

## C0. Introduction

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### C0.1

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

Apple Inc. and its wholly-owned subsidiaries (hereinafter, collectively, Apple or the Company) designs, manufactures and markets smartphones, personal computers, tablets, wearables and accessories, and sells a variety of related services. The Company's products include iPhone®, iPad®, Mac®, Apple Watch®, AirPods®, AirPods Max™, Apple TV®, Beats® products, HomePod® and accessories. The Company operates various platforms, including the App Store®, that allow customers to discover and download applications and digital content, such as books, music, videos, games and podcasts. Apple also offers digital content through subscription-based services, including Apple Arcade®, Apple Music®, Apple News+®, Apple TV+® and Apple Fitness+SM, and a variety of other services, including AppleCare®, iCloud®, Apple Card®, and Apple Pay®.

The Company's customers are primarily in the consumer, small and mid-sized business, education, enterprise and government markets. The Company sells its products and resells third-party products in most of its major markets directly to consumers, small and mid-sized businesses, and education, enterprise and government customers through its retail and online stores and its direct sales force. The Company also employs a variety of indirect distribution channels, such as third-party cellular network carriers, wholesalers, retailers and resellers. The Company's fiscal year is the 52 or 53-week period that ends on the last Saturday of September, with fiscal year 2022 beginning September 26, 2021 and ending on September 24, 2022. Please note the reporting year end date in C0.2 has been modified solely to meet CDP's Online Reporting System (ORS) system constraints.

Apple has provided responses in this Questionnaire upon the request of the CDP signatory investors, RE100, and select customers. All such responses are provided solely on a non-reliance basis. Apple's responses may also contain forward-looking statements that involve risks and uncertainties. Forward-looking statements provide current expectations of future events based on certain assumptions and include any statement that does not directly relate to any historical or current fact. Forward-looking statements are not guarantees of future performance and the Company's actual results may differ significantly from the results discussed in the forward-looking statements. Factors that might cause such differences include, but are not limited to, those discussed in the "Risk Factors" section of the Company's most recently filed periodic reports on Form 10-K and Form 10-Q and subsequent filings with the U.S. Securities and Exchange Commission. Apple assumes no obligation to revise or update any information included in this Questionnaire.

### C0.2

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#### **(C0.2) State the start and end date of the year for which you are reporting data and indicate whether you will be providing emissions data for past reporting years.**

##### **Reporting year**

###### **Start date**

September 26 2021

###### **End date**

September 25 2022

##### **Indicate if you are providing emissions data for past reporting years**

No

##### **Select the number of past reporting years you will be providing Scope 1 emissions data for**

<Not Applicable>

##### **Select the number of past reporting years you will be providing Scope 2 emissions data for**

<Not Applicable>

##### **Select the number of past reporting years you will be providing Scope 3 emissions data for**

<Not Applicable>

### C0.3

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

- Australia
- Austria
- Belgium
- Brazil
- Canada
- Chile
- China
- China, Macao Special Administrative Region
- Colombia
- Czechia
- Denmark
- Egypt
- Finland
- France
- Germany
- Greece
- Hong Kong SAR, China
- Hungary
- India
- Indonesia
- Ireland
- Israel
- Italy
- Japan
- Lithuania
- Malaysia
- Mexico
- Netherlands
- New Zealand
- Norway
- Philippines
- Poland
- Portugal
- Republic of Korea
- Romania
- Russian Federation
- Saudi Arabia
- Singapore
- South Africa
- Spain
- Sweden
- Switzerland
- Taiwan, China
- Thailand
- Turkey
- Ukraine
- 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, a Ticker symbol	AAPL

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 or committee	Responsibilities for climate-related issues
Board-level committee	<p>Apple's Board of Directors reviews and discusses updates on environmental matters with Apple's Vice President of Environment, Policy and Social Initiatives, who is responsible for the development, review, and execution of plans designed to minimize Apple's impact on the environment. These reports include updates on Apple's progress towards environmental and climate goals and the environmental impact of our products and operations. In 2022, the Board formalized the Nominating and Corporate Governance Committee's oversight of Apple's strategies, policies, and practices relating to environmental and social matters.</p> <p>Apple's Audit and Finance Committee is responsible for reviewing and approving any offerings of the Company's debt securities, and taking all actions in furtherance of such transactions, including the appointment of a management pricing committee to determine and approve the specific timing, terms and conditions of any debt offerings. In November 2019, the management pricing committee appointed by the Audit and Finance Committee proceeded with a €2 billion (approximately \$2.2 billion) offering of two series of green bonds dedicated to global initiatives that address Apple's carbon footprint. On an annual basis, management reports to the Audit and Finance Committee on the allocation of Apple's green bond proceeds to eligible environmental projects as reflected in the Company's Annual Green Bond Impact Reports.</p>

C1.1b

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

Frequency with which climate-related issues are a scheduled agenda item	Governance mechanisms into which climate-related issues are integrated	Scope of board-level oversight	Please explain
Scheduled – some meetings	<p>Overseeing and guiding employee incentives</p> <p>Reviewing and guiding strategy</p> <p>Monitoring the implementation of a transition plan</p> <p>Overseeing the setting of corporate targets</p> <p>Monitoring progress towards corporate targets</p> <p>Reviewing and guiding the risk management process</p>	<Not Applicable>	<p>Apple's Board of Directors reviews and discusses updates on environmental matters with Apple's Vice President of Environment, Policy and Social Initiatives who is responsible for the development, review, and execution of plans designed to minimize Apple's impact on the environment. These reports include updates on Apple's progress towards environmental and climate goals and the environmental impact of our products and operations. In 2022, the Board formalized the Nominating and Corporate Governance Committee's oversight of Apple's strategies, policies, and practices relating to environmental and social matters.</p> <p>Apple's Audit and Finance Committee is responsible for reviewing and approving any offerings of the Company's debt securities, and taking all actions in furtherance of such transactions, including the appointment of a management pricing committee to determine and approve the specific timing, terms and conditions of any debt offerings. In November 2019, the management pricing committee appointed by the Audit and Finance Committee proceeded with a €2 billion (approximately \$2.2 billion) offering of two series of green bonds dedicated to global initiatives that address Apple's carbon footprint. On an annual basis, management reports to the Audit and Finance Committee on the allocation of Apple's green bond proceeds to eligible environmental projects as reflected in the Company's Annual Green Bond Impact Reports.</p> <p>The Board's Compensation Committee has oversight of the design and administration of compensation programs and policies, including Apple's executive compensation. As part of their efforts, beginning in 2021, the Compensation Committee amended the annual cash incentive program for executives to include a modifier as a measure to evaluate the actions taken during the year to advance our Apple values, including our environmental programs, and key community initiatives, and reflect our commitment to promoting values-driven leadership, including environmental programs.</p>

C1.1d

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

	Board member(s) have competence on climate-related issues	Criteria used to assess competence of board member(s) on climate-related issues	Primary reason for no board-level competence on climate-related issues	Explain why your organization does not have at least one board member with competence on climate-related issues and any plans to address board-level competence in the future
Row 1	Yes	Apple assesses the competence of Board members on climate-related issues by evaluating their education, direct experience, and/or oversight responsibilities.	<Not Applicable>	<Not Applicable>

C1.2

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

**Position or committee**

Chief Sustainability Officer (CSO)

**Climate-related responsibilities of this position**

- Managing annual budgets for climate mitigation activities
- Managing major capital and/or operational expenditures related to low-carbon products or services (including R&D)
- Managing climate-related acquisitions, mergers, and divestitures
- Developing a climate transition plan
- Implementing a climate transition plan
- Setting climate-related corporate targets
- Monitoring progress against climate-related corporate targets
- Managing public policy engagement that may impact the climate
- Managing value chain engagement on climate-related issues
- Assessing climate-related risks and opportunities
- Managing climate-related risks and opportunities

**Coverage of responsibilities**

<Not Applicable>

**Reporting line**

CEO reporting line

**Frequency of reporting to the board on climate-related issues via this reporting line**

Annually

**Please explain**

Lisa Jackson is Apple's Vice President of Environment, Policy and Social Initiatives. Her responsibilities include those of a Chief Sustainability Officer and she reports directly to Apple's CEO, Tim Cook. Lisa Jackson, who previously was the Administrator of the U.S. Environmental Protection Agency from 2009 to 2013, oversees Apple's environmental program, including climate-related activities, as well as social initiatives and Apple's global Government Affairs team. Reporting directly to Apple's CEO, Tim Cook, Ms. Jackson is the most senior individual below the Board with direct oversight of climate-related activities.

In this capacity, Ms. Jackson briefs the Board on Apple's environmental strategy, programs, initiatives, and progress, while also addressing a variety of other environment and social issues. These briefings are scheduled annually and as important matters arise. Ms. Jackson has established a centralized environment team that works with senior leaders and their teams across Apple (such as Industrial Design, Product Design, Operations, Energy, and Hardware Engineering, among others) to set environmental strategy, monitor progress, engage external stakeholders, including non-governmental organizations (NGOs) and policymakers, and communicate progress on environmental issues. Strategy is set by leveraging Apple's comprehensive carbon footprint (CCF), which quantifies the lifecycle impacts of Apple's products, as well as facilities. The CCF identifies areas to focus Apple's emissions reduction efforts. In 2020, Apple, with the approval of Company leadership, announced an ambitious plan to reach net zero emissions beginning with our fiscal year 2030 footprint. This goal includes an emissions reduction target of 75 percent compared to 2015, with investment in carbon removal projects to address the remaining 25 percent of unavoidable emissions. In fiscal year 2022, our net carbon emissions decreased by over 45 percent as compared to fiscal year 2015, marking steady progress toward our 2030 target. And we avoided more than 28 million metric tons of emissions in fiscal year 2022 through initiatives to use low-carbon materials, drive energy efficiency, and switch to clean energy. Progress is tracked through our annual comprehensive carbon footprint, including LCAs as well as by monitoring growth in renewable energy capacity at our own facilities and in our supply chain. Progress is communicated internally to employees and externally to our customers by engaging with communications teams, such as the Marketing Communications, Corporate Communications, and Employee Communications teams—in addition to direct engagement with policymakers and environmental stakeholders.

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**

Chief Sustainability Officer (CSO)

**Type of incentive**

Monetary reward

**Incentive(s)**

Salary increase

Other, please specify (Discretionary bonuses and restricted stock units)

**Performance indicator(s)**

Achievement of climate transition plan KPI

Progress towards a climate-related target

Implementation of an emissions reduction initiative

Reduction in absolute emissions

Increased engagement with suppliers on climate-related issues

**Incentive plan(s) this incentive is linked to**

Both Short-Term and Long-Term Incentive Plan

**Further details of incentive(s)**

Lisa Jackson is Apple's Vice President of Environment, Policy and Social Initiatives. In this capacity, her responsibilities include those of a Chief Sustainability Officer for Apple, reporting directly to Apple's CEO, Tim Cook. She is expected to advance Apple's environmental and social initiatives. Her annual performance and merit review consider Apple's success in these areas, including progress towards our 2030 goal, reduction in absolute emissions, and implementation of emissions reductions initiatives, such as increased engagement with suppliers. This such merit review is considered in connection with the grant of discretionary awards to Ms. Jackson including discretionary bonuses and restricted stock units.

**Explain how this incentive contributes to the implementation of your organization's climate commitments and/or climate transition plan**

This compensation is intended to incentivize actions to advance our 2030 goal. Our plan to reach carbon neutrality by fiscal year 2030 centers around our strategy to reduce emissions by 75 percent, relative to our fiscal year 2015 carbon footprint. We plan to invest in high-quality carbon removal projects to address the remaining emissions, prioritizing nature-based solutions. And by focusing on emissions reduction, we're tackling the transformative work of making low-carbon products.

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**Entitled to incentive**

Corporate executive team

**Type of incentive**

Monetary reward

**Incentive(s)**

Bonus – set figure

**Performance indicator(s)**

Other (please specify) (Modifier in the annual cash incentive program to advance our Apple values)

**Incentive plan(s) this incentive is linked to**

Short-Term Incentive Plan

**Further details of incentive(s)**

We included a modifier in the annual cash incentive program beginning in 2021 as a measure to evaluate the actions taken during the year to advance our Apple values and key community initiatives. Apple values and key community initiatives were chosen because they reflect our long-standing commitment to incorporate values-driven leadership and responded to shareholder feedback encouraging us to incorporate business-relevant environmental, social, and governance principles into our executive compensation program.

After the Compensation Committee determines the payout opportunity based on our financial performance measures, the Compensation Committee may choose to adjust the named executive officers' payout opportunity upwards or downwards by up to 10% or determine not to make any adjustments. However, the Compensation Committee set an overall cap on annual cash incentive payouts of 200% of the total target payout opportunity for each named executive officer and will not increase a payout above that cap, regardless of the results of its assessment.

For 2022, the Compensation Committee reviewed an extensive scorecard for each Apple value and key community initiative to inform its overall assessment. Each scorecard included the long-term vision, 2022 areas of focus, highlights, including qualitative and quantitative data to measure progress, areas of opportunity, and management's assessment of our overall progress to advance each value and key community initiative.

**Explain how this incentive contributes to the implementation of your organization's climate commitments and/or climate transition plan**

We included a modifier in the annual cash incentive program beginning in 2021 as a measure to evaluate the actions taken during the year to advance our Apple values and key community initiatives. Our plan to reach carbon neutrality by fiscal year 2030 centers around our strategy to reduce emissions by 75 percent, relative to our 2015 carbon footprint. We plan to invest in high-quality carbon removal projects to address the remaining emissions, prioritizing nature-based solutions. And by focusing on emissions reduction, we're tackling the transformative work of making low-carbon products.

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## C2. Risks and opportunities

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### 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	For environmental and climate-related initiatives, we consider short-term horizon to be between 0 to 1 year, medium-term between 1 to 10 years, and long term to be greater than 10 years. These timeframes help us best plan for risks and opportunities relating to climate change.
Medium-term	1	10	For environmental and climate-related initiatives, we consider medium-term horizon to be between 1 to 10 years.
Long-term	10	30	For example, some of Apple's power purchase agreements are 25 -30 years.

## C2.1b

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

At Apple, we're committed to managing regulatory, reputational, and market risks related to climate change and our management team has implemented and supervises day to day risk management processes and reports to the Board on significant matters. As a U.S. public company we disclose to our shareholders information that is material to making informed investment and proxy voting decisions. As disclosed in the Risk Factors section of our Form 10-K for our fiscal year ended September 24, 2022, global climate change is resulting in certain types of natural disasters occurring more frequently or with more intense effects. Such events can make it difficult or impossible for the Company to manufacture and deliver products to its customers, create delays and inefficiencies in the Company's supply and manufacturing chain, and result in slowdowns and outages to the Company's service offerings. Following an interruption to its business, the Company can require substantial recovery time, experience significant expenditures to resume operations, and lose significant sales. Because the Company relies on single or limited sources for the supply and manufacture of many critical components, a business interruption affecting such sources would exacerbate any negative consequences to the Company.

## C2.2

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

#### Value chain stage(s) covered

Direct operations  
Upstream  
Downstream

#### Risk management process

A specific climate-related risk management process

#### Frequency of assessment

More than once a year

#### Time horizon(s) covered

Short-term  
Medium-term  
Long-term

#### Description of process

Climate-related risks and opportunities for Apple are identified and assessed on an ongoing basis (more than once a year), as part of Apple's broader environmental strategy (specific climate-related risk management process). As mentioned in C2.1b, Apple strongly believes it has a responsibility to reduce its impact on climate change. Apple announced that it has a goal of becoming carbon neutral for its operations as well as the entire product lifecycle by fiscal year 2030. This presents a tremendous opportunity for Apple to continue to demonstrate meaningful leadership on climate. To reach this goal, Apple has adopted a broad climate strategy that was developed by a cross-functional working group of teams across the company that meets multiple times each year to discuss risks and opportunities.

For regulatory transition risks that could occur within Apple's direct operations, as well as upstream and downstream value chain, for example, Apple has global governmental affairs and environmental teams that work cross-functionally to monitor climate-related policies (like those relating to carbon pricing or renewable energy) at different stages of development and that could therefore occur over the short-, medium, and long-term. The significance of these policies is determined by their alignment to our strategic climate goals, such as whether a policy would enable or prevent market access to renewable energy. When teams consider that a proposed policy or regulation could affect our strategic goals and priorities, the proposed policy or regulation is escalated within the Company. Apple continually identifies potential policy or regulatory changes that raise concerns or present opportunities relating to advancing our climate strategy and consider advocating accordingly.

For environmental, energy, and climate policies, Apple has policy advisors who track and advise a diverse set of teams across Apple on risks and opportunities from proposed or recently enacted environmental, energy, and climate policies. These teams work together to assess if these policy changes will interfere with our strategies to achieve our 2030 carbon neutrality goal. To assess the significance of the impacts, we weigh Apple's exposure to the significance of the policy. Any action taken in response to environmental, energy, and climate policy changes is coordinated through the Vice President of Environment, Policy and Social Initiatives.

Climate-related physical risks that could occur within Apple's direct operations, as well as upstream and downstream value chain over the short-, medium-, and long-term are identified and assessed at an asset level on an ongoing basis. For example, we regularly conduct water risk analyses to understand facilities that are vulnerable to existing as well as future climate-related water stress. Tools like the World Wildlife Fund (WWF) Risk Filter and the World Resources Institute (WRI) Water Risk Atlas provide us detailed profiles of geographically specific water use and water-related risks that inform our local strategy. We evaluate the risk based on the size and significance of our operations as well as the magnitude of water stress — then prioritize our actions accordingly. And we take action according to the type and significance. Where we have facilities located in areas of high water stress, we seek to minimize use of freshwater through rainwater capture, onsite wastewater recycling, or use of third-party-provided recycled water. Additionally, we invest further in building out alternative water sources for our non-potable needs.

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

	Relevance & inclusion	Please explain
Current regulation	Relevant, always included	We consider existing regulation and climate policies, as well as areas where regulations are lacking, when assessing climate-related risks for the Company, as both can impact Apple. For regulatory risks, Apple has a global governmental affairs and environmental teams monitor existing climate-related policies (such as those relating to carbon pricing or renewable energy) at different stages of implementation. The significance of these policies is determined based on their alignment to our strategic climate goals—for example, whether a renewable energy policy would enable or prevent market access to renewable energy. For example, in fiscal year 2017, Apple joined other tech companies in signing a statement backing the renewable energy policies that the U.S. Administration had taken steps to reverse: "We believe that strong clean energy and climate policies, like the Clean Power Plan, can make renewable energy supplies more robust and address the serious threat of climate change while also supporting American competitiveness, innovation, and job growth." The U.S. Administration's action to reverse clean energy policy posed a risk to all organizations exposed to the negative impacts of climate change. Our response to this action was elevated within our risk assessment process and involved coordination between our governmental affairs and environmental teams. The fact that Apple signed on to a formal statement with other companies demonstrates how significant risks with respect to current climate-related policies are elevated within the Company.
Emerging regulation	Relevant, always included	We consider emerging regulation, such as regulation that enables investments in renewable energy, as critical to our climate strategy, and therefore both monitor and support emerging regulation in this area. Apple's global governmental affairs and environment teams monitor emerging climate-related policies at different stages of development. The significance of these policies is determined based on their alignment to our strategic climate goals—for example, whether a renewable energy policy would enable or prevent market access to renewable energy. For example, in January 2018, Apple filed comments to the Federal Energy Regulatory Commission (FERC), urging it not to finalize a rule that would subsidize fossil fuels, which would limit the ability of renewables to compete in the electricity market. FERC chose not to finalize that rule. Identifying relevant emerging regulations early in the process is important to advancing Apple's climate-related goals, and opposing emerging regulations that make achieving such goals more difficult, such as where regulations may limit the financial competitiveness of renewable energy, is equally important.
Technology	Relevant, always included	Technology creates both risks and opportunities in a number of ways. Apple is a technology company that delivers products to our customers. These products have a carbon footprint, which we calculate through a carbon life cycle assessment (LCA) process. This carbon footprint, if not otherwise addressed, could constitute a risk to Apple, as it represents scope 3 emissions that Apple takes responsibility for as part of its comprehensive carbon footprint. Having committed to carbon neutrality by fiscal year 2030, failure to address product-related emissions could represent a reputational risk to Apple. Product-related emissions also represent an opportunity for Apple to demonstrate leadership and drive down emissions. In particular, we leverage the LCA data in order to identify opportunities to reduce emissions associated with our products throughout their lifecycle. For example, aluminum makes up a large portion of our manufacturing carbon footprint, as it's a key material in many of Apple's products, and, for more than 130 years, it's been produced through a carbon-intensive process. The joint venture between Alcoa and Rio Tinto — announced in May 2018 — aims to commercialize patented technology that eliminates direct greenhouse gas emissions from the traditional smelting process, a key step in aluminum production. Apple believes that this is a revolutionary advancement in the manufacturing of one of the world's most widely used metals. In fiscal year 2022, Apple shipped iPhone SE devices using ELYSIS aluminum, building on our 2019 purchase from the first-ever commercial batch of aluminum resulting from the joint venture, which was used in the production of the 16-inch MacBook Pro.
Legal	Relevant, sometimes included	We consider legal risks as part of our climate strategy in so much as climate-related regulatory risks have a legal component, in terms of compliance as well as risk of litigation. Such legal risks are monitored by our environmental, governmental affairs, and legal teams. For example, the EU has in effect a directive requiring, in management reports for certain legal entities, non-financial disclosures addressing environmental matters (including climate change), social and employee matters, human rights, and bribery and corruption. This directive applies to Apple because of our subsidiary operations in various EU member states. Regulation and policies like the non-financial reporting directive in the EU represent a compliance risk and a potential for reputational harm or litigation for non-compliance.
Market	Relevant, always included	We assess and consider market risks as part of our climate strategy by identifying challenges to deploying renewable energy within our operational footprint and in our supply chain. The robustness of a renewable energy market is an essential element to implementing renewable energy solutions. In countries where the local market conditions create a challenging environment to implement renewable energy solutions, we work with local government and other stakeholders to promote active, market-driven renewable energy projects. Challenging markets include ones with limited renewable energy availability, a lack of established renewable energy markets, or changes in policy to subsidize fossil fuels. These challenges are addressed through our assessment process—first identified by environmental or governmental affairs teams, who then bring proposals for addressing the challenges to our VP of Environment, Policy and Social Initiatives, as needed. Following the assessment process and proposal determination, we then take action, with the ultimate goal of advancing renewable energy and our ability to access it. For example, in January 2018, Apple filed comments to the Federal Energy Regulatory Commission, urging it not to finalize a rule that would subsidize fossil fuels, and, consequently, limit the ability of renewables to compete in the electricity market. FERC chose not to finalize that rule.
Reputation	Relevant, always included	How our customers and stakeholders perceive Apple's performance on climate-related issues could affect the demand for the Company's products. For example, a lack of action on climate change may result in customers opting to purchase electronics from companies that are demonstrating stronger leadership on climate change. We assess this risk by regularly conducting surveys to monitor customer perceptions. To manage this risk, we plan to continue to reduce emissions and communicate Apple's emissions reduction activities—including our most recent announcement to be carbon neutral by fiscal year 2030. Apple also monitors the perceptions of respected NGOs and media. For example, in its most recently published Environmental rankings, JUST Capital rated Apple as first in its industry. And in a review of the Apple's environmental performance, JUST Capital notes that Apple "Sets a verified 1.5 Degree Science-Based Target, something only 15% of Technology Hardware companies and 9% of Russell 1000 companies have committed to." JUST also notes that Apple "focuses intensively on the environmental impact of its products, with a goal to create products with Net-Zero carbon impact by 2030."
Acute physical	Relevant, always included	Acute physical impacts of climate change have the potential to interrupt Apple's operations. In fiscal year 2017, for example, Hurricane Harvey displaced Apple employees located in and around Houston, Texas and caused us to close several stores in the Houston area. We responded to this crisis by helping our employees secure temporary housing, donating \$5 million to the Hand in Hand relief effort, and creating a simple mechanism for our customers to donate to hurricane recovery efforts through iTunes. While these events did not have a significant financial impact to Apple financially, these kinds of acute physical risks are regularly assessed through Apple's risk assessment and planning processes described in our response to question C2.3a to understand and mitigate any potential financial impact. Teams across Apple are involved in assessing the impact of these acute physical risks, including Apple's Travel team, global Giving team, and Facilities and Operations teams. Urgent risks are escalated through Apple's Vice President of Environment, Policy and Social Initiatives, Lisa Jackson. An example of changes made directly into the planning process to account for heightened acute physical risks include the consideration of 200- to 500-year flood events / floodplains in planning for facilities, using best available data, beyond the typical 100-year flood events.
Chronic physical	Relevant, always included	We assess and respond to chronic physical impacts of climate change on our facilities. Northern California, for example, where our headquarters is located, has been subject to drought from time to time. This drought increases potential regulatory risk of water limits on Apple facilities and a perception risk if the local community believes Apple is not taking sufficient action to reduce water use. Most importantly, we believe it to be Apple's responsibility to seek to contribute to the well-being of its local community by being as water efficient as possible. We consider these risks on an ongoing basis by monitoring water use and regional demands on municipal water systems. Broader drought risk persists and as such we are implementing landscape water reduction activities and using recycled water at our headquarters in Santa Clara Valley, California. In addition to drought-related landscape concerns, there are also potential increased costs from adapting to water availability in a changing climate. For example, near our data center in Prineville, Oregon, we partnered with the city to invest in a 180-million-gallon aquifer storage and recovery system that holds water throughout the year for use in peak demand months. This system uses natural underground spaces for cost-effective storage, helping mitigate seasonal impacts and future climate-related risks of water shortages.

C2.3

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

Yes

C2.3a

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

**Identifier**

Risk 1

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

Direct operations

## Risk type & Primary climate-related risk driver

Emerging regulation	Carbon pricing mechanisms
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### Primary potential financial impact

Increased indirect (operating) costs

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

<Not Applicable>

### Company-specific description

Changes in carbon pricing could increase Apple's costs. Apple has domestic and international operations as well as a complex and global supply chain. We have operations in Singapore and Ireland, where there is currently some method of national carbon pricing.

Apple made a commitment to achieving carbon neutrality for our entire value chain by 2030, reducing emissions by 75 percent as compared with 2015 and balancing the residual emissions with high-quality carbon removal. Apple has been carbon neutral in scope 1 and 2 emissions since April 2020, and the majority of Apple's emissions come from manufacturing our products, or scope 3 emissions. In fiscal year 2022, our total net emissions was 20.3 million metric tons of CO<sub>2</sub>e. Hypothetically, if a price on carbon were put in place, we would be liable for any emissions we have not yet mitigated or offset.

Apple recognizes that executing our commitment to carbon neutrality has challenges including the advancement of technology and policy to accelerate the decarbonization of our economy, and our business could be impacted by the prevalent price of carbon if carbon pricing is widely adopted. To assess potential risk associated with a price on carbon that would cover Scope 1, Scope 2, and certain Scope 3 emissions based on our fiscal year 2022 emissions, we calculated that a hypothetical annual price of carbon for Apple's global enterprise could be based on the IMF 2030 projected price of carbon (\$75/MT-CO<sub>2</sub>e).

### Time horizon

Medium-term

### Likelihood

More likely than not

### Magnitude of impact

Medium-low

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

Yes, a single figure estimate

### Potential financial impact figure (currency)

1522500000

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

<Not Applicable>

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

<Not Applicable>

### Explanation of financial impact figure

To calculate a financial impact figure, we used the IMF 2030 projected price for carbon (\$75/MT-CO<sub>2</sub>e) multiplied by our total fiscal year 2022 net emissions (20.3M MT-CO<sub>2</sub>e). This calculation produces the potential annual cost of \$1,522,500,000.

This potential impact figure is a conservative hypothetical estimate for the purpose of our CDP response that assumes an equal carbon price (that is applicable to Scope 1, Scope 2, and certain Scope 3 emissions) for Apple's entire supply chain, and that all countries would be affected by a carbon price. Additionally, this hypothetical estimation assumes that Apple does not realize its carbon neutrality goal by 2030, no further emissions reductions and removals would be made as of fiscal year 2022, and operations (emissions output and revenue) would remain flat. Furthermore, this assumes Apple does not modify its current business model, supply chain, production or sales. This response is being provided purely for illustrative purposes. We do not see carbon pricing as a material risk to Apple for the purposes of U.S. public company regulations.

### Cost of response to risk

0

### Description of response and explanation of cost calculation

Apple has committed to become carbon neutral across our entire business, manufacturing supply chain, and product life cycle by 2030, and is already carbon neutral for its global corporate operations. This commitment means that by 2030 (timeline of implementation), every Apple device sold will have net-zero carbon impact. As part of its carbon neutrality goal, Apple also plans to transition its entire supply chain to 100 percent renewable energy, which will significantly reduce our Scope 3 emissions from manufacturing products.

The Supplier Clean Energy Program now has over 20 gigawatts of clean energy commitments, of which nearly two-thirds are already operational. In fiscal year 2022, 13.7 gigawatts of renewable energy procured by suppliers and online in Apple's supply chain generated 23.7 million megawatt-hours of clean energy, avoiding 17.4 million metric tons of carbon emissions — a 23 percent increase over 2021. Progress towards our carbon neutrality goal helps position Apple to be better prepared to face potential emerging regulation relating to imposing prices on carbon.

In addition to our progress against our goals, we recognize the need for strong government policies that support a just climate transition. That's why Apple believes that advocating for strong climate policies is a core part of our climate strategy. We support the promotion of economy-wide carbon pricing programs with strong interim and long-term targets and accountability mechanisms. And we've supported this since 2016 when we addressed 700 senior government, business, and community leaders at the seventh Clean Energy Ministerial, where we called for governments across the world to put a price on carbon to address climate change. Our policy engagement supports Apple's stance on carbon pricing, and better prepares us for regulations that may impact our direct operations.

The cost response to risk is based on the USD\$2.2 billion green bond issuance in 2019 to help meet our 2030 carbon neutrality goal. However, these funds are borrowed, not considered a cost. As this green bond issuance is part of Apple's business as usual activities, for the purpose of our CDP response, we assume the cost to be 0.

### Comment

All Apple emissions figures discussed in this response are measured over fiscal years, unless noted otherwise. Apple's fiscal year is the 52- or 53-week period that ends on the last Saturday of September.

For more information about Apple's emissions and environmental strategy, read the 2023 Environmental Progress Report: [https://www.apple.com/environment/pdf/Apple\\_Environmental\\_Progress\\_Report\\_2023.pdf](https://www.apple.com/environment/pdf/Apple_Environmental_Progress_Report_2023.pdf)



For more information about Apple's Green Bond, read the Annual Green Bond Impact Report Fiscal Year 2022 Update:  
[https://s2.q4cdn.com/470004039/files/doc\\_downloads/additional\\_reports/2023/apple\\_greenbond\\_report\\_fy2022.pdf](https://s2.q4cdn.com/470004039/files/doc_downloads/additional_reports/2023/apple_greenbond_report_fy2022.pdf)

Lisa Jackson, Apple's Vice President of Environment, Policy, and Social Initiatives, provided the following background on Apple's intention for the green bond issuance: "Apple is unwavering in its commitment to addressing the urgent threat of climate change. The time for action is now. By issuing an additional \$2.2 billion in green bonds, we will accelerate our work to lower carbon emissions across our supply chain and beyond, building on our successful transition to 100% renewable energy. Apple's progress is proof positive that businesses don't have to choose between what's right for the planet and a healthy bottom line."

## 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?

Upstream

#### Opportunity type

Products and services

#### Primary climate-related opportunity driver

Development and/or expansion of low emission goods and services

#### Primary potential financial impact

Reduced indirect (operating) costs

#### Company-specific description

In 2020, we announced our goal to become carbon neutral across our entire business, manufacturing supply chain, and product life cycle by 2030. Our global corporate operations are carbon neutral already, and our new commitment means by 2030, all Apple devices sold will have net zero climate impact. Each Apple product represents an opportunity to reduce our carbon footprint — even small changes can yield significant results. Our carbon footprint helps us identify opportunities to reduce the carbon intensity of our product designs. We prioritize the materials and components that account for significant portions of our carbon emissions. This means that the choices we make product by product can scale toward reducing our overall footprint. These priorities inform our work to design for material efficiency and increased use of recycled and renewable materials.

One project example, funded through Apple's green bond, is our partnership with aluminum companies and the governments of Canada and Quebec to invest in ELYSIS — a joint venture between Rio Tinto and Alcoa — to commercialize patented technology that eliminates direct greenhouse gas emissions from the traditional smelting process. This is a revolutionary advancement in the manufacturing of one of the world's most widely used metals. Since our collaboration began in 2018, we've helped accelerate the development of this technology by facilitating the joint partnership and providing initial funding and ongoing technical support. We continue to support this project, disbursing additional funds in fiscal year 2022 toward our original \$10 million commitment.

Following our announcement to do so in spring 2022, Apple shipped iPhone SE devices using ELYSIS aluminum, building on our 2019 purchase from the first-ever commercial batch of aluminum resulting from the joint venture, which was used in the production of the 16-inch MacBook Pro. The commercial-purity aluminum used in these products is the first to be manufactured without creating any direct carbon emissions during the smelting process. Throughout the past year, ELYSIS has also continued to make progress within its industrial research and development center in Quebec — enabling the venture to begin producing commercial-purity primary aluminum at industrial scale — and continued construction of its larger commercial-scale prototype cells.

#### Time horizon

Medium-term

#### Likelihood

Likely

#### Magnitude of impact

Medium-low

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

Yes, a single figure estimate

#### Potential financial impact figure (currency)

1522500000

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

<Not Applicable>

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

<Not Applicable>

#### Explanation of financial impact figure

The identified potential financial impact is, at minimum, the mitigation of hypothetically paying a price for carbon which was discussed in C2.3a. Our impact figure would be higher considering the return on investment — both financially and associated with earned carbon credits — however; we cannot disclose our confidential return on investment.

To calculate a financial impact figure, we used the IMF 2030 projected price for carbon (\$75/MT-CO2e) multiplied by our total fiscal year 2022 net emissions (20.3M MT-CO2e). This calculation produces the potential annual cost of \$1,522,500,000.

This potential impact figure is a conservative hypothetical estimate for the purpose of our CDP response that assumes an equal carbon price (that is applicable to all Scope 1, Scope 2, and certain Scope 3 emissions) for Apple's entire supply chain, and that all countries would be affected by a carbon price. Additionally, this hypothetical estimation assumes that Apple does not realize its carbon neutrality goal by 2030, no further emissions reductions and removals would be made as of fiscal year 2022, and operations (emissions output and revenue) would remain flat. Furthermore, this assumes Apple does not modify its current business model, supply chain, production or sales. This response is being provided purely for illustrative purposes. We do not see carbon pricing as a material risk to Apple for the purposes of U.S. public company regulations.

#### Cost to realize opportunity

0

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

Growing awareness and evidence of climate change can drive changes in the way we do business, including the way we produce our products and services. The green bond is one of the ways that we are investing in technologies and nature based solutions to scale the needed global low carbon economy future. By sending this important market signal, Apple aims to encourage additional private sector investments.

We have long sought to model how businesses can lead in driving the reduction of global carbon emissions, and our green bonds have helped Apple to demonstrate that leadership. We issued our first \$1.5 billion green bond in February 2016 and our second \$1 billion green bond in June 2017 to help advance projects to mitigate our impact on climate change and inspire others to do the same. Both of these green bonds are now fully allocated. In November 2019, we proceeded with our third green bond issuance, and our first in Europe — raising €2 billion (approximately \$2.2 billion) across two tranches (the "2019 Green Bond"). The 2019 Green Bond supports environmental efforts across the company, as well as our ambitious goal to reach carbon neutrality across Apple's entire carbon footprint, including the full product life cycle, by 2030. We first aim to leverage product design and engineering, energy efficiency, renewable energy, and direct emissions abatement to reduce emissions by 75 percent by 2030, compared with fiscal year 2015. We then plan to address residual emissions by investing in carbon removal solutions. The cost to realize opportunity is based on the USD\$2.2 billion green bond issuance in 2019 to help meet our 2030 carbon neutrality goal. However, Apple borrowed these funds to support part of our usual investment activities for in projects that advance our 2030 goal and so we do not internally consider the full amount of the borrowing to represent a cost to the business. Therefore, for the purpose of our CDP response, we assume the cost to be 0.

#### Comment

All Apple emissions figures discussed in this response is measured over fiscal years, unless noted otherwise. Apple's fiscal year is the 52- or 53-week period that ends on the last Saturday of September.

For more information about Apple's emissions and environmental strategy, read the 2023 Environmental Progress Report:  
[https://www.apple.com/environment/pdf/Apple\\_Environmental\\_Progress\\_Report\\_2023.pdf](https://www.apple.com/environment/pdf/Apple_Environmental_Progress_Report_2023.pdf)

For more information about Apple's Green Bond, read the Annual Green Bond Impact Report Fiscal Year 2022 Update:  
[https://s2.q4cdn.com/470004039/files/doc\\_downloads/additional\\_reports/2023/apple\\_greenbond\\_report\\_fy2022.pdf](https://s2.q4cdn.com/470004039/files/doc_downloads/additional_reports/2023/apple_greenbond_report_fy2022.pdf)

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## C3. Business Strategy

### C3.1

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

##### Row 1

##### Climate transition plan

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

##### Publicly available climate transition plan

Yes

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

We have a different feedback mechanism in place

##### Description of feedback mechanism

We actively engage with shareholders and other stakeholders throughout the year to learn their perspectives on significant issues. This engagement helps us better understand shareholder priorities and perspectives, gives us an opportunity to elaborate upon our initiatives with Apple subject matter experts, and fosters constructive dialogue with our community of shareholders. The Board and our management teams carefully consider the feedback from these meetings as well as shareholder support and feedback at our annual meetings, when reviewing our business practices, corporate governance framework, and executive compensation program.

##### Frequency of feedback collection

More frequently than annually

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

Apple's 2023 Environmental Progress Report details our plan for reaching carbon neutrality by fiscal year 2030 for the life cycle of our products. We've committed to achieving carbon neutrality across our entire value chain by fiscal year 2030 — reducing emissions by 75 percent compared with 2015 and balancing the residual emissions with high-quality carbon removal. This goal is more aggressive than the recommendation for global carbon neutrality by the Intergovernmental Panel on Climate Change by 20 years. Our plan for carbon neutrality involves working within our current business model to incorporate solutions to decarbonize our products. As detailed in our 2023 Environmental Progress Report, these solutions include sourcing recycled or renewable materials for our products, abating direct emissions (where possible), deploying energy efficiency initiatives at our facilities as well as in our supply chain, and transitioning our supply chain to 100 percent renewable electricity. We believe these actions are necessary to do our part to align with a world in which the global average temperature is allowed to rise by no more than 1.5°C above pre-industrial levels.  
[Apple\\_Environmental\\_Progress\\_Report\\_2023.pdf](https://www.apple.com/environment/pdf/Apple_Environmental_Progress_Report_2023.pdf)

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

<Not Applicable>

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

<Not Applicable>

C3.2

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

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

C3.2a

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

Climate-related scenario	Scenario analysis coverage	Temperature alignment of scenario	Parameters, assumptions, analytical choices
Physical climate scenarios   RCP 8.5	Company-wide	<Not Applicable>	In alignment with the recommendations of the Task Force for Climate-related Financial Disclosure (TCFD), in fiscal year 2020 we conducted a climate-related scenario analysis to gain insight into Apple’s exposure to climate change and the impact of climate change on our operations and supply chain. The scenario analysis was part of a larger body of internal assessments on the physical and transition impacts of climate change on our business. i) How the selected scenario(s) were identified, with reference to the inputs, assumptions and analytical methods used: To assess physical risks, we used two scenarios that capture a broad range of future climate projections: a below 2°C scenario (RCP 2.6) and a business-as-usual scenario (RCP 8.5). We then used global climate models from the intercomparison project (CMIP5) that corresponded to these representative concentration pathways. We considered changes over time in three key hazards: heatwaves, heavy precipitation, and drought. We also undertook additional analyses to understand potential future changes in the frequency and intensity of tropical cyclones. Inputs included the geographic location and activities performed at facilities. ii) Time horizon and rationale: The analysis incorporated multiple timeframes (short- and mid-term), extending through 2040 to account for the expected lifespan of major facilities. This timeframe also allowed us to capture divergence in the climate models. iii) Areas of your organization considered: The analysis considered physical and transition risks to our global facilities (offices, retail stores, and data centers) as well as our top 200 suppliers for fiscal year 2020 by direct spend.
Transition scenarios   IEA SDS	Company-wide	<Not Applicable>	In alignment with the recommendations of the Task Force for Climate-related Financial Disclosure (TCFD), in fiscal year 2020 we conducted a comprehensive climate-related scenario analysis to gain insight into Apple’s exposure to climate change and the impact of climate change on its operations and supply chain. The scenario analysis was part of a larger body of internal assessments on the physical and transition impacts of climate change on our business. i) How the selected scenario(s) were identified, with reference to the inputs, assumptions and analytical methods used: To assess transition risks, we leveraged the IEA’s ‘Sustainable Development Scenario’ (SDS) as well as a range of carbon prices from the IPCC’s special report on global warming of 1.5°C. ii) Time horizon and rationale: The analysis incorporated multiple timeframes (short- and mid-term), extending through 2040 to account for the expected lifespan of major facilities. This timeframe also allowed us to capture divergence in the climate models. iii) Areas of your organization considered: The analysis considered transition risks to our global facilities (offices, retail stores, and data centers) as well as our top 200 suppliers by direct spend.

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**

How can a climate-related scenario analysis add to our understanding of Apple’s exposure to climate change including our commitment to 100 percent renewable energy and 2030 carbon neutrality goal?

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

The results of the scenario analysis contributed to a larger body of internal assessments on the physical and transition impacts of climate change on our business. These assessments inform our environmental strategy and goals, including our use of 100 percent renewable electricity for our own corporate offices (including major campuses like those in Cupertino, CA, Austin, TX, Cork, Ireland), retail stores and Apple’s eight data centers, and our goal to transition our entire supply chain to 100 percent renewable electricity by fiscal year 2030. For example, the transition scenario modeled potential future carbon pricing and the results highlighted the potential reduced impact on our business due to our commitment to maintain the use of 100 renewable electricity at all of our facilities globally — including data centers, retail stores, and corporate offices. The results of the scenario analysis reinforced our commitment to use 100 percent renewable electricity at our facilities, a milestone we achieved in 2018, as well as our commitment to reduce our comprehensive emissions by fiscal year 2030, including those related to products, by 75 percent compared to 2015. Examples of actions we’ve taken include our public support for the Clean Power Plan in the United States, our goal to transition all of the electricity used to manufacture our hardware products to 100 percent renewable energy, expansion in planning to consider the effects of 200- to 500-year flood events / floodplains (using best available data), and prioritizing water efficiency and mitigation initiatives in areas of high water risk and stress. For example, we’ve prioritized water efficiency and re-use efforts at our new Austin, Texas facility due in part to data from analyses including the scenario analysis, which flagged potential future susceptibility to drought and heatwaves that could impact water availability. Most importantly, the results of the scenario analysis reinforced our commitment to reach carbon neutrality for the entire life cycle of our products by fiscal year 2030, and to reduce emissions by 75 percent compared to 2015.

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	As a global business, we believe we have a responsibility to our customers, employees, shareholders, and the world at large, to take strong, decisive action on climate change. In 2020, we announced our goal to become carbon neutral for our entire footprint—from our supply chain to the use of the products we make—by fiscal year 2030. Setting this ambitious goal was an important milestone in our work to address climate change. We believe this goal is consistent with what our customers value and presents a climate-related opportunity to increase customer loyalty and brand value. In addition to our aim of changing customer perceptions, jurisdictions seeking to address climate change may implement new or more stringent regulatory schemes aimed at reducing the energy consumed by electronic devices. We have already taken action to move beyond current energy efficiency regulation: every Apple product not only meets, but exceeds ENERGY STAR standards—the strict guidelines set by the U.S. Environmental Protection Agency for energy efficiency. For example, iPhone 14 uses 57 percent less energy than the U.S. Department of Energy’s requirements for battery charger systems. As a result of improvements in energy efficiency, since 2008, we’ve reduced the overall product energy use across all major product lines by more than 70 percent.
Supply chain and/or value chain	Yes	Our efforts to facilitate the transition of our entire supply chain to renewable electricity are essential to reaching our 2030 goal of carbon neutrality — as electricity usage in our supply chain is the single greatest contributor to our carbon emissions. Among the most significant decisions we have made are our significant investments to reduce our contribution to climate change through generating or sourcing 100 percent renewable electricity for our own operations (as of January 2018) and our goal to transition our entire supply chain to 100 percent renewable electricity by fiscal year 2030 through our Supplier Clean Energy Program. The Supplier Clean Energy Program now has over 20 gigawatts of clean energy commitments, of which nearly two-thirds is already operational. In fiscal year 2022, the 13.7 gigawatts of renewable energy procured by suppliers and online in Apple’s supply chain generated 23.7 million megawatt-hours of clean energy, avoiding 17.4 million metric tons of carbon emissions - a 23 percent increase over fiscal year 2021. To help support our suppliers’ transition to renewable energy, we have integrated policy advocacy into our climate strategy. Suppliers often face regulatory barriers to cost-effective renewable energy options. Clean energy technology offers tremendous benefits to our suppliers, to electricity grids, and to countries. We believe that when policymakers fully value these benefits, clean energy becomes more cost competitive than fossil fuel energy. So, we actively support policies that create cost-effective renewable energy markets, and we work closely with suppliers and other climate-leading companies to engage local, regional, and national governments. This encourages the development of country-specific policies that support scalable renewable energy solutions, with impact far beyond Apple’s supply chain.
Investment in R&D	Yes	As part of our goal to become carbon neutral for our comprehensive carbon footprint by fiscal year 2030, we are investing in research and development to support new technologies like the use of recycled materials in our products, which presents an opportunity to reduce emissions associated with the product lifecycle. As part of Apple’s commitment to reduce our products’ environmental impact through innovation, we’ve partnered with aluminum companies and the governments of Canada and Quebec to invest in ELYSIS — a joint venture to commercialize patented technology that eliminates direct greenhouse gas emissions from the traditional smelting process. This is a revolutionary advancement in the manufacturing of one of the world’s most widely used metals. Since our collaboration began in 2018, we’ve helped accelerate the development of this technology by facilitating the joint partnership and providing initial funding and ongoing technical support.
Operations	Yes	While there have been some extreme weather events in the past (such as hurricanes Harvey and Irma) that are believed to have been exacerbated by climate change and that impacted our business, they did not have a significant impact. We anticipate our operations may be impacted by climate change on the medium and long-term, both in terms of reputational risks to our business if we do not continue to take strong action against climate change and in terms of physical risks that could cause service disruption to our data centers, offices, or retail stores, and potentially our product supply chain. To address these operational risks, we’ve built redundancy into our data services, and deploying backup power supply sources at critical facilities. Not only are we working to mitigate our risks through expanding geographically, we’ve also begun planning for larger flooding events than the 100-year flood events / floodplains typically used in planning: we now are considering the effects of 200- to 500-year flood events / floodplains, using best available data.

**C3.4**

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

	Financial planning elements that have been influenced	Description of influence
Row 1	Access to capital	In February 2016, Apple issued a \$1.5 billion green bond and in June 2017 an additional \$1 billion green bond to support capital investments in environmental projects like those that reduce carbon emissions -- such as energy efficiency and renewable energy projects. The \$2.5 billion in aggregate green bond proceeds represents a substantial financial commitment to address climate change and demonstrates how our business strategy has been influenced by climate change. In fiscal year 2018, we fully allocated the \$2.5 billion of green bond proceeds to a number of environmental projects, including renewable energy and energy efficiency projects. Most recently, in 2019, Apple issued a €2 billion green bond issued focused on financing emissions reduction projects that would help meet our 2030 carbon neutrality goal. The green bond included 2 tranches, one with a 6-year maturity, the other with a 12-year maturity.

**C3.5**

**(C3.5) In your organization’s financial accounting, do you identify spending/revenue that is aligned with your organization’s climate transition?**

	Identification of spending/revenue that is aligned with your organization’s climate transition	Indicate the level at which you identify the alignment of your spending/revenue with a sustainable finance taxonomy
Row 1	No, and we do not plan to in the next two years	<Not Applicable>

**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

**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

**Year target was set**

2020

**Target coverage**

Company-wide

**Scope(s)**

Scope 1

Scope 2

Scope 3

**Scope 2 accounting method**

Market-based

**Scope 3 category(ies)**

Category 1: Purchased goods and services

Category 4: Upstream transportation and distribution

Category 6: Business travel

Category 7: Employee commuting

Category 9: Downstream transportation and distribution

Category 11: Use of sold products

Category 12: End-of-life treatment of sold products

**Base year**

2019

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

52730

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

0

**Base year Scope 3, Category 1: Purchased goods and services emissions covered by target (metric tons CO2e)**

18855000

**Base year Scope 3, Category 2: Capital goods emissions covered by target (metric tons CO2e)**

<Not Applicable>

**Base year Scope 3, Category 3: Fuel-and-energy-related activities (not included in Scopes 1 or 2) emissions covered by target (metric tons CO2e)**

<Not Applicable>

**Base year Scope 3, Category 4: Upstream transportation and distribution emissions covered by target (metric tons CO2e)**

45000

**Base year Scope 3, Category 5: Waste generated in operations emissions covered by target (metric tons CO2e)**

<Not Applicable>

**Base year Scope 3, Category 6: Business travel emissions covered by target (metric tons CO2e)**

325500

**Base year Scope 3, Category 7: Employee commuting emissions covered by target (metric tons CO2e)**

194660

**Base year Scope 3, Category 8: Upstream leased assets emissions covered by target (metric tons CO2e)**

<Not Applicable>

**Base year Scope 3, Category 9: Downstream transportation and distribution emissions covered by target (metric tons CO2e)**

1400000

**Base year Scope 3, Category 10: Processing of sold products emissions covered by target (metric tons CO2e)**

<Not Applicable>

**Base year Scope 3, Category 11: Use of sold products emissions covered by target (metric tons CO2e)**

4100000

**Base year Scope 3, Category 12: End-of-life treatment of sold products emissions covered by target (metric tons CO2e)**

60000

**Base year Scope 3, Category 13: Downstream leased assets emissions covered by target (metric tons CO2e)**

<Not Applicable>

**Base year Scope 3, Category 14: Franchises emissions covered by target (metric tons CO2e)**

<Not Applicable>

**Base year Scope 3, Category 15: Investments emissions covered by target (metric tons CO2e)**

<Not Applicable>

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

<Not Applicable>

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

<Not Applicable>

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

24980160

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

25032890

**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**

100

**Base year Scope 3, Category 1: Purchased goods and services emissions covered by target as % of total base year emissions in Scope 3, Category 1: Purchased goods and services (metric tons CO2e)**

68.4

**Base year Scope 3, Category 2: Capital goods emissions covered by target as % of total base year emissions in Scope 3, Category 2: Capital goods (metric tons CO2e)**

<Not Applicable>

**Base year Scope 3, Category 3: Fuel-and-energy-related activities (not included in Scopes 1 or 2) emissions covered by target as % of total base year emissions in Scope 3, Category 3: Fuel-and-energy-related activities (not included in Scopes 1 or 2) (metric tons CO2e)**

<Not Applicable>

**Base year Scope 3, Category 4: Upstream transportation and distribution covered by target as % of total base year emissions in Scope 3, Category 4: Upstream transportation and distribution (metric tons CO2e)**

0.2

**Base year Scope 3, Category 5: Waste generated in operations emissions covered by target as % of total base year emissions in Scope 3, Category 5: Waste generated in operations (metric tons CO2e)**

<Not Applicable>

**Base year Scope 3, Category 6: Business travel emissions covered by target as % of total base year emissions in Scope 3, Category 6: Business travel (metric tons CO2e)**

1.2

**Base year Scope 3, Category 7: Employee commuting covered by target as % of total base year emissions in Scope 3, Category 7: Employee commuting (metric tons CO2e)**

0.7

**Base year Scope 3, Category 8: Upstream leased assets emissions covered by target as % of total base year emissions in Scope 3, Category 8: Upstream leased assets (metric tons CO2e)**

<Not Applicable>

**Base year Scope 3, Category 9: Downstream transportation and distribution emissions covered by target as % of total base year emissions in Scope 3, Category 9: Downstream transportation and distribution (metric tons CO2e)**

5.1

**Base year Scope 3, Category 10: Processing of sold products emissions covered by target as % of total base year emissions in Scope 3, Category 10: Processing of sold products (metric tons CO2e)**

<Not Applicable>

**Base year Scope 3, Category 11: Use of sold products emissions covered by target as % of total base year emissions in Scope 3, Category 11: Use of sold products (metric tons CO2e)**

14.9

**Base year Scope 3, Category 12: End-of-life treatment of sold products emissions covered by target as % of total base year emissions in Scope 3, Category 12: End-of-life treatment of sold products (metric tons CO2e)**

0.2

**Base year Scope 3, Category 13: Downstream leased assets emissions covered by target as % of total base year emissions in Scope 3, Category 13: Downstream leased assets (metric tons CO2e)**

<Not Applicable>

**Base year Scope 3, Category 14: Franchises emissions covered by target as % of total base year emissions in Scope 3, Category 14: Franchises (metric tons CO2e)**

<Not Applicable>

**Base year Scope 3, Category 15: Investments emissions covered by target as % of total base year emissions in Scope 3, Category 15: Investments (metric tons CO2e)**

<Not Applicable>

**Base year Scope 3, Other (upstream) emissions covered by target as % of total base year emissions in Scope 3, Other (upstream) (metric tons CO2e)**

<Not Applicable>

**Base year Scope 3, Other (downstream) emissions covered by target as % of total base year emissions in Scope 3, Other (downstream) (metric tons CO2e)**

<Not Applicable>

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

91

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

91

**Target year**

2030

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

61.7

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

9587596.87

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

55200

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

3000

**Scope 3, Category 1: Purchased goods and services emissions in reporting year covered by target (metric tons CO2e)**

13400000

**Scope 3, Category 2: Capital goods emissions in reporting year covered by target (metric tons CO2e)**

&lt;Not Applicable&gt;

**Scope 3, Category 3: Fuel-and-energy-related activities (not included in Scopes 1 or 2) emissions in reporting year covered by target (metric tons CO2e)**

&lt;Not Applicable&gt;

**Scope 3, Category 4: Upstream transportation and distribution emissions in reporting year covered by target (metric tons CO2e)**

630000

**Scope 3, Category 5: Waste generated in operations emissions in reporting year covered by target (metric tons CO2e)**

&lt;Not Applicable&gt;

**Scope 3, Category 6: Business travel emissions in reporting year covered by target (metric tons CO2e)**

113000

**Scope 3, Category 7: Employee commuting emissions in reporting year covered by target (metric tons CO2e)**

134200

**Scope 3, Category 8: Upstream leased assets emissions in reporting year covered by target (metric tons CO2e)**

&lt;Not Applicable&gt;

**Scope 3, Category 9: Downstream transportation and distribution emissions in reporting year covered by target (metric tons CO2e)**

1270000

**Scope 3, Category 10: Processing of sold products emissions in reporting year covered by target (metric tons CO2e)**

&lt;Not Applicable&gt;

**Scope 3, Category 11: Use of sold products emissions in reporting year covered by target (metric tons CO2e)**

4900000

**Scope 3, Category 12: End-of-life treatment of sold products emissions in reporting year covered by target (metric tons CO2e)**

80000

**Scope 3, Category 13: Downstream leased assets emissions in reporting year covered by target (metric tons CO2e)**

&lt;Not Applicable&gt;

**Scope 3, Category 14: Franchises emissions in reporting year covered by target (metric tons CO2e)**

&lt;Not Applicable&gt;

**Scope 3, Category 15: Investments emissions in reporting year covered by target (metric tons CO2e)**

&lt;Not Applicable&gt;

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

&lt;Not Applicable&gt;

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

&lt;Not Applicable&gt;

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

20550000

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

20600000

**Does this target cover any land-related emissions?**

Yes, it covers land-related CO2 emissions/removals associated with bioenergy and non-land related emissions (e.g. non-FLAG SBT with bioenergy)

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

28.7005883455188

**Target status in reporting year**

Underway

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

For years, we have increased energy efficiency and the use of renewable energy, yet we know we have to do more. That's why in 2020, we unveiled our most ambitious plan to date: to achieve carbon neutrality for the entire life cycle of our products by fiscal year 2030. Our plan to reach neutrality by fiscal year 2030 centers around our strategy to reduce emissions by 75 percent, relative to our 2015 footprint. This reduction aligns with what current climate science shows is necessary to limit warming to 1.5° Celsius. The Science Based Targets initiative (SBTi) validated an emissions reduction target for Apple: 61.7 percent by fiscal year 2030 relative to our 2019 emissions.

This target is company-wide, inclusive of scope 1, scope 2, and scope 3 emissions (including the life cycle of our products). Our SBTi target excludes less than three percent of scope 1 and 2 emissions in the base year, including fire suppressants, refrigerant leakage, as well as purchased and/or landlord-provided steam and chilled water, and certain greenhouse gases (HFC, PFC, SF6 and NF3) which do not meet Apple's relevance threshold. In addition, our SBTi target excludes the following scope 3 categories, which collectively are approximately 10% of our base year scope 3 emissions: "2. capital goods" due to limited data availability, which limits our ability to influence these emissions, as well as "fuel and energy related activities" and "waste generated in operations" as these emissions are negligible.

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

Our plan to reach carbon neutrality by fiscal year 2030 centers around our strategy to reduce emissions by 75 percent, relative to our fiscal year 2015 carbon footprint. Our plan for reaching these goals is comprised of five pillars — the first four are aimed at reducing emissions, whereas the fifth (carbon removal) seeks to remove the remaining 25 percent carbon emissions that are difficult to avoid, like air travel.

Pillar #1: Low Carbon Design: We will design products and manufacturing processes to be less carbon-intensive through thoughtful material selection, increased material efficiency, and greater product energy efficiency.

Pillar #2: Energy efficiency: We will increase energy efficiency at our facilities and in our supply chain by finding opportunities, such as retrofitting, to reduce energy use.

Pillar #3: Renewable electricity: We will maintain our sourcing of 100 percent renewable electricity for our facilities and transition our entire supply chain to 100 percent clean, renewable sources of electricity.

Pillar #4: Direct emissions abatement: We will reduce direct greenhouse gas emissions in our facilities and our supply chain through process innovation, emissions abatement, and the use of non-fossil-based low-carbon fuels.

Pillar #5: Carbon removal: Working in parallel with our emissions reduction efforts, we will scale up investments in carbon removal projects, prioritizing nature-based solutions that protect and restore ecosystems around the world.

As of fiscal year 2022, we've reduced our gross carbon footprint by 45 percent compared to fiscal year 2015, and by nearly 28 percent compared to 2019. This reduction has been variable year over year: in recent years we have seen our footprint level out with the substantial growth of our business. However, we continue to scale the projects underpinning our 2030 carbon neutrality goal, in order to yield further reductions in the medium term.

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

<Not Applicable>

---

**Target reference number**

Abs 2

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

Yes, we consider this a science-based target, but we have not committed to seek validation of this target by the Science Based Targets initiative within the next two years

**Target ambition**

1.5°C aligned

**Year target was set**

2020

**Target coverage**

Company-wide

**Scope(s)**

Scope 1

Scope 2

Scope 3

**Scope 2 accounting method**

Market-based

**Scope 3 category(ies)**

Category 1: Purchased goods and services

Category 4: Upstream transportation and distribution

Category 6: Business travel

Category 7: Employee commuting

Category 9: Downstream transportation and distribution

Category 11: Use of sold products

Category 12: End-of-life treatment of sold products

**Base year**

2015

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

28100

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

42460

**Base year Scope 3, Category 1: Purchased goods and services emissions covered by target (metric tons CO2e)**

29555000

**Base year Scope 3, Category 2: Capital goods emissions covered by target (metric tons CO2e)**

<Not Applicable>

**Base year Scope 3, Category 3: Fuel-and-energy-related activities (not included in Scopes 1 or 2) emissions covered by target (metric tons CO2e)**

<Not Applicable>

**Base year Scope 3, Category 4: Upstream transportation and distribution emissions covered by target (metric tons CO2e)**

45000

**Base year Scope 3, Category 5: Waste generated in operations emissions covered by target (metric tons CO2e)**

<Not Applicable>

**Base year Scope 3, Category 6: Business travel emissions covered by target (metric tons CO2e)**

139900

**Base year Scope 3, Category 7: Employee commuting emissions covered by target (metric tons CO2e)**

173000

**Base year Scope 3, Category 8: Upstream leased assets emissions covered by target (metric tons CO2e)**

<Not Applicable>

**Base year Scope 3, Category 9: Downstream transportation and distribution emissions covered by target (metric tons CO2e)**

1300000



**Base year Scope 3, Category 10: Processing of sold products emissions covered by target (metric tons CO2e)**

<Not Applicable>

**Base year Scope 3, Category 11: Use of sold products emissions covered by target (metric tons CO2e)**

6600000

**Base year Scope 3, Category 12: End-of-life treatment of sold products emissions covered by target (metric tons CO2e)**

500000

**Base year Scope 3, Category 13: Downstream leased assets emissions covered by target (metric tons CO2e)**

<Not Applicable>

**Base year Scope 3, Category 14: Franchises emissions covered by target (metric tons CO2e)**

<Not Applicable>

**Base year Scope 3, Category 15: Investments emissions covered by target (metric tons CO2e)**

<Not Applicable>

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

<Not Applicable>

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

<Not Applicable>

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

38307900

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

38378460

**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**

100

**Base year Scope 3, Category 1: Purchased goods and services emissions covered by target as % of total base year emissions in Scope 3, Category 1:**

**Purchased goods and services (metric tons CO2e)**

72.2

**Base year Scope 3, Category 2: Capital goods emissions covered by target as % of total base year emissions in Scope 3, Category 2: Capital goods (metric tons CO2e)**

<Not Applicable>

**Base year Scope 3, Category 3: Fuel-and-energy-related activities (not included in Scopes 1 or 2) emissions covered by target as % of total base year emissions in Scope 3, Category 3: Fuel-and-energy-related activities (not included in Scopes 1 or 2) (metric tons CO2e)**

<Not Applicable>

**Base year Scope 3, Category 4: Upstream transportation and distribution covered by target as % of total base year emissions in Scope 3, Category 4: Upstream transportation and distribution (metric tons CO2e)**

0.1

**Base year Scope 3, Category 5: Waste generated in operations emissions covered by target as % of total base year emissions in Scope 3, Category 5: Waste generated in operations (metric tons CO2e)**

<Not Applicable>

**Base year Scope 3, Category 6: Business travel emissions covered by target as % of total base year emissions in Scope 3, Category 6: Business travel (metric tons CO2e)**

0.3

**Base year Scope 3, Category 7: Employee commuting covered by target as % of total base year emissions in Scope 3, Category 7: Employee commuting (metric tons CO2e)**

0.4

**Base year Scope 3, Category 8: Upstream leased assets emissions covered by target as % of total base year emissions in Scope 3, Category 8: Upstream leased assets (metric tons CO2e)**

<Not Applicable>

**Base year Scope 3, Category 9: Downstream transportation and distribution emissions covered by target as % of total base year emissions in Scope 3, Category 9: Downstream transportation and distribution (metric tons CO2e)**

3.2

**Base year Scope 3, Category 10: Processing of sold products emissions covered by target as % of total base year emissions in Scope 3, Category 10: Processing of sold products (metric tons CO2e)**

<Not Applicable>

**Base year Scope 3, Category 11: Use of sold products emissions covered by target as % of total base year emissions in Scope 3, Category 11: Use of sold products (metric tons CO2e)**

16.1

**Base year Scope 3, Category 12: End-of-life treatment of sold products emissions covered by target as % of total base year emissions in Scope 3, Category 12: End-of-life treatment of sold products (metric tons CO2e)**

1.2

**Base year Scope 3, Category 13: Downstream leased assets emissions covered by target as % of total base year emissions in Scope 3, Category 13: Downstream leased assets (metric tons CO2e)**

<Not Applicable>

**Base year Scope 3, Category 14: Franchises emissions covered by target as % of total base year emissions in Scope 3, Category 14: Franchises (metric tons CO2e)**

<Not Applicable>

**Base year Scope 3, Category 15: Investments emissions covered by target as % of total base year emissions in Scope 3, Category 15: Investments (metric tons CO2e)**

<Not Applicable>

**Base year Scope 3, Other (upstream) emissions covered by target as % of total base year emissions in Scope 3, Other (upstream) (metric tons CO2e)**

<Not Applicable>

**Base year Scope 3, Other (downstream) emissions covered by target as % of total base year emissions in Scope 3, Other (downstream) (metric tons CO2e)**

<Not Applicable>

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

94

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

94

**Target year**

2030

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

75

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

9594615

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

55200

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

3000

**Scope 3, Category 1: Purchased goods and services emissions in reporting year covered by target (metric tons CO2e)**

13400000

**Scope 3, Category 2: Capital goods emissions in reporting year covered by target (metric tons CO2e)**

<Not Applicable>

**Scope 3, Category 3: Fuel-and-energy-related activities (not included in Scopes 1 or 2) emissions in reporting year covered by target (metric tons CO2e)**

<Not Applicable>

**Scope 3, Category 4: Upstream transportation and distribution emissions in reporting year covered by target (metric tons CO2e)**

630000

**Scope 3, Category 5: Waste generated in operations emissions in reporting year covered by target (metric tons CO2e)**

<Not Applicable>

**Scope 3, Category 6: Business travel emissions in reporting year covered by target (metric tons CO2e)**

113500

**Scope 3, Category 7: Employee commuting emissions in reporting year covered by target (metric tons CO2e)**

134200

**Scope 3, Category 8: Upstream leased assets emissions in reporting year covered by target (metric tons CO2e)**

<Not Applicable>

**Scope 3, Category 9: Downstream transportation and distribution emissions in reporting year covered by target (metric tons CO2e)**

1270000

**Scope 3, Category 10: Processing of sold products emissions in reporting year covered by target (metric tons CO2e)**

<Not Applicable>

**Scope 3, Category 11: Use of sold products emissions in reporting year covered by target (metric tons CO2e)**

4900000

**Scope 3, Category 12: End-of-life treatment of sold products emissions in reporting year covered by target (metric tons CO2e)**

80000

**Scope 3, Category 13: Downstream leased assets emissions in reporting year covered by target (metric tons CO2e)**

<Not Applicable>

**Scope 3, Category 14: Franchises emissions in reporting year covered by target (metric tons CO2e)**

<Not Applicable>

**Scope 3, Category 15: Investments emissions in reporting year covered by target (metric tons CO2e)**

<Not Applicable>

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

<Not Applicable>

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

<Not Applicable>

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

20550000

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

20600000

**Does this target cover any land-related emissions?**

Yes, it covers land-related CO2 emissions/removals associated with bioenergy and non-land related emissions (e.g. non-FLAG SBT with bioenergy)

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

61.7654104237985

**Target status in reporting year**

Underway

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

As of April 2020, we are carbon neutral for scope 1, 2, and scope 3 emissions relating to Apple's corporate operations (employee commute and business travel) beginning in fiscal year 2021. In 2020, we also set a new goal to become carbon neutral for our entire carbon footprint by 2030. We plan to reduce emissions by 75 percent by 2030, compared to 2015 levels, through product design and engineering, energy efficiency and renewable energy, and direct emissions abatement. A science-based target aligned with 1.5° C trajectory calls for a 4.2% annual linear reduction. Since this equates to a 47% reduction over our target period, we consider our target to well-exceed the requirements for a science-based target. The Science Based Targets initiative (SBTi) recently validated an emissions reduction target for Apple: 61.7 percent by 2030 relative to our 2019 emissions. This SBTi-approved target is derived from our current target—to reduce emissions by 75 percent by 2030—only with a 2019 base year, instead of 2015.

This target is company-wide, inclusive of scope 1, scope 2, and scope 3 emissions (including the life cycle of our products). Our SBTi target excludes less than three percent of scope 1 and 2 emissions in the base year, including fire suppressants, refrigerant leakage, as well as purchased and/or landlord-provided steam and chilled water, and certain greenhouse gases (HFC, PFC, SF6 and NF3) which do not meet Apple's relevance threshold. In addition, our SBTi target excludes the following scope 3 categories, which collectively are approximately 10% of our base year scope 3 emissions: "2. capital goods" due to limited data availability, which limits our ability to influence these emissions, as well as "fuel and energy related activities" and "waste generated in operations" as these emissions are negligible.

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

Our plan to reach carbon neutrality by 2030 centers on our strategy to reduce emissions by 75 percent, relative to our fiscal year 2015 carbon footprint. Our plan for reaching these goals is comprised of five pillars — the first four are aimed at reducing emissions, whereas the fifth (carbon removal) seeks to remove the remaining 25 percent carbon emissions.

Pillar #1: Low Carbon Design: We will design products and manufacturing processes to be less carbon-intensive through thoughtful material selection, increased material efficiency, and greater product energy efficiency.

Pillar #2: Energy efficiency: We will increase energy efficiency at our facilities and in our supply chain by finding opportunities, such as retrofitting, to reduce energy use.

Pillar #3: Renewable electricity: We will maintain our sourcing of 100 percent renewable electricity for our facilities and transition our entire supply chain to 100 percent clean, renewable sources of electricity.

Pillar #4: Direct emissions abatement: We will reduce direct greenhouse gas emissions in our facilities and our supply chain through process innovation, emissions abatement, and the use of non-fossil-based low-carbon fuels.

Pillar #5: Carbon removal: Working in parallel with our emissions reduction efforts, we will scale up investments in carbon removal projects, including nature-based solutions that protect and restore ecosystems around the world.

As of fiscal year 2022, we've reduced our gross carbon footprint by 45 percent compared to fiscal year 2015, and by nearly 28 percent compared to 2019. This reduction has been variable year over year: in recent years we have seen our footprint level out with the substantial growth of our business. However, we continue to scale the projects underpinning our 2030 carbon neutrality goal, in order to yield further reductions in the medium term.

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

<Not Applicable>

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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

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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**

2011

**Target coverage**

Company-wide

**Target type: energy carrier**

Electricity

**Target type: activity**

Consumption

**Target type: energy source**

Renewable energy source(s) only

**Base year**

2011

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

154273

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

24

**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?**

Abs 1

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

RE100

Science Based Targets initiative

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

Our target is a company-wide target. We set an ambitious goal to power 100% of our global facilities with 100% renewable energy. We reached this goal in 2018 and have since maintained it. We have additionally committed through the Science Based Targets initiatives to maintain our use of 100 percent renewable electricity for our facilities through 2030.

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

<Not Applicable>

**List the actions which contributed most to achieving this target**

Apple-created renewable electricity projects largely contributed to achieving the sourcing of 100 percent renewable electricity for our facilities, including data centers, offices, and Apple Stores. In total, Apple-created renewable sources account for about 90 percent of the renewable electricity our facilities use — around 1.5 gigawatts currently in use. To cover any gaps in our renewable energy needs beyond what's provided by Apple-created projects (about 4.5 percent of our total corporate load in fiscal year 2022), we directly purchase renewable electricity through available utility green energy programs. Colocation and distribution facility vendors also supply about 3.5 percent of our total load of renewable energy. And in certain situations, we purchase RECs — for example, when we need to cover usage over the short term, before a renewable energy project comes online or when there's a lack of availability of renewable energy projects in-region. These RECs, which account for about 2 percent of our total load, must be tied to recently constructed projects and be Green-e Energy certified, where available. These purchases are subject to the same standards as our Apple-created renewables. Appendix D of Apple's 2023 Environmental Progress Report provides additional details on Apple's renewable energy solutions.

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**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

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**C4.3a**

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**(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	9	0
To be implemented*	10	12358468
Implementation commenced*	2	67540
Implemented*	6	28017500
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	Other, please specify (HVAC optimization, efficient lighting and controls, building envelope and glazing, building controls, energy modeling, and energy audits)
--------------------------------	--

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

27500

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

Scope 1

Scope 2 (location-based)

**Voluntary/Mandatory**

Voluntary

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

8000000

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

32000000

**Payback period**

4-10 years

**Estimated lifetime of the initiative**

11-15 years

**Comment**

Apple's energy efficiency program targets natural gas and electricity use at data centers, retail stores, offices, and R&D facilities located around the world. Initiatives address primarily Scope 2 emissions, but some Scope 1 emissions to a lesser extent as well. For existing buildings, we take a methodical approach, auditing building performance, and then deploying identified energy reduction measures. For new buildings and substantial renovations, we integrate energy efficiency early in the design process when developing new offices or Apple stores, facilitating design that accommodates local conditions, such as temperature and humidity. And once a building is operational, we continue to monitor energy performance to ensure it is performing optimally throughout its lifetime.

In fiscal year 2022, our energy efficiency program helped us reduce our usage by an additional 69.4 million kilowatt-hours and 161,000 therms per year through adjustments made to 9.3 million square feet of new and existing buildings. Together, these new initiatives will avoid about 27,500 metric tons of CO2e per year.

**Initiative category & Initiative type**

Other, please specify	Other, please specify (Use of Renewable Electricity - Wind, Solar, Green utility and REC purchases)
-----------------------	---

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

1290000

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

Scope 2 (market-based)

**Voluntary/Mandatory**

Voluntary

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

0

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

0

**Payback period**

No payback

**Estimated lifetime of the initiative**

Ongoing

**Comment**

Facilities renewable energy projects: we've undertaken a number of renewable energy projects to maintain our 100% renewable energy goal for our corporate facilities, including offices, retail stores, and data centers. These projects include solar PV or wind projects worldwide. In addition, Apple signed up for green utility programs for some of our meters to receive 100% renewables from utility suppliers. Apple also made unbundled Renewable Energy Certificate purchases in various markets to ensure we meet our renewable goals. The above initiatives primarily address Apple's scope 2 emissions. Apple participates in renewable projects in many ways, PPA, VPPA, and long term environmental attributes off-take. Through Apple's participation, we aim to provide a stable cashflow to the projects, therefore, helping the projects to secure long term

financing, which will support adding new renewable energy to the grid. These renewable energy projects are not structured as capital expenditures and therefore do not represent investments. Rather, they are structured as operational expenses. Overall savings from use of renewable electricity in fiscal year 2022 were 1,290,000 metric tons of CO2e.

**Initiative category & Initiative type**

Waste reduction and material circularity	Other, please specify (Use of recycled and low carbon materials)
--	--

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

7800000

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

Scope 3 category 1: Purchased goods & services

**Voluntary/Mandatory**

Voluntary

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

0

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

0

**Payback period**

No payback

**Estimated lifetime of the initiative**

Ongoing

**Comment**

By transitioning to materials that use low carbon energy and recycled content, we can reduce our carbon footprint. We've prioritized select materials and components that make up large part of our carbon footprint to move us closer to our goal of product carbon neutrality. We've seen clear progress with aluminum, which in 2015 represented over a quarter of our product manufacturing footprint. We're continuing to scale our new, 100 percent recycled aluminum alloy — which incorporates recycled content without compromising performance — across all products. For products released in 2022 that had enclosures made with primary aluminum, we prioritized the use of aluminum smelted using low-carbon sources of electricity rather than fossil fuels — for a lower carbon impact. These changes alone have decreased the carbon emissions associated with our use of aluminum by 71 percent since 2015. In fiscal year 2022, these changes to low carbon and recycled materials in our products resulted in 7,800,000 metric tons of avoided CO2e.

**Initiative category & Initiative type**

Energy efficiency in production processes	Other, please specify (HVAC optimization, efficient lighting and controls, repairing compressed air leaks, building controls, energy modeling, and energy audits)
---	---

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

1300000

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

Scope 3 category 1: Purchased goods & services

**Voluntary/Mandatory**

Voluntary

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

0

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

0

**Payback period**

No payback

**Estimated lifetime of the initiative**

Ongoing

**Comment**

We launched the Supplier Clean Energy Program in 2015 to advance the use of clean energy in our supply chain. Through this program, Apple works with suppliers to advocate for policy change in key markets, connects them with high-quality clean energy projects and developers, and educates them on how they can take full advantage of the benefits of clean energy. As of March 2023, over 250 manufacturing partners in 28 countries have committed to 100 percent renewable energy for Apple production — representing over 85% of our direct manufacturing spend. Apple itself has invested directly in renewable energy projects to cover a portion of upstream emissions. In addition, Apple launched the China Clean Energy Fund, a first-of-its-kind investment fund in China that connects suppliers with renewable energy projects. The Supplier Clean Energy Program now has brought online 13.7 GW of renewable energy to our supply chain, which generated 23.7 million megawatt-hours of clean energy in fiscal year 2022, avoiding 17.4 million metric tons of carbon emissions — a 23 percent increase over fiscal year 2021. Because supplier investments and potential savings are unknown, we are unable to estimate the total investments and savings associated with the clean energy program.

**Initiative category & Initiative type**

Low-carbon energy consumption	Other, please specify (Solar PV, Solar CSP, Wind, Hydropower, Biomass)
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**Estimated annual CO2e savings (metric tonnes CO2e)**

17400000

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

Scope 3 category 1: Purchased goods & services

**Voluntary/Mandatory**

Voluntary

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

0

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

0

**Payback period**

No payback

**Estimated lifetime of the initiative**

Ongoing

**Comment**

We launched the Supplier Clean Energy Program in 2015 to advance the use of clean energy in our supply chain. Through this program, Apple works with suppliers to advocate for policy change in key markets, connects them with high-quality clean energy projects and developers, and educates them on how they can take full advantage of the benefits of clean energy. As of March 2023, over 250 manufacturing partners in 28 countries have committed to 100 percent renewable energy for Apple production. Apple itself has invested directly in renewable energy projects to cover a portion of upstream emissions. In addition, Apple launched the China Clean Energy Fund, a first-of-its-kind investment fund in China that connects suppliers with renewable energy projects. The Supplier Clean Energy Program now has brought online 13.7 GW of renewable energy to our supply chain, which generated 23.7 million megawatt-hours of clean energy in fiscal year 2022, avoiding 17.4 million metric tons of carbon emissions — a 23 percent increase over fiscal year 2021. Because supplier investments and potential savings are unknown, we are unable to estimate the total investments and savings associated with the clean energy program.

**Initiative category & Initiative type**

Other, please specify	Other, please specify (Product Energy Efficiency)
-----------------------	---

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

200000

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

Scope 3 category 11: Use of sold products

**Voluntary/Mandatory**

Voluntary

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

0

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

0

**Payback period**

No payback

**Estimated lifetime of the initiative**

Ongoing

**Comment**

Designing energy-efficient products even as we continually enhance performance represents another essential pillar of our approach to carbon neutrality. While this is a continual effort with each new generation of products, since 2008, we've reduced average product energy use by over 70 percent. These projects are operating expenditures, not capital expenditures, so they do not require a capital investment. They also do not generate monetary savings for Apple and therefore the payback period does not apply.

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

Method	Comment
Compliance with regulatory requirements/standards	We always use the state's standards for determining eligibility of renewable resources; abide by Green-e requirements.
Dedicated budget for low-carbon product R&D	Research and Development for new materials and processes with lower carbon emissions.
Internal incentives/recognition programs	In the form of Company-wide publicly-stated goals, internal targets, and annual reporting.
Lower return on investment (ROI) specification	ROI is not the only criteria for selecting emissions reduction investments.
Other (Calculation of a comprehensive carbon footprint)	We calculate a comprehensive carbon footprint using product life cycle analyses, which enables us to prioritize investments.

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

Yes

**C4.5a**

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

**Level of aggregation**

Group of products or services

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

Green Bond Principles (ICMA)

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

Other	Other, please specify (Electronics Hardware)
-------	--

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

Apple has committed to transitioning all of the materials in Apple products to recycled or renewable content. We included recycled content in all iPad and iPhone devices shipped in fiscal year 2022. Under the Green Bond Principles, this category of projects would fall under "pollution prevention and control", as they seek to minimize resource use and reduce emissions.

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

Yes

**Methodology used to calculate avoided emissions**

Other, please specify (ISO14040/14044: Environmental management –Life cycle assessment –Principles and framework/Requirements and guidelines; ISO 14064-3: Greenhouse gases –Part 3: Specification with guidance for the validation and verification of greenhouse gas assertions)

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

Cradle-to-grave

**Functional unit used**

We calculated product life cycle emissions for all iPad and iPhone devices sold in fiscal year 2022, accounting for the use of recycled content and low carbon aluminum (which is smelted using low-carbon sources of electricity). The same assumptions are used for each stage of the product life cycle.

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

We estimated product-related emissions for all iPad and iPhone devices sold in the current reporting year (fiscal year 2022), without the carbon savings from use of recycled content or low carbon aluminum. The same assumptions are used for each stage of the product life cycle for the functional units as for the reference units.

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

Cradle-to-grave

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

3500000

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

We calculated carbon emissions savings from transitioning to recycled materials or use of low-carbon aluminum in iPad and iPhone, for those products that sold in fiscal year 2022.

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

60

**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

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

<Not Applicable>

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

<Not Applicable>

**C5.1b**



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

	Change(s) in methodology, boundary, and/or reporting year definition?	Details of methodology, boundary, and/or reporting year definition change(s)
Row 1	Yes, a change in boundary	In fiscal year 2022, we expanded the scope 3 emissions we include in our corporate footprint to include the following: work from home, third-party cloud services, electricity transmission and distribution losses, and upstream impacts from scope 1 fuels.

**C5.1c**

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

	Base year recalculation	Scope(s) recalculated	Base year emissions recalculation policy, including significance threshold	Past years' recalculation
Row 1	No, because the impact does not meet our significance threshold	<Not Applicable>	Fiscal year 2022 emissions from this change of methodology was less than 19,000 metric tons, or less than 0.09% of our net carbon emissions, which is below our significance threshold. Change in base year emissions would have been less as our operations were smaller.	No

**C5.2**

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

**Scope 1**

**Base year start**

October 26 2010

**Base year end**

October 25 2011

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

21700

**Comment**

**Scope 2 (location-based)**

**Base year start**

**Base year end**

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

**Comment**

**Scope 2 (market-based)**

**Base year start**

October 26 2010

**Base year end**

October 25 2011

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

154300

**Comment**

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

**Base year start**

September 28 2014

**Base year end**

September 27 2015

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

29600000

**Comment**

**Scope 3 category 2: Capital goods**

**Base year start**

**Base year end**

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

**Comment**

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

**Base year start**

September 28 2014

**Base year end**

September 27 2015

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

0

**Comment**

This Scope 3 emissions category was excluded from our baseline emissions, thus assumed to be 0.

**Scope 3 category 4: Upstream transportation and distribution**

**Base year start**

September 28 2014

**Base year end**

September 27 2015

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

370000

**Comment**

**Scope 3 category 5: Waste generated in operations**

**Base year start**

**Base year end**

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

**Comment**

**Scope 3 category 6: Business travel**

**Base year start**

September 28 2014

**Base year end**

September 27 2015

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

139940

**Comment**

**Scope 3 category 7: Employee commuting**

**Base year start**

September 28 2014

**Base year end**

September 27 2015

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

172970

**Comment**

**Scope 3 category 8: Upstream leased assets**

**Base year start**

**Base year end**

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

**Comment**

**Scope 3 category 9: Downstream transportation and distribution**

**Base year start**

September 28 2014

**Base year end**

September 27 2015

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

1300000

**Comment**

**Scope 3 category 10: Processing of sold products**

**Base year start**

**Base year end**

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

**Comment**

**Scope 3 category 11: Use of sold products**

**Base year start**

September 28 2014

**Base year end**

September 27 2015

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

6600000

**Comment**

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

**Base year start**

September 28 2014

**Base year end**

September 27 2015

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

500000

**Comment**

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

**Base year start**

**Base year end**

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

**Comment**

**Scope 3 category 14: Franchises**

**Base year start**

**Base year end**

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

**Comment**

**Scope 3 category 15: Investments**

**Base year start**

**Base year end**

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

**Comment**

**Scope 3: Other (upstream)**

**Base year start**

**Base year end**

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

**Comment**

**Scope 3: Other (downstream)**

**Base year start**

**Base year end**

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

**Comment**

C5.3

---

**(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)
- US EPA Center for Corporate Climate Leadership: Direct Emissions from Stationary Combustion Sources
- US EPA Center for Corporate Climate Leadership: Direct Emissions from Mobile Combustion Sources

C6. Emissions data

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C6.1

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

**Reporting year**

**Gross global Scope 1 emissions (metric tons CO2e)**  
55200

**Start date**  
<Not Applicable>

**End date**  
<Not Applicable>

**Comment**

C6.2

---

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

**Row 1**

**Scope 2, location-based**  
We are reporting a Scope 2, location-based figure

**Scope 2, market-based**  
We are reporting a Scope 2, market-based figure

**Comment**  
We believe our market-based Scope 2 emissions figure most accurately represents our emissions profile since generating and sourcing renewable energy is a key aspect of our environmental strategy.

C6.3

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

**Reporting year**

**Scope 2, location-based**  
1065405

**Scope 2, market-based (if applicable)**  
3000

**Start date**  
<Not Applicable>

**End date**  
<Not Applicable>

**Comment**

C6.4

---

**(C6.4) Are there any sources (e.g. facilities, specific GHGs, activities, geographies, etc.) of Scope 1, Scope 2 or Scope 3 emissions that are within your selected reporting boundary which are not included in your disclosure?**

Yes

C6.4a

---

**(C6.4a) Provide details of the sources of Scope 1, Scope 2, or Scope 3 emissions that are within your selected reporting boundary which are not included in your disclosure.**

**Source of excluded emissions**

Fertilizer use

**Scope(s) or Scope 3 category(ies)**

Scope 1

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

Emissions are not relevant

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

<Not Applicable>

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

<Not Applicable>

**Relevance of Scope 3 emissions from this source**

<Not Applicable>

**Date of completion of acquisition or merger**

<Not Applicable>

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

0

**Estimated percentage of total Scope 3 emissions this excluded source represents**

<Not Applicable>

**Explain why this source is excluded**

We have not included fertilizer use from landscape applications in our Scope 1 emissions as it accounts for far less than 1 percent of our total CO<sub>2</sub>e emissions. Our landscape practices focus on composting our green waste trimmings collected onsite and reusing them as mulch, supplemented only as needed with additional organic fertilizers and a limited amount of slow-release fertilizer products. Apple also employs a robust integrated pest management system, which reduces the need for fertilizer application.

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

No emissions excluded

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## C6.5

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**(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 CO<sub>2</sub>e)**

13400000

**Emissions calculation methodology**

Other, please specify (LCA (ISO 14040 and ISO 14044))

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

50

**Please explain**

We compile primary data for components or materials we know to be carbon-intensive, regardless of their position in our value chain. Each year, we make adjustments in our model to better account for Apple's specific value chain. Approximately 50 percent of our manufacturing emissions are calculated using primary data. We focus our attention on aspects of the product life cycle where our choices can have a material impact on emissions reduction, and use our LCAs to prioritize our work. We purchase third-party computing services, which we approximate to be less than 1 percent of total emissions from purchased goods and services.

## Capital goods

### Evaluation status

Not relevant, explanation provided

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

<Not Applicable>

### Emissions calculation methodology

<Not Applicable>

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

<Not Applicable>

### Please explain

The Greenhouse Gas Protocol Scope 3 Standard cites "influence" as one of the criteria for identifying relevant scope 3 emissions. It defines this criteria as "There are potential emissions reductions that could be undertaken or influenced by the company." The Scope 3 Standard also clearly states that the objective of calculating scope 3 emissions is to "help companies understand their full value chain emissions impact in order to focus company efforts on the greatest GHG reduction opportunities, leading to more sustainable decisions about companies' activities and the products they buy, sell, and produce." We have assessed capital goods emissions and concluded this scope 3 category is not relevant to Apple because data availability is limited, which in turn limits our ability to influence this category of emissions. To calculate emissions from capital goods, the only methodology available to us, based on data availability, are the Economic Input-Output (EIO) LCA models, used in conjunction with Apple's capital expenditures. This method relies upon emissions factors for each broad category of capital expenditures. While it provides an overall magnitude of CO2e emissions associated with capital goods, it is not specific enough to "focus company efforts." Indeed, the only "action" we could take as a result of calculating capital goods using an EIO LCA model would be to "spend less", which is not a meaningful greenhouse gas reduction strategy. During our recent engagement with SBTi to validate our science-based target, we received confirmation that this rationale for excluding this category of scope 3 emissions was acceptable.

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

### Evaluation status

Relevant, calculated

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

10600

### Emissions calculation methodology

Other, please specify (Industry average emission factors)

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

98

### Please explain

We use the fuel data provided for our Scope 1 emissions and DEFRA emissions factors to calculate the upstream emissions associated with fuel and energy related activities — including extraction, refining and transportation of the raw fuel sources prior to combustion. This Scope 3 emissions category was not included in our baseline emissions calculations. This Scope 3 category is included, starting in fiscal year 2022, due to improved data availability.

## Upstream transportation and distribution

### Evaluation status

Relevant, calculated

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

630000

### Emissions calculation methodology

Distance-based method

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

80

### Please explain

We use actual data provided from worldwide logistics, though some assumptions are still made regarding average trip distances. From the data we collect for product logistics, we are not able to entirely align with the "post-sale" and "pre-sale" delimitations of this upstream/downstream transportation emissions calculation. As a result, this upstream figure incorporates a small portion of downstream transportation emissions associated with products that have been sold and shipped directly from a final assembly site or to third party retail stores (which technically occurs post sale to these third-party stores). However, the net total for downstream and upstream transportation and distribution emissions account for all emissions in the product transportation category.

## Waste generated in operations

### Evaluation status

Not relevant, explanation provided

### Emissions in reporting year (metric tons CO<sub>2</sub>e)

<Not Applicable>

### Emissions calculation methodology

<Not Applicable>

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

<Not Applicable>

### Please explain

Waste generated does not result in material Scope 3 emissions. We calculated this figure in our CDP submission covering fiscal year 2013, and it represented less than 0.1 percent of our corporate carbon footprint. This amount has not increased substantively and therefore is still not relevant. That said, reducing waste and use of materials is a central element of our environmental strategy. We've created robust recycling and composting programs to minimize the environmental impact of the waste we produce in our corporate facilities: (i) This work begins by first understanding what we throw away. In some cases, we've installed remote waste monitoring systems to accurately measure waste generation and contamination. (ii) We prevent waste by closely managing what comes to our sites. For example, we've amended construction contracts to include waste reporting and diversion requirements. (iii) We've also worked on enhancing how we recycle and reuse materials. In fiscal year 2022, Apple facilities diverted more than 70 percent of our waste to recycling or composting rather than landfill. These high diversion rates helped limit the amount of waste sent to landfill to about 16,000 metric tons for our global operations. We also support our suppliers in the journey to zero waste through the Zero Waste program. In 2022, suppliers redirected 523,000 metric tons of waste from landfills (up from 491,000 metric tons the previous year), bringing the total to 2.5 million metric tons since the program's inception — the equivalent of eliminating 3.1 million square meters of landfill space. Throughout 2022, 100 percent of established final assembly sites — including for iPhone, iPad, Mac, Apple Watch, AirPods, HomePod, Apple TV, and Beats — maintained zero-waste-to-landfill operations.

## Business travel

### Evaluation status

Relevant, calculated

### Emissions in reporting year (metric tons CO<sub>2</sub>e)

113500

### Emissions calculation methodology

Distance-based method

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

90

### Please explain

Emissions from employee travel are calculated using trip distance data obtained from our travel partner that manages all travel for Apple employees. We consider the data we obtain from our travel partner to be real data that provides roughly 90 percent of the calculation. However, we do not use carrier-specific fuel consumption data (which we would also interpret as primary data).

## Employee commuting

### Evaluation status

Relevant, calculated

### Emissions in reporting year (metric tons CO<sub>2</sub>e)

134200

### Emissions calculation methodology

Distance-based method

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

0

### Please explain

We do not ask employees to report commute mileage directly, nor do we track fuel receipts. We do use employee demographic data (e.g., zip codes) and survey results of commute habits to estimate the average commute distance and to distribute the commuters among single-occupancy cars, carpools, bicycles, transit, Apple Transit, work-from-home, and other commute modes.

## Upstream leased assets

### Evaluation status

Not relevant, explanation provided

### Emissions in reporting year (metric tons CO<sub>2</sub>e)

<Not Applicable>

### Emissions calculation methodology

<Not Applicable>

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

<Not Applicable>

### Please explain

Any upstream leased asset is included in our Scope 1 and Scope 2 emissions. So 100 percent of the emissions from our leased assets are captured in Scope 1 and 2, leaving 0 emissions relevant to our Scope 3 calculations.

## Downstream transportation and distribution

### Evaluation status

Relevant, calculated

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

1270000

### Emissions calculation methodology

Distance-based method

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

50

### Please explain

We use actual data provided by our Worldwide Logistics team, though some assumptions are still made regarding average trip distances. Due to differences in how we collect data for product logistics, we are not able to perfectly align with the "post-sale" and "pre-sale" delimitations of this upstream/downstream transportation emissions calculation. As a result, this downstream figure incorporates a small portion of upstream transportation emissions associated with products that travel from our final assembly sites to our own retail stores (therefore are not yet technically post-sale). However, the net total for downstream and upstream transportation and distribution emissions account for all emissions in the product transportation category. Transportation emissions associated with customer travel from their homes to Apple retail stores are not material to this calculation for two reasons: 1) This number is very small compared to the total downstream transportation and distribution emissions. 2) Many of our stores are located in dense urban environments and often accessible by public transportation.

## Processing of sold products

### Evaluation status

Not relevant, explanation provided

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

<Not Applicable>

### Emissions calculation methodology

<Not Applicable>

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

<Not Applicable>

### Please explain

Not applicable as Apple does not produce intermediate goods, so we do not have activities that fall into this category.

## Use of sold products

### Evaluation status

Relevant, calculated

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

4900000

### Emissions calculation methodology

Methodology for indirect use phase emissions, please specify (Use phase emissions are calculated based on product energy consumption over a 3-4 yr use period. Energy consumption is modeled using European Commission and U.S. EPA computer eco-design studies reflecting aggressive daily product use assumptions.)

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

80

### Please explain

We use detailed primary data regarding the quantity of energy our products consume when in certain operational modes. Daily usage patterns are specific to each product and are based on historical customer use data.

## End of life treatment of sold products

### Evaluation status

Relevant, calculated

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

80000

### Emissions calculation methodology

Fuel-based method

Other, please specify (Include energy used in mechanical separation and shredding of parts. We generally use industry-average data regarding recycling processes to evaluate the impact of end-of-life treatment of sold products, except when Apple-specific processes are used.)

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

50

### Please explain

We use industry-average data regarding recycling processes to evaluate the impact of end-of-life treatment of sold products. When Apple-specific processes are used, for example, Apple's automated disassembly robot Daisy, primary measured data from that equipment is used.



**Downstream leased assets**

**Evaluation status**

Not relevant, explanation provided

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

<Not Applicable>

**Emissions calculation methodology**

<Not Applicable>

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

<Not Applicable>

**Please explain**

Downstream leased assets (such as Apple-operated product recycling facilities) are included in our Scope 1 and Scope 2 emissions; so there are no emissions in this category that fall under our Scope 3 emissions.

**Franchises**

**Evaluation status**

Not relevant, explanation provided

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

<Not Applicable>

**Emissions calculation methodology**

<Not Applicable>

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

<Not Applicable>

**Please explain**

Not applicable as we don't own or sell franchises; so we have 0 emissions from this Scope 3 category.

**Investments**

**Evaluation status**

Not relevant, explanation provided

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

<Not Applicable>

**Emissions calculation methodology**

<Not Applicable>

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

<Not Applicable>

**Please explain**

As per our form 10-K filing with the U.S. Securities and Exchange Commission, "the Company's investment policy and strategy are focused on the preservation of capital and supporting the Company's liquidity requirements." As a result, investments and their interest income are not a significant revenue stream for Apple and are not considered core to our business. Therefore, emissions from this category do not reach our threshold for relevance to our business.

**Other (upstream)**

**Evaluation status**

<Not Applicable>

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

<Not Applicable>

**Emissions calculation methodology**

<Not Applicable>

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

<Not Applicable>

**Please explain**

**Other (downstream)**

**Evaluation status**

<Not Applicable>

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

<Not Applicable>

**Emissions calculation methodology**

<Not Applicable>

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

<Not Applicable>

**Please explain**

**C6.7**

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

No

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

**Intensity figure**

1.48e-7

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

58200

**Metric denominator**

unit total revenue

**Metric denominator: Unit total**

39432800000

**Scope 2 figure used**

Market-based

**% change from previous year**

7

**Direction of change**

Decreased

**Reason(s) for change**

Other emissions reduction activities

**Please explain**

We estimate that gross global combined effective Scope 1 and Scope 2 emissions intensity per unit total revenue decreased by 7 percent from fiscal years 2021 to 2022, though it's key to note that both years' intensity metrics were extremely small. Apple's global Scope 1 and 2 emissions increased from 57,980 in fiscal year 2021 to 58,200 in fiscal year 2022; however, due to emissions reductions activities outlined in C4.3b these emissions did not grow as significantly as our revenue. Apple's revenue is so much greater than our Scope 1 and 2 emissions as to render both years' intensity factors essentially zero. Emissions reduction activities during the fiscal year include low-carbon energy purchase, installation, and consumption, renewable energy use, and building energy efficiency initiatives (see C4.3b).

**Intensity figure**

0.355

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

58200

**Metric denominator**

full time equivalent (FTE) employee

**Metric denominator: Unit total**

164000

**Scope 2 figure used**

Market-based

**% change from previous year**

6

**Direction of change**

Decreased

**Reason(s) for change**

Change in output

**Please explain**

We estimate that gross global combined Scope 1 and Scope 2 emissions intensity per full time equivalent (FTE) employee decreased by 6 percent primarily due to an increase in Apple's in Scope 1 and 2 emissions. Emissions increases were due to scope 2 emissions increases. For fiscal year 2021, we had an average annual FTE count of 154,000 and a combined Scope 1 and Scope 2 emissions of 57,980 metric tons CO2e. For fiscal year 2022, we had an average annual FTE count of 164,000 and a combined Scope 1 and Scope 2 emissions of 58,200 metric tons CO2e for an intensity figure of 0.355 metric tons CO2e per FTE.

**Intensity figure**

0.0182

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

58200

**Metric denominator**

megawatt hour transmitted (MWh)

**Metric denominator: Unit total**

3199000

**Scope 2 figure used**

Market-based

**% change from previous year**

10

**Direction of change**

Decreased

**Reason(s) for change**

Change in output

**Please explain**

We estimate that gross global combined Scope 1 and Scope 2 emissions intensity per megawatt hour (MWh) decreased by 10 percent between fiscal years 2021 and 2022 due to an increase in Apple's electricity consumption and an increase in Scope 1 and 2 emissions due to increased output as described in C7.9. For fiscal year 2021, we used approximately 2,854,000 MWh of electricity and had combined Scope 1 and Scope 2 emissions of 57,980 metric tons CO<sub>2</sub>e. For fiscal year 2022, we used approximately 3,199,000 MWh of electricity and had combined Scope 1 and Scope 2 emissions of 58,200 metric tons CO<sub>2</sub>e for an intensity figure of 0.0182 metric tons CO<sub>2</sub>e per MWh.

## 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 CO <sub>2</sub> e)	GWP Reference
CO <sub>2</sub>	51402	IPCC Fifth Assessment Report (AR5 – 100 year)
CH <sub>4</sub>	43	IPCC Fifth Assessment Report (AR5 – 100 year)
N <sub>2</sub> O	66	IPCC Fifth Assessment Report (AR5 – 100 year)
Other, please specify ((R&D Emissions))	4040	IPCC Fifth Assessment Report (AR5 – 100 year)

### C7.2

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

Country/area/region	Scope 1 emissions (metric tons CO <sub>2</sub> e)
United States of America	46864
Other, please specify (All countries not including the US)	8335

### C7.3

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

By business division

### C7.3a

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

Business division	Scope 1 emissions (metric ton CO <sub>2</sub> e)
Corporate	48411
Data Centers	3672
Retail Stores	3199

### C7.5

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

Country/area/region	Scope 2, location-based (metric tons CO2e)	Scope 2, market-based (metric tons CO2e)
United States of America	0	0
Other, please specify (Americas except for the US)	0	0
Other, please specify (Europe, Middle East, India, Africa)	0	366
Other, please specify (Asia Pacific)	0	2651

**C7.6**

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

By business division

**C7.6a**

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

Business division	Scope 2, location-based (metric tons CO2e)	Scope 2, market-based (metric tons CO2e)
Corporate Facilities	0	3000
Data centers	0	0
Retail Stores	0	0
Distribution Centers	0	0
Co-located data centers	0	0

**C7.7**

**(C7.7) Is your organization able to break down your emissions data for any of the subsidiaries included in your CDP response?**

No

**C7.9**

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

Increased

**C7.9a**

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

	Change in emissions (metric tons CO2e)	Direction of change in emissions	Emissions value (percentage)	Please explain calculation
Change in renewable energy consumption	100000	Decreased	172	In the reporting year, additional consumption of renewable energy reduced emissions by approximately 100,000 metric tons CO2e, and our total Scope 1 and Scope 2 emissions in the previous year were 57,980 tCO2e, therefore we arrived at -172%: $(-100,000/57,980)*100 = -172\%$
Other emissions reduction activities	30000	Decreased	52	In the reporting year, new emissions reductions activities—energy efficiency gains—reduced 30,000 metric tons CO2e, and our total Scope 1 and Scope 2 emissions in the previous year were 57,980 tCO2e, therefore we arrived at -52%: $(-30,000/57,980)*100 = -52\%$
Divestment		<Not Applicable>		
Acquisitions		<Not Applicable>		
Mergers		<Not Applicable>		
Change in output	230220	Increased	225	In the reporting year, our increase in energy consumption due to a change in output had an additional 130,220 tonnes of associated emissions, and our total S1 and S2 emissions in the previous year was 57,980 tCO2e, therefore we arrived at an increase of 225%: $(130,220/57,980)*100 = 225\%$
Change in methodology		<Not Applicable>		
Change in boundary		<Not Applicable>		
Change in physical operating conditions		<Not Applicable>		
Unidentified		<Not Applicable>		
Other		<Not Applicable>		

## C7.9b

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

Market-based

## 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	Yes
Consumption of purchased or acquired steam	Yes
Consumption of purchased or acquired cooling	Yes
Generation of electricity, heat, steam, or cooling	Yes

### C8.2a

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

	Heating value	MWh from renewable sources	MWh from non-renewable sources	Total (renewable and non-renewable) MWh
Consumption of fuel (excluding feedstock)	LHV (lower heating value)	76280	257973	334253
Consumption of purchased or acquired electricity	<Not Applicable>	3112157	0	3112157
Consumption of purchased or acquired heat	<Not Applicable>	0	747	747
Consumption of purchased or acquired steam	<Not Applicable>	0	0	0
Consumption of purchased or acquired cooling	<Not Applicable>	6478	12574	19052
Consumption of self-generated non-fuel renewable energy	<Not Applicable>	50767	<Not Applicable>	50767
Total energy consumption	<Not Applicable>	3245682	271294	3516976

**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.**

**Sustainable biomass**

**Heating value**

LHV

**Total fuel MWh consumed by the organization**

76280

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

76280

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

0

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

<Not Applicable>

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

<Not Applicable>

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

<Not Applicable>

**Comment**

Zeros added for non-activity.

**Other biomass**

**Heating value**

Unable to confirm heating value

**Total fuel MWh consumed by the organization**

0

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

0

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

0

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

<Not Applicable>

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

<Not Applicable>

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

<Not Applicable>

**Comment**

Zeros added for non-activity.

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

**Heating value**

Unable to confirm heating value

**Total fuel MWh consumed by the organization**

0

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

0

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

0

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

<Not Applicable>

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

<Not Applicable>

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

<Not Applicable>

**Comment**

Zeros added for non-activity.

**Coal**

**Heating value**

Unable to confirm heating value

**Total fuel MWh consumed by the organization**

0

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

0

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

0

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

<Not Applicable>

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

<Not Applicable>

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

<Not Applicable>

**Comment**

Zeros added for non-activity.

**Oil**

**Heating value**

LHV

**Total fuel MWh consumed by the organization**

67512

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

0

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

0

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

<Not Applicable>

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

<Not Applicable>

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

<Not Applicable>

**Comment**

Zeros added for non-activity.

**Gas****Heating value**

LHV

**Total fuel MWh consumed by the organization**

188630

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

0

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

188630

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

&lt;Not Applicable&gt;

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

&lt;Not Applicable&gt;

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

&lt;Not Applicable&gt;

**Comment**

Zeros added for non-activity.

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

Unable to confirm heating value

**Total fuel MWh consumed by the organization**

0

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

0

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

0

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

&lt;Not Applicable&gt;

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

&lt;Not Applicable&gt;

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

&lt;Not Applicable&gt;

**Comment**

Zeros added for non-activity.

**Total fuel****Heating value**

LHV

**Total fuel MWh consumed by the organization**

332422

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

76280

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

188670

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

&lt;Not Applicable&gt;

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

&lt;Not Applicable&gt;

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

&lt;Not Applicable&gt;

**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	50767	50767	50767	50767
Heat	188630	188630	0	0
Steam	0	0	0	0
Cooling	0	0	0	0



---

(C8.2g) Provide a breakdown by country/area of your non-fuel energy consumption in the reporting year.

**Country/area**

Australia

**Consumption of purchased electricity (MWh)**

15621

**Consumption of self-generated electricity (MWh)**

0

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

No

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

0

**Consumption of self-generated heat, steam, and cooling (MWh)**

0

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

15621

---

**Country/area**

Austria

**Consumption of purchased electricity (MWh)**

773

**Consumption of self-generated electricity (MWh)**

0

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

No

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

0

**Consumption of self-generated heat, steam, and cooling (MWh)**

0

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

773

---

**Country/area**

Belgium

**Consumption of purchased electricity (MWh)**

773

**Consumption of self-generated electricity (MWh)**

0

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

No

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

0

**Consumption of self-generated heat, steam, and cooling (MWh)**

0

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

773

---

**Country/area**

Brazil

**Consumption of purchased electricity (MWh)**

2085

**Consumption of self-generated electricity (MWh)**

0

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

No

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

0

**Consumption of self-generated heat, steam, and cooling (MWh)**

0

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

2085

---

**Country/area**

Canada

**Consumption of purchased electricity (MWh)**

15213

**Consumption of self-generated electricity (MWh)**

0

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

No

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

0

**Consumption of self-generated heat, steam, and cooling (MWh)**

0

**Total non-fuel energy consumption (MWh) [Auto-calculated]**15213

---

**Country/area**

Chile

**Consumption of purchased electricity (MWh)**

103

**Consumption of self-generated electricity (MWh)**

0

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

No

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

0

**Consumption of self-generated heat, steam, and cooling (MWh)**

0

**Total non-fuel energy consumption (MWh) [Auto-calculated]**103

---

**Country/area**

China

**Consumption of purchased electricity (MWh)**

167242

**Consumption of self-generated electricity (MWh)**

70

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

No

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

136

**Consumption of self-generated heat, steam, and cooling (MWh)**

0

**Total non-fuel energy consumption (MWh) [Auto-calculated]**167448

---

**Country/area**

Colombia

**Consumption of purchased electricity (MWh)**

187

**Consumption of self-generated electricity (MWh)**

0

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

No

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

0

**Consumption of self-generated heat, steam, and cooling (MWh)**

0

**Total non-fuel energy consumption (MWh) [Auto-calculated]**187

---

**Country/area**

Czechia

**Consumption of purchased electricity (MWh)**

3014

**Consumption of self-generated electricity (MWh)**

0

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

No

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

0

**Consumption of self-generated heat, steam, and cooling (MWh)**

0

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

3014

---

**Country/area**

Denmark

**Consumption of purchased electricity (MWh)**

28075

**Consumption of self-generated electricity (MWh)**

0

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

No

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

0

**Consumption of self-generated heat, steam, and cooling (MWh)**

0

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

28075

---

**Country/area**

Egypt

**Consumption of purchased electricity (MWh)**

2

**Consumption of self-generated electricity (MWh)**

0

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

No

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

0

**Consumption of self-generated heat, steam, and cooling (MWh)**

0

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

2

---

**Country/area**

Finland

**Consumption of purchased electricity (MWh)**

98

**Consumption of self-generated electricity (MWh)**

0

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

No

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

0

**Consumption of self-generated heat, steam, and cooling (MWh)**

0

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

98

---

**Country/area**

France

**Consumption of purchased electricity (MWh)**

9961

**Consumption of self-generated electricity (MWh)**

3

---

Is this electricity consumption excluded from your RE100 commitment?

No

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

0

Consumption of self-generated heat, steam, and cooling (MWh)

0

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

9964

---

Country/area

Germany

Consumption of purchased electricity (MWh)

25880

Consumption of self-generated electricity (MWh)

0

Is this electricity consumption excluded from your RE100 commitment?

No

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

0

Consumption of self-generated heat, steam, and cooling (MWh)

0

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

25880

---

Country/area

Greece

Consumption of purchased electricity (MWh)

3

Consumption of self-generated electricity (MWh)

0

Is this electricity consumption excluded from your RE100 commitment?

No

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

0

Consumption of self-generated heat, steam, and cooling (MWh)

0

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

3

---

Country/area

Hong Kong SAR, China

Consumption of purchased electricity (MWh)

16995

Consumption of self-generated electricity (MWh)

0

Is this electricity consumption excluded from your RE100 commitment?

No

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

0

Consumption of self-generated heat, steam, and cooling (MWh)

0

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

16995

---

Country/area

Hungary

Consumption of purchased electricity (MWh)

175

Consumption of self-generated electricity (MWh)

0

Is this electricity consumption excluded from your RE100 commitment?

No

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

0

---

Consumption of self-generated heat, steam, and cooling (MWh)

0

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

175

---

Country/area

India

Consumption of purchased electricity (MWh)

26376

Consumption of self-generated electricity (MWh)

0

Is this electricity consumption excluded from your RE100 commitment?

No

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

4000

Consumption of self-generated heat, steam, and cooling (MWh)

0

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

30376

---

Country/area

Indonesia

Consumption of purchased electricity (MWh)

396

Consumption of self-generated electricity (MWh)

0

Is this electricity consumption excluded from your RE100 commitment?

No

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

0

Consumption of self-generated heat, steam, and cooling (MWh)

0

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

396

---

Country/area

Ireland

Consumption of purchased electricity (MWh)

17162

Consumption of self-generated electricity (MWh)

0

Is this electricity consumption excluded from your RE100 commitment?

No

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

0

Consumption of self-generated heat, steam, and cooling (MWh)

0

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

17162

---

Country/area

Israel

Consumption of purchased electricity (MWh)

32113

Consumption of self-generated electricity (MWh)

0

Is this electricity consumption excluded from your RE100 commitment?

No

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

2065

Consumption of self-generated heat, steam, and cooling (MWh)

0

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

34178

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---

**Country/area**

Italy

**Consumption of purchased electricity (MWh)**

9340

**Consumption of self-generated electricity (MWh)**

0

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

No

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

0

**Consumption of self-generated heat, steam, and cooling (MWh)**

0

**Total non-fuel energy consumption (MWh) [Auto-calculated]**9340

---

**Country/area**

Japan

**Consumption of purchased electricity (MWh)**

30468

**Consumption of self-generated electricity (MWh)**

360

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

No

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

11980

**Consumption of self-generated heat, steam, and cooling (MWh)**

0

**Total non-fuel energy consumption (MWh) [Auto-calculated]**42808

---

**Country/area**

Lithuania

**Consumption of purchased electricity (MWh)**

6

**Consumption of self-generated electricity (MWh)**

0

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

No

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

0

**Consumption of self-generated heat, steam, and cooling (MWh)**

0

**Total non-fuel energy consumption (MWh) [Auto-calculated]**6

---

**Country/area**

Malaysia

**Consumption of purchased electricity (MWh)**

589

**Consumption of self-generated electricity (MWh)**

0

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

No

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

0

**Consumption of self-generated heat, steam, and cooling (MWh)**

0

**Total non-fuel energy consumption (MWh) [Auto-calculated]**589

---

**Country/area**

Mexico

**Consumption of purchased electricity (MWh)**

1282

**Consumption of self-generated electricity (MWh)**

0

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

No

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

0

**Consumption of self-generated heat, steam, and cooling (MWh)**

0

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

1282

---

**Country/area**

Netherlands

**Consumption of purchased electricity (MWh)**

24319

**Consumption of self-generated electricity (MWh)**

0

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

No

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

0

**Consumption of self-generated heat, steam, and cooling (MWh)**

0

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

24319

---

**Country/area**

New Zealand

**Consumption of purchased electricity (MWh)**

412

**Consumption of self-generated electricity (MWh)**

0

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

No

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

0

**Consumption of self-generated heat, steam, and cooling (MWh)**

0

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

412

---

**Country/area**

Norway

**Consumption of purchased electricity (MWh)**

120

**Consumption of self-generated electricity (MWh)**

0

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

No

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

0

**Consumption of self-generated heat, steam, and cooling (MWh)**

0

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

120

---

**Country/area**

Philippines

**Consumption of purchased electricity (MWh)**

123

**Consumption of self-generated electricity (MWh)**

0

Is this electricity consumption excluded from your RE100 commitment?

No

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

0

Consumption of self-generated heat, steam, and cooling (MWh)

0

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

123

---

Country/area

Poland

Consumption of purchased electricity (MWh)

94

Consumption of self-generated electricity (MWh)

0

Is this electricity consumption excluded from your RE100 commitment?

No

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

0

Consumption of self-generated heat, steam, and cooling (MWh)

0

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

94

---

Country/area

Portugal

Consumption of purchased electricity (MWh)

83

Consumption of self-generated electricity (MWh)

0

Is this electricity consumption excluded from your RE100 commitment?

No

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

0

Consumption of self-generated heat, steam, and cooling (MWh)

0

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

83

---

Country/area

Romania

Consumption of purchased electricity (MWh)

7

Consumption of self-generated electricity (MWh)

0

Is this electricity consumption excluded from your RE100 commitment?

No

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

0

Consumption of self-generated heat, steam, and cooling (MWh)

0

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

7

---

Country/area

Russian Federation

Consumption of purchased electricity (MWh)

1745

Consumption of self-generated electricity (MWh)

0

Is this electricity consumption excluded from your RE100 commitment?

No

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

0

---



Consumption of self-generated heat, steam, and cooling (MWh)

0

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

1745

---

Country/area

Saudi Arabia

Consumption of purchased electricity (MWh)

81

Consumption of self-generated electricity (MWh)

0

Is this electricity consumption excluded from your RE100 commitment?

No

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

0

Consumption of self-generated heat, steam, and cooling (MWh)

0

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

81

---

Country/area

Singapore

Consumption of purchased electricity (MWh)

28913

Consumption of self-generated electricity (MWh)

1080

Is this electricity consumption excluded from your RE100 commitment?

No

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

0

Consumption of self-generated heat, steam, and cooling (MWh)

0

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

29993

---

Country/area

South Africa

Consumption of purchased electricity (MWh)

838

Consumption of self-generated electricity (MWh)

0

Is this electricity consumption excluded from your RE100 commitment?

No

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

0

Consumption of self-generated heat, steam, and cooling (MWh)

0

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

838

---

Country/area

Republic of Korea

Consumption of purchased electricity (MWh)

6642

Consumption of self-generated electricity (MWh)

0

Is this electricity consumption excluded from your RE100 commitment?

No

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

0

Consumption of self-generated heat, steam, and cooling (MWh)

0

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

6642

---

---

**Country/area**

Spain

**Consumption of purchased electricity (MWh)**

10521

**Consumption of self-generated electricity (MWh)**

0

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

No

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

0

**Consumption of self-generated heat, steam, and cooling (MWh)**

0

**Total non-fuel energy consumption (MWh) [Auto-calculated]**10521

---

**Country/area**

Sweden

**Consumption of purchased electricity (MWh)**

3558

**Consumption of self-generated electricity (MWh)**

0

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

No

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

0

**Consumption of self-generated heat, steam, and cooling (MWh)**

0

**Total non-fuel energy consumption (MWh) [Auto-calculated]**3558

---

**Country/area**

Switzerland

**Consumption of purchased electricity (MWh)**

890

**Consumption of self-generated electricity (MWh)**

0

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

No

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

0

**Consumption of self-generated heat, steam, and cooling (MWh)**

0

**Total non-fuel energy consumption (MWh) [Auto-calculated]**890

---

**Country/area**

Taiwan, China

**Consumption of purchased electricity (MWh)**

53987

**Consumption of self-generated electricity (MWh)**

86

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

No

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

0

**Consumption of self-generated heat, steam, and cooling (MWh)**

0

**Total non-fuel energy consumption (MWh) [Auto-calculated]**54073

---

**Country/area**

Thailand

**Consumption of purchased electricity (MWh)**

884

**Consumption of self-generated electricity (MWh)**

0

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

No

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

0

**Consumption of self-generated heat, steam, and cooling (MWh)**

0

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

884

---

**Country/area**

Turkey

**Consumption of purchased electricity (MWh)**

2623

**Consumption of self-generated electricity (MWh)**

0

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

No

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

0

**Consumption of self-generated heat, steam, and cooling (MWh)**

0

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

2623

---

**Country/area**

United Arab Emirates

**Consumption of purchased electricity (MWh)**

6887

**Consumption of self-generated electricity (MWh)**

0

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

No

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

0

**Consumption of self-generated heat, steam, and cooling (MWh)**

0

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

6887

---

**Country/area**

Ukraine

**Consumption of purchased electricity (MWh)**

2

**Consumption of self-generated electricity (MWh)**

0

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

No

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

0

**Consumption of self-generated heat, steam, and cooling (MWh)**

0

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

2

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**Country/area**

United Kingdom of Great Britain and Northern Ireland

**Consumption of purchased electricity (MWh)**

36108

**Consumption of self-generated electricity (MWh)**

0

---

Is this electricity consumption excluded from your RE100 commitment?

No

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

0

Consumption of self-generated heat, steam, and cooling (MWh)

0

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

36108

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Country/area

Viet Nam

Consumption of purchased electricity (MWh)

274

Consumption of self-generated electricity (MWh)

0

Is this electricity consumption excluded from your RE100 commitment?

No

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

0

Consumption of self-generated heat, steam, and cooling (MWh)

0

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

274

---

Country/area

United States of America

Consumption of purchased electricity (MWh)

2551160

Consumption of self-generated electricity (MWh)

27120

Is this electricity consumption excluded from your RE100 commitment?

No

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

0

Consumption of self-generated heat, steam, and cooling (MWh)

0

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

2578280

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## C8.2h

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

Country/area of consumption of purchased renewable electricity

United States of America

Sourcing method

Financial (virtual) power purchase agreement (VPPA)

Renewable electricity technology type

Solar

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

112744

Tracking instrument used

US-REC

Country/area of origin (generation) of purchased renewable electricity

United States of America

Are you able to report the commissioning or re-powering year of the energy generation facility?

Yes

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

2012

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

2021

Supply arrangement start year

2012

---

**Additional, voluntary label associated with purchased renewable electricity**

Green-e

**Comment**

---

**Country/area of consumption of purchased renewable electricity**

United States of America

**Sourcing method**

Financial (virtual) power purchase agreement (VPPA)

**Renewable electricity technology type**

Renewable hydrogen fuel cell

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

13640

**Tracking instrument used**

US-REC

**Country/area of origin (generation) of purchased renewable electricity**

United States of America

**Are you able to report the commissioning or re-powering year of the energy generation facility?**

Yes

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

2012

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

2021

**Supply arrangement start year**

2012

**Additional, voluntary label associated with purchased renewable electricity**

No additional, voluntary label

**Comment**

---

**Country/area of consumption of purchased renewable electricity**

United States of America

**Sourcing method**

Financial (virtual) power purchase agreement (VPPA)

**Renewable electricity technology type**

Small hydropower (<25 MW)

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

2000

**Tracking instrument used**

US-REC

**Country/area of origin (generation) of purchased renewable electricity**

United States of America

**Are you able to report the commissioning or re-powering year of the energy generation facility?**

Yes

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

2015

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

2022

**Supply arrangement start year**

2015

**Additional, voluntary label associated with purchased renewable electricity**

No additional, voluntary label

**Comment**

---

**Country/area of consumption of purchased renewable electricity**

United States of America

**Sourcing method**

Financial (virtual) power purchase agreement (VPPA)

**Renewable electricity technology type**

Small hydropower (<25 MW)

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

287

**Tracking instrument used**

US-REC

---

**Country/area of origin (generation) of purchased renewable electricity**

United States of America

**Are you able to report the commissioning or re-powering year of the energy generation facility?**

Yes

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

2015

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

2022

**Supply arrangement start year**

2015

**Additional, voluntary label associated with purchased renewable electricity**

No additional, voluntary label

**Comment**

---

**Country/area of consumption of purchased renewable electricity**

United States of America

**Sourcing method**

Financial (virtual) power purchase agreement (VPPA)

**Renewable electricity technology type**

Solar

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

125484

**Tracking instrument used**

US-REC

**Country/area of origin (generation) of purchased renewable electricity**

United States of America

**Are you able to report the commissioning or re-powering year of the energy generation facility?**

Yes

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

2016

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

2021

**Supply arrangement start year**

2016

**Additional, voluntary label associated with purchased renewable electricity**

No additional, voluntary label

**Comment**

---

**Country/area of consumption of purchased renewable electricity**

United States of America

**Sourcing method**

Financial (virtual) power purchase agreement (VPPA)

**Renewable electricity technology type**

Solar

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

130005

**Tracking instrument used**

US-REC

**Country/area of origin (generation) of purchased renewable electricity**

United States of America

**Are you able to report the commissioning or re-powering year of the energy generation facility?**

Yes

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

2016

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

2021

**Supply arrangement start year**

2016

**Additional, voluntary label associated with purchased renewable electricity**

No additional, voluntary label

**Comment**

---

**Country/area of consumption of purchased renewable electricity**

Canada

**Sourcing method**

Financial (virtual) power purchase agreement (VPPA)

**Renewable electricity technology type**

Solar

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

14560

**Tracking instrument used**

US-REC

**Country/area of origin (generation) of purchased renewable electricity**

United States of America

**Are you able to report the commissioning or re-powering year of the energy generation facility?**

Yes

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

2016

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

2021

**Supply arrangement start year**

2016

**Additional, voluntary label associated with purchased renewable electricity**

No additional, voluntary label

**Comment**

---

**Country/area of consumption of purchased renewable electricity**

United States of America

**Sourcing method**

Physical power purchase agreement (physical PPA) with a grid-connected generator

**Renewable electricity technology type**

Solar

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

157390

**Tracking instrument used**

US-REC

**Country/area of origin (generation) of purchased renewable electricity**

United States of America

**Are you able to report the commissioning or re-powering year of the energy generation facility?**

Yes

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

2017

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

2021

**Supply arrangement start year**

2017

**Additional, voluntary label associated with purchased renewable electricity**

No additional, voluntary label

**Comment**

---

**Country/area of consumption of purchased renewable electricity**

United States of America

**Sourcing method**

Financial (virtual) power purchase agreement (VPPA)

**Renewable electricity technology type**

Solar

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

129106

**Tracking instrument used**

US-REC

**Country/area of origin (generation) of purchased renewable electricity**

United States of America

**Are you able to report the commissioning or re-powering year of the energy generation facility?**

Yes

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

2017

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

2021

**Supply arrangement start year**

2017

**Additional, voluntary label associated with purchased renewable electricity**

No additional, voluntary label

**Comment**

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**Country/area of consumption of purchased renewable electricity**

Canada

**Sourcing method**

Financial (virtual) power purchase agreement (VPPA)

**Renewable electricity technology type**

Solar

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

670

**Tracking instrument used**

US-REC

**Country/area of origin (generation) of purchased renewable electricity**

United States of America

**Are you able to report the commissioning or re-powering year of the energy generation facility?**

Yes

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

2017

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

2021

**Supply arrangement start year**

2017

**Additional, voluntary label associated with purchased renewable electricity**

No additional, voluntary label

**Comment**

---

**Country/area of consumption of purchased renewable electricity**

United States of America

**Sourcing method**

Financial (virtual) power purchase agreement (VPPA)

**Renewable electricity technology type**

Solar

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

33698

**Tracking instrument used**

US-REC

**Country/area of origin (generation) of purchased renewable electricity**

United States of America

**Are you able to report the commissioning or re-powering year of the energy generation facility?**

Yes

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

2017

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

2021

**Supply arrangement start year**

2017

**Additional, voluntary label associated with purchased renewable electricity**

No additional, voluntary label

**Comment**

---

**Country/area of consumption of purchased renewable electricity**

United States of America

**Sourcing method**

Physical power purchase agreement (physical PPA) with a grid-connected generator



**Renewable electricity technology type**

Solar

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

89150

**Tracking instrument used**

US-REC

**Country/area of origin (generation) of purchased renewable electricity**

United States of America

**Are you able to report the commissioning or re-powering year of the energy generation facility?**

Yes

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

2017

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

2021

**Supply arrangement start year**

2017

**Additional, voluntary label associated with purchased renewable electricity**

No additional, voluntary label

**Comment**

---

**Country/area of consumption of purchased renewable electricity**

United States of America

**Sourcing method**

Physical power purchase agreement (physical PPA) with a grid-connected generator

**Renewable electricity technology type**

Wind

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

508410

**Tracking instrument used**

US-REC

**Country/area of origin (generation) of purchased renewable electricity**

United States of America

**Are you able to report the commissioning or re-powering year of the energy generation facility?**

Yes

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

2019

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

2021

**Supply arrangement start year**

2019

**Additional, voluntary label associated with purchased renewable electricity**

No additional, voluntary label

**Comment**

---

**Country/area of consumption of purchased renewable electricity**

United States of America

**Sourcing method**

Financial (virtual) power purchase agreement (VPPA)

**Renewable electricity technology type**

Wind

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

284196

**Tracking instrument used**

US-REC

**Country/area of origin (generation) of purchased renewable electricity**

United States of America

**Are you able to report the commissioning or re-powering year of the energy generation facility?**

Yes

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

2019

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

2021

**Supply arrangement start year**

2019

**Additional, voluntary label associated with purchased renewable electricity**

No additional, voluntary label

**Comment**

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**Country/area of consumption of purchased renewable electricity**

Germany

**Sourcing method**

Financial (virtual) power purchase agreement (VPPA)

**Renewable electricity technology type**

Wind

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

8320

**Tracking instrument used**

GO

**Country/area of origin (generation) of purchased renewable electricity**

Denmark

**Are you able to report the commissioning or re-powering year of the energy generation facility?**

Yes

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

2019

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

2021

**Supply arrangement start year**

2019

**Additional, voluntary label associated with purchased renewable electricity**

No additional, voluntary label

**Comment**

---

**Country/area of consumption of purchased renewable electricity**

Denmark

**Sourcing method**

Financial (virtual) power purchase agreement (VPPA)

**Renewable electricity technology type**

Wind

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

25525

**Tracking instrument used**

GO

**Country/area of origin (generation) of purchased renewable electricity**

Denmark

**Are you able to report the commissioning or re-powering year of the energy generation facility?**

Yes

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

2019

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

2021

**Supply arrangement start year**

2019

**Additional, voluntary label associated with purchased renewable electricity**

No additional, voluntary label

**Comment**

---

**Country/area of consumption of purchased renewable electricity**

Romania

**Sourcing method**

Financial (virtual) power purchase agreement (VPPA)

**Renewable electricity technology type**

Wind

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

10

**Tracking instrument used**

GO

**Country/area of origin (generation) of purchased renewable electricity**

Denmark

**Are you able to report the commissioning or re-powering year of the energy generation facility?**

Yes

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

2019

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

2021

**Supply arrangement start year**

2019

**Additional, voluntary label associated with purchased renewable electricity**

No additional, voluntary label

**Comment**

---

**Country/area of consumption of purchased renewable electricity**

Austria

**Sourcing method**

Financial (virtual) power purchase agreement (VPPA)

**Renewable electricity technology type**

Wind

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

810

**Tracking instrument used**

GO

**Country/area of origin (generation) of purchased renewable electricity**

Denmark

**Are you able to report the commissioning or re-powering year of the energy generation facility?**

Yes

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

2019

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

2021

**Supply arrangement start year**

2019

**Additional, voluntary label associated with purchased renewable electricity**

No additional, voluntary label

**Comment**

---

**Country/area of consumption of purchased renewable electricity**

Belgium

**Sourcing method**

Financial (virtual) power purchase agreement (VPPA)

**Renewable electricity technology type**

Wind

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

370

**Tracking instrument used**

GO

**Country/area of origin (generation) of purchased renewable electricity**

Denmark

**Are you able to report the commissioning or re-powering year of the energy generation facility?**

Yes

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

2019

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

2021

**Supply arrangement start year**

2019

**Additional, voluntary label associated with purchased renewable electricity**

No additional, voluntary label

**Comment**

---

**Country/area of consumption of purchased renewable electricity**

Czechia

**Sourcing method**

Financial (virtual) power purchase agreement (VPPA)

**Renewable electricity technology type**

Wind

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

3035

**Tracking instrument used**

GO

**Country/area of origin (generation) of purchased renewable electricity**

Denmark

**Are you able to report the commissioning or re-powering year of the energy generation facility?**

Yes

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

2019

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

2021

**Supply arrangement start year**

2019

**Additional, voluntary label associated with purchased renewable electricity**

No additional, voluntary label

**Comment**

---

**Country/area of consumption of purchased renewable electricity**

Hungary

**Sourcing method**

Financial (virtual) power purchase agreement (VPPA)

**Renewable electricity technology type**

Wind

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

180

**Tracking instrument used**

GO

**Country/area of origin (generation) of purchased renewable electricity**

Denmark

**Are you able to report the commissioning or re-powering year of the energy generation facility?**

Yes

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

2019

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

2021

**Supply arrangement start year**

2019

**Additional, voluntary label associated with purchased renewable electricity**

No additional, voluntary label

**Comment**

---

**Country/area of consumption of purchased renewable electricity**

Norway

**Sourcing method**

Financial (virtual) power purchase agreement (VPPA)

**Renewable electricity technology type**

Wind

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

125

**Tracking instrument used**

GO

**Country/area of origin (generation) of purchased renewable electricity**

Denmark

**Are you able to report the commissioning or re-powering year of the energy generation facility?**

Yes

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

2019

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

2021

**Supply arrangement start year**

2019

**Additional, voluntary label associated with purchased renewable electricity**

No additional, voluntary label

**Comment**

---

**Country/area of consumption of purchased renewable electricity**

Ukraine

**Sourcing method**

Financial (virtual) power purchase agreement (VPPA)

**Renewable electricity technology type**

Wind

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

2

**Tracking instrument used**

GO

**Country/area of origin (generation) of purchased renewable electricity**

Denmark

**Are you able to report the commissioning or re-powering year of the energy generation facility?**

Yes

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

2019

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

2021

**Supply arrangement start year**

2019

**Additional, voluntary label associated with purchased renewable electricity**

No additional, voluntary label

**Comment**

---

**Country/area of consumption of purchased renewable electricity**

Poland

**Sourcing method**

Financial (virtual) power purchase agreement (VPPA)

**Renewable electricity technology type**

Wind

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

95

**Tracking instrument used**

GO

**Country/area of origin (generation) of purchased renewable electricity**

Denmark

**Are you able to report the commissioning or re-powering year of the energy generation facility?**

Yes

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

2019

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

2021

**Supply arrangement start year**

2019

**Additional, voluntary label associated with purchased renewable electricity**

No additional, voluntary label

**Comment**

---

**Country/area of consumption of purchased renewable electricity**

France

**Sourcing method**

Financial (virtual) power purchase agreement (VPPA)

**Renewable electricity technology type**

Wind

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

170

**Tracking instrument used**

GO

**Country/area of origin (generation) of purchased renewable electricity**

Denmark

**Are you able to report the commissioning or re-powering year of the energy generation facility?**

Yes

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

2019

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

2021

**Supply arrangement start year**

2019

**Additional, voluntary label associated with purchased renewable electricity**

No additional, voluntary label

**Comment**

---

**Country/area of consumption of purchased renewable electricity**

Finland

**Sourcing method**

Financial (virtual) power purchase agreement (VPPA)

**Renewable electricity technology type**

Wind

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

100

**Tracking instrument used**

GO

**Country/area of origin (generation) of purchased renewable electricity**

Denmark

**Are you able to report the commissioning or re-powering year of the energy generation facility?**

Yes

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

2019

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

2021

**Supply arrangement start year**

2019

**Additional, voluntary label associated with purchased renewable electricity**

No additional, voluntary label

**Comment**

---

**Country/area of consumption of purchased renewable electricity**

Lithuania

**Sourcing method**

Financial (virtual) power purchase agreement (VPPA)

**Renewable electricity technology type**

Wind

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

10

**Tracking instrument used**

GO

**Country/area of origin (generation) of purchased renewable electricity**

Denmark

**Are you able to report the commissioning or re-powering year of the energy generation facility?**

Yes

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

2019

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

2021

**Supply arrangement start year**

2019

**Additional, voluntary label associated with purchased renewable electricity**

No additional, voluntary label

**Comment**

---

**Country/area of consumption of purchased renewable electricity**

Portugal

**Sourcing method**

Financial (virtual) power purchase agreement (VPPA)

**Renewable electricity technology type**

Wind

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

65

**Tracking instrument used**

GO

**Country/area of origin (generation) of purchased renewable electricity**

Denmark

**Are you able to report the commissioning or re-powering year of the energy generation facility?**

Yes

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

2019

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

2021

**Supply arrangement start year**

2019

**Additional, voluntary label associated with purchased renewable electricity**

No additional, voluntary label

**Comment**

---

**Country/area of consumption of purchased renewable electricity**

Greece

**Sourcing method**

Financial (virtual) power purchase agreement (VPPA)

**Renewable electricity technology type**

Wind

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

3

**Tracking instrument used**

GO

**Country/area of origin (generation) of purchased renewable electricity**

Denmark

**Are you able to report the commissioning or re-powering year of the energy generation facility?**

Yes

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

2019

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

2021

**Supply arrangement start year**

2019

**Additional, voluntary label associated with purchased renewable electricity**

No additional, voluntary label

**Comment**

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**Country/area of consumption of purchased renewable electricity**

Netherlands

**Sourcing method**

Financial (virtual) power purchase agreement (VPPA)

**Renewable electricity technology type**

Wind

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

160

**Tracking instrument used**

GO

**Country/area of origin (generation) of purchased renewable electricity**

Denmark

**Are you able to report the commissioning or re-powering year of the energy generation facility?**

Yes

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

2019

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

2021

**Supply arrangement start year**

2019

**Additional, voluntary label associated with purchased renewable electricity**

No additional, voluntary label

**Comment**

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**Country/area of consumption of purchased renewable electricity**

Sweden

**Sourcing method**

Financial (virtual) power purchase agreement (VPPA)

**Renewable electricity technology type**

Wind

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

1270

**Tracking instrument used**

GO

**Country/area of origin (generation) of purchased renewable electricity**

Denmark

**Are you able to report the commissioning or re-powering year of the energy generation facility?**

Yes

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

2019

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

2021

**Supply arrangement start year**

2019

**Additional, voluntary label associated with purchased renewable electricity**

No additional, voluntary label

**Comment**

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**Country/area of consumption of purchased renewable electricity**

Switzerland

**Sourcing method**

Financial (virtual) power purchase agreement (VPPA)

**Renewable electricity technology type**

Wind

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

1320

**Tracking instrument used**

GO

**Country/area of origin (generation) of purchased renewable electricity**

Denmark

**Are you able to report the commissioning or re-powering year of the energy generation facility?**

Yes

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

2019

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

2021

**Supply arrangement start year**

2019



**Additional, voluntary label associated with purchased renewable electricity**

No additional, voluntary label

**Comment**

---

**Country/area of consumption of purchased renewable electricity**

Ireland

**Sourcing method**

Financial (virtual) power purchase agreement (VPPA)

**Renewable electricity technology type**

Wind

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

570

**Tracking instrument used**

GO

**Country/area of origin (generation) of purchased renewable electricity**

Denmark

**Are you able to report the commissioning or re-powering year of the energy generation facility?**

Yes

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

2019

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

2021

**Supply arrangement start year**

2019

**Additional, voluntary label associated with purchased renewable electricity**

No additional, voluntary label

**Comment**

---

**Country/area of consumption of purchased renewable electricity**

United Kingdom of Great Britain and Northern Ireland

**Sourcing method**

Financial (virtual) power purchase agreement (VPPA)

**Renewable electricity technology type**

Wind

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

10935

**Tracking instrument used**

GO

**Country/area of origin (generation) of purchased renewable electricity**

Denmark

**Are you able to report the commissioning or re-powering year of the energy generation facility?**

Yes

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

2019

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

2021

**Supply arrangement start year**

2019

**Additional, voluntary label associated with purchased renewable electricity**

No additional, voluntary label

**Comment**

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**Country/area of consumption of purchased renewable electricity**

Israel

**Sourcing method**

Unbundled procurement of Energy Attribute Certificates (EACs)

**Renewable electricity technology type**

Wind

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

14278

**Tracking instrument used**

I-REC

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**Country/area of origin (generation) of purchased renewable electricity**

Denmark

**Are you able to report the commissioning or re-powering year of the energy generation facility?**

Yes

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

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

2022

**Supply arrangement start year**

2022

**Additional, voluntary label associated with purchased renewable electricity**

No additional, voluntary label

**Comment**

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**Country/area of consumption of purchased renewable electricity**

Italy

**Sourcing method**

Financial (virtual) power purchase agreement (VPPA)

**Renewable electricity technology type**

Wind

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

1105

**Tracking instrument used**

GO

**Country/area of origin (generation) of purchased renewable electricity**

Denmark

**Are you able to report the commissioning or re-powering year of the energy generation facility?**

Yes

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

2019

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

2021

**Supply arrangement start year**

2019

**Additional, voluntary label associated with purchased renewable electricity**

No additional, voluntary label

**Comment**

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**Country/area of consumption of purchased renewable electricity**

Russian Federation

**Sourcing method**

Financial (virtual) power purchase agreement (VPPA)

**Renewable electricity technology type**

Wind

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

1765

**Tracking instrument used**

GO

**Country/area of origin (generation) of purchased renewable electricity**

Denmark

**Are you able to report the commissioning or re-powering year of the energy generation facility?**

Yes

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

2019

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

2021

**Supply arrangement start year**

2019

**Additional, voluntary label associated with purchased renewable electricity**

No additional, voluntary label

**Comment**

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**Country/area of consumption of purchased renewable electricity**

Spain

**Sourcing method**

Financial (virtual) power purchase agreement (VPPA)

**Renewable electricity technology type**

Wind

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

2580

**Tracking instrument used**

GO

**Country/area of origin (generation) of purchased renewable electricity**

Denmark

**Are you able to report the commissioning or re-powering year of the energy generation facility?**

Yes

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

2019

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

2021

**Supply arrangement start year**

2019

**Additional, voluntary label associated with purchased renewable electricity**

No additional, voluntary label

**Comment**

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**Country/area of consumption of purchased renewable electricity**

United States of America

**Sourcing method**

Financial (virtual) power purchase agreement (VPPA)

**Renewable electricity technology type**

Solar

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

17000

**Tracking instrument used**

US-REC

**Country/area of origin (generation) of purchased renewable electricity**

United States of America

**Are you able to report the commissioning or re-powering year of the energy generation facility?**

Yes

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

2020

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

2021

**Supply arrangement start year**

2020

**Additional, voluntary label associated with purchased renewable electricity**

No additional, voluntary label

**Comment**

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**Country/area of consumption of purchased renewable electricity**

United States of America

**Sourcing method**

Financial (virtual) power purchase agreement (VPPA)

**Renewable electricity technology type**

Solar

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

74100

**Tracking instrument used**

US-REC

**Country/area of origin (generation) of purchased renewable electricity**

United States of America

**Are you able to report the commissioning or re-powering year of the energy generation facility?**

Yes

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

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2019

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

2021

**Supply arrangement start year**

2019

**Additional, voluntary label associated with purchased renewable electricity**

No additional, voluntary label

**Comment**

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**Country/area of consumption of purchased renewable electricity**

United States of America

**Sourcing method**

Project-specific contract with an electricity supplier

**Renewable electricity technology type**

Solar

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

734443

**Tracking instrument used**

US-REC

**Country/area of origin (generation) of purchased renewable electricity**

United States of America

**Are you able to report the commissioning or re-powering year of the energy generation facility?**

Yes

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

2015

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

2021

**Supply arrangement start year**

2015

**Additional, voluntary label associated with purchased renewable electricity**

Green-e

**Comment**

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**Country/area of consumption of purchased renewable electricity**

United States of America

**Sourcing method**

Project-specific contract with an electricity supplier

**Renewable electricity technology type**

Solar

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

17555

**Tracking instrument used**

US-REC

**Country/area of origin (generation) of purchased renewable electricity**

United States of America

**Are you able to report the commissioning or re-powering year of the energy generation facility?**

Yes

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

2015

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

2021

**Supply arrangement start year**

2015

**Additional, voluntary label associated with purchased renewable electricity**

No additional, voluntary label

**Comment**

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**Country/area of consumption of purchased renewable electricity**

Taiwan, China

**Sourcing method**

Other, please specify (Investment)

**Renewable electricity technology type**

Solar

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

5080

**Tracking instrument used**

Contract

**Country/area of origin (generation) of purchased renewable electricity**

China

**Are you able to report the commissioning or re-powering year of the energy generation facility?**

Yes

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

2015

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

2021

**Supply arrangement start year**

2015

**Additional, voluntary label associated with purchased renewable electricity**

No additional, voluntary label

**Comment**

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**Country/area of consumption of purchased renewable electricity**

Singapore

**Sourcing method**

Project-specific contract with an electricity supplier

**Renewable electricity technology type**

Solar

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

15784

**Tracking instrument used**

TIGR

**Country/area of origin (generation) of purchased renewable electricity**

Singapore

**Are you able to report the commissioning or re-powering year of the energy generation facility?**

Yes

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

2016

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

2021

**Supply arrangement start year**

2016

**Additional, voluntary label associated with purchased renewable electricity**

No additional, voluntary label

**Comment**

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**Country/area of consumption of purchased renewable electricity**

Republic of Korea

**Sourcing method**

Project-specific contract with an electricity supplier

**Renewable electricity technology type**

Solar

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

475

**Tracking instrument used**

TIGR

**Country/area of origin (generation) of purchased renewable electricity**

Singapore

**Are you able to report the commissioning or re-powering year of the energy generation facility?**

Yes

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

2016

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

2021

**Supply arrangement start year**

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2016

**Additional, voluntary label associated with purchased renewable electricity**

No additional, voluntary label

**Comment**

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**Country/area of consumption of purchased renewable electricity**

Turkey

**Sourcing method**

Unbundled procurement of Energy Attribute Certificates (EACs)

**Renewable electricity technology type**

Solar

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

4610

**Tracking instrument used**

Contract

**Country/area of origin (generation) of purchased renewable electricity**

Turkey

**Are you able to report the commissioning or re-powering year of the energy generation facility?**

Yes

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

2017

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

2021

**Supply arrangement start year**

2017

**Additional, voluntary label associated with purchased renewable electricity**

No additional, voluntary label

**Comment**

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**Country/area of consumption of purchased renewable electricity**

India

**Sourcing method**

Unbundled procurement of Energy Attribute Certificates (EACs)

**Renewable electricity technology type**

Solar

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

2319

**Tracking instrument used**

I-REC

**Country/area of origin (generation) of purchased renewable electricity**

India

**Are you able to report the commissioning or re-powering year of the energy generation facility?**

Yes

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

2017

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

2021

**Supply arrangement start year**

2017

**Additional, voluntary label associated with purchased renewable electricity**

No additional, voluntary label

**Comment**

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**Country/area of consumption of purchased renewable electricity**

Israel

**Sourcing method**

Unbundled procurement of Energy Attribute Certificates (EACs)

**Renewable electricity technology type**

Solar

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

17837

**Tracking instrument used**

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I-REC

**Country/area of origin (generation) of purchased renewable electricity**

Israel

**Are you able to report the commissioning or re-powering year of the energy generation facility?**

Yes

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

2018

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

2021

**Supply arrangement start year**

2018

**Additional, voluntary label associated with purchased renewable electricity**

No additional, voluntary label

**Comment**

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**Country/area of consumption of purchased renewable electricity**

Brazil

**Sourcing method**

Unbundled procurement of Energy Attribute Certificates (EACs)

**Renewable electricity technology type**

Solar

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

1860

**Tracking instrument used**

I-REC

**Country/area of origin (generation) of purchased renewable electricity**

Brazil

**Are you able to report the commissioning or re-powering year of the energy generation facility?**

Yes

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

2018

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

2021

**Supply arrangement start year**

2018

**Additional, voluntary label associated with purchased renewable electricity**

No additional, voluntary label

**Comment**

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**Country/area of consumption of purchased renewable electricity**

Chile

**Sourcing method**

Unbundled procurement of Energy Attribute Certificates (EACs)

**Renewable electricity technology type**

Solar

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

105

**Tracking instrument used**

I-REC

**Country/area of origin (generation) of purchased renewable electricity**

Brazil

**Are you able to report the commissioning or re-powering year of the energy generation facility?**

Yes

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

2018

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

2021

**Supply arrangement start year**

2018

**Additional, voluntary label associated with purchased renewable electricity**

No additional, voluntary label

**Comment**

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**Country/area of consumption of purchased renewable electricity**

Mexico

**Sourcing method**

Unbundled procurement of Energy Attribute Certificates (EACs)

**Renewable electricity technology type**

Solar

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

1290

**Tracking instrument used**

Other, please specify (CEL)

**Country/area of origin (generation) of purchased renewable electricity**

Mexico

**Are you able to report the commissioning or re-powering year of the energy generation facility?**

Yes

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

2018

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

2021

**Supply arrangement start year**

2018

**Additional, voluntary label associated with purchased renewable electricity**

No additional, voluntary label

**Comment**

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**Country/area of consumption of purchased renewable electricity**

Taiwan, China

**Sourcing method**

Unbundled procurement of Energy Attribute Certificates (EACs)

**Renewable electricity technology type**

Solar

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

902

**Tracking instrument used**

T-REC

**Country/area of origin (generation) of purchased renewable electricity**

Taiwan, China

**Are you able to report the commissioning or re-powering year of the energy generation facility?**

Yes

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

2020

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

2021

**Supply arrangement start year**

2020

**Additional, voluntary label associated with purchased renewable electricity**

No additional, voluntary label

**Comment**

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**Country/area of consumption of purchased renewable electricity**

Philippines

**Sourcing method**

Unbundled procurement of Energy Attribute Certificates (EACs)

**Renewable electricity technology type**

Solar

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

124

**Tracking instrument used**

Contract

**Country/area of origin (generation) of purchased renewable electricity**

Philippines

**Are you able to report the commissioning or re-powering year of the energy generation facility?**

Yes

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

2020

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

2021

**Supply arrangement start year**

2020

**Additional, voluntary label associated with purchased renewable electricity**

No additional, voluntary label

**Comment**

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**Country/area of consumption of purchased renewable electricity**

South Africa

**Sourcing method**

Unbundled procurement of Energy Attribute Certificates (EACs)

**Renewable electricity technology type**

Solar

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

332

**Tracking instrument used**

Contract

**Country/area of origin (generation) of purchased renewable electricity**

South Africa

**Are you able to report the commissioning or re-powering year of the energy generation facility?**

Yes

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

2020

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

2021

**Supply arrangement start year**

2020

**Additional, voluntary label associated with purchased renewable electricity**

No additional, voluntary label

**Comment**

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**Country/area of consumption of purchased renewable electricity**

Colombia

**Sourcing method**

Unbundled procurement of Energy Attribute Certificates (EACs)

**Renewable electricity technology type**

Solar

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

190

**Tracking instrument used**

Contract

**Country/area of origin (generation) of purchased renewable electricity**

Colombia

**Are you able to report the commissioning or re-powering year of the energy generation facility?**

Yes

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

2020

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

2021

**Supply arrangement start year**

2020

**Additional, voluntary label associated with purchased renewable electricity**

No additional, voluntary label

**Comment**

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**Country/area of consumption of purchased renewable electricity**

China

**Sourcing method**

Unbundled procurement of Energy Attribute Certificates (EACs)

**Renewable electricity technology type**

Solar

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

130885

**Tracking instrument used**

Contract

**Country/area of origin (generation) of purchased renewable electricity**

China

**Are you able to report the commissioning or re-powering year of the energy generation facility?**

Yes

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

2021

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

2021

**Supply arrangement start year**

2021

**Additional, voluntary label associated with purchased renewable electricity**

No additional, voluntary label

**Comment**

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**Country/area of consumption of purchased renewable electricity**

Taiwan, China

**Sourcing method**

Unbundled procurement of Energy Attribute Certificates (EACs)

**Renewable electricity technology type**

Solar

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

22740

**Tracking instrument used**

Contract

**Country/area of origin (generation) of purchased renewable electricity**

China

**Are you able to report the commissioning or re-powering year of the energy generation facility?**

Yes

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

2021

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

2021

**Supply arrangement start year**

2021

**Additional, voluntary label associated with purchased renewable electricity**

No additional, voluntary label

**Comment**

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**Country/area of consumption of purchased renewable electricity**

Hong Kong SAR, China

**Sourcing method**

Other, please specify (Vendor provided renewables)

**Renewable electricity technology type**

Renewable electricity mix, please specify (Vendor provided renewables)

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

7622

**Tracking instrument used**

No instrument used

**Country/area of origin (generation) of purchased renewable electricity**

China

**Are you able to report the commissioning or re-powering year of the energy generation facility?**

No

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

<Not Applicable>

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

2022

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**Supply arrangement start year**

2022

**Additional, voluntary label associated with purchased renewable electricity**

No additional, voluntary label

**Comment**

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**Country/area of consumption of purchased renewable electricity**

Japan

**Sourcing method**

Other, please specify (Vendor provided renewables)

**Renewable electricity technology type**

Wind

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

3132

**Tracking instrument used**

No instrument used

**Country/area of origin (generation) of purchased renewable electricity**

China

**Are you able to report the commissioning or re-powering year of the energy generation facility?**

No

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

<Not Applicable>

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

2022

**Supply arrangement start year**

2022

**Additional, voluntary label associated with purchased renewable electricity**

No additional, voluntary label

**Comment**

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**Country/area of consumption of purchased renewable electricity**

Japan

**Sourcing method**

Other, please specify (Vendor provided renewables)

**Renewable electricity technology type**

Renewable electricity mix, please specify (Vendor provided renewables)

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

1908

**Tracking instrument used**

No instrument used

**Country/area of origin (generation) of purchased renewable electricity**

Japan

**Are you able to report the commissioning or re-powering year of the energy generation facility?**

No

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

<Not Applicable>

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

2022

**Supply arrangement start year**

2022

**Additional, voluntary label associated with purchased renewable electricity**

No additional, voluntary label

**Comment**

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**Country/area of consumption of purchased renewable electricity**

United States of America

**Sourcing method**

Unbundled procurement of Energy Attribute Certificates (EACs)

**Renewable electricity technology type**

Solar

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

41910

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**Tracking instrument used**

US-REC

**Country/area of origin (generation) of purchased renewable electricity**

United States of America

**Are you able to report the commissioning or re-powering year of the energy generation facility?**

No

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

&lt;Not Applicable&gt;

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

2022

**Supply arrangement start year**

2022

**Additional, voluntary label associated with purchased renewable electricity**

No additional, voluntary label

**Comment**

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**Country/area of consumption of purchased renewable electricity**

Australia

**Sourcing method**

Unbundled procurement of Energy Attribute Certificates (EACs)

**Renewable electricity technology type**

Solar

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

9401

**Tracking instrument used**

Australian LGC

**Country/area of origin (generation) of purchased renewable electricity**

Australia

**Are you able to report the commissioning or re-powering year of the energy generation facility?**

No

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

&lt;Not Applicable&gt;

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

2022

**Supply arrangement start year**

2022

**Additional, voluntary label associated with purchased renewable electricity**

No additional, voluntary label

**Comment**

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**Country/area of consumption of purchased renewable electricity**

Republic of Korea

**Sourcing method**

Unbundled procurement of Energy Attribute Certificates (EACs)

**Renewable electricity technology type**

Solar

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

963

**Tracking instrument used**

Korean REC

**Country/area of origin (generation) of purchased renewable electricity**

Republic of Korea

**Are you able to report the commissioning or re-powering year of the energy generation facility?**

No

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

&lt;Not Applicable&gt;

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

2022

**Supply arrangement start year**

2022

**Additional, voluntary label associated with purchased renewable electricity**

No additional, voluntary label

**Comment**

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**Country/area of consumption of purchased renewable electricity**

Republic of Korea

**Sourcing method**

Unbundled procurement of Energy Attribute Certificates (EACs)

**Renewable electricity technology type**

Solar

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

3761

**Tracking instrument used**

Korean REC

**Country/area of origin (generation) of purchased renewable electricity**

Republic of Korea

**Are you able to report the commissioning or re-powering year of the energy generation facility?**

No

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

<Not Applicable>

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

2022

**Supply arrangement start year**

2022

**Additional, voluntary label associated with purchased renewable electricity**

No additional, voluntary label

**Comment**

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**Country/area of consumption of purchased renewable electricity**

Republic of Korea

**Sourcing method**

Unbundled procurement of Energy Attribute Certificates (EACs)

**Renewable electricity technology type**

Solar

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

1296

**Tracking instrument used**

Korean REC

**Country/area of origin (generation) of purchased renewable electricity**

Republic of Korea

**Are you able to report the commissioning or re-powering year of the energy generation facility?**

No

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

<Not Applicable>

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

2022

**Supply arrangement start year**

2022

**Additional, voluntary label associated with purchased renewable electricity**

No additional, voluntary label

**Comment**

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**Country/area of consumption of purchased renewable electricity**

India

**Sourcing method**

Unbundled procurement of Energy Attribute Certificates (EACs)

**Renewable electricity technology type**

Solar

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

8719

**Tracking instrument used**

I-REC

**Country/area of origin (generation) of purchased renewable electricity**

India

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**Are you able to report the commissioning or re-powering year of the energy generation facility?**

No

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

<Not Applicable>

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

2022

**Supply arrangement start year**

2022

**Additional, voluntary label associated with purchased renewable electricity**

No additional, voluntary label

**Comment**

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**Country/area of consumption of purchased renewable electricity**

United Arab Emirates

**Sourcing method**

Unbundled procurement of Energy Attribute Certificates (EACs)

**Renewable electricity technology type**

Solar

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

10790

**Tracking instrument used**

I-REC

**Country/area of origin (generation) of purchased renewable electricity**

United Arab Emirates

**Are you able to report the commissioning or re-powering year of the energy generation facility?**

No

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

<Not Applicable>

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

2022

**Supply arrangement start year**

2022

**Additional, voluntary label associated with purchased renewable electricity**

No additional, voluntary label

**Comment**

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**Country/area of consumption of purchased renewable electricity**

Indonesia

**Sourcing method**

Unbundled procurement of Energy Attribute Certificates (EACs)

**Renewable electricity technology type**

Solar

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

772

**Tracking instrument used**

I-REC

**Country/area of origin (generation) of purchased renewable electricity**

Indonesia

**Are you able to report the commissioning or re-powering year of the energy generation facility?**

No

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

<Not Applicable>

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

2022

**Supply arrangement start year**

2022

**Additional, voluntary label associated with purchased renewable electricity**

No additional, voluntary label

**Comment**

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**Country/area of consumption of purchased renewable electricity**

Viet Nam

**Sourcing method**

Unbundled procurement of Energy Attribute Certificates (EACs)

**Renewable electricity technology type**

Solar

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

534

**Tracking instrument used**

I-REC

**Country/area of origin (generation) of purchased renewable electricity**

Viet Nam

**Are you able to report the commissioning or re-powering year of the energy generation facility?**

No

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

<Not Applicable>

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

2022

**Supply arrangement start year**

2022

**Additional, voluntary label associated with purchased renewable electricity**

No additional, voluntary label

**Comment**

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**Country/area of consumption of purchased renewable electricity**

Malaysia

**Sourcing method**

Unbundled procurement of Energy Attribute Certificates (EACs)

**Renewable electricity technology type**

Solar

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

102

**Tracking instrument used**

I-REC

**Country/area of origin (generation) of purchased renewable electricity**

Malaysia

**Are you able to report the commissioning or re-powering year of the energy generation facility?**

No

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

<Not Applicable>

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

2022

**Supply arrangement start year**

2022

**Additional, voluntary label associated with purchased renewable electricity**

No additional, voluntary label

**Comment**

---

**Country/area of consumption of purchased renewable electricity**

Thailand

**Sourcing method**

Unbundled procurement of Energy Attribute Certificates (EACs)

**Renewable electricity technology type**

Solar

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

1695

**Tracking instrument used**

I-REC

**Country/area of origin (generation) of purchased renewable electricity**

Thailand

**Are you able to report the commissioning or re-powering year of the energy generation facility?**

No

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

<Not Applicable>

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

2022

**Supply arrangement start year**

2022

**Additional, voluntary label associated with purchased renewable electricity**

No additional, voluntary label

**Comment**

---

**Country/area of consumption of purchased renewable electricity**

Israel

**Sourcing method**

Unbundled procurement of Energy Attribute Certificates (EACs)

**Renewable electricity technology type**

Solar

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

15790

**Tracking instrument used**

I-REC

**Country/area of origin (generation) of purchased renewable electricity**

Israel

**Are you able to report the commissioning or re-powering year of the energy generation facility?**

No

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

<Not Applicable>

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

2022

**Supply arrangement start year**

2022

**Additional, voluntary label associated with purchased renewable electricity**

No additional, voluntary label

**Comment**

---

**Country/area of consumption of purchased renewable electricity**

Philippines

**Sourcing method**

Unbundled procurement of Energy Attribute Certificates (EACs)

**Renewable electricity technology type**

Solar

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

120

**Tracking instrument used**

I-REC

**Country/area of origin (generation) of purchased renewable electricity**

Philippines

**Are you able to report the commissioning or re-powering year of the energy generation facility?**

No

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

<Not Applicable>

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

2022

**Supply arrangement start year**

2022

**Additional, voluntary label associated with purchased renewable electricity**

No additional, voluntary label

**Comment**

---

**Country/area of consumption of purchased renewable electricity**

South Africa

**Sourcing method**

Unbundled procurement of Energy Attribute Certificates (EACs)

**Renewable electricity technology type**

Solar



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

1101

**Tracking instrument used**

I-REC

**Country/area of origin (generation) of purchased renewable electricity**

South Africa

**Are you able to report the commissioning or re-powering year of the energy generation facility?**

No

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

<Not Applicable>

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

2022

**Supply arrangement start year**

2022

**Additional, voluntary label associated with purchased renewable electricity**

No additional, voluntary label

**Comment**

---

**Country/area of consumption of purchased renewable electricity**

Colombia

**Sourcing method**

Financial (virtual) power purchase agreement (VPPA)

**Renewable electricity technology type**

Solar

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

180

**Tracking instrument used**

I-REC

**Country/area of origin (generation) of purchased renewable electricity**

Colombia

**Are you able to report the commissioning or re-powering year of the energy generation facility?**

No

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

<Not Applicable>

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

2022

**Supply arrangement start year**

2022

**Additional, voluntary label associated with purchased renewable electricity**

No additional, voluntary label

**Comment**

---

**Country/area of consumption of purchased renewable electricity**

United States of America

**Sourcing method**

Retail supply contract with an electricity supplier (retail green electricity)

**Renewable electricity technology type**

Renewable electricity mix, please specify (Vendor provided renewables)

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

19898

**Tracking instrument used**

Other, please specify (SVCE attestation)

**Country/area of origin (generation) of purchased renewable electricity**

United States of America

**Are you able to report the commissioning or re-powering year of the energy generation facility?**

No

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

<Not Applicable>

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

2022

**Supply arrangement start year**

2022

**Additional, voluntary label associated with purchased renewable electricity**

No additional, voluntary label

**Comment**

---

**Country/area of consumption of purchased renewable electricity**

United States of America

**Sourcing method**

Retail supply contract with an electricity supplier (retail green electricity)

**Renewable electricity technology type**

Renewable electricity mix, please specify (Vendor provided renewables)

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

567

**Tracking instrument used**

No instrument used

**Country/area of origin (generation) of purchased renewable electricity**

United States of America

**Are you able to report the commissioning or re-powering year of the energy generation facility?**

No

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

<Not Applicable>

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

2022

**Supply arrangement start year**

2022

**Additional, voluntary label associated with purchased renewable electricity**

No additional, voluntary label

**Comment**

---

**Country/area of consumption of purchased renewable electricity**

United States of America

**Sourcing method**

Retail supply contract with an electricity supplier (retail green electricity)

**Renewable electricity technology type**

Renewable electricity mix, please specify (Vendor provided renewables)

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

50515

**Tracking instrument used**

Contract

**Country/area of origin (generation) of purchased renewable electricity**

United States of America

**Are you able to report the commissioning or re-powering year of the energy generation facility?**

No

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

<Not Applicable>

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

2022

**Supply arrangement start year**

2022

**Additional, voluntary label associated with purchased renewable electricity**

No additional, voluntary label

**Comment**

---

**Country/area of consumption of purchased renewable electricity**

United States of America

**Sourcing method**

Retail supply contract with an electricity supplier (retail green electricity)

**Renewable electricity technology type**

Renewable electricity mix, please specify (Vendor provided renewables)

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

2600

**Tracking instrument used**

Contract

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**Country/area of origin (generation) of purchased renewable electricity**

United States of America

**Are you able to report the commissioning or re-powering year of the energy generation facility?**

No

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

<Not Applicable>

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

2022

**Supply arrangement start year**

2022

**Additional, voluntary label associated with purchased renewable electricity**

No additional, voluntary label

**Comment**

---

**Country/area of consumption of purchased renewable electricity**

United States of America

**Sourcing method**

Retail supply contract with an electricity supplier (retail green electricity)

**Renewable electricity technology type**

Solar

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

14732

**Tracking instrument used**

No instrument used

**Country/area of origin (generation) of purchased renewable electricity**

United States of America

**Are you able to report the commissioning or re-powering year of the energy generation facility?**

No

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

<Not Applicable>

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

2022

**Supply arrangement start year**

2022

**Additional, voluntary label associated with purchased renewable electricity**

Other, please specify

**Comment**

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**Country/area of consumption of purchased renewable electricity**

Australia

**Sourcing method**

Retail supply contract with an electricity supplier (retail green electricity)

**Renewable electricity technology type**

Renewable electricity mix, please specify (Vendor provided renewables)

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

6002

**Tracking instrument used**

Contract

**Country/area of origin (generation) of purchased renewable electricity**

Australia

**Are you able to report the commissioning or re-powering year of the energy generation facility?**

No

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

<Not Applicable>

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

2022

**Supply arrangement start year**

2022

**Additional, voluntary label associated with purchased renewable electricity**

No additional, voluntary label

**Comment**

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**Country/area of consumption of purchased renewable electricity**

Belgium

**Sourcing method**

Retail supply contract with an electricity supplier (retail green electricity)

**Renewable electricity technology type**

Renewable electricity mix, please specify (Vendor provided renewables)

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

402

**Tracking instrument used**

Contract

**Country/area of origin (generation) of purchased renewable electricity**

Belgium

**Are you able to report the commissioning or re-powering year of the energy generation facility?**

No

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

<Not Applicable>

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

2022

**Supply arrangement start year**

2022

**Additional, voluntary label associated with purchased renewable electricity**

No additional, voluntary label

**Comment**

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**Country/area of consumption of purchased renewable electricity**

France

**Sourcing method**

Retail supply contract with an electricity supplier (retail green electricity)

**Renewable electricity technology type**

Renewable electricity mix, please specify (Vendor provided renewables)

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

7826

**Tracking instrument used**

Contract

**Country/area of origin (generation) of purchased renewable electricity**

France

**Are you able to report the commissioning or re-powering year of the energy generation facility?**

No

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

<Not Applicable>

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

2022

**Supply arrangement start year**

2022

**Additional, voluntary label associated with purchased renewable electricity**

No additional, voluntary label

**Comment**

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**Country/area of consumption of purchased renewable electricity**

Netherlands

**Sourcing method**

Retail supply contract with an electricity supplier (retail green electricity)

**Renewable electricity technology type**

Renewable electricity mix, please specify (Vendor provided renewables)

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

211

**Tracking instrument used**

Contract

**Country/area of origin (generation) of purchased renewable electricity**

Netherlands

**Are you able to report the commissioning or re-powering year of the energy generation facility?**

No

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

<Not Applicable>

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

2022

**Supply arrangement start year**

2022

**Additional, voluntary label associated with purchased renewable electricity**

No additional, voluntary label

**Comment**

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**Country/area of consumption of purchased renewable electricity**

New Zealand

**Sourcing method**

Retail supply contract with an electricity supplier (retail green electricity)

**Renewable electricity technology type**

Renewable electricity mix, please specify (Vendor provided renewables)

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

412

**Tracking instrument used**

No instrument used

**Country/area of origin (generation) of purchased renewable electricity**

New Zealand

**Are you able to report the commissioning or re-powering year of the energy generation facility?**

No

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

<Not Applicable>

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

2022

**Supply arrangement start year**

2022

**Additional, voluntary label associated with purchased renewable electricity**

No additional, voluntary label

**Comment**

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**Country/area of consumption of purchased renewable electricity**

Germany

**Sourcing method**

Retail supply contract with an electricity supplier (retail green electricity)

**Renewable electricity technology type**

Renewable electricity mix, please specify (Vendor provided renewables)

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

9313

**Tracking instrument used**

Contract

**Country/area of origin (generation) of purchased renewable electricity**

Germany

**Are you able to report the commissioning or re-powering year of the energy generation facility?**

No

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

<Not Applicable>

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

2022

**Supply arrangement start year**

2022

**Additional, voluntary label associated with purchased renewable electricity**

No additional, voluntary label

**Comment**

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**Country/area of consumption of purchased renewable electricity**

Ireland

**Sourcing method**

Retail supply contract with an electricity supplier (retail green electricity)

**Renewable electricity technology type**

Renewable electricity mix, please specify (Vendor provided renewables)

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

15634

**Tracking instrument used**

Contract

**Country/area of origin (generation) of purchased renewable electricity**

Ireland

**Are you able to report the commissioning or re-powering year of the energy generation facility?**

No

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

<Not Applicable>

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

2022

**Supply arrangement start year**

2022

**Additional, voluntary label associated with purchased renewable electricity**

No additional, voluntary label

**Comment**

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**Country/area of consumption of purchased renewable electricity**

Italy

**Sourcing method**

Retail supply contract with an electricity supplier (retail green electricity)

**Renewable electricity technology type**

Renewable electricity mix, please specify (Vendor provided renewables)

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

7713

**Tracking instrument used**

Contract

**Country/area of origin (generation) of purchased renewable electricity**

Italy

**Are you able to report the commissioning or re-powering year of the energy generation facility?**

No

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

<Not Applicable>

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

2022

**Supply arrangement start year**

2022

**Additional, voluntary label associated with purchased renewable electricity**

No additional, voluntary label

**Comment**

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**Country/area of consumption of purchased renewable electricity**

Sweden

**Sourcing method**

Retail supply contract with an electricity supplier (retail green electricity)

**Renewable electricity technology type**

Renewable electricity mix, please specify (Vendor provided renewables)

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

274

**Tracking instrument used**

Contract

**Country/area of origin (generation) of purchased renewable electricity**

Sweden

**Are you able to report the commissioning or re-powering year of the energy generation facility?**

No

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

<Not Applicable>

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

2022

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**Supply arrangement start year**

2022

**Additional, voluntary label associated with purchased renewable electricity**

No additional, voluntary label

**Comment**

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**Country/area of consumption of purchased renewable electricity**

Switzerland

**Sourcing method**

Retail supply contract with an electricity supplier (retail green electricity)

**Renewable electricity technology type**

Hydropower (capacity unknown)

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

195

**Tracking instrument used**

Contract

**Country/area of origin (generation) of purchased renewable electricity**

Switzerland

**Are you able to report the commissioning or re-powering year of the energy generation facility?**

No

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

&lt;Not Applicable&gt;

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

2022

**Supply arrangement start year**

2022

**Additional, voluntary label associated with purchased renewable electricity**

No additional, voluntary label

**Comment**

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**Country/area of consumption of purchased renewable electricity**

United Kingdom of Great Britain and Northern Ireland

**Sourcing method**

Retail supply contract with an electricity supplier (retail green electricity)

**Renewable electricity technology type**

Renewable electricity mix, please specify (Vendor provided renewables)

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

169000

**Tracking instrument used**

Contract

**Country/area of origin (generation) of purchased renewable electricity**

United Kingdom of Great Britain and Northern Ireland

**Are you able to report the commissioning or re-powering year of the energy generation facility?**

No

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

&lt;Not Applicable&gt;

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

2022

**Supply arrangement start year**

2022

**Additional, voluntary label associated with purchased renewable electricity**

No additional, voluntary label

**Comment**

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**Country/area of consumption of purchased renewable electricity**

United States of America

**Sourcing method**

Retail supply contract with an electricity supplier (retail green electricity)

**Renewable electricity technology type**

Renewable electricity mix, please specify (Vendor provided renewables)

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

210

**Tracking instrument used**

No instrument used

**Country/area of origin (generation) of purchased renewable electricity**

United States of America

**Are you able to report the commissioning or re-powering year of the energy generation facility?**

No

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

<Not Applicable>

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

2022

**Supply arrangement start year**

2022

**Additional, voluntary label associated with purchased renewable electricity**

No additional, voluntary label

**Comment**

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**Country/area of consumption of purchased renewable electricity**

United States of America

**Sourcing method**

Retail supply contract with an electricity supplier (retail green electricity)

**Renewable electricity technology type**

Renewable electricity mix, please specify (Vendor provided renewables)

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

384

**Tracking instrument used**

No instrument used

**Country/area of origin (generation) of purchased renewable electricity**

United States of America

**Are you able to report the commissioning or re-powering year of the energy generation facility?**

No

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

<Not Applicable>

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

2022

**Supply arrangement start year**

2022

**Additional, voluntary label associated with purchased renewable electricity**

No additional, voluntary label

**Comment**

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**Country/area of consumption of purchased renewable electricity**

Japan

**Sourcing method**

Retail supply contract with an electricity supplier (retail green electricity)

**Renewable electricity technology type**

Renewable electricity mix, please specify (Vendor provided renewables)

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

768

**Tracking instrument used**

No instrument used

**Country/area of origin (generation) of purchased renewable electricity**

Japan

**Are you able to report the commissioning or re-powering year of the energy generation facility?**

No

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

<Not Applicable>

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

2022

**Supply arrangement start year**

2022

**Additional, voluntary label associated with purchased renewable electricity**

No additional, voluntary label

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**Comment**

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**Country/area of consumption of purchased renewable electricity**

United States of America

**Sourcing method**

Other, please specify (Vendor provided renewables)

**Renewable electricity technology type**

Wind

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

1981

**Tracking instrument used**

No instrument used

**Country/area of origin (generation) of purchased renewable electricity**

United States of America

**Are you able to report the commissioning or re-powering year of the energy generation facility?**

No

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

<Not Applicable>

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

2022

**Supply arrangement start year**

2022

**Additional, voluntary label associated with purchased renewable electricity**

No additional, voluntary label

**Comment**

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**Country/area of consumption of purchased renewable electricity**

Netherlands

**Sourcing method**

Other, please specify (Vendor provided renewables)

**Renewable electricity technology type**

Hydropower (capacity unknown)

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

1392

**Tracking instrument used**

No instrument used

**Country/area of origin (generation) of purchased renewable electricity**

Netherlands

**Are you able to report the commissioning or re-powering year of the energy generation facility?**

No

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

<Not Applicable>

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

2022

**Supply arrangement start year**

2022

**Additional, voluntary label associated with purchased renewable electricity**

No additional, voluntary label

**Comment**

---

**Country/area of consumption of purchased renewable electricity**

United States of America

**Sourcing method**

Other, please specify (Vendor provided renewables)

**Renewable electricity technology type**

Wind

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

1341

**Tracking instrument used**

No instrument used

**Country/area of origin (generation) of purchased renewable electricity**

United States of America

**Are you able to report the commissioning or re-powering year of the energy generation facility?**

No

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

<Not Applicable>

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

2022

**Supply arrangement start year**

2022

**Additional, voluntary label associated with purchased renewable electricity**

No additional, voluntary label

**Comment**

---

**Country/area of consumption of purchased renewable electricity**

United States of America

**Sourcing method**

Other, please specify (Vendor provided renewables)

**Renewable electricity technology type**

Wind

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

1248

**Tracking instrument used**

No instrument used

**Country/area of origin (generation) of purchased renewable electricity**

United States of America

**Are you able to report the commissioning or re-powering year of the energy generation facility?**

No

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

<Not Applicable>

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

2022

**Supply arrangement start year**

2022

**Additional, voluntary label associated with purchased renewable electricity**

No additional, voluntary label

**Comment**

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**Country/area of consumption of purchased renewable electricity**

United States of America

**Sourcing method**

Other, please specify (Vendor provided renewables)

**Renewable electricity technology type**

Wind

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

122

**Tracking instrument used**

No instrument used

**Country/area of origin (generation) of purchased renewable electricity**

United States of America

**Are you able to report the commissioning or re-powering year of the energy generation facility?**

No

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

<Not Applicable>

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

2022

**Supply arrangement start year**

2022

**Additional, voluntary label associated with purchased renewable electricity**

No additional, voluntary label

**Comment**

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**Country/area of consumption of purchased renewable electricity**

United States of America

**Sourcing method**

Other, please specify (Vendor provided renewables)

**Renewable electricity technology type**

Wind

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

122

**Tracking instrument used**

No instrument used

**Country/area of origin (generation) of purchased renewable electricity**

United States of America

**Are you able to report the commissioning or re-powering year of the energy generation facility?**

No

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

<Not Applicable>

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

2022

**Supply arrangement start year**

2022

**Additional, voluntary label associated with purchased renewable electricity**

No additional, voluntary label

**Comment**

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**Country/area of consumption of purchased renewable electricity**

United States of America

**Sourcing method**

Other, please specify (Vendor provided renewables)

**Renewable electricity technology type**

Wind

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

87

**Tracking instrument used**

No instrument used

**Country/area of origin (generation) of purchased renewable electricity**

United States of America

**Are you able to report the commissioning or re-powering year of the energy generation facility?**

No

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

<Not Applicable>

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

2022

**Supply arrangement start year**

2022

**Additional, voluntary label associated with purchased renewable electricity**

No additional, voluntary label

**Comment**

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**Country/area of consumption of purchased renewable electricity**

United States of America

**Sourcing method**

Other, please specify (Vendor provided renewables)

**Renewable electricity technology type**

Wind

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

2388

**Tracking instrument used**

No instrument used

**Country/area of origin (generation) of purchased renewable electricity**

United States of America

**Are you able to report the commissioning or re-powering year of the energy generation facility?**

No

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

<Not Applicable>

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

2022

**Supply arrangement start year**

2022

**Additional, voluntary label associated with purchased renewable electricity**

No additional, voluntary label

**Comment**

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**Country/area of consumption of purchased renewable electricity**

United States of America

**Sourcing method**

Other, please specify (Vendor provided renewables)

**Renewable electricity technology type**

Wind

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

2559

**Tracking instrument used**

No instrument used

**Country/area of origin (generation) of purchased renewable electricity**

United States of America

**Are you able to report the commissioning or re-powering year of the energy generation facility?**

No

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

<Not Applicable>

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

2022

**Supply arrangement start year**

2022

**Additional, voluntary label associated with purchased renewable electricity**

No additional, voluntary label

**Comment**

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**Country/area of consumption of purchased renewable electricity**

Singapore

**Sourcing method**

Other, please specify (Vendor provided renewables)

**Renewable electricity technology type**

Small hydropower (<25 MW)

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

4950

**Tracking instrument used**

No instrument used

**Country/area of origin (generation) of purchased renewable electricity**

Singapore

**Are you able to report the commissioning or re-powering year of the energy generation facility?**

No

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

<Not Applicable>

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

2022

**Supply arrangement start year**

2022

**Additional, voluntary label associated with purchased renewable electricity**

No additional, voluntary label

**Comment**

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**Country/area of consumption of purchased renewable electricity**

Japan

**Sourcing method**

Other, please specify (Vendor provided renewables)

**Renewable electricity technology type**

Renewable electricity mix, please specify (Vendor provided renewables)

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

4329

**Tracking instrument used**

No instrument used

**Country/area of origin (generation) of purchased renewable electricity**

Japan

**Are you able to report the commissioning or re-powering year of the energy generation facility?**

No

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

<Not Applicable>

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

2022

**Supply arrangement start year**

2022

**Additional, voluntary label associated with purchased renewable electricity**

No additional, voluntary label

**Comment**

---

**Country/area of consumption of purchased renewable electricity**

Singapore

**Sourcing method**

Other, please specify (Vendor provided renewables)

**Renewable electricity technology type**

Small hydropower (<25 MW)

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

3986

**Tracking instrument used**

No instrument used

**Country/area of origin (generation) of purchased renewable electricity**

Singapore

**Are you able to report the commissioning or re-powering year of the energy generation facility?**

No

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

<Not Applicable>

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

2022

**Supply arrangement start year**

2022

**Additional, voluntary label associated with purchased renewable electricity**

No additional, voluntary label

**Comment**

---

**Country/area of consumption of purchased renewable electricity**

United Kingdom of Great Britain and Northern Ireland

**Sourcing method**

Other, please specify (Vendor provided renewables)

**Renewable electricity technology type**

Renewable electricity mix, please specify (Vendor provided renewables)

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

3248

**Tracking instrument used**

No instrument used

**Country/area of origin (generation) of purchased renewable electricity**

United Kingdom of Great Britain and Northern Ireland

**Are you able to report the commissioning or re-powering year of the energy generation facility?**

No

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

<Not Applicable>

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

2022

**Supply arrangement start year**

2022

**Additional, voluntary label associated with purchased renewable electricity**

No additional, voluntary label

**Comment**

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**Country/area of consumption of purchased renewable electricity**

Germany

**Sourcing method**

Other, please specify (Vendor provided renewables )

**Renewable electricity technology type**

Renewable hydrogen fuel cell

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

3182

**Tracking instrument used**

No instrument used

**Country/area of origin (generation) of purchased renewable electricity**

Germany

**Are you able to report the commissioning or re-powering year of the energy generation facility?**

No

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

<Not Applicable>

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

2022

**Supply arrangement start year**

2022

**Additional, voluntary label associated with purchased renewable electricity**

No additional, voluntary label

**Comment**

---

**Country/area of consumption of purchased renewable electricity**

United Kingdom of Great Britain and Northern Ireland

**Sourcing method**

Other, please specify (Vendor provided renewables )

**Renewable electricity technology type**

Renewable electricity mix, please specify (Vendor provided renewables )

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

2012

**Tracking instrument used**

No instrument used

**Country/area of origin (generation) of purchased renewable electricity**

United Kingdom of Great Britain and Northern Ireland

**Are you able to report the commissioning or re-powering year of the energy generation facility?**

No

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

<Not Applicable>

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

2022

**Supply arrangement start year**

2022

**Additional, voluntary label associated with purchased renewable electricity**

No additional, voluntary label

**Comment**

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**Country/area of consumption of purchased renewable electricity**

China

**Sourcing method**

Other, please specify (Vendor provided renewables )

**Renewable electricity technology type**

Renewable electricity mix, please specify (Vendor provided renewables )

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

1933

**Tracking instrument used**

No instrument used

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**Country/area of origin (generation) of purchased renewable electricity**

China

**Are you able to report the commissioning or re-powering year of the energy generation facility?**

No

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

<Not Applicable>

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

2022

**Supply arrangement start year**

2022

**Additional, voluntary label associated with purchased renewable electricity**

No additional, voluntary label

**Comment**

---

**Country/area of consumption of purchased renewable electricity**

Germany

**Sourcing method**

Other, please specify (Vendor provided renewables )

**Renewable electricity technology type**

Renewable electricity mix, please specify (Vendor provided renewables )

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

1016

**Tracking instrument used**

No instrument used

**Country/area of origin (generation) of purchased renewable electricity**

Germany

**Are you able to report the commissioning or re-powering year of the energy generation facility?**

No

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

<Not Applicable>

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

2022

**Supply arrangement start year**

2022

**Additional, voluntary label associated with purchased renewable electricity**

No additional, voluntary label

**Comment**

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**Country/area of consumption of purchased renewable electricity**

Brazil

**Sourcing method**

Other, please specify (Vendor provided renewables )

**Renewable electricity technology type**

Renewable electricity mix, please specify (Vendor provided renewables )

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

247

**Tracking instrument used**

No instrument used

**Country/area of origin (generation) of purchased renewable electricity**

Brazil

**Are you able to report the commissioning or re-powering year of the energy generation facility?**

No

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

<Not Applicable>

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

2022

**Supply arrangement start year**

2022

**Additional, voluntary label associated with purchased renewable electricity**

No additional, voluntary label

**Comment**

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**Country/area of consumption of purchased renewable electricity**

Sweden

**Sourcing method**

Other, please specify (Vendor provided renewables )

**Renewable electricity technology type**

Hydropower (capacity unknown)

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

50

**Tracking instrument used**

No instrument used

**Country/area of origin (generation) of purchased renewable electricity**

Sweden

**Are you able to report the commissioning or re-powering year of the energy generation facility?**

No

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

<Not Applicable>

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

2022

**Supply arrangement start year**

2022

**Additional, voluntary label associated with purchased renewable electricity**

No additional, voluntary label

**Comment**

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**Country/area of consumption of purchased renewable electricity**

France

**Sourcing method**

Other, please specify (Vendor provided renewables )

**Renewable electricity technology type**

Hydropower (capacity unknown)

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

34

**Tracking instrument used**

No instrument used

**Country/area of origin (generation) of purchased renewable electricity**

France

**Are you able to report the commissioning or re-powering year of the energy generation facility?**

No

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

<Not Applicable>

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

2022

**Supply arrangement start year**

2022

**Additional, voluntary label associated with purchased renewable electricity**

No additional, voluntary label

**Comment**

---

**Country/area of consumption of purchased renewable electricity**

Germany

**Sourcing method**

Other, please specify (Vendor provided renewables )

**Renewable electricity technology type**

Renewable electricity mix, please specify (Vendor provided renewables )

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

2408

**Tracking instrument used**

No instrument used

**Country/area of origin (generation) of purchased renewable electricity**

Germany

**Are you able to report the commissioning or re-powering year of the energy generation facility?**

No



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

<Not Applicable>

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

Please select

**Supply arrangement start year**

2022

**Additional, voluntary label associated with purchased renewable electricity**

No additional, voluntary label

**Comment**

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**Country/area of consumption of purchased renewable electricity**

Sweden

**Sourcing method**

Other, please specify (Vendor provided renewables )

**Renewable electricity technology type**

Renewable electricity mix, please specify (Vendor provided renewables )

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

2027

**Tracking instrument used**

No instrument used

**Country/area of origin (generation) of purchased renewable electricity**

Sweden

**Are you able to report the commissioning or re-powering year of the energy generation facility?**

No

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

<Not Applicable>

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

2022

**Supply arrangement start year**

2022

**Additional, voluntary label associated with purchased renewable electricity**

No additional, voluntary label

**Comment**

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**Country/area of consumption of purchased renewable electricity**

Germany

**Sourcing method**

Other, please specify (Vendor provided renewables )

**Renewable electricity technology type**

Renewable electricity mix, please specify (Vendor provided renewables )

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

1341

**Tracking instrument used**

No instrument used

**Country/area of origin (generation) of purchased renewable electricity**

Germany

**Are you able to report the commissioning or re-powering year of the energy generation facility?**

No

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

<Not Applicable>

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

2022

**Supply arrangement start year**

2022

**Additional, voluntary label associated with purchased renewable electricity**

No additional, voluntary label

**Comment**

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**Country/area of consumption of purchased renewable electricity**

Ireland

**Sourcing method**

Other, please specify (Vendor provided renewables )

**Renewable electricity technology type**

Renewable electricity mix, please specify (Vendor provided renewables )

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

767

**Tracking instrument used**

No instrument used

**Country/area of origin (generation) of purchased renewable electricity**

Ireland

**Are you able to report the commissioning or re-powering year of the energy generation facility?**

No

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

<Not Applicable>

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

2022

**Supply arrangement start year**

2022

**Additional, voluntary label associated with purchased renewable electricity**

No additional, voluntary label

**Comment**

---

**Country/area of consumption of purchased renewable electricity**

Germany

**Sourcing method**

Other, please specify (Vendor provided renewables )

**Renewable electricity technology type**

Renewable electricity mix, please specify (Vendor provided renewables )

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

673

**Tracking instrument used**

No instrument used

**Country/area of origin (generation) of purchased renewable electricity**

Germany

**Are you able to report the commissioning or re-powering year of the energy generation facility?**

No

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

<Not Applicable>

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

2022

**Supply arrangement start year**

2022

**Additional, voluntary label associated with purchased renewable electricity**

No additional, voluntary label

**Comment**

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**Country/area of consumption of purchased renewable electricity**

Netherlands

**Sourcing method**

Other, please specify (Vendor provided renewables )

**Renewable electricity technology type**

Renewable electricity mix, please specify (Vendor provided renewables )

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

586

**Tracking instrument used**

No instrument used

**Country/area of origin (generation) of purchased renewable electricity**

Netherlands

**Are you able to report the commissioning or re-powering year of the energy generation facility?**

No

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

<Not Applicable>

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

2022

**Supply arrangement start year**

2022

**Additional, voluntary label associated with purchased renewable electricity**

No additional, voluntary label

**Comment**

---

**Country/area of consumption of purchased renewable electricity**

France

**Sourcing method**

Other, please specify (Vendor provided renewables )

**Renewable electricity technology type**

Renewable electricity mix, please specify (Vendor provided renewables )

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

467

**Tracking instrument used**

No instrument used

**Country/area of origin (generation) of purchased renewable electricity**

France

**Are you able to report the commissioning or re-powering year of the energy generation facility?**

No

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

&lt;Not Applicable&gt;

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

2022

**Supply arrangement start year**

2022

**Additional, voluntary label associated with purchased renewable electricity**

No additional, voluntary label

**Comment**

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**Country/area of consumption of purchased renewable electricity**

Denmark

**Sourcing method**

Other, please specify (Vendor provided renewables )

**Renewable electricity technology type**

Renewable electricity mix, please specify (Vendor provided renewables )

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

365

**Tracking instrument used**

No instrument used

**Country/area of origin (generation) of purchased renewable electricity**

Denmark

**Are you able to report the commissioning or re-powering year of the energy generation facility?**

No

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

&lt;Not Applicable&gt;

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

2022

**Supply arrangement start year**

2022

**Additional, voluntary label associated with purchased renewable electricity**

No additional, voluntary label

**Comment**

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**Country/area of consumption of purchased renewable electricity**

Ireland

**Sourcing method**

Other, please specify (Vendor provided renewables )

**Renewable electricity technology type**

Renewable electricity mix, please specify (Vendor provided renewables )

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

193

**Tracking instrument used**

No instrument used

**Country/area of origin (generation) of purchased renewable electricity**

Ireland

**Are you able to report the commissioning or re-powering year of the energy generation facility?**

No

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

<Not Applicable>

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

2022

**Supply arrangement start year**

2022

**Additional, voluntary label associated with purchased renewable electricity**

No additional, voluntary label

**Comment**

---

**Country/area of consumption of purchased renewable electricity**

Netherlands

**Sourcing method**

Other, please specify (Vendor provided renewables )

**Renewable electricity technology type**

Wind

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

15530

**Tracking instrument used**

No instrument used

**Country/area of origin (generation) of purchased renewable electricity**

Netherlands

**Are you able to report the commissioning or re-powering year of the energy generation facility?**

No

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

<Not Applicable>

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

2022

**Supply arrangement start year**

2022

**Additional, voluntary label associated with purchased renewable electricity**

No additional, voluntary label

**Comment**

---

**Country/area of consumption of purchased renewable electricity**

United States of America

**Sourcing method**

Other, please specify (Vendor provided renewables )

**Renewable electricity technology type**

Wind

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

955

**Tracking instrument used**

No instrument used

**Country/area of origin (generation) of purchased renewable electricity**

United States of America

**Are you able to report the commissioning or re-powering year of the energy generation facility?**

No

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

<Not Applicable>

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

2022

**Supply arrangement start year**

2022

**Additional, voluntary label associated with purchased renewable electricity**

No additional, voluntary label

**Comment**

---

**Country/area of consumption of purchased renewable electricity**

United States of America

**Sourcing method**

Other, please specify (Vendor provided renewables )

**Renewable electricity technology type**

Wind

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

691

**Tracking instrument used**

No instrument used

**Country/area of origin (generation) of purchased renewable electricity**

United States of America

**Are you able to report the commissioning or re-powering year of the energy generation facility?**

No

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

<Not Applicable>

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

2022

**Supply arrangement start year**

2022

**Additional, voluntary label associated with purchased renewable electricity**

No additional, voluntary label

**Comment**

---

**Country/area of consumption of purchased renewable electricity**

Germany

**Sourcing method**

Other, please specify (Vendor provided renewables )

**Renewable electricity technology type**

Renewable electricity mix, please specify (Vendor provided renewables )

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

535

**Tracking instrument used**

No instrument used

**Country/area of origin (generation) of purchased renewable electricity**

Germany

**Are you able to report the commissioning or re-powering year of the energy generation facility?**

No

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

<Not Applicable>

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

2022

**Supply arrangement start year**

2022

**Additional, voluntary label associated with purchased renewable electricity**

No additional, voluntary label

**Comment**

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**Country/area of consumption of purchased renewable electricity**

France

**Sourcing method**

Other, please specify (Vendor provided renewables )

**Renewable electricity technology type**

Renewable electricity mix, please specify (Vendor provided renewables )

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

1313

**Tracking instrument used**

No instrument used

**Country/area of origin (generation) of purchased renewable electricity**

France

**Are you able to report the commissioning or re-powering year of the energy generation facility?**

No

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

<Not Applicable>

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

2022

**Supply arrangement start year**

2022

**Additional, voluntary label associated with purchased renewable electricity**

No additional, voluntary label

**Comment**

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**Country/area of consumption of purchased renewable electricity**

United Kingdom of Great Britain and Northern Ireland

**Sourcing method**

Other, please specify (Vendor provided renewables )

**Renewable electricity technology type**

Renewable electricity mix, please specify (Vendor provided renewables )

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

965

**Tracking instrument used**

No instrument used

**Country/area of origin (generation) of purchased renewable electricity**

United Kingdom of Great Britain and Northern Ireland

**Are you able to report the commissioning or re-powering year of the energy generation facility?**

No

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

<Not Applicable>

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

2022

**Supply arrangement start year**

2022

**Additional, voluntary label associated with purchased renewable electricity**

No additional, voluntary label

**Comment**

---

**Country/area of consumption of purchased renewable electricity**

Netherlands

**Sourcing method**

Other, please specify (Vendor provided renewables )

**Renewable electricity technology type**

Renewable electricity mix, please specify (Vendor provided renewables )

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

3276

**Tracking instrument used**

No instrument used

**Country/area of origin (generation) of purchased renewable electricity**

Netherlands

**Are you able to report the commissioning or re-powering year of the energy generation facility?**

No

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

<Not Applicable>

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

2022

**Supply arrangement start year**

2022

**Additional, voluntary label associated with purchased renewable electricity**

No additional, voluntary label

**Comment**

---

**Country/area of consumption of purchased renewable electricity**

United States of America

**Sourcing method**

Other, please specify (Vendor provided renewables )

**Renewable electricity technology type**

Renewable electricity mix, please specify (Vendor provided renewables )

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

2385

**Tracking instrument used**

No instrument used

**Country/area of origin (generation) of purchased renewable electricity**

United States of America

**Are you able to report the commissioning or re-powering year of the energy generation facility?**

No

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

<Not Applicable>

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

2022

**Supply arrangement start year**

2022

**Additional, voluntary label associated with purchased renewable electricity**

No additional, voluntary label

**Comment**

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**Country/area of consumption of purchased renewable electricity**

United Kingdom of Great Britain and Northern Ireland

**Sourcing method**

Other, please specify (Vendor provided renewables )

**Renewable electricity technology type**

Wind

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

1504

**Tracking instrument used**

No instrument used

**Country/area of origin (generation) of purchased renewable electricity**

United Kingdom of Great Britain and Northern Ireland

**Are you able to report the commissioning or re-powering year of the energy generation facility?**

No

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

<Not Applicable>

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

2022

**Supply arrangement start year**

2022

**Additional, voluntary label associated with purchased renewable electricity**

No additional, voluntary label

**Comment**

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**Country/area of consumption of purchased renewable electricity**

Netherlands

**Sourcing method**

Other, please specify (Vendor provided renewables )

**Renewable electricity technology type**

Renewable electricity mix, please specify (Vendor provided renewables )

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

1931

**Tracking instrument used**

No instrument used

**Country/area of origin (generation) of purchased renewable electricity**

Netherlands

**Are you able to report the commissioning or re-powering year of the energy generation facility?**

No

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

<Not Applicable>

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

2022

**Supply arrangement start year**

2022

**Additional, voluntary label associated with purchased renewable electricity**

No additional, voluntary label

**Comment**

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**Country/area of consumption of purchased renewable electricity**

Singapore

**Sourcing method**

Other, please specify (Vendor provided renewables )

**Renewable electricity technology type**

Renewable electricity mix, please specify (Vendor provided renewables )

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

1391

**Tracking instrument used**

No instrument used

**Country/area of origin (generation) of purchased renewable electricity**

Singapore

**Are you able to report the commissioning or re-powering year of the energy generation facility?**

No

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

<Not Applicable>

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

2022

**Supply arrangement start year**

2022

**Additional, voluntary label associated with purchased renewable electricity**

No additional, voluntary label

**Comment**

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**Country/area of consumption of purchased renewable electricity**

Japan

**Sourcing method**

Other, please specify (Vendor provided renewables )

**Renewable electricity technology type**

Renewable electricity mix, please specify (Vendor provided renewables )

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

436

**Tracking instrument used**

No instrument used

**Country/area of origin (generation) of purchased renewable electricity**

Japan

**Are you able to report the commissioning or re-powering year of the energy generation facility?**

No

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

<Not Applicable>

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

2022

**Supply arrangement start year**

2022

**Additional, voluntary label associated with purchased renewable electricity**

No additional, voluntary label

**Comment**

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**Country/area of consumption of purchased renewable electricity**

Australia

**Sourcing method**

Other, please specify (Vendor provided renewables )

**Renewable electricity technology type**

Renewable electricity mix, please specify (Vendor provided renewables )

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

121

**Tracking instrument used**

No instrument used

**Country/area of origin (generation) of purchased renewable electricity**

Australia

**Are you able to report the commissioning or re-powering year of the energy generation facility?**

No

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

<Not Applicable>

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

2022

**Supply arrangement start year**

2022

**Additional, voluntary label associated with purchased renewable electricity**

No additional, voluntary label

**Comment**

---

**Country/area of consumption of purchased renewable electricity**

United States of America

**Sourcing method**

Other, please specify (Vendor provided renewables )

**Renewable electricity technology type**

Renewable electricity mix, please specify (Vendor provided renewables )

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

3491

**Tracking instrument used**

No instrument used

**Country/area of origin (generation) of purchased renewable electricity**

United States of America

**Are you able to report the commissioning or re-powering year of the energy generation facility?**

No

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

<Not Applicable>

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

2022

**Supply arrangement start year**

2022

**Additional, voluntary label associated with purchased renewable electricity**

No additional, voluntary label

**Comment**

---

**Country/area of consumption of purchased renewable electricity**

United States of America

**Sourcing method**

Other, please specify (Vendor provided renewables )

**Renewable electricity technology type**

Renewable electricity mix, please specify (Vendor provided renewables )

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

2446

**Tracking instrument used**

No instrument used

**Country/area of origin (generation) of purchased renewable electricity**

United States of America

**Are you able to report the commissioning or re-powering year of the energy generation facility?**

No

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

<Not Applicable>

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

2022

**Supply arrangement start year**

2022

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**Additional, voluntary label associated with purchased renewable electricity**

No additional, voluntary label

**Comment**

---

**Country/area of consumption of purchased renewable electricity**

United States of America

**Sourcing method**

Other, please specify (Vendor provided renewables )

**Renewable electricity technology type**

Renewable electricity mix, please specify (Vendor provided renewables )

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

1525

**Tracking instrument used**

No instrument used

**Country/area of origin (generation) of purchased renewable electricity**

United States of America

**Are you able to report the commissioning or re-powering year of the energy generation facility?**

No

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

<Not Applicable>

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

2022

**Supply arrangement start year**

2022

**Additional, voluntary label associated with purchased renewable electricity**

No additional, voluntary label

**Comment**

---

**Country/area of consumption of purchased renewable electricity**

United States of America

**Sourcing method**

Other, please specify (Vendor provided renewables )

**Renewable electricity technology type**

Renewable electricity mix, please specify (Vendor provided renewables )

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

813

**Tracking instrument used**

No instrument used

**Country/area of origin (generation) of purchased renewable electricity**

United States of America

**Are you able to report the commissioning or re-powering year of the energy generation facility?**

No

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

<Not Applicable>

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

2022

**Supply arrangement start year**

2022

**Additional, voluntary label associated with purchased renewable electricity**

No additional, voluntary label

**Comment**

---

**Country/area of consumption of purchased renewable electricity**

United States of America

**Sourcing method**

Other, please specify (Vendor provided renewables )

**Renewable electricity technology type**

Renewable electricity mix, please specify (Vendor provided renewables )

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

748

**Tracking instrument used**

No instrument used

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**Country/area of origin (generation) of purchased renewable electricity**

United States of America

**Are you able to report the commissioning or re-powering year of the energy generation facility?**

No

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

<Not Applicable>

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

2022

**Supply arrangement start year**

2022

**Additional, voluntary label associated with purchased renewable electricity**

No additional, voluntary label

**Comment**

---

**Country/area of consumption of purchased renewable electricity**

United States of America

**Sourcing method**

Other, please specify (Vendor provided renewables )

**Renewable electricity technology type**

Renewable electricity mix, please specify (Vendor provided renewables )

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

150

**Tracking instrument used**

No instrument used

**Country/area of origin (generation) of purchased renewable electricity**

United States of America

**Are you able to report the commissioning or re-powering year of the energy generation facility?**

No

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

<Not Applicable>

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

2022

**Supply arrangement start year**

2022

**Additional, voluntary label associated with purchased renewable electricity**

No additional, voluntary label

**Comment**

---

**Country/area of consumption of purchased renewable electricity**

United States of America

**Sourcing method**

Other, please specify (Vendor provided renewables)

**Renewable electricity technology type**

Wind

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

317

**Tracking instrument used**

No instrument used

**Country/area of origin (generation) of purchased renewable electricity**

United States of America

**Are you able to report the commissioning or re-powering year of the energy generation facility?**

No

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

<Not Applicable>

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

2022

**Supply arrangement start year**

2022

**Additional, voluntary label associated with purchased renewable electricity**

No additional, voluntary label

**Comment**

---

**Country/area of consumption of purchased renewable electricity**

United States of America

**Sourcing method**

Other, please specify (Vendor provided renewables)

**Renewable electricity technology type**

Wind

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

122

**Tracking instrument used**

No instrument used

**Country/area of origin (generation) of purchased renewable electricity**

United States of America

**Are you able to report the commissioning or re-powering year of the energy generation facility?**

No

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

<Not Applicable>

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

2022

**Supply arrangement start year**

2022

**Additional, voluntary label associated with purchased renewable electricity**

No additional, voluntary label

**Comment**

---

**Country/area of consumption of purchased renewable electricity**

United States of America

**Sourcing method**

Other, please specify (Vendor provided renewables)

**Renewable electricity technology type**

Wind

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

2607

**Tracking instrument used**

No instrument used

**Country/area of origin (generation) of purchased renewable electricity**

United States of America

**Are you able to report the commissioning or re-powering year of the energy generation facility?**

No

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

<Not Applicable>

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

2022

**Supply arrangement start year**

2022

**Additional, voluntary label associated with purchased renewable electricity**

No additional, voluntary label

**Comment**

---

**Country/area of consumption of purchased renewable electricity**

United States of America

**Sourcing method**

Other, please specify (Vendor provided renewables)

**Renewable electricity technology type**

Wind

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

1557

**Tracking instrument used**

No instrument used

**Country/area of origin (generation) of purchased renewable electricity**

United States of America

**Are you able to report the commissioning or re-powering year of the energy generation facility?**

No

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

<Not Applicable>

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

2022

**Supply arrangement start year**

2022

**Additional, voluntary label associated with purchased renewable electricity**

No additional, voluntary label

**Comment**

---

**Country/area of consumption of purchased renewable electricity**

United States of America

**Sourcing method**

Retail supply contract with an electricity supplier (retail green electricity)

**Renewable electricity technology type**

Renewable electricity mix, please specify (Vendor provided renewables)

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

252

**Tracking instrument used**

No instrument used

**Country/area of origin (generation) of purchased renewable electricity**

United States of America

**Are you able to report the commissioning or re-powering year of the energy generation facility?**

No

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

<Not Applicable>

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

2022

**Supply arrangement start year**

2022

**Additional, voluntary label associated with purchased renewable electricity**

No additional, voluntary label

**Comment**

---

**Country/area of consumption of purchased renewable electricity**

United States of America

**Sourcing method**

Retail supply contract with an electricity supplier (retail green electricity)

**Renewable electricity technology type**

Renewable electricity mix, please specify (Vendor provided renewables)

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

480

**Tracking instrument used**

No instrument used

**Country/area of origin (generation) of purchased renewable electricity**

United States of America

**Are you able to report the commissioning or re-powering year of the energy generation facility?**

No

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

<Not Applicable>

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

2022

**Supply arrangement start year**

2022

**Additional, voluntary label associated with purchased renewable electricity**

No additional, voluntary label

**Comment**

---

**Country/area of consumption of purchased renewable electricity**

Spain

**Sourcing method**

Retail supply contract with an electricity supplier (retail green electricity)

**Renewable electricity technology type**

Renewable electricity mix, please specify (Vendor provided renewables)

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

7947

**Tracking instrument used**

Contract

**Country/area of origin (generation) of purchased renewable electricity**

Spain

**Are you able to report the commissioning or re-powering year of the energy generation facility?**

No

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

<Not Applicable>

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

2022

**Supply arrangement start year**

2022

**Additional, voluntary label associated with purchased renewable electricity**

No additional, voluntary label

**Comment**

---

**C8.2i****(C8.2i) Provide details of your organization's low-carbon heat, steam, and cooling purchases in the reporting year by country/area..****Sourcing method**

Other, please specify (Renewable electricity)

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

India

**Energy carrier**

Cooling

**Low-carbon technology type**

Renewable energy mix

**Low-carbon heat, steam, or cooling consumed (MWh)**

4000

**Comment**

The electricity used for creating cooling (chilled water) has been covered with renewable electricity.

---

**Sourcing method**

Other, please specify (Renewable electricity)

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

Hong Kong SAR, China

**Energy carrier**

Cooling

**Low-carbon technology type**

Renewable energy mix

**Low-carbon heat, steam, or cooling consumed (MWh)**

779

**Comment**

The electricity used for creating cooling (chilled water) has been covered with renewable electricity.

---

**Sourcing method**

Other, please specify (Renewable electricity)

**Country/area of consumption of low-carbon heat, steam or cooling**

Japan

**Energy carrier**

Cooling

**Low-carbon technology type**

Renewable energy mix

**Low-carbon heat, steam, or cooling consumed (MWh)**

7391

**Comment**

The electricity used for creating cooling (chilled water) has been covered with renewable electricity.

---

**(C8.2j) Provide details of your organization's renewable electricity generation by country/area in the reporting year.****Country/area of generation**

United States of America

**Renewable electricity technology type**

Renewable hydrogen fuel cell

**Facility capacity (MW)**

4

**Total renewable electricity generated by this facility in the reporting year (MWh)**

22047

**Renewable electricity consumed by your organization from this facility in the reporting year (MWh)**

22047

**Energy attribute certificates issued for this generation**

No

**Type of energy attribute certificate**

&lt;Not Applicable&gt;

**Comment**

---

**Country/area of generation**

United States of America

**Renewable electricity technology type**

Solar

**Facility capacity (MW)**

14

**Total renewable electricity generated by this facility in the reporting year (MWh)**

14885

**Renewable electricity consumed by your organization from this facility in the reporting year (MWh)**

14885

**Energy attribute certificates issued for this generation**

No

**Type of energy attribute certificate**

&lt;Not Applicable&gt;

**Comment**

---

**Country/area of generation**

United States of America

**Renewable electricity technology type**

Solar

**Facility capacity (MW)**

0.1

**Total renewable electricity generated by this facility in the reporting year (MWh)**

120

**Renewable electricity consumed by your organization from this facility in the reporting year (MWh)**

120

**Energy attribute certificates issued for this generation**

No

**Type of energy attribute certificate**

&lt;Not Applicable&gt;

**Comment**

---

**Country/area of generation**

United States of America

**Renewable electricity technology type**

Solar

**Facility capacity (MW)**

0.17

**Total renewable electricity generated by this facility in the reporting year (MWh)**

230

**Renewable electricity consumed by your organization from this facility in the reporting year (MWh)**230

---

**Energy attribute certificates issued for this generation**

No

**Type of energy attribute certificate**

<Not Applicable>

**Comment**

---

**Country/area of generation**

United States of America

**Renewable electricity technology type**

Solar

**Facility capacity (MW)**

0.8

**Total renewable electricity generated by this facility in the reporting year (MWh)**

162

**Renewable electricity consumed by your organization from this facility in the reporting year (MWh)**

162

**Energy attribute certificates issued for this generation**

No

**Type of energy attribute certificate**

<Not Applicable>

**Comment**

---

**Country/area of generation**

United States of America

**Renewable electricity technology type**

Solar

**Facility capacity (MW)**

0.5

**Total renewable electricity generated by this facility in the reporting year (MWh)**

1356

**Renewable electricity consumed by your organization from this facility in the reporting year (MWh)**

1356

**Energy attribute certificates issued for this generation**

No

**Type of energy attribute certificate**

<Not Applicable>

**Comment**

---

**Country/area of generation**

United States of America

**Renewable electricity technology type**

Solar

**Facility capacity (MW)**

0.75

**Total renewable electricity generated by this facility in the reporting year (MWh)**

567

**Renewable electricity consumed by your organization from this facility in the reporting year (MWh)**

567

**Energy attribute certificates issued for this generation**

No

**Type of energy attribute certificate**

<Not Applicable>

**Comment**

---

**Country/area of generation**

United States of America

**Renewable electricity technology type**

Solar

**Facility capacity (MW)**

0.1

**Total renewable electricity generated by this facility in the reporting year (MWh)**

90



**Renewable electricity consumed by your organization from this facility in the reporting year (MWh)**

90

**Energy attribute certificates issued for this generation**

No

**Type of energy attribute certificate**

<Not Applicable>

**Comment**

---

**Country/area of generation**

United States of America

**Renewable electricity technology type**

Solar

**Facility capacity (MW)**

1.1

**Total renewable electricity generated by this facility in the reporting year (MWh)**

1374

**Renewable electricity consumed by your organization from this facility in the reporting year (MWh)**

1374

**Energy attribute certificates issued for this generation**

No

**Type of energy attribute certificate**

<Not Applicable>

**Comment**

---

**Country/area of generation**

United States of America

**Renewable electricity technology type**

Solar

**Facility capacity (MW)**

0.05

**Total renewable electricity generated by this facility in the reporting year (MWh)**

80

**Renewable electricity consumed by your organization from this facility in the reporting year (MWh)**

80

**Energy attribute certificates issued for this generation**

No

**Type of energy attribute certificate**

<Not Applicable>

**Comment**

---

**Country/area of generation**

United States of America

**Renewable electricity technology type**

Solar

**Facility capacity (MW)**

4.67

**Total renewable electricity generated by this facility in the reporting year (MWh)**

8257

**Renewable electricity consumed by your organization from this facility in the reporting year (MWh)**

8257

**Energy attribute certificates issued for this generation**

No

**Type of energy attribute certificate**

<Not Applicable>

**Comment**

---

**Country/area of generation**

Japan

**Renewable electricity technology type**

Solar

**Facility capacity (MW)**

0.3

**Total renewable electricity generated by this facility in the reporting year (MWh)**

360

**Renewable electricity consumed by your organization from this facility in the reporting year (MWh)**

360

**Energy attribute certificates issued for this generation**

No

**Type of energy attribute certificate**

<Not Applicable>

**Comment**

---

**Country/area of generation**

Taiwan, China

**Renewable electricity technology type**

Solar

**Facility capacity (MW)**

1

**Total renewable electricity generated by this facility in the reporting year (MWh)**

86

**Renewable electricity consumed by your organization from this facility in the reporting year (MWh)**

86

**Energy attribute certificates issued for this generation**

No

**Type of energy attribute certificate**

<Not Applicable>

**Comment**

---

**Country/area of generation**

Singapore

**Renewable electricity technology type**

Solar

**Facility capacity (MW)**

1.1

**Total renewable electricity generated by this facility in the reporting year (MWh)**

1080

**Renewable electricity consumed by your organization from this facility in the reporting year (MWh)**

1080

**Energy attribute certificates issued for this generation**

No

**Type of energy attribute certificate**

<Not Applicable>

**Comment**

---

**Country/area of generation**

France

**Renewable electricity technology type**

Solar

**Facility capacity (MW)**

0.01

**Total renewable electricity generated by this facility in the reporting year (MWh)**

3

**Renewable electricity consumed by your organization from this facility in the reporting year (MWh)**

3

**Energy attribute certificates issued for this generation**

No

**Type of energy attribute certificate**

<Not Applicable>

**Comment**

---

**Country/area of generation**

China

**Renewable electricity technology type**

Solar

**Facility capacity (MW)**

0.1

**Total renewable electricity generated by this facility in the reporting year (MWh)**

70

**Renewable electricity consumed by your organization from this facility in the reporting year (MWh)**

70

**Energy attribute certificates issued for this generation**

No

**Type of energy attribute certificate**

<Not Applicable>

**Comment**

---

**Country/area of generation**

China

**Renewable electricity technology type**

Solar

**Facility capacity (MW)**

40

**Total renewable electricity generated by this facility in the reporting year (MWh)**

31704

**Renewable electricity consumed by your organization from this facility in the reporting year (MWh)**

31704

**Energy attribute certificates issued for this generation**

No

**Type of energy attribute certificate**

<Not Applicable>

**Comment**

---

**Country/area of generation**

China

**Renewable electricity technology type**

Solar

**Facility capacity (MW)**

40

**Total renewable electricity generated by this facility in the reporting year (MWh)**

30800

**Renewable electricity consumed by your organization from this facility in the reporting year (MWh)**

30800

**Energy attribute certificates issued for this generation**

No

**Type of energy attribute certificate**

<Not Applicable>

**Comment**

---

**Country/area of generation**

Australia

**Renewable electricity technology type**

Solar

**Facility capacity (MW)**

0.5

**Total renewable electricity generated by this facility in the reporting year (MWh)**

1080

**Renewable electricity consumed by your organization from this facility in the reporting year (MWh)**

1080

**Energy attribute certificates issued for this generation**

No

**Type of energy attribute certificate**

<Not Applicable>

**Comment**

---

**Country/area of generation**

Japan

**Renewable electricity technology type**

Solar

**Facility capacity (MW)**

12

**Total renewable electricity generated by this facility in the reporting year (MWh)**

19940

**Renewable electricity consumed by your organization from this facility in the reporting year (MWh)**

19940

**Energy attribute certificates issued for this generation**

No

**Type of energy attribute certificate**

&lt;Not Applicable&gt;

**Comment****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.**

Apple’s energy sourcing strategy includes making strategic investments in the development of new renewable energy generation facilities in the countries/areas in which we operate. When making such investments, we prioritize projects that clearly demonstrate the principle of additionally, whereby Apple’s investment is a primary catalyst in driving the addition of new renewable electricity generation sources to the local grid. This includes a variety of investment structures, including Apple owned generation facilities, equity investments, and long-term renewable energy purchase agreements (including power purchase agreements, virtual power purchase agreements, and environmental attribute purchase agreements). For countries/areas in which we have a very small footprint, we encourage the development of new renewable electricity resources by making investments through our Power for Impact program, which has the added benefit of bringing social and economic benefits to the local communities in which the projects are developed. As of July 2023, Apple’s sourcing strategy has directly contributed to bringing over 1.6 gigawatts of new renewable energy capacity online in the areas in which Apple operates.

Looking beyond Apple’s worldwide operations to the impacts of our manufacturing supply chain, we have urged our suppliers to decarbonize their entire Apple footprints by 2030, including all their Scope 1 and 2 emissions associated with Apple production. Our Supplier Clean Energy Program helps enable suppliers’ transition to clean, renewable electricity through policy advocacy, providing information and access to renewable energy procurement options, and creating engagement opportunities with renewable energy experts. In total, the Supplier Clean Energy Program now has over 20 gigawatts of clean energy commitments, of which nearly two-thirds are already operational. An example of innovation that connects our suppliers to high quality renewable energy projects is the China Clean Energy Fund which enables Apple and our suppliers to invest in clean energy. As of March 2023, the fund has invested in over 650 megawatts of renewable electricity projects, with nearly 100 percent of those investments online.

**C8.2l****(C8.2l) In the reporting year, has your organization faced any challenges to sourcing renewable electricity?**

	Challenges to sourcing renewable electricity	Challenges faced by your organization which were not country/area-specific
Row 1	No	<Not Applicable>

**C9. Additional metrics****C9.1****(C9.1) Provide any additional climate-related metrics relevant to your business.****C10. Verification****C10.1**

**(C10.1) Indicate the verification/assurance status that applies to your reported emissions.**

	Verification/assurance status
Scope 1	Third-party verification or assurance process in place
Scope 2 (location-based or market-based)	Third-party verification or assurance process in place
Scope 3	Third-party verification or assurance process in place

**C10.1a**

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**(C10.1a) Provide further details of the verification/assurance undertaken for your Scope 1 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**

Apple FY2022 CCF Assurance Statement.pdf

**Page/ section reference**

1-4

**Relevant standard**

ISO14064-3

**Proportion of reported emissions verified (%)**

100

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**C10.1b**

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**(C10.1b) Provide further details of the verification/assurance undertaken for your Scope 2 emissions and attach the relevant statements.**

**Scope 2 approach**

Scope 2 location-based

**Verification or assurance cycle in place**

Annual process

**Status in the current reporting year**

Complete

**Type of verification or assurance**

Limited assurance

**Attach the statement**

Apple FY2022 CCF Assurance Statement.pdf

**Page/ section reference**

1-4

**Relevant standard**

ISO14064-3

**Proportion of reported emissions verified (%)**

100

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**C10.1c**

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**(C10.1c) Provide further details of the verification/assurance undertaken for your Scope 3 emissions and attach the relevant statements.**

**Scope 3 category**

Scope 3: Purchased goods and services

**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**

Apple FY2022 CCF Scope 3 - Product Assurance Statement.pdf

**Page/section reference**

1-4

**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**

**(C10.2a) Which data points within your CDP disclosure have been verified, and which verification standards were used?**

Disclosure module verification relates to	Data verified	Verification standard	Please explain
C8. Energy	Renewable energy products	ISAE3000 and ISO 14064-3	The verification document attached also includes verification of renewable energy consumption (page 2) both self-generated and purchased including certificates from our Apple-created projects, renewable energy supplied to our facilities via utility green energy programs, renewable energy procured on Apple's behalf from the wholesale market via Direct Access programs, and market purchases of renewable energy certificates. This number is referenced in C7.5 (MWh of low-carbon electricity consumed).
C8. Energy	Energy consumption	ISAE3000 and ISO 14064-3	The verification document also includes verification of total Natural Gas consumption referenced in C8.2c (found on page 2 of attached document).
C8. Energy	Energy consumption	ISAE3000 and ISO 14064-3	The verification document also includes verification of total electricity consumption (page 2), referenced in This number is referenced in C7.5 (MWh of electricity consumed).
C4. Targets and performance	Other, please specify (Progress against renewable target)	ISAE3000 and ISO 14064-3	The attached assurance document shows verification of our scope 1, 2, and 3 emissions referenced in C4.2.

Apple  
 FY2022 CCF  
 Assurance  
 Statement.pdf

**C11. Carbon pricing**

**C11.1**

**(C11.1) Are any of your operations or activities regulated by a carbon pricing system (i.e. ETS, Cap & Trade or Carbon Tax)?**

No, and we do not anticipate being regulated in the next three years

**C11.2**

**(C11.2) Has your organization canceled any project-based carbon credits within the reporting year?**

Yes

**(C11.2a) Provide details of the project-based carbon credits canceled by your organization in the reporting year.****Project type**

Agriculture

**Type of mitigation activity**

Carbon removal

**Project description**

The Alto Mayo Protected Forest (AMPF) covers approximately 182,000 hectares of land in the Peruvian Amazon of extremely high value for biodiversity conservation and watershed protection. The threats to the area have increased in the last decade with the development of regional infrastructure projects and the rising price of coffee — the main crop grown in this area — leading to increasing deforestation and the subsequent loss of ecosystem services that this area provides. In response, Conservation International and its allies in the region designed the Alto Mayo Conservation Initiative (AMCI) to promote the sustainable management of the AMPF and its ecosystem services for the benefit of the local populations and the global climate. With the financial support of carbon financing, these actions are facilitating the conservation of large expanses of forest with associated climate change mitigation benefits while also creating opportunities for the sustainable development of local communities.

**Credits canceled by your organization from this project in the reporting year (metric tons CO2e)**

9100

**Purpose of cancellation**

Voluntary offsetting

**Are you able to report the vintage of the credits at cancellation?**

Yes

**Vintage of credits at cancellation**

2016

**Were these credits issued to or purchased by your organization?**

Issued

**Credits issued by which carbon-crediting program**

VCS (Verified Carbon Standard)

**Method(s) the program uses to assess additionality for this project**

Consideration of legal requirements

Investment analysis

Barrier analysis

**Approach(es) by which the selected program requires this project to address reversal risk**

Monitoring and compensation

**Potential sources of leakage the selected program requires this project to have assessed**

Activity-shifting

**Provide details of other issues the selected program requires projects to address****Comment**

Please note that the vintage of credits at cancellation ranges from 2016 to 2018. Per CDP guidance, the oldest vintage was selected in this response.

**Project type**

Agriculture

**Type of mitigation activity**

Carbon removal

**Project description**

The Chyulu Hills REDD+ Project (CHRP) is a multi-partner initiative designed to promote climate change mitigation and adaptation, restore biodiversity, and create alternative livelihoods under the UN scheme of Reducing Emissions from Deforestation and forest Degradation (REDD+). It's located in the Tsavo-Amboseli ecosystem in southeastern Kenya and stretches over an area of over 410,000 hectares. Its main geographic feature is the volcanic Chyulu Hills mountain range, from which the project derives its name. This project presents a broad ecosystem approach, including REDD+, to provide long-term sustainable financing and management to maintain the ecological integrity of an iconic African landscape. The project will help protect a very high-value wildlife and biodiversity area while supporting the development needs of Indigenous and other local communities.

**Credits canceled by your organization from this project in the reporting year (metric tons CO2e)**

315000

**Purpose of cancellation**

Voluntary offsetting

**Are you able to report the vintage of the credits at cancellation?**

Yes

**Vintage of credits at cancellation**

2017

**Were these credits issued to or purchased by your organization?**

Issued

**Credits issued by which carbon-crediting program**

VCS (Verified Carbon Standard)

**Method(s) the program uses to assess additionality for this project**

Consideration of legal requirements

Investment analysis

Barrier analysis

**Approach(es) by which the selected program requires this project to address reversal risk**

Monitoring and compensation

**Potential sources of leakage the selected program requires this project to have assessed**

Activity-shifting

Market leakage

**Provide details of other issues the selected program requires projects to address**

**Comment**

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**C11.3**

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**(C11.3) Does your organization use an internal price on carbon?**

No, and we do not currently anticipate doing so in the next two years

**C12. Engagement**

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**C12.1**

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**(C12.1) Do you engage with your value chain on climate-related issues?**

Yes, our suppliers

**C12.1a**

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**(C12.1a) Provide details of your climate-related supplier engagement strategy.**

**Type of engagement**

Innovation & collaboration (changing markets)

**Details of engagement**

Collaborate with suppliers on innovative business models to source renewable energy

**% of suppliers by number**

100

**% total procurement spend (direct and indirect)**

85

**% of supplier-related Scope 3 emissions as reported in C6.5**

**Rationale for the coverage of your engagement**

The manufacturing of our products represent the most significant source of Apple's emissions (about 65% in FY22), per our comprehensive carbon footprint. That is why we've engaged deeply with our suppliers to reduce our footprint from manufacturing, with a focus on energy use and material selection. Through these programs, we've engaged 100% Apple-managed direct suppliers. This pool of suppliers extends beyond our top suppliers by spend, to 100% suppliers with whom we directly contract in the manufacturing of Apple products. The Apple Supplier Code of Conduct requires all Apple suppliers to report their emissions and their reduction targets. Apple suppliers sign and are required to uphold the provisions set forth in the Apple Supplier Code of Conduct and associated Supplier Responsibility Standards. As part of Apple's supplier engagement, we are partnering with our worldwide supply chain to urge accelerated action to achieve carbon neutrality for their Apple-related corporate operations. Apple requires reporting on progress toward these goals — specifically Scope 1 & 2 emissions reductions related to our production — and will track and audit annual progress. Apple will partner with suppliers that are working with urgency and making measurable progress toward decarbonization.

Our Supplier Energy Efficiency Program launched a supplier energy training program to increase the suppliers' awareness of energy conservation and to stimulate energy efficiency improvement activities. Apple conducts energy audits to identify energy saving opportunities and offers technical assistance. And we developed and shared a supplier GHG emission inventory reporting tool with all of Apple-managed supplier facilities. This tool helps suppliers calculate their Scope 1 & 2 emissions. For the energy that's needed, our Supplier Clean Energy Program (CEP) helps suppliers transition to renewable energy through a combination of direct engagement and online resources. The program's Clean Energy portal of resources is available to all our suppliers, while suppliers who commit to addressing 100% of their global manufacturing footprint for Apple become official CEP participants. We've also worked with suppliers on material selection -- including material innovation, switching to aluminum smelted using renewable sources of electricity, and transitioning to recycled materials.

**Impact of engagement, including measures of success**

Our threshold of success across our supplier engagement is represented by positive annual progress in the number of suppliers engaged, energy savings, and use of clean energy which supports our goal to transition our manufacturing supply chain to 100 percent renewable energy and reaching carbon neutrality for our entire carbon footprint by FY2030. Each year, participants of the Supplier Clean Energy Program (CEP) are asked to update their annual renewable energy information and progress to date, and this information is then verified through third party assurances; this allows us to track suppliers' progress towards powering 100 percent of their Apple production with renewable energy. We measure clean energy participation based on the number of suppliers in our program and the total clean energy generated per year — and consider annual increases in these programs as success. To-date, over 250 suppliers — an increase from 213 since FY2021— have committed to procuring 100 percent clean energy for their Apple-related load, and even more have engaged with the CEP. The renewable energy already online generated 23.7M MWh of clean energy in FY2022 (up from 18.1M MWh in FY2021), avoiding 17.4M MT of carbon emissions in our supply chain (up from 13.9M MT in FY2021). The CEP has over 20 GW of clean energy commitments — up from nearly 16 GW in FY21.

Regarding energy efficiency, we measure success based on level of engagement in our program and reduction in energy savings. Suppliers engaged in our program saved more than 1.6B KWh of electricity through efficiency efforts (up from 1.15M MWh in FY21).

**Comment**

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**C12.2**

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**(C12.2) Do your suppliers have to meet climate-related requirements as part of your organization's purchasing process?**

Yes, climate-related requirements are included in our supplier contracts

**C12.2a**

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**(C12.2a) Provide details of the climate-related requirements that suppliers have to meet as part of your organization’s purchasing process and the compliance mechanisms in place.**

**Climate-related requirement**

Climate-related disclosure through a non-public platform

**Description of this climate related requirement**

Apple is committed to respecting the highest standards of environmental conduct including climate change. Apple’s suppliers are required to use environmentally responsible practices wherever they make products or perform services for Apple, to operate in accordance with the principles and requirements, as applicable, in this Apple’s Supplier Code of Conduct (“Code”), and in full compliance with all Applicable Laws and Regulations.

Apple Supplier Code of Conduct assessments, including surprise assessments, are conducted globally. In FY2022, our supply chain’s average assessment performance in the environmental category was 96 percent. Supplier assessment scores are reflective of a supplier’s performance at the time of assessment.

**% suppliers by procurement spend that have to comply with this climate-related requirement**

100

**% suppliers by procurement spend in compliance with this climate-related requirement**

96

**Mechanisms for monitoring compliance with this climate-related requirement**

First-party verification  
Off-site third-party verification

**Response to supplier non-compliance with this climate-related requirement**

Retain and engage

---

**Climate-related requirement**

Purchasing renewable energy

**Description of this climate related requirement**

Apple is committed to addressing climate change and increasing the use of renewable energy around the world. We transitioned to 100 percent renewable electricity in our offices, retail stores, and data centers in 2018. And in 2020, we took steps to be carbon neutral for our corporate emissions, including business travel and employee commute, and announced our ambitious goal to become carbon neutral for the entire life cycle of our products by fiscal year 2030. To reach this target, we plan to transition our entire manufacturing supply chain — including material extraction, component manufacturing, and final product assembly — to 100 percent renewable electricity. To help facilitate this transition to clean energy in our manufacturing supply chain, we launched the Supplier Clean Energy Program in 2015. We’ve targeted carbon-intensive suppliers or those that represent a large portion of Apple’s direct spend with suppliers. As of April 2023, over 250 manufacturing partners in 28 countries have committed to 100 percent renewable energy for their Apple production, which corresponds to over 85 percent of Apple’s direct spend for materials, manufacturing, and assembly of our products worldwide.

**% suppliers by procurement spend that have to comply with this climate-related requirement**

85

**% suppliers by procurement spend in compliance with this climate-related requirement**

85

**Mechanisms for monitoring compliance with this climate-related requirement**

First-party verification  
On-site third-party verification

**Response to supplier non-compliance with this climate-related requirement**

Retain and engage

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**C12.3**

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**(C12.3) Does your organization engage in activities that could either directly or indirectly influence policy, law, or regulation that may impact the climate?**

Row 1

**External engagement activities that could directly or indirectly influence policy, law, or regulation that may impact the climate**

Yes, we engage directly with policy makers

Yes, our membership of/engagement with trade associations could influence policy, law, or regulation that may impact the climate

Yes, we fund organizations or individuals whose activities could influence policy, law, or regulation that may impact the climate

**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)**

Apple\_Environmental\_Progress\_Report\_2023.pdf

**Describe the process(es) your organization has in place to ensure that your external engagement activities are consistent with your climate commitments and/or climate transition plan**

Apple's Vice President of Environment, Policy and Social Initiatives, Lisa Jackson, oversees Apple's worldwide governmental affairs team to ensure alignment of policy influencing activities with our climate change strategy. Ms. Jackson reviews all significant legislative, public policy, and communications initiatives related to climate and environment, as well as all substantive participation requests for environmental advocacy. Apple believes that its clear and forceful position on climate action—through direct communications to employees and the broader public from both Ms. Jackson and Apple's CEO Tim Cook—leaves no ambiguity among its policy teams about Apple's stance on climate change. This clear direction from leadership also enables a unified approach to climate action regardless of employees' geographic location or business division. Apple works with various groups including those listed in C12.3, to drive U.S. state, federal, and foreign-government policies that support climate action, such as increased access to renewable energy. When deciding whether to join or maintain membership in a trade association (such as those select ones listed in 12.3b), that trade association's position and activity on climate change is a factor Apple considers. If direct or indirect engagement activities become inconsistent with our overall climate change strategy, we may disengage. For example, in 2009, Apple resigned its membership at the U.S. Chamber of Commerce directly as a result of the Chamber's public statements opposing the regulation of GHG emissions and its opposition to climate change legislation.

**Primary reason for not engaging in activities that could directly or indirectly influence policy, law, or regulation that may impact the climate**

<Not Applicable>

**Explain why your organization does not engage in activities that could directly or indirectly influence policy, law, or regulation that may impact the climate**

<Not Applicable>

C12.3a

**(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?**

**Specify the policy, law, or regulation on which your organization is engaging with policy makers**

Japan RE policies

**Category of policy, law, or regulation that may impact the climate**

Climate change mitigation

**Focus area of policy, law, or regulation that may impact the climate**

Other, please specify (Clean energy generation)

**Policy, law, or regulation geographic coverage**

National

**Country/area/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**

Apple is calling for the development of a renewable energy credit trading system better designed for market involvement and offering more detailed project data to accompany credits. Also, in Japan, we became the first of several multinationals to join the Japan Climate Leader's Partnership, which aligns business objectives with environmental goals. Apple is an Executive Member and participates in Advisory Working groups. Apple supported JCLP and RE100 letters to the Government supporting more ambitious climate and energy targets, and greater accountability on emissions impacts of different energy solutions. More recently, Apple is advocating for direct transactions of Non-Fossil Fuel Certificates (NFCs), and accelerated implementation of virtual power purchase agreements, streamlining to avoid permitting and regulatory delays, ambitious carbon pricing, alignment with 1.5C pathway, and accelerated expansion of RE in Japan.

**Details of exceptions (if applicable) and your organization's proposed alternative approach to the policy, law or regulation**

<Not Applicable>

**Have you evaluated whether your organization's engagement on this policy, law, or regulation is aligned with the goals of the Paris Agreement?**

Yes, we have evaluated, and it is aligned

**Please explain whether this policy, law or regulation is central to the achievement of your climate transition plan and, if so, how?**

There are several areas mentioned, and the overall goal is to increase RE supply and decrease emissions in Japan. The policies, if improved, will help suppliers access more RE, that is more cost-competitive. This supports efforts for the supply chain to transition to 100% RE, in line with Apple's carbon neutrality plan.

**Specify the policy, law, or regulation on which your organization is engaging with policy makers**

Viet Nam Direct Power Purchase Pilot

**Category of policy, law, or regulation that may impact the climate**

Climate change mitigation

**Focus area of policy, law, or regulation that may impact the climate**

Other, please specify (Clean energy generation)

**Policy, law, or regulation geographic coverage**

National

**Country/area/region the policy, law, or regulation applies to**

Viet Nam

**Your organization's position on the policy, law, or regulation**

Support with minor exceptions

**Description of engagement with policy makers**

In Viet Nam, we advocated for government action to enable companies to purchase renewable energy. We are part of Asia Clean Energy Coalition, which also supports launch of DPPA in Viet Nam, and we are part of US ASEAN Business Council, where we have encouraged the association to take a position more in line with Viet Nam's net zero commitment.

**Details of exceptions (if applicable) and your organization's proposed alternative approach to the policy, law or regulation**

We support a design that takes into account interest of all parties, setting a transparent pricing mechanism that is cost competitive.

**Have you evaluated whether your organization's engagement on this policy, law, or regulation is aligned with the goals of the Paris Agreement?**

Yes, we have evaluated, and it is aligned

**Please explain whether this policy, law or regulation is central to the achievement of your climate transition plan and, if so, how?**

While this pilot scheme is not central to the achievement of our carbon neutrality plan by fiscal year 2030, it does support our plan by creating necessary mechanisms -- enabling the transition to 100 percent renewable energy. Without such a mechanism, it could be difficult for suppliers to procure renewables in Vietnam.

**Specify the policy, law, or regulation on which your organization is engaging with policy makers**

Korea Green premium, PPA rules

**Category of policy, law, or regulation that may impact the climate**

Climate change mitigation

**Focus area of policy, law, or regulation that may impact the climate**

Other, please specify (Clean energy generation)

**Policy, law, or regulation geographic coverage**

National

**Country/area/region the policy, law, or regulation applies to**

Republic of Korea

**Your organization's position on the policy, law, or regulation**

Support with no exceptions

**Description of engagement with policy makers**

We are engaged in Korea to improve transparency of the Green Premium auction and accelerate implementation of cost-effective PPA options.

**Details of exceptions (if applicable) and your organization's proposed alternative approach to the policy, law or regulation**

<Not Applicable>

**Have you evaluated whether your organization's engagement on this policy, law, or regulation is aligned with the goals of the Paris Agreement?**

Yes, we have evaluated, and it is aligned

**Please explain whether this policy, law or regulation is central to the achievement of your climate transition plan and, if so, how?**

While this policy is not central to the achievement of our carbon neutrality goal by fiscal year 2030, this policy supports our goal through the accelerated implementation of cost-effective procurement mechanisms in the Republic of Korea, reducing difficulty for our suppliers in the procurement of 100 percent renewable energy.

**Specify the policy, law, or regulation on which your organization is engaging with policy makers**

Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal (Basel Convention)

**Category of policy, law, or regulation that may impact the climate**

Low-carbon products and services

**Focus area of policy, law, or regulation that may impact the climate**

Circular economy

**Policy, law, or regulation geographic coverage**

Global

**Country/area/region the policy, law, or regulation applies to**

<Not Applicable>

**Your organization's position on the policy, law, or regulation**

Support with minor exceptions

**Description of engagement with policy makers**

Support policies to recycle and reuse material in support of Apple's ambition to make all products from recycled or renewable materials.

**Details of exceptions (if applicable) and your organization's proposed alternative approach to the policy, law or regulation**

Support improvements to the Basel Convention that maintain critical environmental and community protections while enabling the more efficient global movement of material for recycling to best in class facilities.

**Have you evaluated whether your organization's engagement on this policy, law, or regulation is aligned with the goals of the Paris Agreement?**

Yes, we have evaluated, and it is aligned

**Please explain whether this policy, law or regulation is central to the achievement of your climate transition plan and, if so, how?**

Using more recycled content helps minimize the overall resource footprint supporting our products, which helps achieve our carbon neutrality goals. The Basel Convention plays an important role in enabling more material recycling and more recycled material in the supply chain.

**Specify the policy, law, or regulation on which your organization is engaging with policy makers**

Transmission Interconnection Updates

**Category of policy, law, or regulation that may impact the climate**

Low-carbon products and services

**Focus area of policy, law, or regulation that may impact the climate**

Other, please specify (Updating interconnection processes to get renewable electricity on the grid more quickly)

**Policy, law, or regulation geographic coverage**

National

**Country/area/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**

Apple submitted a comment to the Federal Energy Regulatory Commission supporting the Notice of Proposed Rulemaking they put out with proposed modifications to the interconnection queue process.

**Details of exceptions (if applicable) and your organization's proposed alternative approach to the policy, law or regulation**

<Not Applicable>

**Have you evaluated whether your organization's engagement on this policy, law, or regulation is aligned with the goals of the Paris Agreement?**

Yes, we have evaluated, and it is aligned

**Please explain whether this policy, law or regulation is central to the achievement of your climate transition plan and, if so, how?**

While this policy is not central to the achievement of our carbon neutrality goal by fiscal year 2030, this policy supports our goal by improving the time it takes to connect renewable energy to the grid, thus accelerating grid decarbonization overall.

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**Specify the policy, law, or regulation on which your organization is engaging with policy makers**

Paris Agreement

**Category of policy, law, or regulation that may impact the climate**

Climate change mitigation

**Focus area of policy, law, or regulation that may impact the climate**

Other, please specify (Regulation of GHG emissions)

**Policy, law, or regulation geographic coverage**

Global

**Country/area/region the policy, law, or regulation applies to**

<Not Applicable>

**Your organization's position on the policy, law, or regulation**

Support with no exceptions

**Description of engagement with policy makers**

Through Race to Zero and America is All In, we're tracking our shared commitment to support the Paris Agreement and efforts to achieve robust near-term emissions targets. Apple is also actively supporting the Asia Clean Energy Coalition — launched in 2022 at COP27 — to support accelerated corporate renewable electricity procurement in Asia, and the First Movers Coalition, a global initiative harnessing the purchasing power of companies to decarbonize seven "hard to abate" industrial sectors that currently account for 30 percent of global emissions according to WEF, also a key part of the corporate efforts at COP27.

**Details of exceptions (if applicable) and your organization's proposed alternative approach to the policy, law or regulation**

<Not Applicable>

**Have you evaluated whether your organization's engagement on this policy, law, or regulation is aligned with the goals of the Paris Agreement?**

Yes, we have evaluated, and it is aligned

**Please explain whether this policy, law or regulation is central to the achievement of your climate transition plan and, if so, how?**

While no singular policy, law, or regulation is central to the achievement of our plan, the Paris Agreement aligns to our commitment to achieving carbon neutrality across our entire value chain by 2030 — reducing emissions by 75 percent compared with 2015 and balancing the residual emissions with high-quality carbon removal.

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C12.3b

**(C12.3b) Provide details of the trade associations your organization is a member of, or 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 (Advanced Energy United (AEU))

**Is your organization's position on climate change policy consistent with theirs?**

Consistent

**Has your organization attempted to influence their position in the reporting year?**

No, we did not attempt to influence their position

**Describe how your organization's position is consistent with or differs from the trade association's position, and any actions taken to influence their position**

AEU is an association of businesses working to make energy secure, clean, and affordable by educating, engaging, and advocating for policies that allow its member companies to compete to repower our economy with 100% clean energy. Its mission is to accelerate the transition to 100% clean energy in the United States, and strives to achieve this goal by working with decision makers at every level of government as well as regulators of energy markets. Advanced Energy United encompasses a broad range of products and services that constitute the best available technologies to meet energy needs today and tomorrow—these include energy efficiency, demand response, natural gas electric generation, solar, wind, hydro, nuclear, electric vehicles, biofuels, and smart grid. AEU's vision is of a prosperous world that runs on secure, clean, affordable energy. For more information, please visit [advancedenergyunited.org/about](https://advancedenergyunited.org/about)

**Funding figure your organization provided to this trade association in the reporting year (currency as selected in C0.4)**

**Describe the aim of your organization's funding**

<Not Applicable>

**Have you evaluated whether your organization's engagement with this trade association is aligned with the goals of the Paris Agreement?**

Yes, we have evaluated, and it is aligned

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**Trade association**

Other, please specify (American Council for an Energy-Efficient Economy (ACEEE))

**Is your organization's position on climate change policy consistent with theirs?**

Consistent

**Has your organization attempted to influence their position in the reporting year?**

No, we did not attempt to influence their position

**Describe how your organization's position is consistent with or differs from the trade association's position, and any actions taken to influence their position**

The ACEEE is a nonprofit research organization, that develops transformative policies to reduce energy waste and combat climate change. With independent analysis, ACEEE aims to build a vibrant and equitable economy - one that uses energy more productively, reduces costs, protects the environment, and promotes the health, safety, and well-being of everyone.

**Funding figure your organization provided to this trade association in the reporting year (currency as selected in C0.4)**

**Describe the aim of your organization's funding**

<Not Applicable>

**Have you evaluated whether your organization's engagement with this trade association is aligned with the goals of the Paris Agreement?**

Yes, we have evaluated, and it is aligned

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**Trade association**

Other, please specify (Japan Climate Leadership Partners (JCLP))

**Is your organization's position on climate change policy consistent with theirs?**

Consistent

**Has your organization attempted to influence their position in the reporting year?**

No, we did not attempt to influence their position

**Describe how your organization's position is consistent with or differs from the trade association's position, and any actions taken to influence their position**

JCLP advocates that companies should work aggressively to decarbonize their operations, and should speak up on climate policy. It is a coalition of Japanese companies, and companies that do business in Japan. For more information, please visit <https://japan-clp.jp/en>

**Funding figure your organization provided to this trade association in the reporting year (currency as selected in C0.4)**

**Describe the aim of your organization's funding**

<Not Applicable>

**Have you evaluated whether your organization's engagement with this trade association is aligned with the goals of the Paris Agreement?**

Yes, we have evaluated, and it is aligned

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**Trade association**

Other, please specify (Information Technology Industry Council)

**Is your organization's position on climate change policy consistent with theirs?**

Consistent

**Has your organization attempted to influence their position in the reporting year?**

No, we did not attempt to influence their position

**Describe how your organization's position is consistent with or differs from the trade association's position, and any actions taken to influence their position**

The Information Technology Industry Council (ITI) has a clear position supporting innovation leading to increased energy efficiency and the promotion of clean, renewable energy sources, as indicated on their website (<https://www.itic.org/policy/energy>): "ITI and our members seek to continuously improve the energy efficiency landscape in the U.S. and globally to leverage energy-efficient technologies. ITI works on behalf of our member companies to advocate for policies that advance both intelligent efficiency and product efficiency..." 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. Our position and their positions are in alignment; we are not attempting to influence their position.

**Funding figure your organization provided to this trade association in the reporting year (currency as selected in C0.4)**

**Describe the aim of your organization's funding**

<Not Applicable>

**Have you evaluated whether your organization's engagement with this trade association is aligned with the goals of the Paris Agreement?**

Yes, we have evaluated, and it is aligned

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**Trade association**

BusinessEurope

**Is your organization's position on climate change policy consistent with theirs?**

Mixed

**Has your organization attempted to influence their position in the reporting year?**

Yes, we decided to terminate our membership within the next two years

**Describe how your organization's position is consistent with or differs from the trade association's position, and any actions taken to influence their position**

BusinessEurope represents national business federations who are their direct members. They work across all policy areas affecting their members. "BusinessEurope is committed to and aware of the challenges that climate change presents as well as the impacts of human activities. This is why BusinessEurope highly welcomed the Paris Agreement, which reflects the long-term objective of limiting global warming below 2°C."

**Funding figure your organization provided to this trade association in the reporting year (currency as selected in C0.4)**

**Describe the aim of your organization's funding**

<Not Applicable>

**Have you evaluated whether your organization's engagement with this trade association is aligned with the goals of the Paris Agreement?**

Yes, we have evaluated, and it is aligned

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**Trade association**

Other, please specify (DigitalEurope)

**Is your organization's position on climate change policy consistent with theirs?**

Consistent

**Has your organization attempted to influence their position in the reporting year?**

No, we did not attempt to influence their position

**Describe how your organization's position is consistent with or differs from the trade association's position, and any actions taken to influence their position**

DIGITALEUROPE is convinced that digital technologies are key enablers for attaining the sustainability goals of the European Green Deal and contributing to the Paris Agreement and United Nations Sustainable Development Goals (SDGs).

**Funding figure your organization provided to this trade association in the reporting year (currency as selected in C0.4)**

**Describe the aim of your organization's funding**

<Not Applicable>

**Have you evaluated whether your organization's engagement with this trade association is aligned with the goals of the Paris Agreement?**

Yes, we have evaluated, and it is aligned

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**Trade association**

Other, please specify (Clean Energy Buyers Association (CEBA))

**Is your organization's position on climate change policy consistent with theirs?**

Consistent

**Has your organization attempted to influence their position in the reporting year?**

No, we did not attempt to influence their position

**Describe how your organization's position is consistent with or differs from the trade association's position, and any actions taken to influence their position**

CEBA is a membership association for energy customers seeking to procure clean energy across the U.S. CEBA's aspiration is to achieve a 90% carbon-free U.S. electricity system by 2030 and to cultivate a global community of energy customers driving clean energy.

**Funding figure your organization provided to this trade association in the reporting year (currency as selected in C0.4)**

**Describe the aim of your organization's funding**

<Not Applicable>

**Have you evaluated whether your organization's engagement with this trade association is aligned with the goals of the Paris Agreement?**

Yes, we have evaluated, and it is aligned

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**Trade association**

Other, please specify (AmCham EU)

**Is your organization's position on climate change policy consistent with theirs?**

Consistent

**Has your organization attempted to influence their position in the reporting year?**

No, we did not attempt to influence their position

**Describe how your organization's position is consistent with or differs from the trade association's position, and any actions taken to influence their position**

Amcham EU represent companies that are already researching, developing and investing in low-carbon solutions and technologies. Amcham EU has advocated for a stable and predictable framework for investments to encourage and sustain these efforts. Amcham EU believes the Paris Agreement provides clear goals as well as a balanced and cost-efficient approach to reducing emissions

**Funding figure your organization provided to this trade association in the reporting year (currency as selected in C0.4)**

**Describe the aim of your organization's funding**

<Not Applicable>

**Have you evaluated whether your organization's engagement with this trade association is aligned with the goals of the Paris Agreement?**

Yes, we have evaluated, and it is aligned

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**Trade association**

Business Roundtable

**Is your organization's position on climate change policy consistent with theirs?**

Mixed

**Has your organization attempted to influence their position in the reporting year?**

Yes, we attempted to influence them but they did not change their position

**Describe how your organization's position is consistent with or differs from the trade association's position, and any actions taken to influence their position**

Business Roundtable is an association of chief executive officers of America's leading companies working to promote a thriving US economy and expanded opportunity for all Americans through sound public policy. Business Roundtable believes corporations should lead by example, support sound public policies and drive innovation needed to address climate change. Apple actively engages with BRT staff and tries to influence the positions that the trade association takes so that they are more aligned with Apple's position on climate change.

**Funding figure your organization provided to this trade association in the reporting year (currency as selected in C0.4)**

**Describe the aim of your organization's funding**

<Not Applicable>

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**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

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### C12.3c

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**(C12.3c) Provide details of the funding you provided to other organizations or individuals in the reporting year whose activities could influence policy, law, or regulation that may impact the climate.**

**Type of organization or individual**

Non-Governmental Organization (NGO) or charitable organization

**State the organization or individual to which you provided funding**

Ceres

**Funding figure your organization provided to this organization or individual in the reporting year (currency as selected in C0.4)**

50000

**Describe the aim of this funding and how it could influence policy, law or regulation that may impact the climate**

Ceres works with leading businesses to make the financial business case for sustainability. As members of their Company Network we provide information and support, and help drive state and federal action on climate change. We collaborate with other companies and participate in Ceres-driven advocacy. For more information, visit [ceres.org/networks/ceres-company-network](https://ceres.org/networks/ceres-company-network)

**Have you evaluated whether this funding is aligned with the goals of the Paris Agreement?**

Yes, we have evaluated, and it is aligned

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**Type of organization or individual**

Non-Governmental Organization (NGO) or charitable organization

**State the organization or individual to which you provided funding**

World Business Council for Sustainable Development (WBCSD)

**Funding figure your organization provided to this organization or individual in the reporting year (currency as selected in C0.4)**

115000

**Describe the aim of this funding and how it could influence policy, law or regulation that may impact the climate**

As members of WBCSD, we engage with impactful coalitions and networks that create advocacy inputs for common policy asks, and enabling the adoption of standards and tools. WBCSD mobilizes its members to create the scale needed to transform their businesses and value chains to achieve Net Zero by 2050. For more information, visit [wbcscd.org/Imperatives/Climate-Action](https://wbcscd.org/Imperatives/Climate-Action).

**Have you evaluated whether this funding is aligned with the goals of the Paris Agreement?**

Yes, we have evaluated, and it is aligned

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**Type of organization or individual**

Non-Governmental Organization (NGO) or charitable organization

**State the organization or individual to which you provided funding**

RE100

**Funding figure your organization provided to this organization or individual in the reporting year (currency as selected in C0.4)**

18000

**Describe the aim of this funding and how it could influence policy, law or regulation that may impact the climate**

As a RE100 Member and Advisory Committee member, we engage with local and national governments to accelerate the adoption of renewable electricity solutions. We work RE100 to enact policy measures that support corporate sourcing of renewable electricity and creates a competitive market for businesses to buy renewables. For more information, visit [there100.org](https://there100.org)

**Have you evaluated whether this funding is aligned with the goals of the Paris Agreement?**

Yes, we have evaluated, and it is aligned

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**Type of organization or individual**

Non-Governmental Organization (NGO) or charitable organization

**State the organization or individual to which you provided funding**

Asia Clean Energy Coalition (ACEC)

**Funding figure your organization provided to this organization or individual in the reporting year (currency as selected in C0.4)**

20000

**Describe the aim of this funding and how it could influence policy, law or regulation that may impact the climate**

As a Member and Advisory Committee member, we engage through ACEC with national governments to accelerate the adoption of renewable electricity solutions. We work to enact policy measures that support corporate sourcing of renewable electric and creates a competitive market for businesses to buy renewables.

**Have you evaluated whether this funding is aligned with the goals of the Paris Agreement?**

Yes, we have evaluated, and it is aligned

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### C12.4

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**(C12.4) Have you published information about your organization's response to climate change and GHG emissions performance for this reporting year in places other than in your CDP response? If so, please attach the publication(s).**



**Publication**

In mainstream reports

**Status**

Complete

**Attach the document**

Apple\_2023\_ProxyStatement.pdf

**Page/Section reference**

Pages 10, 22, 24, 50

**Content elements**

Strategy  
Emissions figures  
Other metrics

**Comment**

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**Publication**

In mainstream reports

**Status**

Complete

**Attach the document**

2022\_Apple-10-K.pdf

**Page/Section reference**

Pages 5, 13, 14

**Content elements**

Risks & opportunities

**Comment**

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**Publication**

In voluntary sustainability report

**Status**

Complete

**Attach the document**

Apple\_Environmental\_Progress\_Report\_2023.pdf

**Page/Section reference**

All

**Content elements**

Governance  
Strategy  
Risks & opportunities  
Emissions figures  
Emission targets  
Other metrics

**Comment**

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**Publication**

In voluntary sustainability report

**Status**

Complete

**Attach the document**

iPhone\_14\_iPhone\_14\_Plus\_PER\_Sept2022.pdf

**Page/Section reference**

All

**Content elements**

Strategy  
Emissions figures  
Emission targets  
Other metrics

**Comment**

We publish product environmental reports at the launch of each product. These includes the carbon footprint of the product, as well as descriptions of other environmental features of the product. These are available on our environmental website: <https://www.apple.com/environment>

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**Publication**

In voluntary sustainability report

**Status**

Complete

**Attach the document**

Apple\_SR\_2023\_Progress\_Report-compressed.pdf

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**Page/Section reference**

Pages 6, 53-54, 62-90

**Content elements**

- Strategy
- Risks & opportunities
- Emissions figures
- Emission targets
- Other metrics

**Comment**

**Publication**

In voluntary sustainability report

**Status**

Complete

**Attach the document**

FY23-Supplier-Code-of-Conduct-and-Supplier-Responsibility-Standards.pdf

**Page/Section reference**

Pages 3-4, 56-60, 89-109

**Content elements**

- Strategy
- Risks & opportunities
- Emissions figures
- Other metrics

**Comment**

C12.5

(C12.5) Indicate the collaborative frameworks, initiatives and/or commitments related to environmental issues for which you are a signatory/member.

	Environmental collaborative framework, initiative and/or commitment	Describe your organization's role within each framework, initiative and/or commitment
Row 1	RE100 The B Team We Are Still In We Mean Business World Business Council for Sustainable Development (WBCSD)	Apple is committed to achieving clear impact across our environmental goals — and beyond our footprint as a company. This is urgent work that we can't do without others. This means working with our partners, learning from their feedback, and providing support where we can make a difference. We aim to effect positive change within and beyond our operations and supply chain. And we respond to the world around us by looking for opportunities where our leadership can impact policies, industries, and communities in a transformative way.

C15. Biodiversity

C15.1

(C15.1) Is there board-level oversight and/or executive management-level responsibility for biodiversity-related issues within your organization?

	Board-level oversight and/or executive management-level responsibility for biodiversity-related issues	Description of oversight and objectives relating to biodiversity	Scope of board-level oversight
Row 1	Yes, executive management-level responsibility	<p>Apple's Vice President of Environment, Social, and Policy Initiatives is responsible for the development, review, and execution of plans designed to minimize Apple's impact on the environment. A number of Apple's environmental programs have an impact on biodiversity, including Apple's packaging specification, which requires that all fiber packaging be sourced from responsible sources, Apple's closed loop initiatives, which reduce its reliance on mining and the associated environmental impacts, water restoration initiatives, as well as carbon removal projects, many of which have conservation benefits.</p> <p>Apple's Board of Directors reviews and discusses updates on environmental matters with Apple's Vice President of Environment, Policy and Social Initiatives, who is responsible for the development, review, and execution of plans designed to minimize Apple's impact on the environment. These reports include updates on Apple's progress towards environmental and climate goals and the environmental impact of our products and operations. In 2022, the Board formalized the Nominating and Corporate Governance Committee's oversight of Apple's strategies, policies, and practices relating to environmental and social matters.</p>	<Not Applicable>

C15.2

**(C15.2) Has your organization made a public commitment and/or endorsed any initiatives related to biodiversity?**

	Indicate whether your organization made a public commitment or endorsed any initiatives related to biodiversity	Biodiversity-related public commitments	Initiatives endorsed
Row 1	Yes, we have made public commitments and publicly endorsed initiatives related to biodiversity	Commitment to respect legally designated protected areas Commitment to no conversion of High Conservation Value areas	SDG

**C15.3**

**(C15.3) Does your organization assess the impacts and dependencies of its value chain on biodiversity?**

**Impacts on biodiversity**

**Indicate whether your organization undertakes this type of assessment**

No and we don't plan to within the next two years

**Value chain stage(s) covered**

<Not Applicable>

**Portfolio activity**

<Not Applicable>

**Tools and methods to assess impacts and/or dependencies on biodiversity**

<Not Applicable>

**Please explain how the tools and methods are implemented and provide an indication of the associated outcome(s)**

<Not Applicable>

**Dependencies on biodiversity**

**Indicate whether your organization undertakes this type of assessment**

No and we don't plan to within the next two years

**Value chain stage(s) covered**

<Not Applicable>

**Portfolio activity**

<Not Applicable>

**Tools and methods to assess impacts and/or dependencies on biodiversity**

<Not Applicable>

**Please explain how the tools and methods are implemented and provide an indication of the associated outcome(s)**

<Not Applicable>

**C15.4**

**(C15.4) Does your organization have activities located in or near to biodiversity- sensitive areas in the reporting year?**

Not assessed

**C15.5**

**(C15.5) What actions has your organization taken in the reporting year to progress your biodiversity-related commitments?**

	Have you taken any actions in the reporting period to progress your biodiversity-related commitments?	Type of action taken to progress biodiversity- related commitments
Row 1	Yes, we are taking actions to progress our biodiversity-related commitments	Land/water protection Land/water management Education & awareness Livelihood, economic & other incentives

**C15.6**

**(C15.6) 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	Please select

**C15.7**

**(C15.7) Have you published information about your organization’s response to biodiversity-related issues for this reporting year in places other than in your CDP response? If so, please attach the publication(s).**

Report type	Content elements	Attach the document and indicate where in the document the relevant biodiversity information is located
In voluntary sustainability report or other voluntary communications	Content of biodiversity-related policies or commitments Other, please specify (Description of the biodiversity benefits of carbon removal solutions.)	2023 EPR (FY22) page 27-28 (description of the biodiversity benefits of carbon removal), page 78 (biodiversity benefits of carbon offset projects), and page 109 (EHS policy) Apple_Environmental_Progress_Report_2023.pdf

C16. Signoff

C-FI

**(C-FI) Use this field to provide any additional information or context that you feel is relevant to your organization's response. Please note that this field is optional and is not scored.**

C16.1

**(C16.1) Provide details for the person that has signed off (approved) your CDP climate change response.**

	Job title	Corresponding job category
Row 1	Vice President, Environment, Policy and Social Initiatives	Chief Sustainability Officer (CSO)

SC. Supply chain module

SC0.0

**(SC0.0) If you would like to do so, please provide a separate introduction to this module.**

We have a number of programs to reduce product-related emissions. We recently announced our goal to become carbon neutral across our entire business, manufacturing supply chain, and product life cycle by fiscal year 2030. Apple is already carbon neutral today for its global corporate operations, and this new commitment means that by fiscal year 2030, every Apple device sold will have net zero climate impact. This goal builds on Apple’s prior success powering all of our facilities worldwide with 100 percent renewable energy, which is another example of our substantive, visible commitment to mitigating climate change. As part of its carbon neutrality goal, Apple also plans to transition its entire supply chain to 100 percent renewable energy, which will significantly reduce our Scope 3 emissions from manufacturing products. The Supplier Clean Energy Program now has over 20 gigawatts of clean energy commitments, of which nearly two-thirds is already operational. In fiscal year 2022, the 13.7 gigawatts of renewable energy already online in Apple’s supply chain generated 23.7 million megawatt-hours of clean energy, avoiding 17.4 million metric tons of carbon emissions — a 23 percent increase over fiscal year 2021.

Our Product Environmental Reports include product-level carbon emissions data for each major product release. These are available at:  
<https://www.apple.com/environment/#reports-product>

SC0.1

**(SC0.1) What is your company’s annual revenue for the stated reporting period?**

	Annual Revenue
Row 1	

SC1.1

**(SC1.1) Allocate your emissions to your customers listed below according to the goods or services you have sold them in this reporting period.**

SC1.2

**(SC1.2) Where published information has been used in completing SC1.1, please provide a reference(s).**

SC1.3

(SC1.3) What are the challenges in allocating emissions to different customers, and what would help you to overcome these challenges?

Allocation challenges	Please explain what would help you overcome these challenges
Doing so would require we disclose business sensitive/proprietary information	

SC1.4

(SC1.4) Do you plan to develop your capabilities to allocate emissions to your customers in the future?

SC2.1

(SC2.1) Please propose any mutually beneficial climate-related projects you could collaborate on with specific CDP Supply Chain members.

SC2.2

(SC2.2) Have requests or initiatives by CDP Supply Chain members prompted your organization to take organizational-level emissions reduction initiatives?  
Please select

SC4.1

(SC4.1) Are you providing product level data for your organization's goods or services?

Submit your response

In which language are you submitting your response?

English

Please confirm how your response should be handled by CDP

	I understand that my response will be shared with all requesting stakeholders	Response permission
Please select your submission options	Yes	Public

Please confirm below

I have read and accept the applicable Terms