-K -SEC filing (https://ir.vmware.com/websites/vmware/English/5100/us-sec-filing.html?year_filter=0&category_filter=1). We also incorporated sections on ESG, DEI, 2030 Agenda (our ESG strategy), and corporate governance reporting in our Proxy statement (https://ir.vmware.com/websites/vmware/English/5100/us-sec-filing.html?year_filter=0&category_filter=2) for the second consecutive year.
Market	Relevant, always included	 Market risks, which may be influenced by climate issues, are relevant and included in our enterprise risk management identification and assessment processes conducted by our Internal Audit team. We face intense competition across all markets for our products and services. We believe that the key factors in our ability to successfully compete include the quality, price, and adaptability of our product and service offerings, along with energy efficiency (decarbonization) benefits.
		While we are a technology leader in virtualization and cloud infrastructure solutions and have a favourable reputation with our customers, many of our current or potential competitors have longer operating histories, greater name recognition, larger customer bases and significantly greater financial, technical, sales, marketing and other resources. An example of a climate-related market risk we consider is if we fail to develop and implement energy efficiency features in our offerings that equal or exceed those in competing products we would risk losing a part of our market share that values our products' environmental benefits.



Reputation	Relevant, always included	Reputational risks, which may be influenced by climate issues, are relevant and included in our enterprise risk management identification and assessment processes conducted by our Internal Audit team. For VMware, given that we have led the virtualization of IT with our virtualization products, for example vSphere, vCloud NFV, and Horizon, and that our products are known for energy efficiency, it would negatively impact our business if our reputation was damaged due to a lack of performance around the environment and climate change. There is now greater public and shareholder scrutiny on how companies are assessing climate change risks and opportunities. Third party ESG rating and ranking agencies such as Morgan Stanley Capital International (MSCI) ESG rating (https://www.msci.com/research-and-insights/esg-ratings-corporate-search-tool/issuer/vmware-inc/IID00000002129033) scan businesses environmental performance and practices to rate companies. We were also recently named to the Dow Jones Sustainability Index (DJSI) for the second year in a row. The DJSI is one of the most respected independent sustainability performance evaluation systems and we outranked many of our peers in the software category for our leadership in corporate sustainability. VMware must demonstrate commitment to climate change related action and progress on public goals to continue to score high on ESG ranking and ratings.
Acute physical	Relevant, always included	Acute physical risks, which may be influenced by climate issues, are relevant and included in our enterprise risk management identification and assessment processes conducted by our Internal Audit team. We evaluate the impacts of potential event-driven weather incidents that are severe or frequent such as drought, wildfires, acute air pollution, floods, water crisis, or increase in temperature. We closely monitor the impact from potential natural disasters to our major office locations. Tropical storm Henri and hurricane Ida did not have a major impact in 2021 for our AMER operations. Such events can impact our major locations, where R&D product development, operations and support are conducted. Under our Future of Work distributed workforce model, we are also monitoring climate related weather risks in our major locations for impacts to employees' home power and network infrastructure.



Chronic	Relevant,	Chronic physical risks, which may be influenced by climate issues, are relevant and included in our enterprise risk
physical	always	management identification and assessment processes conducted by our Internal Audit team. We evaluate the impacts of
	included	chronic physical risks and longer-term shifts in climate patterns, such as sustained higher temperatures, that may cause sea level rise or frequent cyclones; chronic heat waves causing droughts; changes in precipitation patterns; and changing weather patterns.
		For example, climate-driven changes in precipitation extremes have the potential to disrupt VMware's internal operations. Our India office locations like Delhi, Mumbai and Chennai experienced heavy rainfall (including significant events in September 2021 and November 2021). In addition, we had potential incident advisories for flooding events in China and Malaysia in 2021.

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?

No

C2.3b

(C2.3b) Why do you not consider your organization to be exposed to climate-related risks with the potential to have a substantive financial or strategic impact on your business?

		Primary reason	Please explain
R	ow	Risks exist, but none with potential	To prioritize relevant climate risks for VMware, a qualitative climate screening and quantitative scenario analysis
1		to have a substantive financial or	aligned to TCFD recommendations were conducted in FY22 to identify, assess, and quantify VMware's climate-
		strategic impact on business	related transition and physical risks, as well as corresponding opportunities. Risks were prioritized based on the
			scope of their impact and which risks VMware has direct management control over (first order risks). Scenario
			analysis modeling was conducted to capture the likelihood/onset of the severity of climate risks for physical risks.
			The impact of long-term changes in climate and weather patterns leading to increased heat and drought



conditions at colocation data centers as well as the risks to employees' "work from home" productivity was analyzed. This quantitative analysis estimated financial and business impact of physical risks affecting VMware's ability to continue operations. As an example, financial analyses related to increased cooling demand at data centers and decreased employee productivity due to rising temperatures were completed. These analyses showed that while VMware does face some potential risk, it is below the revenue and free cash flow thresholds for substantive financial impact related to climate as defined in question C2.1b for CDP reporting purposes. Transition risks like reputational impact with respect to customers and employees were also analyzed. Based on our definition of substantive financial risk as outlined in C2.1b, none of the identified risks were found to be reasonably likely to have a substantive financial or strategic impact on the business in the short to medium term. Although these risks have not met our definition in fiscal 2022, we are working on mitigation and adaptation plans to best prepare VMware for a changing climate. In addition, we recognize that climate risk management and analysis is an ongoing and dynamic process. We plan to continue maturing our approach and completing financial analysis of additional climate-related risks as they arise or as we have new information.

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 and/or expansion of low emission goods and services

Primary potential financial impact

Increased revenues resulting from increased demand for products and services

Company-specific description

VMware provides a multi-cloud platform that delivers a best-in-class infrastructure for enterprise applications on any cloud measured on economics, resilience, sustainability and security. VMware extends its leadership in private cloud and works with all major public cloud vendors to deliver this vision. For example, VMware Cloud on AWS (Amazon Web Services) is an on-demand service that enables customers to run applications across vSphere-based cloud environments and provides access to a broad range of AWS services. Customers may migrate workloads from their older data centers to the public cloud, using less and newer servers, which improves energy efficiency. VMware Cloud on AWS can add and remove hosts on demand thus further improving resource efficiency, avoiding more carbon emissions. VMware launched its Zero Carbon Committed initiative in 2021, partnering with cloud providers. This initiative connects customers who have sustainability goals and are looking for low-carbon solutions with a VMware cloud provider who is committed to achieving zero-carbon clouds through renewable energy-powered operations and energy-efficient data centers. As of June 2022, there are 30 partners who have joined the program.

Addressing customers desire for a low carbon economy, VMware enhances its business with more sustainability features. VMware develops tools to report and analyze customers' carbon footprints. VMware innovates in improving resource utilization and energy efficiency of customers' multi-cloud environments, reducing customers' TCO and carbon emissions. In addition to server consolidation, VMware's multi-cloud management solution enables customers to run their workloads in the best region with lowest cost and carbon emission.

For more details see Products & Technology Solutions in VMware's Annual Report Form 10-K here: https://ir.vmware.com/websites/vmware/English/5100/us-sec-filing.html VMware, Inc CDP Climate Change Questionnaire 2022



Time horizon

Long-term

Likelihood More likely than not

Magnitude of impact

Medium

Are you able to provide a potential financial impact figure?

Yes, a single figure estimate

Potential financial impact figure (currency)

150,000,000

Potential financial impact figure - minimum (currency)

Potential financial impact figure - maximum (currency)

Explanation of financial impact figure

We believe the increased demand from customers to improve their energy efficiency and reduce their carbon footprints could positively impact our revenue by increasing demand for VMware software solutions that decrease energy usage and carbon emissions. We do not currently have a definitive means to calculate this increased demand separate from other drivers of demand, thus it is not possible to precisely calculate the potential financial impact at this time. Due to increased GHG Regulation and increased customer demand for more efficient SW data center solutions, if we are able to grow our virtualization business by 1.5% as a result of this increased demand, this would represent \$150M. Theoretically, VMware could receive \$150M over the next three to six years from this increased demand from customers. This figure meets the >1% revenue threshold discussed in C2.1b.

Cost to realize opportunity

0



Strategy to realize opportunity and explanation of cost calculation

Intrinsic sustainability is at the root of VMware's strategy. We study our major products and services to create sustainability datasheets. We develop tools for carbon calculation, enabling our customers to track and reduce their carbon footprint. We work with our cloud partners on the zero carbon committed initiative. We are investing in innovative solutions to drive more carbon transparency and workload carbon efficiency. We are sponsoring research projects to work with academia on future innovations. In FY23, we are investing in an engineering team to focus on sustainable product offerings. We have a 3-year product roadmap with incremental deliverables. We are setting yearly Objective and Key Results (OKRs) for our long-term commitment of VMware's ESG 2030 agenda. As we do not disclose exact financial figures of this nature, we have responded \$0 as our response to the cost to realize the opportunity.

Comment

C3. Business Strategy

C3.1

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

Row 1

Transition plan

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

Publicly available transition plan

Yes

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

We have a different feedback mechanism in place

Description of feedback mechanism



The details of our net zero commitment and our science-based emissions reduction targets are shared on our public company website (www.vmware.com/company/esg) and in our annual ESG Report. VMware invites stakeholders to provide feedback on the topics covered in our report and on our website by submitting the questions or comments to our ESG office via email (ESG@vmware.com).

In addition, in FY22, we strengthened our stockholder engagement program by proactively reaching out to our ten largest unaffiliated stockholders who collectively held approximately 38% of our total unaffiliated shares outstanding, as well as the two major proxy advisory firms in the U.S., to solicit feedback on ESG. We engaged with these investors through a series of select investor calls that included the VP of ESG and highlighted ESG topics. The investor feedback was analyzed and insights reviewed with ESG leadership.

VMware is committed to achieving net zero carbon emissions for our operations and supply chain by 2030 as part of our Environmental, Social and Governance strategy. Among other things, we purchase renewable energy, work with our suppliers to reduce their emissions, and support distributed workforces through our Future of Work initiative to reduce what we can. By purchasing carbon offsets, we participate in low carbon sustainable development projects that enable carbon avoidance to offset our remaining emissions. In line with the leading net zero guidance, we are developing our strategy to include carbon removal projects to address residual emissions.

Our net zero goal builds on approved science-based targets and expands the scope of our climate commitments to enable employees, customers and partners to act even as the definition of a net zero future evolves. Our validated science-based targets are ambitious 1.5°C-aligned targets focused on halving our absolute Scope 1 & 2 emissions, our employee commute and fuel and energy-related emissions by FY2031 from a FY2019 baseline. VMware further commits that 75% of its suppliers by spend covering purchased goods and services, capital goods, upstream leased assets and upstream transportation and distribution will have science-based targets by FY2025.

Frequency of feedback collection

More frequently than annually

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

www.vmware.com/company/net-zero | www.vmware.com/company/esg



C3.2

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

Use of climate-related scenario analysis to inform strategy	
Row 1	Yes, qualitative and quantitative

C3.2a

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

Climate- related scenario	Scenario analysis coverage	Temperature alignment of scenario	Parameters, assumptions, analytical choices
Physical climate scenarios RCP 2.6	Company- wide		We used scenario analysis to understand what the impacts of climate change could be for our colocation data center operations and our employees. Assumptions around possible impacts on operating expenses and employee productivity were used. The colocation data centers and major employee metro areas were analyzed at the median (50th percentile) of 30 downscaled LOCA models (from the 1/16th degree LOCA climate data set http://loca.ucsd.edu/) across the three different future world scenarios on the 2030 and 2050 time horizon. The climate metrics evaluated to understand impacts on operating expenses and employee productivity were extreme heat, extreme precipitation events, and drought.
Physical climate scenarios RCP 4.5	Company- wide		We used scenario analysis to understand what the impacts of climate change could be for our colocation data center operations and our employees. Assumptions around possible impacts on operating expenses and employee productivity were used. The colocation data centers and major employee metro areas were analyzed at the median (50th percentile) of 30 downscaled LOCA models (from the 1/16th degree LOCA climate data set http://loca.ucsd.edu/) across the three different future world scenarios on the 2030 and 2050 time horizon. The climate metrics evaluated to understand impacts on operating expenses and employee productivity were extreme heat, extreme precipitation events, and drought.



Physical climate scenarios RCP 8.5	Company- wide	We used scenario analysis to understand what the impacts of climate change could be for our colocation data center operations and our employees. Assumptions around possible impacts on operating expenses and employee productivity were used. The colocation data centers and major employee metro areas were analyzed at the median (50th percentile) of 30 downscaled LOCA models (from the 1/16th degree LOCA climate data set http://loca.ucsd.edu/) across the three different future world scenarios on the 2030 and 2050 time horizon. The climate metrics evaluated to understand impacts on operating expenses and employee productivity were extreme heat, extreme precipitation events, and drought.
Transition scenarios IEA 2DS	Company- wide	i) Scenario identification/inputs/assumptions: We complete a quantitative & qualitative climate-related scenario analysis to understand and evaluate the implications of our SBT. Assumptions around future growth rates, sales, employee headcount and real estate square footage are used. ii) Time horizon: Analysis includes medium and long-term time horizons as prescribed by SBTi & CDP (5-15 years, 15+ years, respectively), as we use this analysis to meet or exceed the SBT i criteria. For the SBT i analysis and SBT tracking, we perform a yearly Scope 3 inventory. iii) Areas considered: SBT assessment applies to the entire company, including the operating boundary for scope 1 & 2 emissions, and scope 3 emissions. Scope 1: vehicles, refrigerants, natural gas use, and diesel use from generators Scope 2: facilities, data centers, purchased cooling in leased locations, and labs Scope 3: purchased goods & services, capital goods, Fuel-and-energy-related activities (FERA), upstream transportation and distribution, waste, business travel, employee commuting, and upstream leased assets The assessment relies on assumptions and inputs from specific business/stakeholder groups: facilities, data center labs, real estate, finance, and supplier network. iv) Results: We would need to achieve reductions ranging from 25% to 55% for medium and long-term timeframes, respectively. Consequentially, our SBT is to reduce scope 1 and 2 emissions by 50% by FY2031 from a FY2019 base-year. Results are used to directly inform objectives and corporate strategy by providing reference points to determine feasibility and actions to reduce emissions. FY2019 base year analysis results showed 94% of our total emissions were scope 3, and 54% of scope 3 target to reduce scope 3 GHG emissions from employee commuting and FERA 50% by FY2031 from a FY2019 base year. We further committed that 75% of suppliers by spend covering purchased goods & services, capital goods, upstream leased assets and upstream transportation and distribution will have SBTs by F



emissions yearly for our growth trajectory and consider reduction levels needed to align with SBTi criteria
and to meet our SBT. We use the analysis to understand reduction goals progress and future energy
procurement needs.

C3.2b

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

Row 1

Focal questions

What is VMware's direct operational exposure to climate-related risks across plausible "future climate worlds" on a 2030 and 2050 time horizon?

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

Through this analysis it was found that our colocation data centers will experience chronic higher temperatures including higher temperature extremes for longer amounts of time across all scenarios. The severity of this change differed across the scenarios but it is likely that there will be higher cooling demand required at our colocation data centers and thus investments into operational efficiencies is of strategic advantage.

We also found that the metro areas in which VMware employees live and work will likely experience different future climate stressors. The majority of metro areas are expected to experience increased extreme heat conditions and more frequent extreme precipitation events. As we now rely on the ability to maintain a remote workforce, these changes in the climate may impact our employee's future work-from-home productivity. Based on these findings, we plan to focus our efforts on better understanding what our employees' resilience will be to these climate risks. With these results, across all scenarios it is expected there will be some degree of impacts on our direct operations which may have a financial impact via increased operating expenses and/or losses in employee productivity. The severity of VMware's exposure to those risks is dependent on the scenario and the impacts of VMware's future resilience building initiatives.

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	Description/time horizon: Customers increasingly evaluate IT energy & carbon impacts to support their sustainability/decarbonization goals; our products help lower carbon footprints and measure carbon reduction initiative impacts. We continually update product features to remain competitive and secure new business. Climate related strategy will continue to influence our products/services strategy now and in the future (short-term:0-1 yr, medium-term:1-3 yrs, & long-term:3-6 yr). In our 2030 Agenda we commit to accelerate productivity & carbon efficiency of customer digital operations. We help accelerate a low carbon future through efforts to drive net-zero emissions, radical efficiency, carbon-free clouds, and sustainable innovation. Our multi-cloud, virtual cloud networking, digital workspace, application modernization and security solutions form a flexible, consistent digital foundation on which to build/run/manage/connect/protect applications, anywhere. Our cloud infrastructure & business mobility solutions accelerate digital transformation with a software-defined approach to IT. Desktop/server/data center virtualization solutions help customers reduce energy costs/consumption. We led the development of virtualization technologies & continue transforming IT resources by allowing them to manage resources across private clouds and complex multi-cloud/multi-device environments. Most substantial strategic decisions: The primary aspect of climate change that drives our strategy is enabling energy efficiency via software. Cloud computing enables shifting to a lower carbon business model while increasing operational efficiency. We support customers in avoiding emissions with our compute virtualization platform, vSphere,
		and in reducing their hardware footprints with vSAN & NSX products. Our annual study "Enabling More Agile & Sustainable Business through Carbon-Efficient Digital Transformations" quantifies significant environmental benefits: over 758 MMT CO2e avoided by our customers via virtualization products since 2003. Our SDDC technologies form private cloud foundations, enabling the extension of private to public cloud to run/manage/secure/connect applications across clouds/devices. We continually invest in and



		have annual releases that provide more robust features to support our client requirements.
Supply chain and/or value chain	Yes	Description & time horizon: Climate change may have a long-term negative impact on our business. Risks related to rapid climate change may have an increasingly adverse impact on our business and those of our customers, partners and vendors in the longer term. Given the inherent risks faced by all businesses in today's climate along with the scale of our global supply chain, VMware aims to create an awareness of climate-related risks among our suppliers that will better enable them to identify and prepare for future events through CDP disclosures. A number of climate-related risks, including extreme weather events, could impair the production capabilities of our suppliers or disrupt transportation networks, potentially limiting our ability to fulfil obligations to our customers. Engaging with our suppliers also presents an opportunity to reduce emissions beyond our direct operations. Climate related strategy will continue to influence our supply chain business strategy now and into the future (short-term of 0-1 year, medium-term of 1-3 years, and long-term of 3-6 years).
		Most substantial strategic decisions to date: VMware's supply chain strategy is influenced by climate-related risks and opportunities now and in the future (short, medium, and long term). VMware joined CDP's Supply Chain initiative in 2018 to engage suppliers. Through this platform, we learned that our suppliers are highly capable and understand the need for emissions reductions. In FY22, we reached out to suppliers representing over 75% of our spend regarding their climate change related activities. We received about the same number of supplier responses from the previous year, and gleaned valuable insight into the climate-related activities being pursued by a number them, though we did not see much movement from the prior year. For example, 37% of the suppliers who responded said that they work on engaging their own supply chain to reduce their emissions, and 56% indicated that they have taken action to reduce their emissions and GHG levels. We know that we cannot achieve our climate goals alone. For this reason, we have committed to working with 75% of our suppliers by spend to support them in setting their own science-based targets by FY2025.



Investment in	Yes	Description & time horizon:
R&D		We have made investments in R&D in response to climate-related risks and opportunities that improve our cloud product offerings as customers are increasingly evaluating IT energy use/carbon impacts, as well as the companies that provide these products and services. We invest in continually updating product
		features to remain competitive and secure new business. Climate related strategy will continue to influence our R&D business strategy now and in the future (short-term of 0-1 year, medium-term of 1-3 years, and long-term of 3-6 years).
		Most substantial strategic decisions to date:
		To make significant progress in our R&D strategy, we continually invest in opportunities with climate-
		related benefits that improve our cloud product offerings now and in the future (short, medium, and long term). We have assembled an experienced group of developers with expertise within application
		modernization, cloud management, cloud infrastructure, networking, security, anywhere workspaces,
		software-as-a-service (SaaS), open source and edge solutions. We also have strong ties to leading academic institutions around the world and we invest in joint research with academia. We prioritize product
		development efforts through a combination of engineering-driven innovation and customer- and market-
		driven feedback. Our R&D culture values innovation, quality and open collaboration with partners. We continue to invest in and focus on expanding our subscription and SaaS offerings. We continue to invest in
		key growth areas and areas we expect to be significant growth drivers in future periods.
		In 2020 VMware partnered with US National Science Foundation for a new research program: "The Next
		Generation of Sustainable Digital Infrastructure." The program incorporates sustainability concerns across
		the full development and operations lifecycle and determines measurement methods to capture various
		applications. VMware and NSF are leading this a multiyear digital infrastructure sustainability research to foster novel, transformative research in fundamental and systematic approaches to lead to practical
		methodologies/tools. The joint NSF-VMware awards, which total US \$6,000,000 in research funding grants
		over three years, are made for two multi-university research teams



Operations	Yes	Description/ time horizon: Climate change may have a long-term negative impact on our business. While we mitigate the business risks associated with climate change for our operations, there are inherent climate-related risks wherever business is conducted. Any primary locations may be vulnerable to the effects of climate change and the impacts of extreme weather events, which have caused regional short-term systemic failures in the U.S. and elsewhere.
		Operations are subject to a number of climate-related risks, such as potential disruptions to our drought/wildfire prone Palo Alto campus, all presenting opportunities to evolve, innovate, and include operational resiliency into our strategy. Climate related strategy will continue to influence our operational strategy in the short (0-1 year), medium (1-3 years, and long-term (3-6 years).
		Most substantial strategic decisions: In the last 4 years California has experienced extreme temperatures & low precipitation, resulting in wildfires that impact air quality and electric service at our Palo Alto campus, where 4,000+ employees work. We have installed a microgrid on our 105-acre campus in Palo Alto illustrates the impact of which extends far beyond our campus, providing local renewable power, energy storage, and emergency back-up power to the local community in a climate-related event.
		Inspired by a vision to increase our community's resilience in the face of climate disasters, we assessed systemic risks and realized that our collective dependency on grid power made us vulnerable to outages. VMware collaborated with the City of Palo Alto on a first-of-its-kind community microgrid that can provide local renewable power and energy that is reliable, sustainable, and resilient.
		The microgrid prototype encompasses two buildings on VMware's campus, supported by two 1 MWh batteries which integrate with existing rooftop solar panels and 100% renewable grid power. Each microgrid has the capability to support the community's Mobile Emergency Operations Center (MEOC), providing connectivity and resilient power for its vehicles. These MEOC vehicles can then use the VMware microgrid in case of extended power outages or fuel shortages to provide critical communication services during emergencies for the surrounding community.



C3.4

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

e	Financial planning elements that have been nfluenced	Description of influence
1 [Revenues Direct costs ndirect costs Capital expenditures Capital allocation Acquisitions and divestments Assets	We plan for climate-related risks and opportunities annually as part of our existing annual financial planning process in the ESG office. ESG investments are prioritized across three considerations 1) alignment to our 2030 strategy 2) financial ROI and 3) impact. Prioritized investments are presented by the VP, ESG and reviewed with the ESG Executive Sponsors and by the VP, Corporate Finance. The proposed plan is presented by the CFO at the board level, with ESG as a specific component of VMware's annual operating plan for board review. The approved plan is incorporated in the financial planning of relevant organizations across the enterprise and is intended to ensure we meet current climate commitments, as well as make progress towards future climate commitments.



	We also incorporate climate risk into our operational costs through making short-term expenditures, such as carbon credits and RECs, towards meeting our current RE100 and Climate Neutral commitments, and longer-term investments and capital expenditures, such as R&D for climate-related opportunities per C2.4a, responsible sourcing and renewable energy investments, towards future commitments such as SBTs, Net Zero, Supplier targets, and Zero Carbon Committed Clouds.
	ii.) Time horizon: Climate related risks and opportunities influence our financial planning now and in the future (short, medium, and long term). Our financial planning related to revenues, indirect and direct (operating) costs, capital allocation/expenditure, and assets, as impacted by climate-related risks and opportunities extends to the long term. For several elements, planning occurs routinely (annual plan and quarterly forecast).

C3.5

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

No, but we plan to in the next two years

C4. Targets and performance

C4.1

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

Absolute target

C4.1a

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



Target reference number Abs 1

Year target was set 2020

Target coverage

Company-wide

Scope(s)

Scope 1

Scope 2

Scope 2 accounting method Market-based

Scope 3 category(ies)

Base year

2019

Base year Scope 1 emissions covered by target (metric tons CO2e) 3,819

Base year Scope 2 emissions covered by target (metric tons CO2e) 20,054

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



- Total base year emissions covered by target in all selected Scopes (metric tons CO2e) 23,873
- Base year Scope 1 emissions covered by target as % of total base year emissions in Scope 1 100
- Base year Scope 2 emissions covered by target as % of total base year emissions in Scope 2
- Base year Scope 3 emissions covered by target as % of total base year emissions in Scope 3 (in all Scope 3 categories)
- Base year emissions covered by target in all selected Scopes as % of total base year emissions in all selected Scopes 100
- Target year

2031

- Targeted reduction from base year (%)
 - 50
- Total emissions in target year covered by target in all selected Scopes (metric tons CO2e) [auto-calculated] 11,936.5
- Scope 1 emissions in reporting year covered by target (metric tons CO2e) 2,685
- Scope 2 emissions in reporting year covered by target (metric tons CO2e) 1,025
- Scope 3 emissions in reporting year covered by target (metric tons CO2e)



Total emissions in reporting year covered by target in all selected scopes (metric tons CO2e) 3,710

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

168.9188623131

Target status in reporting year

Underway

Is this a science-based target?

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

Target ambition

1.5°C aligned

Please explain target coverage and identify any exclusions

Our SBTi -approved target is to reduce our company-wide Scope 1 and 2 emissions by 50% by FY2031 from a FY2019 base-year. All years listed are our fiscal years as defined in C0.2.

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

The percentage achieved is a result of the reduction in our Scope 1 and 2 emissions since FY2019. 100% of all VMware offices and colocation data centers are covered under our RE100 commitment.

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

Target reference number Abs 2

Year target was set 2020



Target coverage

Company-wide

Scope(s) Scope 3

Scope 2 accounting method

Scope 3 category(ies)

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

Base year

2019

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

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

Base year Scope 3 emissions covered by target (metric tons CO2e) 12,803

Total base year emissions covered by target in all selected Scopes (metric tons CO2e) 12,803

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

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



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

Base year emissions covered by target in all selected Scopes as % of total base year emissions in all selected Scopes 100

Target year

2031

Targeted reduction from base year (%) 50

Total emissions in target year covered by target in all selected Scopes (metric tons CO2e) [auto-calculated] 6,401.5

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

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

Scope 3 emissions in reporting year covered by target (metric tons CO2e) 8,024

Total emissions in reporting year covered by target in all selected scopes (metric tons CO2e) 8,024

% of target achieved relative to base year [auto-calculated] 74.6543778802

Target status in reporting year

Underway



Is this a science-based target?

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

Target ambition

1.5°C aligned

Please explain target coverage and identify any exclusions

Our SBTi-approved Scope 3 target is to reduce absolute Scope 3 GHG emissions from employee commuting and fuel-and-energy-related activities 50% by FY2031 from a FY2019 base year. All years listed are our fiscal years as defined in C0.2.

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

100% of all VMware offices and colocation data centers are covered under our RE100 commitment.

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

Target reference number

Abs 3

Year target was set 2020

Target coverage

Company-wide

Scope(s)

Scope 3

Scope 2 accounting method



Scope 3 category(ies) Category 7: Employee commuting

Base year

2019

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

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

Base year Scope 3 emissions covered by target (metric tons CO2e) 51,464

Total base year emissions covered by target in all selected Scopes (metric tons CO2e) 51,464

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

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

Base year Scope 3 emissions covered by target as % of total base year emissions in Scope 3 (in all Scope 3 categories) 13

Base year emissions covered by target in all selected Scopes as % of total base year emissions in all selected Scopes 100

Target year



2031

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

50

Total emissions in target year covered by target in all selected Scopes (metric tons CO2e) [auto-calculated] 25,732

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

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

Scope 3 emissions in reporting year covered by target (metric tons CO2e) 28,831

Total emissions in reporting year covered by target in all selected scopes (metric tons CO2e) 28,831

% of target achieved relative to base year [auto-calculated] 87.9566298772

Target status in reporting year

Underway

Is this a science-based target?

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

Target ambition

1.5°C aligned

Please explain target coverage and identify any exclusions



Our SBTi-approved Scope 3 target is to reduce absolute Scope 3 GHG emissions from employee commuting 50% by FY2031 from a FY2019 base year. Our employee commute estimation includes emissions from teleworking (i.e., employees working remotely). All years listed are our fiscal years as defined in C0.2.

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

Under our Future of Work (FoW) initiative—a hybrid workforce model that offers all employees the flexibility and freedom to work from a VMware office, a home office, or other places that enable them to meet their professional and personal goals. We also offer a range of region-specific low-carbon employee commute programs through a combination of strategies, including but not limited to: public transport subsidies, vanpooling, dedicated parking spots for electric vehicles and bike racks.

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

C4.2

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

Target(s) to increase low-carbon energy consumption or production Net-zero target(s) Other climate-related target(s)

C4.2a

(C4.2a) Provide details of your target(s) to increase low-carbon energy consumption or production.

Target reference number Low 1

Year target was set

2016



Target coverage Company-wide

Target type: energy carrier Electricity

Target type: activity

Consumption

Target type: energy source

Renewable energy source(s) only

Base year

2015

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

139,798

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

71

Target year

2021

- % share of low-carbon or renewable energy in target year 100
- % share of low-carbon or renewable energy in reporting year 100
- % of target achieved relative to base year [auto-calculated]

100



Target status in reporting year

Achieved

Is this target part of an emissions target?

This target is a part of our Abs1 .

Is this target part of an overarching initiative?

RE100

Please explain target coverage and identify any exclusions

This goal is a part of our Scope 2 SBT which is as follows: VMware commits to increase annual sourcing of renewable electricity from 94% in FY2019 to 100% by FY2021 and commits to continue annually sourcing 100% renewable electricity through to FY2031. We increased our global consumption of renewable energy from 94% in FY19 to 100% in FY21 and have maintained 100% in FY22 as well.

We joined RE100 and declared a renewable energy target in 2016 and defined company-wide offices, and company-managed data centers as the goal boundary. In 2018, we folded in colocation services related IT equipment Scope 2 emissions for the first time into overall Scope 2 calculations. This was done in accordance with the Future of Internet Power best practices paper

(https://www.bsr.org/reports/BSR_Future_of_Internet_Power_GHG_Emissions_Report.pdf). The colocation IT equipment power consumption are also included in the RE% target calculations.

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

List the actions which contributed most to achieving this target

To achieve this, we focused on prioritizing energy efficiency within our operations, followed by direct contracts to procure renewables and purchase of Environmental Attribute Certificates (EACs). We are also developing a region-specific renewable electricity program that includes virtual power purchase agreements (VPPA) and aggregated VPPAs in mature markets where VMware has a significant presence, such as the United States and Europe.



C4.2b

(C4.2b) Provide details of any other climate-related targets, including methane reduction targets.

Target reference nu	umber
Oth 1	
Year target was set	c .
2016	
Target coverage	
Company-wide	
Target type: absolu	ute or intensity
Absolute	
Target type: catego	ory & Metric (target numerator if reporting an intensity target)
Waste manageme	ent
Other, please spe	cify
% waste dive	rsion from landfill
Target denominato	r (intensity targets only)
Base year	
2015	
Figure or percentag	ge in base year
94	
Target year	



2025

Figure or percentage in target year 90

Figure or percentage in reporting year

84

% of target achieved relative to base year [auto-calculated] 250

Target status in reporting year

Underway

Is this target part of an emissions target?

Is this target part of an overarching initiative?

Other, please specify VMware's Environmental Management Practices

Please explain target coverage and identify any exclusions

Our 2025 waste goal is to achieve 90% waste diversion globally. In the 2015 base year our diversion rate was 94%, covering 33% of our operations. In the reporting year our diversion rate is 84%, covering 56% of our operations.

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

The diversion rate at our Palo Alto location was 92% this year, which now makes up 24% of our global real estate portfolio. We are aiming to increase the diversion rate at our remaining sites by implementing best practices from Palo Alto. Please see VMware's ESG report for more information on our 2030 Agenda and our corporate sustainability goals.

List the actions which contributed most to achieving this target



Target reference number Oth 2

Year target was set

2020

Target coverage

Company-wide

Target type: absolute or intensity

Absolute

Target type: category & Metric (target numerator if reporting an intensity target)

Engagement with suppliers

Percentage of suppliers (by emissions) with a science-based target

Target denominator (intensity targets only)

Base year

2019

Figure or percentage in base year

28

Target year

2025

Figure or percentage in target year

75



Figure or percentage in reporting year

19

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

-19.1489361702

Target status in reporting year

Underway

Is this target part of an emissions target?

Yes, it is the supplier engagement portion of our Scope 3 SBT.

Is this target part of an overarching initiative?

Science Based Targets initiative - approved supplier engagement target

Please explain target coverage and identify any exclusions

VMware commits that 75% of its suppliers by spend covering purchased goods and services, capital goods, upstream leased assets and upstream transportation and distribution will have science-based targets by FY2025. All years listed are our fiscal years as defined in C0.2

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

To achieve our supply chain carbon reduction goals, we are increasing efforts in FY22 to work with suppliers at a deeper level to support them and ensure progress towards our SBT goal. Currently, in addition to the 19% who have set targets a further 36% have formally committed to setting targets, meaning 55% are engaged with the SBTi. We continually work with our top suppliers on enhancing their ESG efforts and checking in on their progress, so we expect to see these numbers increase.

List the actions which contributed most to achieving this target

C4.2c

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



Target reference number

NZ1

Target coverage

Company-wide

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

Abs1 Abs2 Abs3

Target year for achieving net zero

2031

Is this a science-based target?

No, but we are reporting another target that is science-based

Please explain target coverage and identify any exclusions

As part of our 2030 Agenda, VMware is committed to achieving net zero carbon emissions for our operations and supply chain.

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

Yes

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

Our science-based targets, our commitments to RE100 and carbon neutrality are foundational as we drive towards net zero. We plan investments for our emission elimination projects as part of our annual operating cycle and are in the process of developing a long-term net zero plan which will also include our carbon removal strategy to neutralize residual emissions by 2030.

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



C4.3

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

Yes

C4.3a

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

	Number of initiatives	Total estimated annual CO2e savings in metric tonnes CO2e (only for rows marked *)
Under investigation	0	0
To be implemented*	0	0
Implementation commenced*	1	6.78
Implemented*	16	711.72
Not to be implemented	0	0

C4.3b

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

Initiative category & Initiative type

Energy efficiency in buildings Lighting

Estimated annual CO2e savings (metric tonnes CO2e)



94.75

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

Scope 2 (location-based) Scope 2 (market-based)

Voluntary/Mandatory

Voluntary

Annual monetary savings (unit currency – as specified in C0.4) 33,219

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

473,808

Payback period

4-10 years

Estimated lifetime of the initiative

16-20 years

Comment

Installation of LED lighting and control panel upgrades

Initiative category & Initiative type

Energy efficiency in buildings Other, please specify High-efficiency equipment

Estimated annual CO2e savings (metric tonnes CO2e)

616.98



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

Scope 1 Scope 2 (location-based) Scope 2 (market-based)

Voluntary/Mandatory

Voluntary

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

21,398

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

367,436

Payback period

16-20 years

Estimated lifetime of the initiative

16-20 years

Comment

EC fan and energy valve installation for AHUs, boiler replacement and CRAC unit upgrades.

C4.3c

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

Method	Comment
Dedicated budget for energy	To accelerate our Sustainable Products, VMware has used the ring fence method of budgeting which enables increased
efficiency	focus on and visibility to our investment in delivering sustainable product solutions. For the majority of our other
	investments, VMware uses our integrated annual capital budgeting process to identify & fund energy saving projects
	globally. To determine which projects to invest in, as part of the ESG Office annual financial planning process, investments



Compliance with regulatory requirements/standards	for Scope 1, 2 and 3 reduction activities are prioritized across 3 considerations, 1) alignment to 2030 strategy 2) financial ROI and 3) impact. Along with typical Scope 2 emissions reduction activities such as LED lighting, upgrading HVAC systems, or designing to LEED certification, VMware also invests in Scope 2 through renewable energy, such as the Palo Alto campus microgrid, and Scope 3 initiatives such as employee commute and the responsible supplier program. Certain projects may be necessary to meet or exceed regulatory or customer compliance requirements. In such cases, compliance would be the driver and objective.
Partnering with governments on technology development	VMware has worked closely with the City of Palo Alto to develop the prototype of an innovative community microgrid, a local energy grid that can disconnect from the traditional grid and operate autonomously. The microgrid prototype encompasses two buildings on VMware's Palo Alto campus, supported by two 1 MWh batteries which integrate with existing rooftop solar panels and 100% renewable grid power. Each microgrid has the capability to also support the community's Mobile Emergency Operations Center (MEOC), providing connectivity and resilient power for its vehicles. These MEOC vehicles can use the VMware microgrid in case of extended power outages or fuel shortages to provide critical communication services.
Internal incentives/recognition programs	VMware's Sustainability at Home is a program lead by our Sustainability Ambassadors (volunteer teams) in each region, where they engage with their communities by partnering with sustainable product companies and nonprofits to enable VMware employees to lead a more sustainable lifestyle. Some of the organizations offer discounts to our employees and all of them offer continued education on sustainability topics. Currently, these offerings include discounts on renewable energy and residential solar, composting, and alternatives to plastic products. Some examples of companies are: SunShares, for the fifth consecutive year, enabling our employees to reduce their carbon emissions at home and go solar. SunShares (https://www.bayareasunshares.org/) is a solar bulk purchase program that is available for all of our California employees. In a similar manner we partner with Common Energy (https://www.commonenergy.us/partners/vmware). Through this



	program, employees can sign up to support a new, local, clean energy project for free. Energy from the project replaces fossil fuel generation, lowering emissions in the community. In addition, everyone who signs up receives guaranteed savings on their electricity. It is available to employees in nine different states in the U.S. Two additional companies offer discounts to our employees: in Costa Rica (plastic alternatives) and Massachusetts (composting) - helping employees reduce their emissions from waste.
	obtained the Bandera Azul Ecologica for our Costa Rica site for the fifth consecutive year. This prestigious award granted by the Costa Rican government on a yearly basis recognizes the effort and volunteer work of different local committees (within Costa Rica-based companies) that strive to improve environmental practices and use the program to adapt and mitigate climate change.
Employee engagement	We have a unique professional development opportunity for our employees called "Take 3." This program enables an employee to work in a different group for three months as a respite from their normal work and as a way to broaden their understanding of how the organization works. Our sustainability team actively recruits employees for Take 3 opportunities and we have had great success in leveraging these relationships to support us in more effectively communicating with various business units and increasing engagement in our sustainability strategy overall.
	We have developed new employee training content on sustainability for all employees that is now delivered online during virtual orientations. We also engage our employees on a regular basis through various communication channels, including our enterprise collaboration platform, Social and our Slack channel. It is here where employees can have active dialogues about the issues they care about, including sustainability.
	As VMware people around the world sheltered at home, our 2021 Earth Month campaign theme was about meeting them right where they were, in ways that were responsive to the moment. We called it: "Save Our Home—Without Leaving Yours." Our Sustainability Ambassadors engaged with their colleagues and communities on how to drive sustainable lifestyles and adopt sustainable mindsets by managing food waste, adjusting purchasing decisions, managing water and energy consumption, and making responsible transportation choices. These efforts culminated in an employee-created, company-wide sustainability guide, a compilation of tips and resources for leading a sustainable lifestyle while working



remotely. Our Sustainability at Home Guide is available for all of our employees on our intranet.

C4.5

(C4.5) Do you classify any of your existing goods and/or services as low-carbon products? $$\mathrm{Yes}$$

C4.5a

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

Level of aggregation

Group of products or services

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

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

Type of product(s) or service(s)

Other Other, please specify Virtualization Software

Description of product(s) or service(s)

Since 2003, VMware's virtualization products have helped customers avoid over 1.2 billion MT CO2e, as quantified by the International Data Corporation (IDC). Over time, VMware has expanded its focus from computing to storage and networking through its vSAN and NSX technologies, increasing the ability to reduce CO2e emissions. VMware was the first company to articulate a vision for the Software-Defined Data Center (SDDC), enabling management of the data center to be entirely automated by software, from one, unified platform. Traditional data centers are loose collections of technology silos where each application type has its own vertical stack consisting of a CPU and operating



system, storage pool, networking and security, and management systems. Over time, costs to maintain the data center infrastructure have been increasing because the data center environment has become divergent, leading to higher complexity. The increased complexity of the data center demands constantly increasing resources to manage and maintain the IT infrastructure not to mention the power usage and overall size of the carbon footprint of these traditional data centers. The SDDC is designed to transform the data center into an on-demand service that addresses application requirements by abstracting, pooling and automating the services that are required from the underlying hardware.

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

Yes

Methodology used to calculate avoided emissions

Evaluating the carbon-reducing impacts of ICT

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

Use stage

Functional unit used

The number of physical servers, storage appliances, and switches that were not deployed because of the implementations of VMware's virtualization technologies serve as the basis for calculating the amount of energy and CO2e emissions avoided. The energy avoided is directly proportional to the avoidance of physical servers being deployed and is augmented to reflect the energy that would have been used to operate the data center.

Reference product/service or baseline scenario used

IDC's Worldwide Server Tracker data provided the basis for total worldwide number of physical servers deployed, including the portions both with and without virtualization capabilities, from 2008 to 2019.

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

Use stage

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

18.46



Explain your calculation of avoided emissions, including any assumptions

A conservative and defensible approach to calculate the server host infrastructure avoided and the associated power consumption and carbon dioxide emissions that were avoided because of enterprise use of VMware's virtualization infrastructure was used. The estimates include incremental virtualizations implemented in 2019 as well as contributions from the installed base of virtualized infrastructure still in operations as of 2015 providing ongoing avoided energy and carbon savings. For storage and networking, the savings are twofold — savings associated with displacement of storage appliances and switches, and using high-efficiency storage devices.

The impact of vSAN and NSX on host server utilization was calculated and resultant storage appliance and switch displacement. The annual avoided infrastructure estimate was combined with avoided installed base estimates to determine the total avoided infrastructure counts for each year. For the installed base estimates, a useful life of 4.5 years was assumed. Data on IT equipment avoidance was used from 2019 vSphere, vSAN, and NSX new deployments and existing installations, as well as weighted-average power data and annual runtimes to determine both annual and cumulative, since 2003, megawatt-hours (MWh) avoided. The energy and carbon emissions savings associated with the replacement of HDD-based storage with SSD-based storage devices was also calculated.

The cumulative savings from storage virtualization were combined with compute virtualization savings. In addition to energy savings from avoided infrastructure during 2019, IDC also calculated power consumption avoided because of cooling and other non-IT equipment energy savings using a power usage effectiveness (PUE) of 1.6. This assumes approximately 37.5% of the total energy consumed by the data center is for operations such as cooling.

Equivalent power consumption avoidance data was then converted into metric tons of carbon dioxide (MT CO2) emissions avoided using the weighted-average annual U.S. electricity carbon emissions factor as published by the U.S. Energy Information Administration for the year 2019.

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

79



C5. Emissions methodology

C5.1

(C5.1) Is this your first year of reporting emissions data to CDP? No

C5.1a

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

Row 1

```
Has there been a structural change?
No
```

C5.1b

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

	Change(s) in methodology, boundary, and/or reporting year definition?	
Row 1	No	

C5.2

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

Scope 1

Base year start



February 1, 2018

Base year end

January 31, 2019

Base year emissions (metric tons CO2e)

3,819

Comment

The FY2019 base-year Scope 1 emissions include emissions from natural gas used for space heating, diesel used for emergency generators, refrigerant emissions from owned/managed equipment and gasoline used in the company owned fleet for Shipping & Receiving in Palo Alto.

Scope 2 (location-based)

Base year start

February 1, 2018

Base year end

January 31, 2019

Base year emissions (metric tons CO2e)

73,257

Comment

The FY2019 base-year Scope 2 emissions include purchased electricity (for all VMware offices and colocation data centers) and refrigerant emissions from all leased sites.

Scope 2 (market-based)

Base year start

February 1, 2018

Base year end



January 31, 2019

Base year emissions (metric tons CO2e)

20,054

Comment

The FY2019 base-year Scope 2 emissions include purchased electricity (for all VMware offices and colocation data centers) and refrigerant emissions from all leased sites.

Scope 3 category 1: Purchased goods and services

Base year start

February 1, 2018

Base year end January 31, 2019

Base year emissions (metric tons CO2e)

210,222

Comment

Scope 3 category 2: Capital goods

Base year start

February 1, 2018

Base year end

January 31, 2019

Base year emissions (metric tons CO2e)

50,440



Comment

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

Base year start

February 1, 2018

Base year end

January 31, 2019

Base year emissions (metric tons CO2e)

12,803

Comment

Scope 3 category 4: Upstream transportation and distribution

Base year start

February 1, 2018

Base year end

January 31, 2019

Base year emissions (metric tons CO2e)

3,505

Comment

Scope 3 category 5: Waste generated in operations



Base year start

February 1, 2018

Base year end January 31, 2019

Base year emissions (metric tons CO2e) 351

Comment

Scope 3 category 6: Business travel

Base year start

February 1, 2018

Base year end

January 31, 2019

Base year emissions (metric tons CO2e)

75,282

Comment

Scope 3 category 7: Employee commuting

Base year start

February 1, 2018

Base year end

January 31, 2019



Base year emissions (metric tons CO2e) 51,464

Comment

Scope 3 category 8: Upstream leased assets

Base year start

February 1, 2018

Base year end

January 31, 2019

Base year emissions (metric tons CO2e)

1,394

Comment

Scope 3 category 9: Downstream transportation and distribution

Base year start

February 1, 2018

Base year end

January 31, 2019

Base year emissions (metric tons CO2e)

Comment



Given the nature of our business as a software and technology services company, we have determined this category to be not relevant for our Scope 3 reporting.

Scope 3 category 10: Processing of sold products

Base year start

February 1, 2018

Base year end

January 31, 2019

Base year emissions (metric tons CO2e)

Comment

Given the nature of our business as a software and technology services company, we have determined this category to be not relevant for our Scope 3 reporting.

Scope 3 category 11: Use of sold products

Base year start

February 1, 2018

Base year end

January 31, 2019

Base year emissions (metric tons CO2e)

Comment

Given the nature of our business as a software and technology services company, we have determined this category to be not relevant for our Scope 3 reporting.



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

Base year start

February 1, 2018

Base year end

January 31, 2019

Base year emissions (metric tons CO2e)

Comment

Given the nature of our business as a software and technology services company, we have determined this category to be not relevant for our Scope 3 reporting.

Scope 3 category 13: Downstream leased assets

Base year start

February 1, 2018

Base year end

January 31, 2019

Base year emissions (metric tons CO2e)

Comment

Given the nature of our business as a software and technology services company, we have determined this category to be not relevant for our Scope 3 reporting.

Scope 3 category 14: Franchises

Base year start



February 1, 2018

Base year end

January 31, 2019

Base year emissions (metric tons CO2e)

Comment

Given the nature of our business as a software and technology services company, we have determined this category to be not relevant for our Scope 3 reporting.

Scope 3 category 15: Investments

Base year start

February 1, 2018

Base year end

January 31, 2019

Base year emissions (metric tons CO2e)

Comment

Given the nature of our business as a software and technology services company, we have determined this category to be not relevant for our Scope 3 reporting.

Scope 3: Other (upstream)

Base year start

February 1, 2018

Base year end



January 31, 2019

Base year emissions (metric tons CO2e)

Comment

Given the nature of our business as a software and technology services company, we have determined this category to be not relevant for our Scope 3 reporting.

Scope 3: Other (downstream)

Base year start

February 1, 2018

Base year end

January 31, 2019

Base year emissions (metric tons CO2e)

Comment

Given the nature of our business as a software and technology services company, we have determined this category to be not relevant for our Scope 3 reporting.

C5.3

(C5.3) Select the name of the standard, protocol, or methodology you have used to collect activity data and calculate emissions. The Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard (Revised Edition)



C6. Emissions data

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) 2.685

Comment

Our gross global Scope 1 emissions are 2,685 MT CO2e. While the City of Palo Alto has provided carbon neutral natural gas since July 1, 2017, we have not considered this offset into our calculation. We buy green gas tariffs for Staines, UK as well but do not claim any offset.

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 66.884

Scope 2, market-based (if applicable)

1,025

Comment

Our Scope 2 emissions account for the purchased electricity and purchased cooling for our VMware sites and our colocation data centers.

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

Emissions in reporting year (metric tons CO2e) 200,603



Emissions calculation methodology

Hybrid method

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

12

Please explain

VMware uses Environmentally Extended Economic Input Output (EEIO) lifecycle analysis (LCA) emissions factors to quantify the emissions associated with its annual supplier and procurement purchasing activity. Annualized spend data is mapped to corresponding scope 3 categories, supplier categories, and industry sectors and is then multiplied by cradle-to-gate LCA emission factors for the sector to provide an estimated carbon emissions associated with the extraction, production and transport of purchased goods and services acquired or purchased by VMware in the reported year. For our key spend categories like Infrastructure as a Service and Colocation services, the emissions are calculated using a mix of actual supplier-specific data, estimated data, and spend data. Supplier spend activity that was already included in Scope 1 or 2 (such as electricity purchases from leased buildings) and other Scope 3 categories (such as upstream leased assets) that could be further defined to a GHG Protocol scope 3 category were removed from the Purchased Goods and Services category to prevent double counting. This may represent an under- or over- reporting of emissions in certain supplier categories and specific suppliers based on available spend data due to the nature of cost and accrual accounting. We anticipate improving the methodology and availability data in the future which will impact our year-on-year reporting and trends over time.

Capital goods

Evaluation status

Relevant, calculated

Emissions in reporting year (metric tons CO2e)

81,341

Emissions calculation methodology

Average spend-based method

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

0



Please explain

VMware uses Environmentally Extended Economic Input Output (EEIO) lifecycle analysis (LCA) emissions factors to quantify the emissions associated with its annual supplier and procurement purchasing activity. Annualized spend data is mapped to corresponding scope 3 categories, supplier categories, and industry sectors and is then multiplied by cradle-to-gate LCA emission factors for the sector to provide an estimated carbon emissions associated with the extraction, production and transport of capital goods acquired or purchased by VMware in the reported year. We have elected to use this methodology over using a single generic emissions factor (EF) for 'all' capital goods as reported, to enable better visibility into specific capital good categories by spend and carbon impact. Supplier spend activity that was already included in Scope 1 or 2 (such as electricity consumption from owned IT hardware) and other Scope 3 categories (such as upstream leased assets) that could be further defined to a GHG Protocol scope 3 category were removed from the Capital Goods category to prevent double counting. This may represent an under- or over- reporting of emissions in certain supplier categories and specific suppliers based on available spend data due to the nature of cost and accrual accounting. We anticipate improving the methodology and availability data in the future which will impact our year-on-year reporting and trends over time.

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

Evaluation status

Relevant, calculated

Emissions in reporting year (metric tons CO2e)

8,024

Emissions calculation methodology

Fuel-based method

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

100

Please explain

FERA emissions reported are based on the market-based approach for Scope 2 reporting. Emissions were calculated for fuel-and-energyrelated activities (not included in Scope 1 or 2) by totaling activity data for each Scope 1 fuel type and electricity consumption by country. These



totals were multiplied by their relevant specific emission factors from UK Defra /DECC 2021 Conversion Factors for Company Reporting, AIB Residual Mix, and EPA eGRID. VMware's purchased renewable energy certificates were applied at a 0 emissions factor at the country level.

Upstream transportation and distribution

Evaluation status

Relevant, calculated

Emissions in reporting year (metric tons CO2e)

21,099

Emissions calculation methodology

Average spend-based method

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

0

Please explain

VMware uses Environmentally Extended Economic Input Output (EEIO) lifecycle analysis (LCA) emissions factors to quantify the emissions associated with its annual supplier & procurement purchasing activity. Annualized spend data is mapped to corresponding scope 3 categories, supplier categories, and industry sectors and is then multiplied by cradle-to-gate LCA emission factors for the sector to provide an estimated carbon emissions associated with the extraction, production and transport of capital goods acquired or purchased by VMware in the reported year. This may represent an under- or over- reporting of emissions in certain supplier categories and specific suppliers based on available spend data due to the nature of cost and accrual accounting. We anticipate improving the methodology and availability data in the future which will impact our year-on-year reporting and trends over time.

Waste generated in operations

Evaluation status

Relevant, calculated

Emissions in reporting year (metric tons CO2e)



116

Emissions calculation methodology

Waste-type-specific method

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

52

Please explain

VMware uses the EPA's WARM methodology which assigns values to each material that gets, landfilled, recycled and composted, along with GHG Protocol's guidance on waste generated in operations to calculate the emissions associated with waste generated in our global operations. Waste collection & disposal data for our Palo Alto, India, China, Taiwan, Armenia, UK, Sweden, Spain, France, Ireland & Bulgaria sites and global e-waste data provided by our waste management vendors.

Business travel

Evaluation status

Relevant, calculated

Emissions in reporting year (metric tons CO2e)

3,131

Emissions calculation methodology

Distance-based method

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

100

Please explain

Flight miles by trip is provided by the travel agent, American Express Global Business Travel. Based on the flight mileage, each flight is categorized by haul to align with the DEFRA business travel emissions factors for air travel (2021). The DEFRA EFs are then multiplied by the total miles by haul to determine the total GHG emissions. A 40% uplift aviation impact factor is considered this year to account for Radiative Forcing.



Employee commuting

Evaluation status Relevant, calculated Emissions in reporting year (metric tons CO2e) 28,831 Emissions calculation methodology

Average data method

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

0

Please explain

Our employee commute emissions including teleworking are estimated based on broad-based assumptions. We estimated employee commute emissions using internal HR data, modes of transportation split, commuting days a year and EPA emissions factors. For home-office emissions, we adopted a bottoms-up approach to account for region-specific energy-end uses such as IT plug load, lighting, space heating and cooling for the representative size of a typical home office, taking into consideration region specific electricity and fuel emission factors.

Upstream leased assets

Evaluation status

Relevant, calculated

Emissions in reporting year (metric tons CO2e)

540

Emissions calculation methodology

Average data method

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

0



Please explain

VMware uses Environmentally Extended Economic Input Output (EEIO) lifecycle analysis (LCA) emissions factors to quantify the emissions associated with its annual supplier and procurement purchasing activity. Annualized spend data is mapped to corresponding scope 3 categories, supplier categories, and industry sectors and is then multiplied by cradle-to-gate LCA emission factors for the sector to provide an estimated carbon emissions associated with the extraction, production and transport of upstream leased assets acquired or purchased by VMware in the reported year. Supplier spend activity that was already included in Scope 1 or 2 (such as electricity consumption from colocation data centers) that could be further defined to a GHG Protocol scope 3 category were removed from the Upstream Leased Assets category to prevent double counting. This may represent an under- or over- reporting of emissions in certain supplier categories and specific suppliers based on available spend data due to the nature of cost and accrual accounting. We anticipate improving the methodology and availability data in the future which will impact our year-on-year reporting and trends over time.

Downstream transportation and distribution

Evaluation status

Not relevant, explanation provided

Please explain

Given the nature of our business as a software and technology services company, we have determined this category to be not relevant for our Scope 3 reporting.

Processing of sold products

Evaluation status

Not relevant, explanation provided

Please explain

Given the nature of our business as a software and technology services company, we have determined this category to be not relevant for our Scope 3 reporting.

Use of sold products

Evaluation status



Not relevant, explanation provided

Please explain

As this category is optional for the IT Service industry under the GHGP, VMware does not currently include this in Scope 3 reporting. VMware is determining a process to evaluate emissions in this category to determine scope and relevance.

End of life treatment of sold products

Evaluation status

Not relevant, explanation provided

Please explain

VMware delivers software products and services which have no physical end of life and therefore have no end-of-life emissions impacts.

Downstream leased assets

Evaluation status

Not relevant, explanation provided

Please explain

VMware does not have significant operations or assets owned by VMware that are then leased, which are not already included in our Scope 1 and 2 emissions based on operational control.

Franchises

Evaluation status

Not relevant, explanation provided

Please explain

VMware does not have any product, process or system franchises and as such has determined this category as not relevant.

Investments



Evaluation status

Not relevant, explanation provided

Please explain

As per GHG protocol Scope 3 definition, Investments category is designed primarily for private financial institutions, and public financial institutions (e.g., multilateral development banks, export credit agencies). VMware is not in the financial services business and hence this category is not relevant.

Other (upstream)

Evaluation status

Not relevant, explanation provided

Please explain

Other (downstream)

Evaluation status

Not relevant, explanation provided

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.

Inte	ensity figure 0.0000003
Met	tric numerator (Gross global combined Scope 1 and 2 emissions, metric tons CO2e) 3,710
Met	unit total revenue
Met	tric denominator: Unit total 12,851,000,000
Sco	p pe 2 figure used Market-based
% c	66
Dire	ection of change Decreased
Rea	ason for change As in previous years, our teams have undertaken emission reduction activities through building energy efficiency projects such as lighting retrofits and high efficiency equipment (as outlined in C4.3b). For example, the lighting has been upgraded to LED in our Atlanta office and lighting controls have been upgraded in our Palo Alto HQ buildings. Also, boilers and CRAC (computer room air conditioning) units have been



upgraded to higher efficiency equipment in Palo Alto. HVAC systems have been updated in Beijing and energy valve and EC fan installations in AHUs have been done in Bangalore. There has also been a slight reduction in our Scope 1 emissions due to continued low occupancy rates as our offices were gradually opened across regions and employees are provided an option to continue working remotely under our Future of Work initiative. There is a significant reduction in our Scope 2 emissions due to 100% of the purchased electricity consumed in our sites (including colos) being renewable energy through a combination of grid mix, green tariffs and EACs to maintain our RE100 status. This overall decrease along with a 9% increase in our revenue (denominator) has resulted in a 66% decrease in our emissions intensity from last year.

Intensity figure

0.0000054

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

69,569

Metric denominator

unit total revenue

Metric denominator: Unit total

12,851,000,000

Scope 2 figure used

Location-based

% change from previous year

15

Direction of change

Decreased

Reason for change

As in previous years, our teams have undertaken emission reduction activities through building energy efficiency projects such as lighting retrofits and high efficiency equipment (as outlined in C4.3b). For example, the lighting has been upgraded to LED in our Atlanta office and



lighting controls have been upgraded in our Palo Alto HQ buildings. Also, boilers and CRAC units have been upgraded to higher efficiency equipment in Palo Alto. HVAC systems have been updated in Beijing and energy valve and EC fan installations in AHUs have been done in Bangalore.

There was a decrease in our Scope 2 location-based emissions (~7%) because of the redistribution of our real estate portfolio due to the consolidation of offices in some regions. The Scope 1 emissions also decreased slightly (4%) due to continued low occupancy rates and offices opening up in some of our regions like India only in the latter half of FY22. The combined Scope 1 & 2 emissions along with a 9% increase in our revenue (denominator) has resulted in a 15% decrease in our emissions intensity from last year.

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	1,510.66	IPCC Fifth Assessment Report (AR5 – 100 year)
CH4	3.25	IPCC Fifth Assessment Report (AR5 – 100 year)
N2O	0.7	IPCC Fifth Assessment Report (AR5 – 100 year)
HFCs	1,170.54	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)
Armenia	65.51
Bulgaria	8.3
Costa Rica	21.81
India	399.95
Ireland	133.68
United Kingdom of Great Britain and Northern Ireland	26.5
United States of America	2,029.41

C7.3

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

By activity

C7.3c

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

Activity	Scope 1 emissions (metric tons CO2e)		
Natural Gas	1,278.66		
Diesel	228.34		
Fleet	7.41		
Refrigerants	1,170.54		



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)
Argentina	6.79	0.63
Armenia	179.87	2.3
Australia	568.45	21.18
Austria	6.39	0.26
Belgium	1.79	0.05
Brazil	11.02	1
Bulgaria	2,249.82	31.85
Canada	21.23	3.95
Chile	10.6	0.17
China	2,504.53	61.67
Colombia	3.76	0.15
Costa Rica	37.7	21.59
Czechia	6.36	0.17
Denmark	7.36	0.26
Egypt	4.9	0.55
France	23.02	3.63
Germany	53.46	2.95
Hungary	1.6	0.06
India	12,933.41	278.14



Indonesia	5.42	0.12
Ireland	1,110.41	13.99
Israel	245.97	6.13
Italy	59.41	2.33
Japan	955.84	55
Malaysia	63.34	2.2
Mexico	1.6	0.02
Netherlands	319.24	2.04
New Zealand	3.32	1.06
Norway	0.38	0.16
Pakistan	9.22	0.39
Peru	1.43	0.05
Philippines	37.32	0.89
Poland	22.75	0.44
Portugal	1.8	0.09
Russian Federation	69.17	1.06
Saudi Arabia	45.75	0.55
Singapore	374.79	18.52
South Africa	113.15	0.78
Republic of Korea	3.41	2.68
Spain	98.98	4.26
Sweden	2.46	0.79



Switzerland	1.91	0.37
Taiwan, China	78.01	2.29
Thailand	29.67	1.51
Turkey	36.96	0.49
United Arab Emirates	152.61	1.13
United Kingdom of Great Britain and Northern Ireland	286.84	11.98
United States of America	44,119.17	462.72
Viet Nam	1.17	0.12

C7.6

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

By activity

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)
Purchased Electricity	65,859	0
Purchased Cooling	1,025	1,025

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	6,211.37	Decreased	61	6,211 MT CO2e of Scope 2 (market-based) emissions were reduced from last year due to increase in our purchase of renewable energy. Our total Scope 1 & 2 emissions in the previous year was 10,105 MT. Therefore, we calculated the percentage change as $(6,211/10,105) *100 = 61\%$ (i.e., a 61% reduction in emissions).
Other emissions reduction activities	711.73	Decreased	7	The emissions reductions activities VMware implemented at owned and leased facilities worldwide in 2021 resulted in energy savings and corresponding emissions avoidance of around 711.73 MT CO2e. The emissions value was derived by dividing the change in emissions by our 2020 Scope 1 and 2 market-based emissions as (711.73/10,105)*100 = 1% (i.e., a 7% reduction in emissions).
Divestment				There were no divestments in FY22.
Acquisitions				There were no significant acquisitions that impacted our emissions in FY22.
Mergers				There were no mergers in FY22.
Change in output				There was no change in output in FY22.
Change in methodology				There was no change in methodology in FY22.
Change in boundary				There was no change in boundary in FY22.



Change in		There was no change in physical operating conditions in FY22.
physical operating		
conditions		
Unidentified		NA
Other		NA

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	Yes

C8.2a

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

	Heating value	MWh from renewable sources	MWh from non-renewable sources	Total (renewable and non- renewable) MWh
Consumption of fuel (excluding feedstock)	HHV (higher heating value)	0	7,990	7,990
Consumption of purchased or acquired electricity		190,468	0	190,468
Consumption of self-generated non-fuel renewable energy		433		433
Total energy consumption		190,901	7,990	198,891

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.

Heating value

Total fuel MWh consumed by the organization 0

MWh fuel consumed for self-generation of electricity

MWh fuel consumed for self-generation of heat

Comment

Other biomass

Heating value

Total fuel MWh consumed by the organization 0



MWh fuel consumed for self-generation of heat

Comment

Other renewable fuels (e.g. renewable hydrogen)

Heating value

Total fuel MWh consumed by the organization 0

MWh fuel consumed for self-generation of electricity

MWh fuel consumed for self-generation of heat

Comment

Coal

Heating value

Total fuel MWh consumed by the organization

0



MWh fuel consumed for self-generation of heat

Comment

Oil

Heating value

Total fuel MWh consumed by the organization 0

MWh fuel consumed for self-generation of electricity

MWh fuel consumed for self-generation of heat

Comment

Gas

Heating value HHV Total fuel MWh cons

Total fuel MWh consumed by the organization 7,057



MWh fuel consumed for self-generation of heat

7,057

Comment

Natural gas is used in our Palo Alto, Staines & Denver sites for space heating

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

Heating value

LHV

Total fuel MWh consumed by the organization 902

MWh fuel consumed for self-generation of electricity 902

MWh fuel consumed for self-generation of heat

Comment

Diesel is used in emergency generators at our Palo Alto, Wenatchee, Dallas, Austin, Broomfield, Cork, Yerevan, Sofia, Bangalore, Chennai & Pune sites.

Total fuel

Heating value

Total fuel MWh consumed by the organization

0



MWh fuel consumed for self-generation of heat

Comment

C8.2d

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

	Total Gross generation (MWh)	Generation that is consumed by the organization (MWh)	Gross generation from renewable sources (MWh)	Generation from renewable sources that is consumed by the organization (MWh)
Electricity	433	433	433	433
Heat	0	0	0	0
Steam	0	0	0	0
Cooling	0	0	0	0

C8.2g

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

Country/area

Argentina

Consumption of electricity (MWh)

19.14



Consumption of heat, steam, and cooling (MWh)

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

19.14

Is this consumption excluded from your RE100 commitment?

No

Country/area

Armenia

Consumption of electricity (MWh)

932.16

Consumption of heat, steam, and cooling (MWh)

0

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

932.16

Is this consumption excluded from your RE100 commitment? No

Country/area

Australia



Consumption of electricity (MWh) 768.85 Consumption of heat, steam, and cooling (MWh)

0

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

768.85

Is this consumption excluded from your RE100 commitment? No

Country/area Austria Consumption of electricity (MWh) 41.16 Consumption of heat, steam, and cooling (MWh) 0 Total non-fuel energy consumption (MWh) [Auto-calculated] 41.16 Is this consumption excluded from your RE100 commitment? No



Country/area

Belgium

Consumption of electricity (MWh) 8.65

Consumption of heat, steam, and cooling (MWh) $_{\rm 0}$

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

8.65

Is this consumption excluded from your RE100 commitment?

No

Country/area Brazil Consumption of electricity (MWh) 100.48 Consumption of heat, steam, and cooling (MWh) 0 Total non-fuel energy consumption (MWh) [Auto-calculated] 100.48

Is this consumption excluded from your RE100 commitment?

No



Country/area Bulgaria Consumption of electricity (MWh) 4,975.1 Consumption of heat, steam, and cooling (MWh) 0 Total non-fuel energy consumption (MWh) [Auto-calculated] 4,975.1 Is this consumption excluded from your RE100 commitment? No

Country/area Canada Consumption of electricity (MWh) 589.86 Consumption of heat, steam, and cooling (MWh) Total non-fuel energy consumption (MWh) [Auto-calculated]

589.86

0



Is this consumption excluded from your RE100 commitment?

Country/area Chile Consumption of electricity (MWh) 25.95 Consumption of heat, steam, and cooling (MWh) 0 Total non-fuel energy consumption (MWh) [Auto-calculated] 25.95 Is this consumption excluded from your RE100 commitment? No Country/area China Consumption of electricity (MWh) 3,965.68

Consumption of heat, steam, and cooling (MWh)

0



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

3,965.68

Is this consumption excluded from your RE100 commitment? No

Country/area

Colombia

Consumption of electricity (MWh)

22.49

Consumption of heat, steam, and cooling (MWh)

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

22.49

Is this consumption excluded from your RE100 commitment? No

Country/area

Costa Rica

Consumption of electricity (MWh)

1,732.8



Consumption of heat, steam, and cooling (MWh) $_{\rm 0}$

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

1,732.8

Is this consumption excluded from your RE100 commitment?

No

Country/area

Czechia

Consumption of electricity (MWh)

12.48

Consumption of heat, steam, and cooling (MWh)

0

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

12.48

Is this consumption excluded from your RE100 commitment? No

Country/area

Denmark



Consumption of electricity (MWh) 41.88 Consumption of heat, steam, and cooling (MWh) 0 Total non-fuel energy consumption (MWh) [Auto-calculated]

41.88

Is this consumption excluded from your RE100 commitment? No

Country/area Egypt Consumption of electricity (MWh) 8.95 Consumption of heat, steam, and cooling (MWh) 0 Total non-fuel energy consumption (MWh) [Auto-calculated] 8.95 Is this consumption excluded from your RE100 commitment? No



Country/area

France

Consumption of electricity (MWh) 351.96

Consumption of heat, steam, and cooling (MWh) $_{\rm 0}$

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

351.96

Is this consumption excluded from your RE100 commitment?

No

Country/area Germany Consumption of electricity (MWh)

125.83

Consumption of heat, steam, and cooling (MWh)

0

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

125.83

Is this consumption excluded from your RE100 commitment?

No



Country/area Hungary Consumption of electricity (MWh) 6.06 Consumption of heat, steam, and cooling (MWh) 0 Total non-fuel energy consumption (MWh) [Auto-calculated] 6.06 Is this consumption excluded from your RE100 commitment? No

Country/area

Consumption of electricity (MWh)

16,831.05

Consumption of heat, steam, and cooling (MWh)

0

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

16,831.05



Is this consumption excluded from your RE100 commitment?

Country/area Indonesia Consumption of electricity (MWh) 6.92 Consumption of heat, steam, and cooling (MWh) 0 Total non-fuel energy consumption (MWh) [Auto-calculated] 6.92 Is this consumption excluded from your RE100 commitment? No Country/area Ireland Consumption of electricity (MWh) 3,308.44 Consumption of heat, steam, and cooling (MWh)

0



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

3,308.44

Is this consumption excluded from your RE100 commitment? No

Country/area

Israel

Consumption of electricity (MWh)

484.63

Consumption of heat, steam, and cooling (MWh)

0

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

484.63

Is this consumption excluded from your RE100 commitment?

No

Country/area

Italy

Consumption of electricity (MWh)

185.31



Consumption of heat, steam, and cooling (MWh) $_0$

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

185.31

Is this consumption excluded from your RE100 commitment?

No

Country/area

Japan

Consumption of electricity (MWh)

1,793.8

Consumption of heat, steam, and cooling (MWh)

0

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

1,793.8

Is this consumption excluded from your RE100 commitment? No

Country/area

Malaysia



Consumption of electricity (MWh) 92.37

Consumption of heat, steam, and cooling (MWh)

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

92.37

Is this consumption excluded from your RE100 commitment? No

Country/area Mexico Consumption of electricity (MWh) 3.46 Consumption of heat, steam, and cooling (MWh) 0 Total non-fuel energy consumption (MWh) [Auto-calculated] 3.46 Is this consumption excluded from your RE100 commitment? No



Country/area

Netherlands

Consumption of electricity (MWh) 759.22

Consumption of heat, steam, and cooling (MWh) $_{\rm 0}$

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

759.22

Is this consumption excluded from your RE100 commitment?

No

Country/area New Zealand Consumption of electricity (MWh) 20.8 Consumption of heat, steam, and cooling (MWh) 0 Total non-fuel energy consumption (MWh) [Auto-calculated]

20.8

Is this consumption excluded from your RE100 commitment?

No



Country/area Norway Consumption of electricity (MWh) 25.95 Consumption of heat, steam, and cooling (MWh) 0 Total non-fuel energy consumption (MWh) [Auto-calculated]

25.95

Is this consumption excluded from your RE100 commitment?

No

Country/area

Pakistan

Consumption of electricity (MWh)

22.49

Consumption of heat, steam, and cooling (MWh)

0

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

22.49



Is this consumption excluded from your RE100 commitment?

Country/area Peru Consumption of electricity (MWh) 6.92 Consumption of heat, steam, and cooling (MWh) 0 Total non-fuel energy consumption (MWh) [Auto-calculated] 6.92 Is this consumption excluded from your RE100 commitment? No Country/area Philippines Consumption of electricity (MWh) 51.85

Consumption of heat, steam, and cooling (MWh)

0



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

51.85

Is this consumption excluded from your RE100 commitment? No

Country/area

Poland

Consumption of electricity (MWh)

31.43

Consumption of heat, steam, and cooling (MWh)

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

31.43

Is this consumption excluded from your RE100 commitment?

No

Country/area

Portugal

Consumption of electricity (MWh)

5.77



Consumption of heat, steam, and cooling (MWh)

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

5.77

Is this consumption excluded from your RE100 commitment?

Country/area

Russian Federation

Consumption of electricity (MWh)

190.82

Consumption of heat, steam, and cooling (MWh)

0

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

190.82

Is this consumption excluded from your RE100 commitment? No

Country/area Saudi Arabia



Consumption of electricity (MWh) 87.3 Consumption of heat, steam, and cooling (MWh) 0 Total non-fuel energy consumption (MWh) [Auto-calculated]

87.3

Is this consumption excluded from your RE100 commitment? No

Country/area Singapore Consumption of electricity (MWh) 915.64 Consumption of heat, steam, and cooling (MWh) 0 Total non-fuel energy consumption (MWh) [Auto-calculated] 915.64 Is this consumption excluded from your RE100 commitment? No



Country/area

South Africa

Consumption of electricity (MWh) 125.44

Consumption of heat, steam, and cooling (MWh)

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

125.44

Is this consumption excluded from your RE100 commitment?

No

Country/area Republic of Korea Consumption of electricity (MWh) 1.35

Consumption of heat, steam, and cooling (MWh)

0

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

1.35

Is this consumption excluded from your RE100 commitment?

No



Country/area

Spain

Consumption of electricity (MWh)

365.01

Consumption of heat, steam, and cooling (MWh)

0

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

365.01

Is this consumption excluded from your RE100 commitment?

No

Country/area

Sweden

Consumption of electricity (MWh)

124.19

Consumption of heat, steam, and cooling (MWh)

0

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

124.19



Is this consumption excluded from your RE100 commitment?

Country/area Switzerland Consumption of electricity (MWh) 58.94 Consumption of heat, steam, and cooling (MWh) 0 Total non-fuel energy consumption (MWh) [Auto-calculated] 58.94 Is this consumption excluded from your RE100 commitment? No Country/area Taiwan, China Consumption of electricity (MWh) 135.44

Consumption of heat, steam, and cooling (MWh)

0



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

135.44

Is this consumption excluded from your RE100 commitment? No

Country/area

Thailand

Consumption of electricity (MWh)

58.11

Consumption of heat, steam, and cooling (MWh)

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

58.11

Is this consumption excluded from your RE100 commitment? No

Country/area

Turkey

Consumption of electricity (MWh)

78.24



Consumption of heat, steam, and cooling (MWh)

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

78.24

Is this consumption excluded from your RE100 commitment?

No

Country/area

United Arab Emirates

Consumption of electricity (MWh)

291.19

Consumption of heat, steam, and cooling (MWh)

0

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

291.19

Is this consumption excluded from your RE100 commitment? No

Country/area

United Kingdom of Great Britain and Northern Ireland



Consumption of electricity (MWh) 1,294.46

Consumption of heat, steam, and cooling (MWh)

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

1,294.46

Is this consumption excluded from your RE100 commitment? No

Country/area United States of America Consumption of electricity (MWh)

149,813.02

Consumption of heat, steam, and cooling (MWh)

0

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

149,813.02

Is this consumption excluded from your RE100 commitment?

No



Country/area Viet Nam Consumption of electricity (MWh) 2.31 Consumption of heat, steam, and cooling (MWh) 0 Total non-fuel energy consumption (MWh) [Auto-calculated] 2.31 Is this consumption excluded from your RE100 commitment? No

C8.2h

(C8.2h) Provide details of your organization's renewable electricity purchases in the reporting year by country

Country/area of renewable electricity consumption Argentina

Sourcing method

Unbundled Energy Attribute Certificate (EAC) purchase

Renewable electricity technology type

Wind

Renewable electricity consumed via selected sourcing method in the reporting year (MWh)



19.4

Tracking instrument used

Total attribute instruments retained for consumption by your organization (MWh) 19.4

Country/area of origin (generation) of the renewable electricity/attribute consumed Brazil

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

Vintage of the renewable energy/attribute (i.e. year of generation) 2021

Brand, label, or certification of the renewable electricity purchase No brand, label, or certification

Comment

Country/area of renewable electricity consumption

Armenia

Sourcing method

Unbundled Energy Attribute Certificate (EAC) purchase

Renewable electricity technology type

Wind



Renewable electricity consumed via selected sourcing method in the reporting year (MWh) 932.16

Tracking instrument used

Total attribute instruments retained for consumption by your organization (MWh) 932.16

Country/area of origin (generation) of the renewable electricity/attribute consumed Turkey

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

Vintage of the renewable energy/attribute (i.e. year of generation) 2021

Brand, label, or certification of the renewable electricity purchase No brand, label, or certification

Comment

Country/area of renewable electricity consumption

Australia

Sourcing method

Unbundled Energy Attribute Certificate (EAC) purchase

Renewable electricity technology type



Renewable electricity mix, please specify Solar/Wind

Renewable electricity consumed via selected sourcing method in the reporting year (MWh) 768.65

Tracking instrument used

Australian LGC

- **Total attribute instruments retained for consumption by your organization (MWh)** 768.65
- Country/area of origin (generation) of the renewable electricity/attribute consumed Australia
- Commissioning year of the energy generation facility (e.g. date of first commercial operation or repowering)
- Vintage of the renewable energy/attribute (i.e. year of generation) 2021
- Brand, label, or certification of the renewable electricity purchase No brand, label, or certification

Comment

Country/area of renewable electricity consumption

Austria

Sourcing method



Unbundled Energy Attribute Certificate (EAC) purchase

Renewable electricity technology type Renewable electricity mix, please specify Solar/Wind

Renewable electricity consumed via selected sourcing method in the reporting year (MWh) 41.16

Tracking instrument used GO

Total attribute instruments retained for consumption by your organization (MWh) 41.16

Country/area of origin (generation) of the renewable electricity/attribute consumed

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

Vintage of the renewable energy/attribute (i.e. year of generation) 2021

Brand, label, or certification of the renewable electricity purchase EKOenergy label

Comment

Country/area of renewable electricity consumption



Belgium

Sourcing method

Unbundled Energy Attribute Certificate (EAC) purchase

Renewable electricity technology type

Renewable electricity mix, please specify Solar/Wind

Renewable electricity consumed via selected sourcing method in the reporting year (MWh) 8.65

Tracking instrument used GO

Total attribute instruments retained for consumption by your organization (MWh) 8.65

Country/area of origin (generation) of the renewable electricity/attribute consumed

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

Vintage of the renewable energy/attribute (i.e. year of generation) 2021

Brand, label, or certification of the renewable electricity purchase EKOenergy label



Country/area of renewable electricity consumption

Brazil

Sourcing method Unbundled Energy Attribute Certificate (EAC) purchase Renewable electricity technology type Wind Renewable electricity consumed via selected sourcing method in the reporting year (MWh) 100.48 Tracking instrument used I-REC Total attribute instruments retained for consumption by your organization (MWh) 100.48 Country/area of origin (generation) of the renewable electricity/attribute consumed Brazil Commissioning year of the energy generation facility (e.g. date of first commercial operation or repowering) Vintage of the renewable energy/attribute (i.e. year of generation) 2021 Brand, label, or certification of the renewable electricity purchase No brand, label, or certification Comment



Country/area of renewable electricity consumption

Bulgaria

Sourcing method Unbundled Energy Attribute Certificate (EAC) purchase

Renewable electricity technology type

Renewable electricity mix, please specify Solar/Wind

Renewable electricity consumed via selected sourcing method in the reporting year (MWh) 2,937.08

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Tracking instrument used GO
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Total attribute instruments retained for consumption by your organization (MWh) 2.937.08

Country/area of origin (generation) of the renewable electricity/attribute consumed

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

Vintage of the renewable energy/attribute (i.e. year of generation) 2021

Brand, label, or certification of the renewable electricity purchase



EKOenergy label

Comment

Country/area of renewable electricity consumption Canada Sourcing method Unbundled Energy Attribute Certificate (EAC) purchase Renewable electricity technology type Renewable electricity mix, please specify Wind/Hydro Renewable electricity consumed via selected sourcing method in the reporting year (MWh) 589.86 Tracking instrument used **US-REC** Total attribute instruments retained for consumption by your organization (MWh) 589.86 Country/area of origin (generation) of the renewable electricity/attribute consumed United States of America Commissioning year of the energy generation facility (e.g. date of first commercial operation or repowering)

Vintage of the renewable energy/attribute (i.e. year of generation)



2021

Brand, label, or certification of the renewable electricity purchase

Green-e

Comment

Country/area of renewable electricity consumption

Chile

Sourcing method

Unbundled Energy Attribute Certificate (EAC) purchase

Renewable electricity technology type

Renewable electricity mix, please specify Solar/Wind

Renewable electricity consumed via selected sourcing method in the reporting year (MWh)

25.95

Tracking instrument used

I-REC

Total attribute instruments retained for consumption by your organization (MWh)

25.95

Country/area of origin (generation) of the renewable electricity/attribute consumed

Chile

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



Vintage of the renewable energy/attribute (i.e. year of generation) 2021

Brand, label, or certification of the renewable electricity purchase No brand, label, or certification

Comment

Country/area of renewable electricity consumption China Sourcing method Unbundled Energy Attribute Certificate (EAC) purchase Renewable electricity technology type Wind Renewable electricity consumed via selected sourcing method in the reporting year (MWh) 3,965.68 Tracking instrument used I-REC Total attribute instruments retained for consumption by your organization (MWh) 3,965.68 Country/area of origin (generation) of the renewable electricity/attribute consumed China



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

Vintage of the renewable energy/attribute (i.e. year of generation) 2021

Brand, label, or certification of the renewable electricity purchase No brand, label, or certification

Comment

Country/area of renewable electricity consumption Colombia

Sourcing method

Unbundled Energy Attribute Certificate (EAC) purchase

Renewable electricity technology type

Renewable electricity mix, please specify Solar/Wind

Renewable electricity consumed via selected sourcing method in the reporting year (MWh)

22.49

Tracking instrument used

I-REC

Total attribute instruments retained for consumption by your organization (MWh)

22.49



Country/area of origin (generation) of the renewable electricity/attribute consumed Colombia

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

Vintage of the renewable energy/attribute (i.e. year of generation) 2021

Brand, label, or certification of the renewable electricity purchase No brand, label, or certification

Comment

Country/area of renewable electricity consumption

Costa Rica

Sourcing method

Unbundled Energy Attribute Certificate (EAC) purchase

Renewable electricity technology type

Renewable electricity mix, please specify Solar/Wind

Renewable electricity consumed via selected sourcing method in the reporting year (MWh)

1,732.8

Tracking instrument used

I-REC



Total attribute instruments retained for consumption by your organization (MWh) 1,732.8

Country/area of origin (generation) of the renewable electricity/attribute consumed Costa Rica

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

Vintage of the renewable energy/attribute (i.e. year of generation) 2021

Brand, label, or certification of the renewable electricity purchase No brand, label, or certification

Comment

Country/area of renewable electricity consumption

Czechia

Sourcing method

Unbundled Energy Attribute Certificate (EAC) purchase

Renewable electricity technology type

Renewable electricity mix, please specify Solar/Wind

Renewable electricity consumed via selected sourcing method in the reporting year (MWh)

12.48



Tracking instrument used

Total attribute instruments retained for consumption by your organization (MWh) 12.48

Country/area of origin (generation) of the renewable electricity/attribute consumed

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

Vintage of the renewable energy/attribute (i.e. year of generation) 2021

Brand, label, or certification of the renewable electricity purchase EKOenergy label

Comment

Country/area of renewable electricity consumption

Denmark

Sourcing method

Unbundled Energy Attribute Certificate (EAC) purchase

Renewable electricity technology type

Renewable electricity mix, please specify Solar/Wind



Renewable electricity consumed via selected sourcing method in the reporting year (MWh) 41.88

Tracking instrument used GO

Total attribute instruments retained for consumption by your organization (MWh) 41.88

Country/area of origin (generation) of the renewable electricity/attribute consumed

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

Vintage of the renewable energy/attribute (i.e. year of generation) 2021

Brand, label, or certification of the renewable electricity purchase EKOenergy label

Comment

Country/area of renewable electricity consumption
Egypt

Sourcing method

Unbundled Energy Attribute Certificate (EAC) purchase

Renewable electricity technology type



Solar

Renewable electricity consumed via selected sourcing method in the reporting year (MWh) 8.95

Tracking instrument used

- **Total attribute instruments retained for consumption by your organization (MWh)** 8.95
- Country/area of origin (generation) of the renewable electricity/attribute consumed Israel

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

Vintage of the renewable energy/attribute (i.e. year of generation) 2021

Brand, label, or certification of the renewable electricity purchase No brand, label, or certification

Comment

Country/area of renewable electricity consumption

France

Sourcing method

Unbundled Energy Attribute Certificate (EAC) purchase



Renewable electricity technology type Renewable electricity mix, please specify Solar/Wind

Renewable electricity consumed via selected sourcing method in the reporting year (MWh) 351.96

Tracking instrument used

GO

Total attribute instruments retained for consumption by your organization (MWh) 351.96

Country/area of origin (generation) of the renewable electricity/attribute consumed

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

Vintage of the renewable energy/attribute (i.e. year of generation) 2021

Brand, label, or certification of the renewable electricity purchase EKOenergy label

Comment

Country/area of renewable electricity consumption Germany



Sourcing method Unbundled Energy Attribute Certificate (EAC) purchase Renewable electricity technology type Renewable electricity mix, please specify Solar/Wind Renewable electricity consumed via selected sourcing method in the reporting year (MWh) 125.83 Tracking instrument used

GO

Total attribute instruments retained for consumption by your organization (MWh) 125.83

Country/area of origin (generation) of the renewable electricity/attribute consumed

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

Vintage of the renewable energy/attribute (i.e. year of generation) 2021

Brand, label, or certification of the renewable electricity purchase EKOenergy label



Country/area of renewable electricity consumption Hungary

Sourcing method Unbundled Energy Attribute Certificate (EAC) purchase Renewable electricity technology type

Renewable electricity mix, please specify Solar/Wind

Renewable electricity consumed via selected sourcing method in the reporting year (MWh) 6.06

Tracking instrument used

GO

Total attribute instruments retained for consumption by your organization (MWh) 6.06

Country/area of origin (generation) of the renewable electricity/attribute consumed

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

Vintage of the renewable energy/attribute (i.e. year of generation) 2021

Brand, label, or certification of the renewable electricity purchase EKOenergy label



Country/area of renewable electricity consumption

India

Sourcing method Unbundled Energy Attribute Certificate (EAC) purchase Renewable electricity technology type Hydropower (capacity unknown) Renewable electricity consumed via selected sourcing method in the reporting year (MWh) 5,820.66 Tracking instrument used I-REC Total attribute instruments retained for consumption by your organization (MWh) 5,820.66 Country/area of origin (generation) of the renewable electricity/attribute consumed India Commissioning year of the energy generation facility (e.g. date of first commercial operation or repowering) Vintage of the renewable energy/attribute (i.e. year of generation) 2021 Brand, label, or certification of the renewable electricity purchase No brand, label, or certification



Country/area of renewable electricity consumption

Indonesia

Sourcing method

Unbundled Energy Attribute Certificate (EAC) purchase

Renewable electricity technology type

Hydropower (capacity unknown)

Renewable electricity consumed via selected sourcing method in the reporting year (MWh)

6.92

Tracking instrument used

I-REC

Total attribute instruments retained for consumption by your organization (MWh)

6.92

Country/area of origin (generation) of the renewable electricity/attribute consumed Indonesia

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

Vintage of the renewable energy/attribute (i.e. year of generation)

2021

Brand, label, or certification of the renewable electricity purchase

No brand, label, or certification



Comment

Country/area of renewable electricity consumption Ireland Sourcing method Unbundled Energy Attribute Certificate (EAC) purchase Renewable electricity technology type Renewable electricity mix, please specify Solar/Wind Renewable electricity consumed via selected sourcing method in the reporting year (MWh) 147.74 Tracking instrument used GO Total attribute instruments retained for consumption by your organization (MWh) 147.74 Country/area of origin (generation) of the renewable electricity/attribute consumed Commissioning year of the energy generation facility (e.g. date of first commercial operation or repowering)

Vintage of the renewable energy/attribute (i.e. year of generation)

2021



Brand, label, or certification of the renewable electricity purchase EKOenergy label

Country/area of re	newable electricity consumption
Sourcing method Unbundled Energ	gy Attribute Certificate (EAC) purchase
Renewable electri Solar	city technology type
Renewable electri 484.63	city consumed via selected sourcing method in the reporting year (MWh)
Tracking instrume	nt used
Total attribute ins 484.63	ruments retained for consumption by your organization (MWh)
Country/area of or Israel	igin (generation) of the renewable electricity/attribute consumed
	ear of the energy generation facility (e.g. date of first commercial operation or repowering)



2021

Brand, label, or certification of the renewable electricity purchase

No brand, label, or certification

Comment

Country/area of renewable electricity consumption

Italy

Sourcing method Unbundled Energy Attribute Certificate (EAC) purchase

Renewable electricity technology type

Renewable electricity mix, please specify Solar/Wind

Renewable electricity consumed via selected sourcing method in the reporting year (MWh)

185.31

Tracking instrument used

GO

Total attribute instruments retained for consumption by your organization (MWh) 185.31

Country/area of origin (generation) of the renewable electricity/attribute consumed

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



Vintage of the renewable energy/attribute (i.e. year of generation) 2021

Brand, label, or certification of the renewable electricity purchase EKOenergy label

Comment

Country/area of renewable electricity consumption Japan Sourcing method Unbundled Energy Attribute Certificate (EAC) purchase Renewable electricity technology type Solar Renewable electricity consumed via selected sourcing method in the reporting year (MWh) 1,353.78 Tracking instrument used Other, please specify PowerPlus Total attribute instruments retained for consumption by your organization (MWh) 1,353.78



Japan

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

Vintage of the renewable energy/attribute (i.e. year of generation) 2021

Brand, label, or certification of the renewable electricity purchase

Other, please specify PowerPlus

Comment

Country/area of renewable electricity consumption

Malaysia

Sourcing method

Unbundled Energy Attribute Certificate (EAC) purchase

Renewable electricity technology type

Hydropower (capacity unknown)

Renewable electricity consumed via selected sourcing method in the reporting year (MWh)

92.37

Tracking instrument used

I-REC

Total attribute instruments retained for consumption by your organization (MWh)



92.37

Country/area of origin (generation) of the renewable electricity/attribute consumed Malaysia

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

Vintage of the renewable energy/attribute (i.e. year of generation) 2021

Brand, label, or certification of the renewable electricity purchase No brand, label, or certification

Comment

Country/area of renewable electricity consumption

Mexico

Sourcing method

Unbundled Energy Attribute Certificate (EAC) purchase

Renewable electricity technology type

Wind

Renewable electricity consumed via selected sourcing method in the reporting year (MWh)

3.46

Tracking instrument used

I-REC



Total attribute instruments retained for consumption by your organization (MWh) 3.46

Country/area of origin (generation) of the renewable electricity/attribute consumed Mexico

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

Vintage of the renewable energy/attribute (i.e. year of generation) 2021

Brand, label, or certification of the renewable electricity purchase No brand, label, or certification

Comment

Country/area of renewable electricity consumption

Netherlands

Sourcing method

Unbundled Energy Attribute Certificate (EAC) purchase

Renewable electricity technology type

Renewable electricity mix, please specify Solar/Wind

Renewable electricity consumed via selected sourcing method in the reporting year (MWh)

182.98



Tracking instrument used

Total attribute instruments retained for consumption by your organization (MWh) 182.98

Country/area of origin (generation) of the renewable electricity/attribute consumed

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

Vintage of the renewable energy/attribute (i.e. year of generation) 2021

Brand, label, or certification of the renewable electricity purchase EKOenergy label

Comment

Country/area of renewable electricity consumption

New Zealand

Sourcing method

Unbundled Energy Attribute Certificate (EAC) purchase

Renewable electricity technology type

Renewable electricity mix, please specify Solar/Wind



Renewable electricity consumed via selected sourcing method in the reporting year (MWh) 20.8

Tracking instrument used Australian LGC

Total attribute instruments retained for consumption by your organization (MWh) 20.8

Country/area of origin (generation) of the renewable electricity/attribute consumed Australia

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

Vintage of the renewable energy/attribute (i.e. year of generation) 2021

Brand, label, or certification of the renewable electricity purchase No brand, label, or certification

Comment

Country/area of renewable electricity consumption

Norway

Sourcing method

Unbundled Energy Attribute Certificate (EAC) purchase

Renewable electricity technology type



Renewable electricity mix, please specify Solar/Wind

Renewable electricity consumed via selected sourcing method in the reporting year (MWh) 25.95

Tracking instrument used GO

Total attribute instruments retained for consumption by your organization (MWh) 25.95

Country/area of origin (generation) of the renewable electricity/attribute consumed

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

Vintage of the renewable energy/attribute (i.e. year of generation) 2021

Brand, label, or certification of the renewable electricity purchase EKOenergy label

Comment

Country/area of renewable electricity consumption

Pakistan

Sourcing method



Unbundled Energy Attribute Certificate (EAC) purchase

Renewable electricity technology type

Hydropower (capacity unknown)

Renewable electricity consumed via selected sourcing method in the reporting year (MWh)

22.49

Tracking instrument used

Total attribute instruments retained for consumption by your organization (MWh) 22.49

Country/area of origin (generation) of the renewable electricity/attribute consumed India

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

Vintage of the renewable energy/attribute (i.e. year of generation) 2021

Brand, label, or certification of the renewable electricity purchase No brand, label, or certification

Comment

Country/area of renewable electricity consumption

Peru



Sourcing method Unbundled Energy Attribute Certificate (EAC) purchase Renewable electricity technology type Wind Renewable electricity consumed via selected sourcing method in the reporting year (MWh)

Renewable electricity consumed via selected sourcing method in the reporting year (MWh 6.92

Tracking instrument used I-REC

Total attribute instruments retained for consumption by your organization (MWh) 6.92

Country/area of origin (generation) of the renewable electricity/attribute consumed Brazil

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

Vintage of the renewable energy/attribute (i.e. year of generation) 2021

Brand, label, or certification of the renewable electricity purchase No brand, label, or certification

Comment

Country/area of renewable electricity consumption



Philippines

Sourcing method

Unbundled Energy Attribute Certificate (EAC) purchase

Renewable electricity technology type

Hydropower (capacity unknown)

Renewable electricity consumed via selected sourcing method in the reporting year (MWh) 51.85

Tracking instrument used

Total attribute instruments retained for consumption by your organization (MWh) 51.85

Country/area of origin (generation) of the renewable electricity/attribute consumed Malaysia

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

Vintage of the renewable energy/attribute (i.e. year of generation) 2021

Brand, label, or certification of the renewable electricity purchase No brand, label, or certification

Comment



Country/area of renewable electricity consumption Poland

Sourcing method Unbundled Energy Attribute Certificate (EAC) purchase Renewable electricity technology type

Renewable electricity mix, please specify Solar/Wind

Renewable electricity consumed via selected sourcing method in the reporting year (MWh)

31.43

Tracking instrument used

GO

Total attribute instruments retained for consumption by your organization (MWh) 31.43

Country/area of origin (generation) of the renewable electricity/attribute consumed

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

Vintage of the renewable energy/attribute (i.e. year of generation) 2021

Brand, label, or certification of the renewable electricity purchase EKOenergy label

Comment



Country/area of renewable electricity consumption

Portugal

Sourcing method Unbundled Energy Attribute Certificate (EAC) purchase Renewable electricity technology type Renewable electricity mix, please specify Solar/Wind Renewable electricity consumed via selected sourcing method in the reporting year (MWh) 5.77

Tracking instrument used

GO

Total attribute instruments retained for consumption by your organization (MWh)

5.77

Country/area of origin (generation) of the renewable electricity/attribute consumed

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

Vintage of the renewable energy/attribute (i.e. year of generation) 2021

Brand, label, or certification of the renewable electricity purchase EKOenergy label



Comment

Country/area of renewable electricity consumption **Russian Federation** Sourcing method Unbundled Energy Attribute Certificate (EAC) purchase Renewable electricity technology type Renewable electricity mix, please specify Solar/Wind Renewable electricity consumed via selected sourcing method in the reporting year (MWh) 190.82 Tracking instrument used GO Total attribute instruments retained for consumption by your organization (MWh) 190.82 Country/area of origin (generation) of the renewable electricity/attribute consumed Commissioning year of the energy generation facility (e.g. date of first commercial operation or repowering)

Vintage of the renewable energy/attribute (i.e. year of generation)

2021



Brand, label, or certification of the renewable electricity purchase EKOenergy label

Comment

Country/area of re Saudi Arabia	newable electricity consumption
Sourcing method	
Unbundled Energ	gy Attribute Certificate (EAC) purchase
Renewable electric	city technology type
Renewable electric 87.3	city consumed via selected sourcing method in the reporting year (MWh)
Tracking instrume	nt used
Total attribute inst 87.3	ruments retained for consumption by your organization (MWh)
Country/area of or United Arab Emin	igin (generation) of the renewable electricity/attribute consumed
Commissioning ye	ear of the energy generation facility (e.g. date of first commercial operation or repowering)



2021

Brand, label, or certification of the renewable electricity purchase

No brand, label, or certification

Comment

Country/area of renewable electricity consumption

Singapore

Sourcing method

Unbundled Energy Attribute Certificate (EAC) purchase

Renewable electricity technology type

Hydropower (capacity unknown)

Renewable electricity consumed via selected sourcing method in the reporting year (MWh)

836.97

Tracking instrument used

I-REC

Total attribute instruments retained for consumption by your organization (MWh)

836.97

Country/area of origin (generation) of the renewable electricity/attribute consumed

Malaysia

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



Vintage of the renewable energy/attribute (i.e. year of generation) 2021

Brand, label, or certification of the renewable electricity purchase No brand, label, or certification

Comment

Country/area of renewable electricity consumption

South Africa

Sourcing method

Unbundled Energy Attribute Certificate (EAC) purchase

Renewable electricity technology type

Hydropower (capacity unknown)

Renewable electricity consumed via selected sourcing method in the reporting year (MWh)

125.44

Tracking instrument used

I-REC

Total attribute instruments retained for consumption by your organization (MWh)

125.44

Country/area of origin (generation) of the renewable electricity/attribute consumed

South Africa

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



Vintage of the renewable energy/attribute (i.e. year of generation) 2021

Brand, label, or certification of the renewable electricity purchase No brand, label, or certification

Comment

Country/area of renewable electricity consumption

Republic of Korea

Sourcing method

Unbundled Energy Attribute Certificate (EAC) purchase

Renewable electricity technology type

Renewable electricity mix, please specify Any, excluding biomass

Renewable electricity consumed via selected sourcing method in the reporting year (MWh)

1.35

Tracking instrument used

Other, please specify PowerPlus

Total attribute instruments retained for consumption by your organization (MWh)

1.35



Country/area of origin (generation) of the renewable electricity/attribute consumed Republic of Korea

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

Vintage of the renewable energy/attribute (i.e. year of generation) 2021

Brand, label, or certification of the renewable electricity purchase

Other, please specify PowerPlus

Comment

Country/area of renewable electricity consumption

Spain

Sourcing method

Unbundled Energy Attribute Certificate (EAC) purchase

Renewable electricity technology type

Renewable electricity mix, please specify Solar/Wind

Renewable electricity consumed via selected sourcing method in the reporting year (MWh)

365.01

Tracking instrument used

GO



Total attribute instruments retained for consumption by your organization (MWh) 365.01

Country/area of origin (generation) of the renewable electricity/attribute consumed

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

Vintage of the renewable energy/attribute (i.e. year of generation) 2021

Brand, label, or certification of the renewable electricity purchase EKOenergy label

Comment

Country/area of renewable electricity consumption

Sweden

Sourcing method

Unbundled Energy Attribute Certificate (EAC) purchase

Renewable electricity technology type

Renewable electricity mix, please specify Solar/Wind

Renewable electricity consumed via selected sourcing method in the reporting year (MWh)

124.19



Tracking instrument used

Total attribute instruments retained for consumption by your organization (MWh) 124.19

Country/area of origin (generation) of the renewable electricity/attribute consumed

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

Vintage of the renewable energy/attribute (i.e. year of generation) 2021

Brand, label, or certification of the renewable electricity purchase EKOenergy label

Comment

Country/area of renewable electricity consumption

Switzerland

Sourcing method

Unbundled Energy Attribute Certificate (EAC) purchase

Renewable electricity technology type

Renewable electricity mix, please specify Solar/Wind



Renewable electricity consumed via selected sourcing method in the reporting year (MWh) 58.94

Tracking instrument used GO

Total attribute instruments retained for consumption by your organization (MWh) 58.94

Country/area of origin (generation) of the renewable electricity/attribute consumed

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

Vintage of the renewable energy/attribute (i.e. year of generation) 2021

Brand, label, or certification of the renewable electricity purchase EKOenergy label

Comment

Country/area of renewable electricity consumption

Taiwan, China

Sourcing method

Unbundled Energy Attribute Certificate (EAC) purchase

Renewable electricity technology type



Wind

Renewable electricity consumed via selected sourcing method in the reporting year (MWh) 135.44

Tracking instrument used

- Total attribute instruments retained for consumption by your organization (MWh) 135.44
- Country/area of origin (generation) of the renewable electricity/attribute consumed China

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

Vintage of the renewable energy/attribute (i.e. year of generation) 2021

Brand, label, or certification of the renewable electricity purchase No brand, label, or certification

Comment

Country/area of renewable electricity consumption

Thailand

Sourcing method

Unbundled Energy Attribute Certificate (EAC) purchase



Renewable electricity technology type

Renewable electricity mix, please specify Solar/Wind

Renewable electricity consumed via selected sourcing method in the reporting year (MWh) 58.11

Tracking instrument used

I-REC

Total attribute instruments retained for consumption by your organization (MWh)

58.11

Country/area of origin (generation) of the renewable electricity/attribute consumed Thailand

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

Vintage of the renewable energy/attribute (i.e. year of generation) 2021

Brand, label, or certification of the renewable electricity purchase

No brand, label, or certification

Comment

Country/area of renewable electricity consumption Turkey



Sourcing method Unbundled Energy Attribute Certificate (EAC) purchase Renewable electricity technology type Wind Renewable electricity consumed via selected sourcing method in the

Renewable electricity consumed via selected sourcing method in the reporting year (MWh) 78.24

Tracking instrument used I-REC

Total attribute instruments retained for consumption by your organization (MWh) 78.24

Country/area of origin (generation) of the renewable electricity/attribute consumed Turkey

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

Vintage of the renewable energy/attribute (i.e. year of generation) 2021

Brand, label, or certification of the renewable electricity purchase No brand, label, or certification

Comment

Country/area of renewable electricity consumption



United Arab Emirates

Sourcing method

Unbundled Energy Attribute Certificate (EAC) purchase

Renewable electricity technology type

Solar

Renewable electricity consumed via selected sourcing method in the reporting year (MWh) 291.19

Tracking instrument used I-REC

- Total attribute instruments retained for consumption by your organization (MWh) 291.19
- Country/area of origin (generation) of the renewable electricity/attribute consumed United Arab Emirates

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

- Vintage of the renewable energy/attribute (i.e. year of generation) 2021
- Brand, label, or certification of the renewable electricity purchase No brand, label, or certification

Comment



Country/area of renewable electricity consumption United Kingdom of Great Britain and Northern Ireland

Sourcing method Unbundled Energy Attribute Certificate (EAC) purchase

Renewable electricity technology type

Renewable electricity mix, please specify Solar/Wind

Renewable electricity consumed via selected sourcing method in the reporting year (MWh) 74.64

Tracking instrument used REGO

Total attribute instruments retained for consumption by your organization (MWh)

74.64

Country/area of origin (generation) of the renewable electricity/attribute consumed

United Kingdom of Great Britain and Northern Ireland

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

Vintage of the renewable energy/attribute (i.e. year of generation) 2021

Brand, label, or certification of the renewable electricity purchase

No brand, label, or certification

Comment



Country/area of renewable electricity consumption

United States of America

Sourcing method Unbundled Energy Attribute Certificate (EAC) purchase

Renewable electricity technology type

Renewable electricity mix, please specify Wind/Hydro

Renewable electricity consumed via selected sourcing method in the reporting year (MWh)

57,330.06

Tracking instrument used

US-REC

Total attribute instruments retained for consumption by your organization (MWh) 57,330.06

Country/area of origin (generation) of the renewable electricity/attribute consumed

United States of America

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

Vintage of the renewable energy/attribute (i.e. year of generation)

2021

Brand, label, or certification of the renewable electricity purchase

Green-e



Comment

Country/area of renewable electricity consumption Viet Nam Sourcing method Unbundled Energy Attribute Certificate (EAC) purchase Renewable electricity technology type Hydropower (capacity unknown) Renewable electricity consumed via selected sourcing method in the reporting year (MWh) 2.31 Tracking instrument used I-REC Total attribute instruments retained for consumption by your organization (MWh) 2.31 Country/area of origin (generation) of the renewable electricity/attribute consumed Malaysia Commissioning year of the energy generation facility (e.g. date of first commercial operation or repowering) Vintage of the renewable energy/attribute (i.e. year of generation) 2021 Brand, label, or certification of the renewable electricity purchase



No brand, label, or certification

Comment

Country/area of renewable electricity consumption

United States of America

Sourcing method

Default delivered renewable electricity from a grid that is 95% or more renewable and where there is no mechanism for specifically allocating renewable electricity

Renewable electricity technology type

Large hydropower (>25 MW)

Renewable electricity consumed via selected sourcing method in the reporting year (MWh)

41,423.95

Tracking instrument used

No instrument used

Total attribute instruments retained for consumption by your organization (MWh)

41,423.95

Country/area of origin (generation) of the renewable electricity/attribute consumed

United States of America

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

Vintage of the renewable energy/attribute (i.e. year of generation)



2021

Brand, label, or certification of the renewable electricity purchase

No brand, label, or certification

Comment

Country/area of renewable electricity consumption

United States of America

Sourcing method

Default delivered renewable electricity from the grid, supported by energy attribute certificates

Renewable electricity technology type

Renewable electricity mix, please specify

Renewable electricity consumed via selected sourcing method in the reporting year (MWh)

27,039.36

Tracking instrument used

No instrument used

Total attribute instruments retained for consumption by your organization (MWh)

27,039.36

Country/area of origin (generation) of the renewable electricity/attribute consumed

United States of America

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



Vintage of the renewable energy/attribute (i.e. year of generation) 2021

Brand, label, or certification of the renewable electricity purchase No brand, label, or certification

Comment

Country/area of renewable electricity consumption

India

Sourcing method

Direct procurement from an offsite grid-connected generator e.g. Power Purchase Agreement (PPA)

Renewable electricity technology type

Wind

Renewable electricity consumed via selected sourcing method in the reporting year (MWh)

10,423.55

Tracking instrument used

Contract

Total attribute instruments retained for consumption by your organization (MWh)

10,423.55

Country/area of origin (generation) of the renewable electricity/attribute consumed

India

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



Vintage of the renewable energy/attribute (i.e. year of generation) 2021

Brand, label, or certification of the renewable electricity purchase No brand, label, or certification

Comment

Country/area of renewable electricity consumption

United Kingdom of Great Britain and Northern Ireland

Sourcing method

Green electricity products from an energy supplier (e.g. Green Tariffs)

Renewable electricity technology type

Renewable electricity mix, please specify

Renewable electricity consumed via selected sourcing method in the reporting year (MWh)

1,219.83

Tracking instrument used

No instrument used

Total attribute instruments retained for consumption by your organization (MWh)

1,219.83

Country/area of origin (generation) of the renewable electricity/attribute consumed

United Kingdom of Great Britain and Northern Ireland



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

Vintage of the renewable energy/attribute (i.e. year of generation) 2021

Brand, label, or certification of the renewable electricity purchase No brand, label, or certification

Comment

Country/area of renewable electricity consumption

Ireland

Sourcing method

Green electricity products from an energy supplier (e.g. Green Tariffs)

Renewable electricity technology type

Renewable electricity mix, please specify

Renewable electricity consumed via selected sourcing method in the reporting year (MWh)

3,160.7

Tracking instrument used

No instrument used

Total attribute instruments retained for consumption by your organization (MWh)

3,160.7

Country/area of origin (generation) of the renewable electricity/attribute consumed



Ireland

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

Vintage of the renewable energy/attribute (i.e. year of generation) 2021

Brand, label, or certification of the renewable electricity purchase No brand, label, or certification

Comment

Country/area of renewable electricity consumption

Japan

Sourcing method

Green electricity products from an energy supplier (e.g. Green Tariffs)

Renewable electricity technology type

Hydropower (capacity unknown)

Renewable electricity consumed via selected sourcing method in the reporting year (MWh)

440.02

Tracking instrument used

Contract

Total attribute instruments retained for consumption by your organization (MWh)

440.02



Country/area of origin (generation) of the renewable electricity/attribute consumed Japan

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

Vintage of the renewable energy/attribute (i.e. year of generation) 2021

Brand, label, or certification of the renewable electricity purchase No brand, label, or certification

Comment

Country/area of renewable electricity consumption

Bulgaria

Sourcing method

Unbundled Energy Attribute Certificate (EAC) purchase

Renewable electricity technology type

Renewable electricity mix, please specify

Renewable electricity consumed via selected sourcing method in the reporting year (MWh)

2,014.87

Tracking instrument used

Other, please specify

Total attribute instruments retained for consumption by your organization (MWh)



2,014.87

Country/area of origin (generation) of the renewable electricity/attribute consumed Bulgaria

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

Vintage of the renewable energy/attribute (i.e. year of generation) 2021

Brand, label, or certification of the renewable electricity purchase Other, please specify

Comment

Country/area of renewable electricity consumption

India

Sourcing method

Direct procurement from an offsite grid-connected generator e.g. Power Purchase Agreement (PPA)

Renewable electricity technology type

Renewable electricity mix, please specify

Renewable electricity consumed via selected sourcing method in the reporting year (MWh)

586.84

Tracking instrument used

Other, please specify



Total attribute instruments retained for consumption by your organization (MWh) 586.84

Country/area of origin (generation) of the renewable electricity/attribute consumed

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

Vintage of the renewable energy/attribute (i.e. year of generation) 2021

Brand, label, or certification of the renewable electricity purchase Other, please specify

Comment

Country/area of renewable electricity consumption

Netherlands

Sourcing method

Green electricity products from an energy supplier (e.g. Green Tariffs)

Renewable electricity technology type

Renewable electricity mix, please specify

Renewable electricity consumed via selected sourcing method in the reporting year (MWh)

576.24

Tracking instrument used



GO

Total attribute instruments retained for consumption by your organization (MWh) 576.24

Country/area of origin (generation) of the renewable electricity/attribute consumed Netherlands

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

Vintage of the renewable energy/attribute (i.e. year of generation) 2021

Brand, label, or certification of the renewable electricity purchase Other, please specify

Comment

Country/area of renewable electricity consumption

Singapore

Sourcing method

Green electricity products from an energy supplier (e.g. Green Tariffs)

Renewable electricity technology type

Renewable electricity mix, please specify

Renewable electricity consumed via selected sourcing method in the reporting year (MWh)

78.67



Tracking instrument used

Other, please specify

Total attribute instruments retained for consumption by your organization (MWh) 78.67

Country/area of origin (generation) of the renewable electricity/attribute consumed Singapore

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

Vintage of the renewable energy/attribute (i.e. year of generation) 2021

Brand, label, or certification of the renewable electricity purchase Other, please specify

Comment

Country/area of renewable electricity consumption

United States of America

Sourcing method

Purchase from an on-site installation owned by a third party

Renewable electricity technology type

Renewable electricity mix, please specify

Renewable electricity consumed via selected sourcing method in the reporting year (MWh)



23,610.02

Tracking instrument used

No instrument used

Total attribute instruments retained for consumption by your organization (MWh) 23,610.02

Country/area of origin (generation) of the renewable electricity/attribute consumed United States of America

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

Vintage of the renewable energy/attribute (i.e. year of generation) 2021

Brand, label, or certification of the renewable electricity purchase No brand, label, or certification

Comment

C8.2j

(C8.2j) Provide details of your organization's renewable electricity generation by country in the reporting year.

Country/area of generation United States of America

Renewable electricity technology type



Solar

Facility capacity (MW)

Total renewable electricity generated by this facility in the reporting year (MWh)

410

Renewable electricity directly consumed by your organization from this facility in the reporting year for which certificates were not issued (MWh)

410

Renewable electricity directly consumed by your organization from this facility in the reporting year for which certificates were issued and retired (MWh)

0

Renewable electricity sold to the grid in the reporting year (MWh)

0

Certificates issued for the renewable electricity that was sold to the grid (MWh)

0

Certificates issued and retired for self-consumption for the renewable electricity that was sold to the grid (MWh)

Type of energy attribute certificate

Total self-generation counted towards RE100 target (MWh) [Auto-calculated]

410

Comment



On-site rooftop solar at Palo Alto

Country/area of generation Bulgaria

Renewable electricity technology type

Solar

```
Facility capacity (MW)
```

Total renewable electricity generated by this facility in the reporting year (MWh)

23

Renewable electricity directly consumed by your organization from this facility in the reporting year for which certificates were not issued (MWh)

23

Renewable electricity directly consumed by your organization from this facility in the reporting year for which certificates were issued and retired (MWh)

0

```
Renewable electricity sold to the grid in the reporting year (MWh)
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0

Certificates issued for the renewable electricity that was sold to the grid (MWh)

0

Certificates issued and retired for self-consumption for the renewable electricity that was sold to the grid (MWh)



Type of energy attribute certificate

Total self-generation counted towards RE100 target (MWh) [Auto-calculated]

23

Comment

On-site rooftop solar at Sofia

C8.2k

(C8.2k) Describe how your organization's renewable electricity sourcing strategy directly or indirectly contributes to bringing new capacity into the grid in the countries/areas in which you operate.

We are committed to maintaining 100 percent renewable electricity for our global facilities through 2030 and moving forward, we are actively reviewing the availability of new virtual power purchase agreements that add renewable energy generating assets to the grid in locations where we have significant demand. Over time, we plan to increase the proportion of high impact renewable electricity purchasing contracts to our portfolio and where possible, shift away from relying on Energy Attribute Certificates (EACs) to maintain our RE100 status.

C8.2I

(C8.2I) In the reporting year, has your organization faced any challenges to sourcing renewable electricity?

	Challenges to sourcing renewable electricity	
Row 1	Yes, in specific countries/areas in which we operate	

C8.2m

(C8.2m) Provide details of the country-specific challenges to sourcing renewable electricity faced by your organization in the reporting year.



Country/area	Reason(s) why it was challenging to source renewable electricity within selected country/area	Provide additional details of the barriers faced within this country/area
Peru	Inability to buy Energy Attribute Certificates (EACs) in small quantities	<10MWh
Indonesia	Inability to buy Energy Attribute Certificates (EACs) in small quantities	<10MWh
Egypt	Inability to buy Energy Attribute Certificates (EACs) in small quantities	<10MWh
Singapore	Limited supply of renewable electricity in the market Prohibitively priced renewable electricity	
Saudi Arabia	Lack of credible renewable electricity procurement options (e.g. EACs, Green Tariffs)	
Philippines	Inability to buy Energy Attribute Certificates (EACs) in small quantities Limited supply of renewable electricity in the market	<50MWh
Pakistan	Inability to buy Energy Attribute Certificates (EACs) in small quantities	<50 MWh

C9. Additional metrics

C9.1

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

Description

Other, please specify Carbon Impact of Products (avoided energy and carbon)

Metric value

217,480,000



Metric numerator

MWh

Metric denominator (intensity metric only)

% change from previous year

0

Direction of change

Please explain

In 2021, we believe incremental energy and carbon avoided through use of VMware virtualization technologies will be the same order of magnitude as 2019 (the last year we measured carbon emissions avoided through the use of our products) if not more, given that COVID accelerated digital transformation of traditionally brick and mortar businesses. Our commissioned IDC white paper includes detailed calculations and a study on the impacts of VMware's virtualization products from 2003 to 2019. The outcome of this research concluded that our customers have avoided over 758 million MT CO2e as a result of our products. An additional 455 million MT CO2e emissions were avoided due to non–IT data center energy avoidance (cooling, non-IT equipment energy). In 2019, incremental energy and carbon avoided through use of VMware virtualization technologies equated to 217,480,000 MWh and 95 million MT CO2e. An additional 130,488,000 MWh of energy and 57 million MT CO2e were avoided due to non-IT data center savings. Please see our August 2020 IDC White Paper is entitled "Enabling More Agile & Sustainable Business through Carbon-Efficient Digital Transformations," which can be found at: http://www.vmware.com/go/VMwareIDCWhitePaper2020

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

VMware 2021 CDP GHG Verification_Apex_6June.pdf

Page/ section reference

Page 1/ GHG Emissions Statement (VMware 2021 CDP GHG Verification_Apex_6June,pdf)

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.

Proportion of reported emissions verified (%)



100

Scope 2 approach

Scope 2 market-based

Verification or assurance cycle in place

Annual process

Status in the current reporting year

Complete

Type of verification or assurance

Limited assurance

Attach the statement

VMware 2021 CDP GHG Verification_Apex_6June.pdf

Page/ section reference

Page 1/ GHG Emissions Statement (VMware 2021 CDP GHG Verification_Apex_6June,pdf)

Relevant standard

ISO14064-3

Proportion of reported emissions verified (%)



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: Fuel and energy-related activities (not included in Scopes 1 or 2) Scope 3: Waste generated in operations Scope 3: Business travel Scope 3: Employee commuting

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

VMware 2021 CDP GHG Verification_Apex_6June.pdf

Page/section reference

Page 1/ GHG Emissions Statement (VMware 2021 CDP GHG Verification_Apex_6June,pdf)

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?

Yes

C10.2a

Disclosure module verification relates to	Data verified	Verification standard	Please explain
C8. Energy	Energy consumption	ISO 14064-3	In addition to having our carbon emissions assured by Apex (formerly Bureau Veritas), they assured VMware's total scope 1 and 2 energy in MWh.
C9. Additional metrics	Other, please specify Estimated carbon avoided by our virtualization products	Commissioned study by IDC	VMware sponsored a white paper in 2020 with IDC to quantify the estimated carbon avoided by our virtualization products. Please see the August 2020 IDC White Paper, sponsored by VMware, entitled "Enabling More Agile & Sustainable Business through Carbon-Efficient Digital Transformations," which can be found at: http://www.vmware.com/go/VMwareIDCWhitePaper2020



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? Yes

C11.2a

(C11.2a) Provide details of the project-based carbon credits originated or purchased by your organization in the reporting period.

Credit origination or credit purchase

Credit purchase

Project type

Transport

Project identification

According to the World Resources Institute, transport is responsible for 22% of global energy-related greenhouse gas emissions and the sector's emissions are increasing at a greater rate than any other. Over the last two decades, Delhi has seen exponential growth in vehicle numbers (to 9.6 million in 2016), leading to poor air quality and CO2 emissions. Public transport is the primary mode of road transport for most people in India, and the public transport systems are among the most heavily used in the world, transporting billions of passengers per year. Under the Clean Development Mechanism (CDM) methodology for mass rapid transit projects, carbon finance supported Metro Delhi in



installing over 100 kilometers of state-of-the art electric rail systems with new trains. It's improved safety and reliability is attracting people away from private cars and other less efficient motorized vehicles. The metro system now carries 2.7 million people a day. This CDM project is reducing carbon emissions by almost 600,000 tonnes of CO2 per year and helping improve local air quality by reducing NOx and particulate matter. The Delhi Metro is the second Metro System in the world to achieve ISO14001 certification. Environmental impacts of construction were carefully managed with 10 trees planted for every one that had to be removed. In addition, the project invests annually in social programs including improved cycling infrastructure and environmental education programs in schools. Other initiatives have also been registered as separate projects under the CDM including provision of solar to power stations and use of breaking energy to power trains.

Verified to which standard

CDM (Clean Development Mechanism)

Number of credits (metric tonnes CO2e)

20,000

Number of credits (metric tonnes CO2e): Risk adjusted volume

20,000

Credits cancelled Yes

Purpose, e.g. compliance Voluntary Offsetting

Credit origination or credit purchase

Credit purchase

Project type

Other, please specify Clean Water

Project identification



Every one in four people worldwide do not have access to clean drinking water, and in Sub-Saharan Africa it is one in three. Each day, hundreds of children under the age of five die from preventable illness relating to unsafe water according to UNICEF. This Gold Standard project, based primarily in Uganda, Malawi, Rwanda and Eritrea provides clean drinking water to small rural communities by repairing and drilling new boreholes. Boreholes can be used as water wells by installing a vertical pipe casing and well screen with a hand pump which allows water to be extracted from the ground, even during dry seasons. By providing clean water, communities no longer need to purify water through boiling. This alleviates pressure on local forests – the predominant source of firewood – and reduces greenhouse gas emissions. In addition to delivering emission reductions to help take urgent action to combat climate change (SDG 13), this project has a plethora of additional cobenefits. It improves health and wellbeing (SDG 3); In Uganda, 10 rehabilitated boreholes serve 5,700 people, preventing 100 cases of diarrhea and six fatalities each year. In 2016, while 29% of people globally did not use safely managed drinking water services, in Uganda the situation is significantly worse with 93% of people not using safely managed drinking water. The project also improves gender equality (SDG 5): boreholes greatly reduce the time needed for collection of water and fuel, and the purification of water. This reduces exposure to indoor air pollution, and allows women to focus on other income-generating activities. Without a functioning borehole, women spent and average of 2 hours 50 minutes per day collecting water, which reduced to 47 minutes per day after the borehole in the region was rehabilitated.

Verified to which standard

Gold Standard

Number of credits (metric tonnes CO2e)

2,500

Number of credits (metric tonnes CO2e): Risk adjusted volume

2,500

Credits cancelled

Yes

Purpose, e.g. compliance Voluntary Offsetting

Credit origination or credit purchase



Credit purchase

Project type

Wind

Project identification

This portfolio of wind projects supports the transition to renewable energy in India and China. Both countries are still highly dependent on fossil fuels for their energy, and rapid population growth has added to the increasing pressure on electricity generating capacity. 70% of India's energy is currently supplied by coal, and China is the world's largest producer and consumer of coal. The wind farms in this portfolio deliver clean, renewable energy to the regional grid, displacing electricity that would have otherwise been drawn primarily from fossil fuel power stations. The wind farms also contribute to the local economy and livelihood of residents through the creation of jobs, both temporary during construction and permanent for operation and maintenance (SDG 8). Carbon offsets purchased by VMware accelerate the global transition to low-carbon energy whilst supporting jobs and infrastructure resilience.

Verified to which standard

VCS (Verified Carbon Standard)

Number of credits (metric tonnes CO2e)

21,312

Number of credits (metric tonnes CO2e): Risk adjusted volume

21,312

Credits cancelled

Yes

Purpose, e.g. compliance Voluntary Offsetting

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/clients

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

4

% total procurement spend (direct and indirect)

75

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



Rationale for the coverage of your engagement

We engage with approximately 250 suppliers each year on the CDP Supply Chain platform to understand our supplier base climate maturity. This is the number of suppliers that make up roughly 75% of our procurement spend and about 71% of total scope 3 emissions in FY22.

Impact of engagement, including measures of success

In FY22, we engaged suppliers representing 75% of our spend. In FY22, we measured the success of our supplier engagement through our CDP Supply Chain response rate, and other metrics. Through this platform, we learned that our suppliers are highly capable and understand the need for emissions reductions. We received about the same number of supplier responses from the previous year, and gleaned valuable insight into the climate-related activities being pursued by a number them, though we did not see much movement from the prior year. To achieve our supply chain carbon reduction goals, we are increasing efforts in 2022 to work with suppliers at a deeper level to support them and ensure progress towards our SBT goal of having 75% of our suppliers by spend setting their own science-based targets by the end of FY2025. This target has been approved by the Science Based Target Initiative.

Comment

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

3

% total procurement spend (direct and indirect)

75

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



Rationale for the coverage of your engagement

We choose to engage with suppliers who we spend over \$1M on an annual basis. This is since many of our strategic suppliers will see recurring contracts, and we have high spend values with them. As such, we expect them to have the time and resources to complete the assessment, so they can improve their own organization, but also so we can identify any potential risk areas. We have found that smaller suppliers (<\$1M in annual spend) are not as willing to engage in the program with such low spend, and these suppliers make up a very small portion of our overall spending.

Impact of engagement, including measures of success

We have increased the sample size for our engagement over the last year, expanding it to include over 400 of our top suppliers. 37% of our suppliers work on engaging their own supply chain to reduce their emissions, and 56% have taken action to reduce their emissions and GHG levels. We continually work with our top suppliers on enhancing their ESG efforts and checking in on their progress, so we expect to see these numbers increase.

Comment

C12.1b

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

Type of engagement & Details of engagement

Education/information sharing

Run an engagement campaign to educate customers about the climate change impacts of (using) your products, goods, and/or services

% of customers by number

100

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



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

VMware's products have supported our customers in reducing their carbon footprints for the last 18 years. We offer information on customer emissions reductions on the Sustainability page of our website, including interactive resources like a carbon calculator to enable our customers to easily assess their environmental impact. We share the product impact data in our annual ESG Report. Our 2020 white paper from IDC quantifies the cumulative positive carbon impact of our products for our customers. VMware's infrastructure virtualization solutions — which encompasses compute (server), storage, networking, and management capabilities — form the underpinning of modern data center infrastructure. It enables firms to gain data center-wide and IT-wide efficiencies as well as establish metrics to track and ultimately avoid carbon emissions resulting from IT infrastructure growth. Please see our August 2020 IDC White Paper entitled "Enabling More Agile & Sustainable Business through Carbon-Efficient Digital Transformations," which can be found at: http://www.vmware.com/go/VMwareIDCWhitePaper2020

Impact of engagement, including measures of success

We measure the success of our customer education efforts around the climate change impacts of data center products by measuring avoided greenhouse gas emissions during product use phase. Since 2003, VMware's products have avoided over 758 million MT CO2e for our customers. An additional 455 million MT CO2e emissions were avoided due to non–IT data center energy avoidance (cooling, non-IT equipment energy). We also share product impact data at our annual user conference, VMware Explore (previously VMworld), which is held in both the United States and Europe, while our vForum events are held in the Asia Pacific and Japan region.

Type of engagement & Details of engagement

Education/information sharing

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

0

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



The group of customers selected for engagement on Ecovadis and Customer Technical Advisory Councils are from across industries and regions. Scope of your engagement: we have many opportunities to engage with our customers and actively seek their input and requirements. We specifically engage in annual or bi-annual Customer Technical Advisory Councils across each region of our business and feedback is incorporated into our product roadmaps, where applicable. We engage our customers regarding our ESG performance with EcoVadis. EcoVadis is an independent sustainability rating provider. We use EcoVadis to support our customers in providing them with a holistic view of our sustainability efforts through transparency and third-party review, and to empower us with an efficient response process. We prioritize responding to our customer's annual questionnaires, as well as ad-hoc queries aiming to be as responsive as possible on these issues and concerns. We have a global team that includes members from our field support, sustainability and compliance groups that is responsible for responding to customer ESG questions. Proportion of the portfolio value chain covered by the engagement strategy: we have experienced a significant increase in engagement with our customers regarding our ESG performance over the last year through RFPs and questionnaires. We currently have 70 customers on the EcoVadis platform and provide our scorecard directly to numerous other customers who are external to the platform.

Impact of engagement, including measures of success

As a measure of success, we have received positive confirmation from our customers upon review of our data and to date, they have all been satisfied with our responses. Additionally, we have a customer advocacy team that engages regularly through a Net Promoter Score (NPS) survey. Globally, more than 2,000 companies have committed to setting science-based targets for emissions reductions. We realize that the majority of those are our customers. We are working with the field sales teams to help these customers in their digital transformation journeys through deeper penetration of our technologies to magnify the impact of our engagement strategy. We deploy and test products in our own IT environments (we refer to this as VMware on VMware), and then share the learnings, business and sustainability benefits with our customers so that they can enthusiastically continue to use our products and data in their own ESG efforts.

Type of engagement & Details of engagement

Collaboration & innovation Other, please specify Influence and collaborate with our public cloud ecosystem partners to promote renewable energy

% of customers by number



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

0

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

Recognizing the enormous opportunity VMware has to influence and collaborate with our public cloud ecosystem partners, our Zero Carbon Committed program (ZCC) has a vision that all VMware public cloud data centers will be zero carbon through energy-efficient and 100% renewable energy powered operations by 2030.

We recognize and promote VMware Cloud Verified public cloud partners that have publicly committed to 100% renewable energy-powered data center operations to be achieved on or before 2030. We make it easy for our customers that have zero carbon supply chain goals to find and connect with our ZCC providers through the VMware public cloud provider portal (https://cloud.vmware.com/providers/zero-carbon). We develop tools to help our public cloud partners run their infrastructure more productively to reduce energy consumption and carbon emissions (web-based Carbon Calculator and Optimizer tool – in progress). We provide educational opportunities for our partners to help them along their zero carbon journey including why they should be considering setting a renewable energy goal, how to set a goal, and how to execute on a goal. We are partnering with the Clean Energy Buyers Association (CEBA) to offer a free 6-month trial membership to all of our public cloud partners (campaign launched). We are developing a 3-hour workshop and making available on-demand training modules to be made available in our Partner Connect portal (in progress).

Impact of engagement, including measures of success

Zero Carbon Committed initiative launched in May 2021 with 5 partners. There are now 30 partners including 5 of 6 hyperscaler partners.

C12.2

(C12.2) Do your suppliers have to meet climate-related requirements as part of your organization's purchasing process? Yes, suppliers have to meet climate-related requirements, but they are not included in our supplier contracts

C12.2a

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



Climate-related requirement

Setting a science-based emissions reduction target

Description of this climate related requirement

VMware has set a science-based target that includes a commitment to engage our suppliers so that 75% of supplier by spend will set their own SBTs by the end of FY25. As part of this commitment, we requested disclosure of carbon emissions from suppliers representing 75% of spend through CDP Supply Chain. Additionally, our supplier contracts and code of conduct require that suppliers will abide by all regulatory requirements applicable in their jurisdiction.

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

75

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

19

Mechanisms for monitoring compliance with this climate-related requirement

Other, please specify

VMware pulls data directly from the Science-based target initiative quarterly to monitor progress.

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

Retain and engage

Climate-related requirement

Climate-related disclosure through a non-public platform

Description of this climate related requirement

VMware has partnered with EcoVadis to analyze the ESG performance of our top suppliers – those with \$1M+ in annual spend. The platform's assessment allows us to see where our risks are, but also encourages our suppliers to be more mindful of their own practices while giving them



suggestions and training to improve. VMware also completes the assessment ourselves each year, and continuously works to improve our own score.

- % suppliers by procurement spend that have to comply with this climate-related requirement 56
- % suppliers by procurement spend in compliance with this climate-related requirement 29
- Mechanisms for monitoring compliance with this climate-related requirement Supplier scorecard or rating
- Response to supplier non-compliance with this climate-related requirement Retain and engage

C12.3

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

Row 1

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

Yes, we engage directly with policy makers

Yes, we engage indirectly through trade associations

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

Yes

Attach commitment or position statement(s)

https://news.vmware.com/sustainability/climate-week-2019



VMware at Climate Week 2019.pdf

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

VMware has established a tiered governance structure that consists of a Sustainability Technical Council and an Executive Sustainability Advisory Group.

The Technical Council includes various representation within the Office of the CTO and Products and Cloud Services Business Unit. This Technical Council meets quarterly with the Vice President of Environmental, Social, Governance (ESG) to provide insights, share ideas and drive cross-company sustainability initiatives. The goal of the Council is to drive sustainability into our engineering processes and to collaborate on assessing the environmental impacts of our products. The Executive Sustainability Advisory Group includes key internal stakeholders whose role it is to review and guide our sustainability strategy, reporting, and corporate sustainability goals.

The Executive Sustainability Advisory Group includes the following stakeholders:

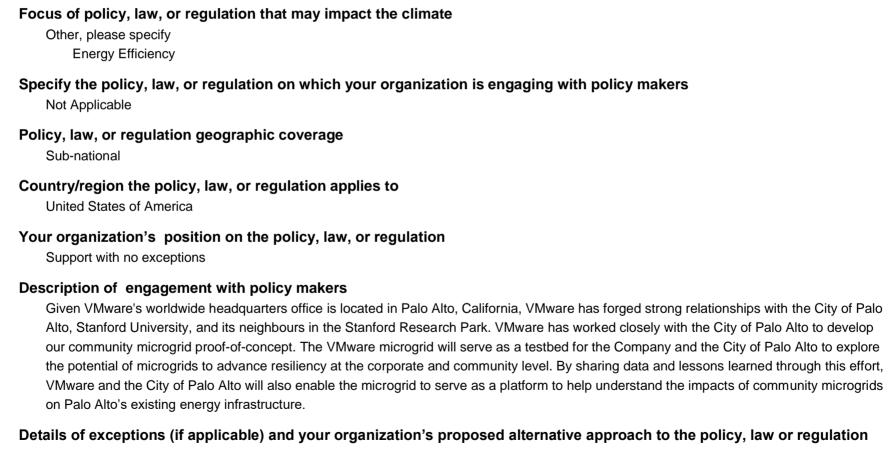
- Chief People Officer
- Chief Technology Officer
- Chief Communications Officer
- Senior Vice President, Global Government Relations and Public Policy
- VP, Deputy Counsel
- VP, Internal Audit
- VP, Workplace

With regard to public policy, all of our policy engagement activities are coordinated through our Senior Vice President of Global Government Relations and Public Policy, who is a member of VMware's cross-functional Executive Sustainability Advisory Group. Our regional heads of Government Relations in the Americas, Asia-Pacific, and EMEA will collaborate with leaders of VMware's Environment, Social, and Governance team to consolidate and present a unified VMware perspective that is relevant where policy engagement and guidance is required at the provincial or local level. Given that our core business drives energy efficiency, these groups are aligned to support appropriate climate or energy-related legislation.



C12.3a

(C12.3a) On what policy, law, or regulation that may impact the climate has your organization been engaging directly with policy makers in the reporting year?





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

Yes, we have evaluated, and it is aligned

Focus of policy, law, or regulation that may impact the climate

Other, please specify Energy Infrastructure

Specify the policy, law, or regulation on which your organization is engaging with policy makers Not Applicable

Policy, law, or regulation geographic coverage National

Country/region the policy, law, or regulation applies to

United States of America

Your organization's position on the policy, law, or regulation

Support with no exceptions

Description of engagement with policy makers

Securing State Energy Infrastructure VMware supports and actively participates in policy academies with the National Governors Association (NGA) Center for Best Practices Resource Center on Cyber Security. The NGA works with state governors across the country to assist states in developing responsible policies and state legislation to enhance the cybersecurity of state energy systems and infrastructure. The NGA recognizes that a cyber-attack on the systems that run water treatment facilities and electrical and nuclear power plants, can have significant negative environmental consequences.

Details of exceptions (if applicable) and your organization's proposed alternative approach to the policy, law or regulation



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

Yes, we have evaluated, and it is aligned

Focus of policy, law, or regulation that may impact the climate

Minimum energy efficiency requirements

Specify the policy, law, or regulation on which your organization is engaging with policy makers

Energy and Natural Resources Act of 2017 (S. 1460)

Policy, law, or regulation geographic coverage

National

Country/region the policy, law, or regulation applies to

United States of America

Your organization's position on the policy, law, or regulation

Support with no exceptions

Description of engagement with policy makers

VMware has supported H.R. 306, Energy Efficient Government Technology Act, and worked with Palo Alto's Congresswoman, Rep. Anna Eshoo, and her staff to advocate for its passage in the House. Our Palo Alto Congresswoman, Rep. Anna Eshoo (D-CA), introduced H.R. 306, Efficient Government Technology Act, which requires the Department of Energy to update its 2007 baseline for energy efficiency at data centers, with an eye to making new data centers operate with less expenditure of power -- and by extension fewer costs. The legislation also tasks agencies with collaborating with DOE, the Office of Management and Budget (OMB) and the Environmental Protection Agency to come up with ways of measuring and verifying energy saving methods to make data centers operate with less energy. OMB would have to report on agency progress. Additionally, OMB would establish a program to certify tech workers in the evaluation and management of energy usage for the purpose of tracking data center efficiency. Stats: The federal government could realize \$5 billion in energy savings over seven years with more efficient use of data centers, according to a 2013 report from the Center for Climate and Energy Solutions. The Department of Energy estimates that implementation of best practices alone could reduce the government's data center energy bill by 20 to 40 percent. With investments in the latest technologies, experts estimate that most data centers could slash their energy use by 80 to 90 percent. Bill Status:



H.R. 306 passed in the House on January 3, 2017, and was introduced on June 28, 2017, as part of the Senate bill, titled "Energy and Natural Resources Act of 2017" (S. 1460). The legislative session ended before it was passed. The energy efficient data center provisions of S. 1460, Energy and Natural Resources Act of 2017 were built into H.R. 133, Consolidated Appropriations Act of 2021. Section 1003 "Energy Efficient Data Centers" of the FY 2021 Appropriations Act amends Section 453 of the Energy Independence and Security Act of 2007 (42 U.S.C. 17112) to require the Secretary of EPA to conduct a study and publish a public report no later than 4 years after the enactment of the Energy Act of 2020. Further, the open data initiative and data center utilization metrics provisions of S. 1460 are also included in the FY 2021 Appropriations Act.

Details of exceptions (if applicable) and your organization's proposed alternative approach to the policy, law or regulation

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

Yes, we have evaluated, and it is aligned

Focus of policy, law, or regulation that may impact the climate

Other, please specify IT Modernization

Specify the policy, law, or regulation on which your organization is engaging with policy makers

Modernizing Government Technology (MGT) Act

Policy, law, or regulation geographic coverage National

Country/region the policy, law, or regulation applies to United States of America

Your organization's position on the policy, law, or regulation

Support with no exceptions

Description of engagement with policy makers



Through its trade association memberships, VMware supported the Modernizing Government Technology (MGT) Act, which was adopted into law in December 2017. The MGT Act of 2016 reformed how the Federal Government funds and modernizes IT solutions and keeps pace with innovations, such as virtualization, and cloud computing that can positively impact the environment.

Details of exceptions (if applicable) and your organization's proposed alternative approach to the policy, law or regulation

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

Yes, we have evaluated, and it is aligned

Focus of policy, law, or regulation that may impact the climate

Other, please specify Emissions Management

Specify the policy, law, or regulation on which your organization is engaging with policy makers

Digital Society Promotion Act

Policy, law, or regulation geographic coverage

National

Country/region the policy, law, or regulation applies to

Japan

Your organization's position on the policy, law, or regulation

Support with no exceptions

Description of engagement with policy makers

Japan's Ministry of the Environment's (MOE's) "Construction of a system to enable centralized management of greenhouse gas emissions" of "Digital Governance Project for Greenhouse Gas Emissions" (JPY360M/FY2020 budget) is a Japanese government system to comprehensively manage the amount of greenhouse gas emissions and reduction plans of each company. This project requires a flexible development methodology because it needs to work with a number of private systems. VMware is supporting the Japanese government to change of the



current rigid government system development and to build this system for the better. The system is in development, starting in 2019 and expected through 2022. VMware is actively supporting legislators in their efforts to pass the Digital Society Promotion Act, legislation introduced by a Diet member that will enable a more efficient digital government. Specific support is planned to arrange a Diet question that will allow the introduction of "agile development" and "container technology" into the development of government systems. This question is scheduled for a parliamentary session in October 2020. The bill affects the way all Japanese government systems are developed, including the "Digital Governance Project for Greenhouse Gas Emissions".

Details of exceptions (if applicable) and your organization's proposed alternative approach to the policy, law or regulation

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

Yes, we have evaluated, and it is aligned

Focus of policy, law, or regulation that may impact the climate

Other, please specify SustainabilityClimate Resilience

Specify the policy, law, or regulation on which your organization is engaging with policy makers

The Infrastructure Investment and Jobs Act

Policy, law, or regulation geographic coverage

National

Country/region the policy, law, or regulation applies to

United States of America

Your organization's position on the policy, law, or regulation

Support with no exceptions

Description of engagement with policy makers



VMware advocated in favor of the Infrastructure Investment and Jobs Act (aka "Bipartisan Infrastructure Law") includes billions of dollars for resilience, particularly for utilities, which includes climate resilience measures.

VMware advocated in favor of the National Defense Authorization Act, which included a provision requiring the Department of Defense to identify the 50 least efficient (from an energy and water consumption perspective) data centers within its organization.

Details of exceptions (if applicable) and your organization's proposed alternative approach to the policy, law or regulation

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

Yes, we have evaluated, and it is aligned

Focus of policy, law, or regulation that may impact the climate

Other, please specify Sustainability/Climate Resilience

Specify the policy, law, or regulation on which your organization is engaging with policy makers

National Defense Authorization Act

Policy, law, or regulation geographic coverage National

Country/region the policy, law, or regulation applies to

United States of America

Your organization's position on the policy, law, or regulation

Support with no exceptions

Description of engagement with policy makers



VMware advocated in favor of the National Defense Authorization Act, which included a provision requiring the Department of Defense to identify the 50 least efficient (from an energy and water consumption perspective) data centers within its organization.

Details of exceptions (if applicable) and your organization's proposed alternative approach to the policy, law or regulation

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

Yes, we have evaluated, and it is aligned

Focus of policy, law, or regulation that may impact the climate

Other, please specify Digital and Climate Action

Specify the policy, law, or regulation on which your organization is engaging with policy makers

Not Applicable

Policy, law, or regulation geographic coverage

Regional

Country/region the policy, law, or regulation applies to

Europe

Your organization's position on the policy, law, or regulation

Support with no exceptions

Description of engagement with policy makers

VMware worked with DIGITALEUROPE to include specific language around virtualization technology and its impact on reducing environment impact in their thought leadership publication titled, "Digital action = Climate action: 8 ideas to accelerate the twin transition. https://www.digitaleurope.org/resources/digital-action-climate-action-8-ideas-to-accelerate-the-twin-transition. VMware supports DIGITALEUROPE's message that digital technologies can help organizations reduce their climate impact and help reduce emissions. It is through the "twin transition," which is an effort toward a simultaneous green and digital economy.



Details of exceptions (if applicable) and your organization's proposed alternative approach to the policy, law or regulation

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

Yes, we have evaluated, and it is aligned

Focus of policy, law, or regulation that may impact the climate

Other, please specify Digital Transformation and Carbon Emissions

Specify the policy, law, or regulation on which your organization is engaging with policy makers

Not Applicable

Policy, law, or regulation geographic coverage

Regional

Country/region the policy, law, or regulation applies to

Europe

Your organization's position on the policy, law, or regulation

Support with no exceptions

Description of engagement with policy makers

VMware partnered with Aurora Research Group to support and produce a research publication titled, "Digital Transformation and a Net Zero Emissions Europe: The role of cloud computing and data centres in achieving power sector emissions reductions in Europe." VMware also hosted a virtual and public webinar with panel experts to launch the publication. Member of the European Parliament Sean Kelly delivered a 5-minute video praising VMware and its activities in Europe. Daniel Mes, Member of Cabinet of Executive Vice President for European Green Deal Frans Timmermans, was a speaker, and Karl Falkenberg, former European Commission Director General for Environment, moderated the panel.

https://www.vmware.com/content/dam/digitalmarketing/vmware/en/pdf/sustainability/vmw-aurora-energy-research-report.pdf



Details of exceptions (if applicable) and your organization's proposed alternative approach to the policy, law or regulation

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

Yes, we have evaluated, and it is aligned

C12.3b

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

Trade association

Other, please specify The Information Technology Industry Council

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

Consistent

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

We publicly promote their current position

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

Information Technology Industry Council (ITI) and its members seek to continuously improve the energy efficiency landscape in the US and globally to leverage energy efficient technologies. ITI works on behalf of its member companies to advocate for policies that advance both intelligent efficiency and product efficiency.

VMware's Senior Vice President of Global Government Relations sits on the Executive Committee of ITI and influences ITI's policy positions. ITI and its member companies understand that we have a major stake in the fight against climate change. VMware supports the three strategic



commitments ITI has made in this regard. ITI also supports government policies that emphasize an innovation agenda for mitigating and adapting our changing climate. On energy efficiency, ITI unites the tech sector and the NGO community to advance policies that drive sustainable economic growth through technology-enabled energy and product efficiency innovation. ITI works proactively with the Environmental Protection Agency as an active partner in and advisor to the ENERGY STAR program, their activities in Europe in coordination with Digital Europe, their work in China in coordination with USITO and their policy efforts elsewhere in Asia, Latin America, Africa, and the Middle East. It also participates actively in energy efficiency efforts within the G-20, the Asia Pacific Economic Cooperation (APEC) forum, the United Nations, and other international venues.

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

166,333

Describe the aim of your organization's funding

Partner with trade association with similar positions on public policy to achieve desired public policy outcomes.

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

Yes, we have evaluated, and it is aligned

Trade association

Other, please specify Digital Europe

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

Consistent

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

We publicly promote their current position



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

Digital Europe is committed to contributing to a sustainable and energy efficient Europe. The organization aims to ensure that products are designed, produced, used, and where possible reused or recycled in a sustainable and safe manner, and promote the benefits of digital solutions in achieving sustainable goals. They help stakeholders to: • product design, including substance use • resource efficiency and waste management • reducing GHG emissions • broader global supply chain responsibility, including responsible sourcing Digital Europe addresses these specific areas of sustainability: chemicals, circular-economy, eco-design, waste, and supply-chain transparency.

VMware's Senior Vice President of Global Government Relations is a voting member of Digital Europe; VMware's Head of EMEA Government Relations regularly partners with Digital Europe and its member organizations. Digital Europe, its board, and members are committed to contributing to a sustainable Europe that benefits society at large. VMware will raise awareness of our virtualization technology in support of Digital Europe's aim of leveraging innovative technology to encourage a sustainable future.

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

37,208.7

Describe the aim of your organization's funding

Partner with trade association with similar positions on public policy to achieve desired public policy outcomes

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

Yes, we have evaluated, and it is aligned

Trade association

Other, please specify US-ASEAN Business Council



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

Consistent

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

We publicly promote their current position

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

The US-ASEAN Business Council and our members are committed to supporting governments in ASEAN in their efforts to mitigate the risks of climate change. We support global action that drives reductions in greenhouse gas emissions while progressing economic development. USABC stands behind our members' efforts which include the use of innovative technology to improve energy efficiency, developing scalable technologies to lower greenhouse gas emissions, and creating and adopting clean and renewable sources of energy.

VMware's Senior Vice President of Global Government Relations sits on the board of the US-ASEAN Business Council. To support VMware's in-region policy efforts, VMware's Director and Head of ASEAN Government Relations and Public Policy is based in Singapore and reports to the Vice President of Global Government Relations. VMware's technologies support USABC's mission to reduce greenhouse gas emissions, and where USABC can support ASEAN countries in this effort, VMware will also offer support and solutions.

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

32,500

Describe the aim of your organization's funding

Partner with trade association with similar positions on public policy to achieve desired public policy outcomes.

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

Yes, we have evaluated, and it is aligned



C12.4

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

Publication

In mainstream reports

Status

Complete

Attach the document

0 10-K_VMware_FY2022.pdf

Page/Section reference

Page 14 / Environmental, Social and Governance and Environmental Sustainability Page 4, 35 / Risk Factors (10-K_VMware_FY2022.pdf)

Content elements

Governance Strategy Risks & opportunities

Comment



https://ir.vmware.com/websites/vmware/English/5100/us-sec-filing.html

Please note that the page/section references strictly match the sections listed in 10-K. Page 14/Environmental Social and Governance covers both Governance & Strategy content elements. Our 2030 Agenda represents our ESG Strategy focused on three business outcomes: Sustainability, Equity and Trust.

Publication

In mainstream reports

Status

Complete

Attach the document

VMware_Proxy Statement_FY2022_compressed.pdf

Page/Section reference

Page 6,7,24 / Governance Page 20,21,22 / Strategy Page 9-10 /Risks & Opportunities Page 22/ Emissions Targets

Content elements

Governance Strategy Risks & opportunities Emissions figures

Comment



https://ir.vmware.com/websites/vmware/English/5100/us-sec-filing.html

Publication

In voluntary communications

Status

Complete

Attach the document

VMware Website.pdf

Page/Section reference

Page 1 / Strategy Page 2/ Governance Page 4 / Emissions targets Page 6 / Emissions figures Page 5,6,7 / Other metrics

Content elements

Governance Strategy Emissions figures Emission targets

Comment

Screenshot of https://www.vmware.com/company/esg.html [Last accessed on 15th June 2022] included in VMware Website.pdf

Publication

In voluntary sustainability report

Status

Underway - previous year attached

Attach the document

ESG Report_VMware_FY2021.pdf

Page/Section reference

Page 38 - 43 / Governance Page 8 - 10 /Strategy Page 4-5 /Emission targets Page 53 - 54 /Emissions figures Page 48 – 55/ Other metrics

Content elements

Governance

Strategy

Emissions figures

Emission targets

Other metrics

Comment

https://www.vmware.com/content/dam/digitalmarketing/vmware/en/pdf/company/vmware-esg-report-2021.pdf





C15. Biodiversity

C15.1

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

	Board-level oversight and/or executive management-level responsibility for biodiversity-related issues
Row 1 No, and we do not plan to have both within the next two years	

C15.2

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

	Indicate whether your organization made a public commitment or endorsed any initiatives related to biodiversity	Biodiversity-related public commitments	Initiatives endorsed
Row 1	Yes, we have made public commitments and publicly endorsed initiatives related to biodiversity	Other, please specify As an important component of our net zero strategy, we have set a commitment to conserve, restore, and plant one million trees by 2030. See our pledge at: https://www.1t.org/pledges/one-million-trees-for-a-thriving- planet	Other, please specify Last year, we joined 1t.org (alongside our one million tree commitment), part of the World Economic Forum's work to accelerate nature- based solutions in support of the UN Decade on Ecosystem Restoration.

C15.3

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

Does your organization assess the impact of its value chain on biodiversity?



Row 1 No, but we plan to assess biodiversity-related impacts within the next two years

C15.4

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

	Have you taken any actions in the reporting period to progress your biodiversity-related commitments?	Type of action taken to progress biodiversity- related commitments
Ro ^r 1	 Yes, we are taking actions to progress our biodiversity-related commitments 	Other, please specify We have planted over 260,000 trees since 2020 as part of our commitment to plant and protect one million trees by 2030. See our progress at: https://www.vmware.com/company/net- zero

C15.5

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

	Does your organization use indicators to monitor biodiversity performance?	Indicators used to monitor biodiversity performance
Row 1	No	

C15.6

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

Report type	Content elements	Attach the document and indicate where in the document the relevant biodiversity information is located	
No publications			



C16. Signoff

C-FI

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

C16.1

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

	Job title	Corresponding job category
Row 1	CFO	Chief Financial Officer (CFO)