Product Sustainability Fact Sheet

Amazon WorkSpaces Thin Client

2024 release
Updated July 2024 - for US only

Designed for Sustainability

We're working to make Amazon devices more sustainable—from how we build them to how customers use and eventually retire them.

Carbon Footprint

77 kg CO_2e total carbon emissions

Materials

Amazon WorkSpaces Thin Client is made from 50% recycled materials (power adapter and cable not included).

Energy

Sleep Mode reduces energy consumption when idle. We also invest in renewable energy that, by 2025, will be equivalent to this device's electricity usage.

Figures are for Amazon WorkSpaces Thin Client, not including any other variants or any bundled accessories or devices. We update the carbon footprint when we discover new information that increases the estimated carbon footprint of a device by more than 10%.

The product carbon footprint of this device has been certified by the Carbon Trust[1].

Life Cycle

We consider sustainability in every stage of a device's life cycle—from sourcing raw materials to end-of-life.

Amazon WorkSpaces Thin Client total life cycle carbon emissions: 77 kg CO_2e
Carbon emissions of each life cycle stage:

01 Materials and Manufacturing

37%

02 Transportation

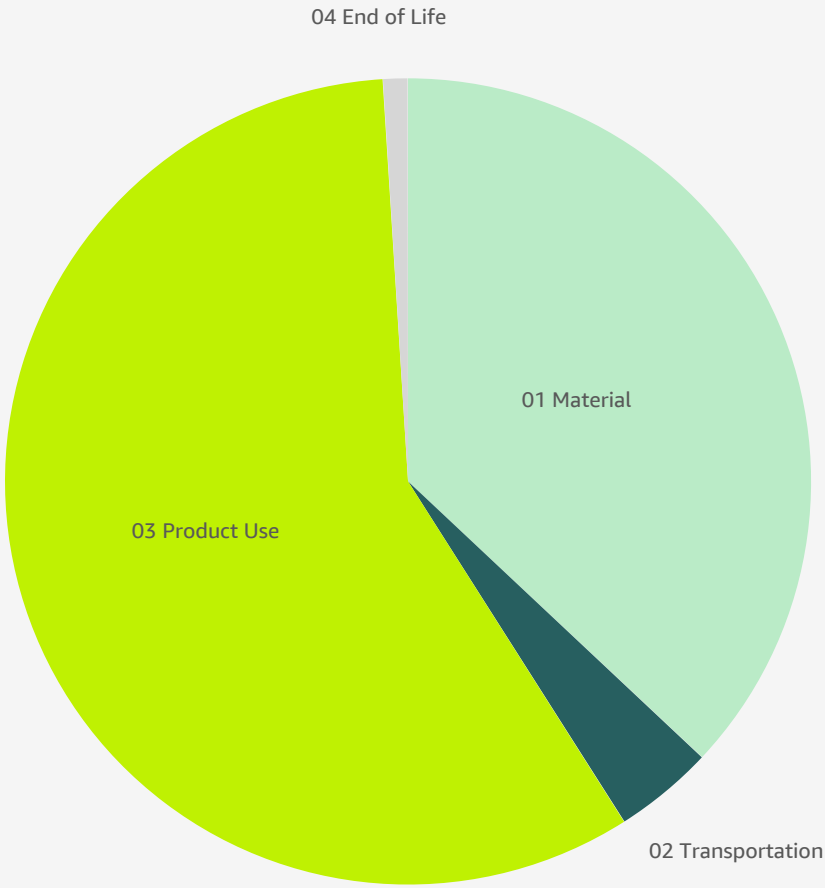
4%

03 Product Use

58%

04 End-of-Life

1%



Life Cycle Assessment: A methodology to assess the environmental impact (e.g., carbon emissions) associated with life cycle stages of a product—from raw material extraction and processing, through production, use, and disposal.

This product's biogenic carbon emissions of -0.145 kg CO_2e are included in the total footprint calculation. The total biogenic carbon content in this product is 0.12 kg C. Percentage values may not add up to 100% due to rounding.

Materials and Manufacturing

We account for the extraction, production, and transportation of raw materials, as well as the manufacturing, transporting, and assembling of all parts.

Recycled Materials

This device is made from **50% recycled materials.** The plastic is made from **10% post-consumer recycled plastic.** The aluminum parts are made from **98% recycled aluminum.** The fabric parts are made from **99% post-consumer recycled fabric.** Power adapter and cable not included.

Chemical Safety

Through our partnership with ChemFORWARD, we're collaborating with industry peers to proactively identify harmful chemicals and safer alternatives ahead of regulations.

Suppliers

All of our assembly sites for this product have achieved UL Zero Waste to Landfill Platinum certification. This means our suppliers handle waste in environmentally responsible ways, diverting more than 90% of their facility's waste from the landfill through methods other than "waste to energy".

We engage suppliers who manufacture our devices or their components—particularly final assembly sites, semiconductors, printed circuit boards, displays, batteries, and accessories—and encourage them to increase renewable energy use and reduce manufacturing emissions. As of the end of 2023, we have received commitments from 49 device suppliers to work with us on decarbonization, up from 28 suppliers in 2022. We also helped 21 suppliers develop renewable energy plans for Amazon Devices production and assembly. We are continuing to expand this program in 2024 and beyond.

Transportation

We account for an average inbound and outbound trip that is representative of an average device or accessory. This includes transporting the product from final assembly to the end customer.

Amazon Commitment

Delivering for our global customers requires Amazon to rely on a variety of transportation solutions for long and short distances. Decarbonizing our transportation network is a key part of meeting The Climate Pledge by 2040. That's why we're actively transforming our fleet network and operations.

Product Use

We determine the expected energy consumption of a device over its lifetime and calculate the carbon emissions associated with the use of our devices.

Sleep Mode

Amazon WorkSpaces Thin Client has a Sleep setting that turns off the display if it remains inactive for a specified period of time. Sleep Mode reduces energy consumption when idle.

Renewable Energy

We're making investments in wind and solar farm capacity that, by 2025, will be equal to the energy use of this device.

End-of-Life

To model end-of-life emissions, we estimate the ratio of end products that are sent to each disposal pathway including recycling, combustion, and landfill. We also account for any emissions required to transport and/or treat the materials.

Durability

We design our devices with best-in-class reliability models, so they're more resilient and last longer. We also release over-the-air software updates for our customers' devices so they don't need to replace them as often.

Recycling

Built to last. But when you're ready, you can recycle your devices. Explore Amazon Second Chance.

Methodology

Our approach to measuring a product's carbon footprint?

To meet **The Climate Pledge** goal to be net-zero carbon by 2040, we measure and estimate this product's carbon footprint, and identify opportunities to reduce its carbon emissions. Our life cycle assessment ("LCA") models align with internationally recognized standards, like the Greenhouse Gas ("GHG") Protocol Product Life Cycle Accounting and Reporting Standard[2] and International Standards Organization ("ISO") 14067[3]. Our methodology and product carbon footprint results are reviewed by the Carbon Trust with reasonable assurance. All carbon footprint numbers are estimates and we continuously improve our methodology as the science and data available to us evolve.

What's in an Amazon device's product carbon footprint?

We calculate this product's carbon footprint throughout its life cycle stages, including materials and manufacturing, transportation, use, and end-of-life. Two carbon footprint metrics are considered: 1) the total carbon emissions across all life cycle stages of one device or accessory (in kilograms of carbon dioxide equivalent, or kg CO_2e), and 2) the average carbon emissions per year used of the estimated device lifetime, in kg CO_2e/use-year.

Materials and Manufacturing: We calculate the carbon emissions from material and manufacturing based on the list of raw materials and components to manufacture a product, namely the bill of materials. We account for the emissions from the extraction, production, and transportation of raw materials, as well as the manufacturing, transporting, and assembling of all parts. For certain components and materials, we may collect primary data from our suppliers to supplement our industry average data, collected from a mix of commercially and publicly available LCA databases.

Transportation: We estimate the emissions of transporting the product from final assembly to our end customer using actual or best estimated average transportation distances and transportation modes for each device or accessory.

Use: We calculate the emissions associated with the use (i.e., electricity consumption) of this product by multiplying the total electricity consumption over a device's estimated lifetime with the carbon emissions from the generation of 1 kWh electricity (the grid emission factor). The total energy consumption of a device is based on the average user's power consumption and estimated time spent in various modes of operation like desktop view, video call, idle, and sleep mode. A specific user may have a higher or lower use phase footprint associated with their device depending on their specific usage patterns.

We use country-specific grid emission factors to account for the regional variations in electricity grid mix. **Learn more** about how Amazon plans to decarbonize and neutralize the use phase of our connected devices by 2040.

End-of-Life: For end-of-life emissions, we account for any emissions required to transport and/or treat the materials destined to each disposal pathway (e.g., recycling, combustion, landfill).

How do we use the product carbon footprint?

The footprint helps us identify carbon reduction opportunities across this product's various life cycle stages. In addition, we use it to communicate our carbon reduction progress over time—this is included in the calculation of Amazon's corporate carbon footprint. **Learn more** about Amazon corporate carbon footprint methodology.

How often do we update a product's carbon footprint?

After we launch a new product, we track and audit the carbon emissions of all life cycle phases of our devices. Product sustainability fact sheets are updated when we discover new information that increases the estimated carbon footprint of a device by more than 10% or if it materially changes our estimated reduction generation over generation.

Learn more about our product carbon footprint methodology and limitations in our full methodology document.

Definitions:

Biogenic carbon emissions: Carbon released as carbon dioxide or methane from combustion or decomposition of biomass or bio-based products.

Life Cycle Assessment: A methodology to assess the environmental impact (e.g., carbon emissions) associated with life cycle stages of a product—from raw material extraction and processing, through production, use, and disposal.

Endnotes

[1]**Carbon Trust Certification Number:** CERT-13704; LCA data version July 2024 published by Carbon Trust.
[2]**Greenhouse Gas ("GHG") Protocol Product Life Cycle Accounting and Reporting Standard: https://ghgprotocol.org/product-standard** published by the Greenhouse Gas Protocol
[3]**International Standards Organization ("ISO") 14067:2018 Greenhouse gases—Carbon footprint of products—Requirements and guidelines for quantification: https://www.iso.org/standard/71206.html** published by International Standards Organization