

# APPLE: Zhe HUANG AI 22208901

## Carbon footprint

1. The total carbon footprint for Apple in 2020 was 219 million metric tons of CO<sub>2</sub>e.
2. Scope 1 emissions (direct emissions from owned or controlled sources): 14,800 metric tons of CO<sub>2</sub>e  
Scope 2 emissions (indirect emissions from the generation of purchased electricity, heat, or steam): 24.7 million metric tons of CO<sub>2</sub>e
3. According to Apple's Environmental Responsibility Report for 2020, the company's annual electricity consumption for that year was 14.7 billion kilowatt-hours (kWh).
4. The company's renewable energy use percentage for its global operations was 100%.  
Apple uses a custom carbon intensity factor that takes into account the specific characteristics of each energy source and the local grid mix.
5. Apple's Scope 3 GHG emissions for that year were 194.2 million metric tons of CO<sub>2</sub>e.
6. Emissions include emissions from the production of raw materials used in its products, emissions from the transportation of those materials and finished products, emissions from the use of Apple products by customers, and emissions from the disposal of those products at the end of their useful life.
7. Apple's energy efficiency improvements, renewable energy investments, product design
9. Carbon neutrality: Apple has committed to becoming carbon neutral across its entire value chain by 2030. This means that the company will aim to eliminate or offset all of its greenhouse gas emissions, including emissions from its supply chain, products, and operations.  
Scope and sources: Apple's carbon neutrality goal covers all scopes and sources of greenhouse gas emissions, including Scope 1 (direct emissions from owned or controlled sources), Scope 2 (indirect emissions from purchased electricity), and Scope 3 (indirect emissions from the value chain).  
Timeline: Apple has set a target to reduce its greenhouse gas emissions by 75% by 2030, compared to its 2015 baseline. The remaining 25% of emissions will be addressed through carbon removal projects, such as reforestation and land restoration initiatives.  
Incompressible emissions: Apple has acknowledged that some emissions will be difficult or impossible to eliminate entirely, such as those associated with the production of certain materials or the use of certain transportation modes. The company has stated that it will

prioritize reducing these emissions through energy efficiency measures and the use of renewable energy sources, and will work with its suppliers to address emissions in its value chain.

10. Apple has set a target to increase its use of renewable energy sources to 100% by 2030. To achieve this target, Apple plans to continue investing in renewable energy projects, such as solar and wind farms, and to work with its suppliers to encourage the use of renewable energy in its value chain.

11. These requirements include Greenhouse gas emissions reduction; Energy efficiency; Water conservation; Waste reduction; Chemical management

12. Yes, Apple has set a goal to reduce the environmental impact of its business travel, which is a source of greenhouse gas emissions included in Scope 3 of its carbon footprint.

To achieve this goal, Apple has stated that it will prioritize reducing the need for business travel through the use of videoconferencing and other virtual meeting technologies. The company has also established guidelines for sustainable travel, which include encouraging employees to choose more sustainable travel options, such as public transportation and cycling, when possible.

## Water

1. Apple does not report this information in its annual environmental reports. However, it is known that Apple has established requirements for its suppliers to implement water conservation measures, and the company has stated that it is committed to promoting sustainable water use throughout its operations and supply chain.

2. Apple has not publicly stated a specific target for reducing its water consumption.

## Resources

1. Aluminum; Tin; Rare earth elements; Plastics

2. MacBook Air: The casing for the MacBook Air contains 100% recycled aluminum.

iPhone: The speaker enclosure in the iPhone 12 models contains 35% or more recycled plastic.

iPad: The enclosure for the iPad contains 100% recycled aluminum.

Apple Watch: The casing for the Apple Watch contains 100% recycled aluminum.

3. Some of the materials that Apple uses recycled content for, such as aluminum and cobalt, are included on the EU's list of critical raw materials.

## **E–waste**

1. Apple does not disclose the exact amount of e–waste that it generates each year, but the company has made a commitment to reducing its environmental impact by promoting more sustainable manufacturing practices and reducing waste.
2. These include: Product Design; Recycling Program; Material Recovery; Environmental Standards
3. Apple uses advanced manufacturing processes to recover and reuse these materials in new products. For example, the company's robot, Daisy, is capable of disassembling and recovering materials from up to 200 iPhones per hour, including rare earth elements that are used in the iPhone's Taptic Engine.

## **Users, cities and rest of the world**

1. These projects include: Apple Park; Smart City Initiatives; Renewable Energy; Environmental Projects
2. Apple has several major plans for reducing the impact from using their products or services, including: Product Energy Efficiency; Material Efficiency; Renewables and Energy Storage; Emissions Reduction; Recycling and Waste Reduction
3. Forest Conservation; Supplier Responsibility; Retail Stores