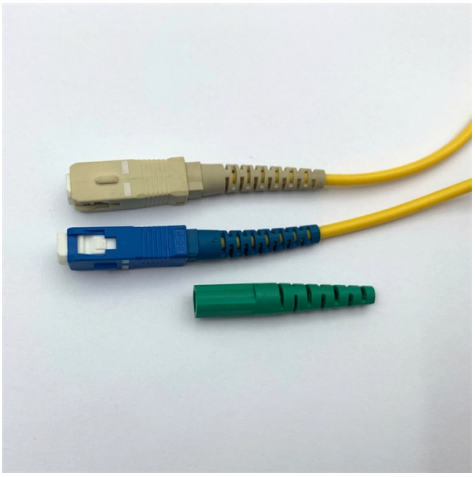
Energy Consumption of Big Data Centers



Overview

According to the International Energy Agency, data centers are projected to consume between 650-1,050 TWh by 2026, with these facilities accounting for roughly 1. 5% of global electricity consumption in 2024. Centralized cooling resources are of two types: (1) those moving chilled air through large ductwork; or (2) those moving chilled water in a piped cooling loop that exchanges heat with the environment. One type, called. A new report from the IEA assesses how the relationship between energy and artificial intelligence (AI) is evolving rapidly, drawing on the latest data and analysis and close tracking of technological and economic developments in the AI sector. Building on the IEA's landmark Energy and AI report. In 2023, U. This comprehensive guide explores exactly how much electricity data centers use, what drives their enormous energy appetite, and what the future holds as. The International Energy Agency (IEA) reported in 2025 that worldwide data center electricity demand is on track to more than double by 2030, reaching around 945 TWh (slightly above Japan's current consumption). One type, called. In 2022, global data center PUE rose to 1.

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Article Content

Data centre electricity use surged in 2025, even with tightening ...

New IEA report explores AI''s growing energy footprint, options for meeting data centre power demand, and impacts on energy affordability, security and wider economy

How Much Electricity Does a Data Center Use?

Data center electricity usage varies dramatically based on size, purpose, and efficiency. Understanding these categories helps contextualize the

Data Center Energy Consumption: How Much Energy Did/Do/Will

Data centers today consume a significant and growing share of electricity. Globally, data centers (excluding cryptocurrency mining) used an estimated 415 terawatt-hours (TWh) in 2024,

Data Centers and Their Energy Consumption: Frequently Asked

Some projections show that data center energy consumption could double or triple by 2028. Roughly one-half or greater of the electric power demand of data centers stems directly from

Data Center Energy Consumption Statistics | 2026 Edition

Our in-depth market data report on Data Center Energy Consumption. Explore verified statistics and the latest research.

Data Center Energy Consumption Statistics & Data (2026)

Explore data center energy consumption statistics and key trends. Learn efficiency benchmarks and insights shaping sustainable infrastructure decisions.

Data center power consumption

Discover all statistics and data on Data center power consumption now on statista !

Nuclear-Powered Data Centers: Big Tech''s $400B SMR Bet in 2026

Global data center electricity consumption exceeds 1,000 TWh in 2026 as Big Tech commits $400B+ to nuclear-powered facilities. Microsoft, Amazon, Google, and Meta sign SMR

AI is set to drive surging electricity demand from data

Another energy security concern relates to the expanding demand for critical minerals used in the equipment in the data centres that power AI. The

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Insight: US utilities grapple with Big Tech''s massive power demands

U.S. electric utilities are fielding massive requests for new power capacity as Big Tech scours the country for viable locations for new data centers to keep up with the compute demands of AI.

Data centres will use twice as much energy by 2030 — driven by AI

NEWS 10 April 2025 Data centres will use twice as much energy by 2030 — driven by AI These facilities accounted for roughly 1.5% of global electricity consumption in 2024.

In focus: Data centres – an energy-hungry challenge

Data centres are a vital infrastructure supporting our ever-growing use of cloud storage, social media, AI, streaming services and more. They''re also an increasingly hot topic of the clean

Data center energy consumption +17% in 2025

Data center energy consumption rises 17% in 2025, driven by AI growth. IEA highlights infrastructure limits and rising global demand.

Data Center Energy Consumption: How Much Energy

Data Center Energy Consumption: How Much Energy Did/Do/Will They Eat? Plumes of steam rise above the cooling towers at Google''s data

AI''s environmental costs threaten water, land and climate

In some countries, data centres already account for a significant share of national electricity consumption, placing pressure on energy systems. In others, expanding facilities are

AI data center growth: Meeting the demand | McKinsey

All data centers consume significant amounts of energy, but AI-ready ones are especially demanding because of their high average power

Frugal AI helps countries priced out of Big Tech

Model sizes have exploded, leading to significant energy and water consumption, and yet billions of people remain excluded from AI''s benefits,“ Arjuna Sathiaseelan, founder of the Saving

US data centers'' energy use amid the artificial intelligence boom | Pew ...

Data centers accounted for 4% of total U.S. electricity use in 2024. Their energy demand is expected to more than double by 2030.

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