# Google's Carbon Emissions Surge Amid AI Expansion Challenges



Google's carbon emissions increased significantly between 2022 and 2023, primarily due to the expanding energy demands of their artificial intelligence (AI) operations. The tech giant reported a 13% rise in emissions over the past year, which contributes to a 48% increase since their 2019 baseline. These figures cast doubt on Google’s ambitious goal of achieving net-zero carbon emissions by 2030.

In its annual sustainability report, released on Tuesday, Google cited the rapid growth and environmental impact of its AI initiatives as major challenges to meeting its climate objectives. The company emphasized that its data centers are crucial for AI advancements but acknowledged that these facilities are energy-intensive, contributing heavily to greenhouse gas emissions.

Despite these challenges, Google highlighted some positive aspects. It claimed its data centers are 1.8 times more energy efficient than those of its competitors. Furthermore, the company sees potential in AI to foster environmental solutions, such as optimizing energy-efficient transit routes and simulating extreme weather events.

Other tech giants are experiencing similar difficulties. Microsoft's emissions have grown 29% since 2020, and Amazon reported only a 0.4% reduction in emissions for 2021-2022, despite a 40% overall increase since 2019. The International Energy Agency (IEA) projects that global data center electricity demand could double between 2022 and 2026, exacerbating the environmental impact of AI.

This increase in energy consumption has implications beyond emissions. A study highlighted that AI could account for up to 6.6 billion cubic meters of water usage by 2027, nearly two-thirds of England’s annual consumption.