

Carbon Emissions Energy Internet

Article Overview

The internet contributes significantly to global carbon emissions, with data centers, network infrastructure, and AI training consuming large amounts of energy and producing greenhouse gases.

How Internet Use Generates Carbon Emissions

Every online activity—from sending emails to streaming videos—requires electricity, which often comes from fossil fuels, resulting in CO₂ emissions. Data centers, which store and process vast amounts of information, are major contributors because they run 24/7 and require constant cooling using electricity and water . Network infrastructure, including routers, switches, and cables, also consumes energy, adding to the overall carbon footprint . Even small actions, like sending a single email, can emit measurable amounts of CO₂ .

Scale of the Impact

The average internet user spends over 3,200 hours online per year, which accounts for roughly 40% of their personal carbon budget . Globally, ICT (Information and Communication Technology) accounts for 6–10% of electricity consumption and about 4% of greenhouse gas emissions, comparable to the total emissions from global air traffic . Platforms like YouTube and TikTok alone produce millions of metric tons of CO₂ annually, with TikTok generating around 14.7 million metric tons .

AI and Digital Services...



Article Content

Dec 28, 2025

What is a Digital Carbon Footprint?

How big is the Digital CO₂ Footprint? According to one estimate, around 5.5 billion people worldwide will have internet access in 2024. Every single search query,

Oct 10, 2025

Does the Internet development affect energy and carbon emission ...

Improving energy and carbon emission performance is of practical significance to the green economy, and Internet development may help achieve this goal

Oct 06, 2025

The Carbon Footprint of the Internet | Climate Impact Partners

Ever wondered how many carbon emissions are generated by online activity? Our updated infographic shows the level of CO₂ emissions generated through emails, searches and

Aug 25, 2025

Measuring the Emissions & Energy Footprint of the ICT Sector ...

The World Bank report, Measuring the Emissions & Energy Footprint of the ICT Sector: Implications for Climate Action, brings together data and analysis on the energy and emissions across 30 countries

Nov 19, 2025

Internet carbon footprint, explained | Shift Blog | Shift Browser

In simple terms, the data centers, network infrastructure, and devices used to get online require electricity. This is often generated from fossil fuel sources, and as a result, CO₂ emissions

Oct 05, 2025

The Carbon Cost of the Internet

The energy needed to maintain the Internet comes with a carbon cost and significantly contributes to total global carbon emissions. Where is this energy sourced from and why does it matter?

Jan 22, 2026

The Hidden Carbon Cost of Internet Traffic | ISOC Pulse

Estimating the carbon footprint of an Internet activity requires more than measuring the power consumption of individual network devices. The first challenge is translating device-level

Jul 14, 2026

The Climate Cost of Internet Data

Every email, video stream, and social media scroll has a hidden carbon footprint that's growing exponentially as our digital lives expand. The internet now accounts for approximately 1.5%

May 19, 2026

The environmental sustainability of digital content consumption

Decarbonising electricity would substantially mitigate the climate impacts linked to Internet consumption, while the use of mineral and metal resources would remain of concern.

Mar 31, 2026

The Internet's Climate Footprint Is Big. Here's How We Shrink It.

Streaming TV, downloading podcasts & scrolling through memes carry an environmental cost. Here's how we can start to address internet-induced climate change issues.

Aug 10, 2025

Carbon Footprint of the Internet Over Time Since 1990 (With Graphics)

What Is the Carbon Footprint of the Internet? When answering the question, what is the carbon footprint of the internet, the percentage of the CO₂ emissions emitted by digital technologies

Mar 16, 2026

World Bank Document

France is the only country where the electronic communications regulator compiles telecommunications sector emissions and energy use.²⁵ In contrast, for sectors such as energy, waste, and agriculture,

Apr 09, 2026

What's the carbon footprint of average Internet use?

The average Internet user spends 3,230 hours online every year. Here's the carbon footprint of that. A new analysis suggests that decarbonizing the electric grid and keeping electronic

Mar 18, 2026

Internet Carbon Emissions 2026: Key Statistics & Facts

Internet carbon footprint in numbers: 3.7% of global emissions, 414g CO2 per GB, streaming vs email impact. Latest 2026 statistics on digital pollution and what websites can do.

Oct 25, 2025

The Internet's Invisible Carbon Footprint

Internet activity produces carbon emissions and AI is one of the worst offenders. Here's how much everyday internet activities costs the environment.

Jul 09, 2026

The environmental sustainability of digital content consumption

The average Internet user spends over 40% of their waking hours online, yet the environmental footprint remains poorly understood. This study suggests that digital content

Mar 23, 2026

The internet's big carbon footprint need not doom the climate

Understanding the energy and emissions use is difficult because many technology companies are not transparent. Renee Obringer, an environmental engineer with the National Socio

Jan 27, 2026

Internet carbon footprint, explained | Shift Blog | Shift

Internet use has a carbon footprint: Every online action—emails, searches, streaming—requires energy, much of which still comes from fossil

Mar 27, 2026

The effects of internet infrastructure on carbon neutrality

These findings provide new insights into the climate change benefits associated with internet infrastructure and offer additional policy tools for reducing carbon emissions and enhancing

Jan 03, 2026

What's the carbon footprint of average Internet use?

The average Internet user's digital consumption results in the emission of 229 kilograms of carbon dioxide per year, the researchers found. That amounts to about 3-4% of average per capita

Aug 14, 2025

Our Digital Carbon Footprint: What's the Environmental

Every single search query, every streamed song or video and every email sent, billions of times over all around the world - it all adds up to an ever

Feb 21, 2026

AI: Five charts that put data-centre energy use

One major critique concerns the environmental impact of AI, particularly the intensive energy use and carbon dioxide (CO2) emissions of the

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