# Energy Internet Energy Consumption Forecast

## Overview

This data-file forecasts the energy consumption of the internet, rising from 900 TWH in 2025 to 1,800 TWH in 2030 and 4,000 TWH by 2050. Input assumptions to the model can be flexed. Data centres are facilities used to house servers, storage systems, networking equipment and associated components that are installed in racks and organised into rows. This IT equipment, and a range of auxiliary equipment required to keep it in working order, comprise the following: Servers are. This report examines how the growth of digital services, and the data centres that support them, affects energy consumption in the UK. This white paper dispels common misconceptions about data transmission and electricity use, and highlights the importance of sound methodology to assess.

## Article Content

May 15, 2026

Impact of growth of data centres on energy consumption

While digitalisation introduces new electricity demand, it can also displace energy-intensive physical activities. The study developed a new methodology for estimating the total electricity...

Oct 30, 2025

Digital data demand and renewable energy limits: Forecasting the ...

Our modelling forecasts reveal a concerning trend: despite the expansion in renewable energy capacities, they are likely insufficient to satisfy the burgeoning electricity needs of the digital

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Digital data demand and renewable energy limits: Forecasting the ...

This study aims to investigate whether renewable energy generation can keep pace with the rising energy demands of the digital sector. Specifically, it explores the growing concern that the

Oct 11, 2025

Data centres will use twice as much energy by 2030 —

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

Jan 21, 2026

Understanding Global Internet Energy Usage & Trends

Energy Usage Mitigation Opportunities: Over the past decade, there has been a major shift from corporate data centers to huge hyperscale cloud data centers

Jan 17, 2026

World Energy Outlook 2022 – Analysis

About this report With the world in the midst of the first global energy crisis – triggered by Russia''s invasion of Ukraine – the World Energy Outlook

Dec 02, 2025

November 2025 Data Centre Impact Study

Sector context – other research on the impact of data centres on electricity networks At the time of writing this report, other projects and research around data centres and electricity networks are also

Dec 23, 2025

World Final Energy Consumption Forecasting

Forecasting final energy consumption at the global and regional levels, based on Enerdata''s recognised energy forecasting scenarios.

Sep 28, 2025

Annual Energy Outlook 2026

More › Introduction The Annual Energy Outlook 2026 (AEO2026) explores medium- and long-term alternative futures in the United States.

Jun 18, 2026

Rethinking ICT energy: networks, data centers, AI

Ericsson''s insights on trends and drivers of energy use in the ICT sector. Learn about misunderstandings, and what the future holds for energy consumption.

Apr 26, 2026

Energy demand from AI – Energy and AI – Analysis

From 2024 to 2030, data centre electricity consumption grows by around 15% per year, more than four times faster than the growth of total electricity consumption from all other sectors.

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Energy demand from AI – Energy and AI – Analysis

There is substantial uncertainty both about data centre consumption today and in the future. The uncertainty surrounding future electricity demand requires a scenario

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Evaluating Energy Consumption of Internet Services

This paper will discuss some of the expected climate benefits of the internet and discuss the energy consumption and a simple model to estimate CO2 footprint of some inter-net services, and finally

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World Energy Outlook 2025 – Analysis

The IEA''s flagship World Energy Outlook (WEO) is the most authoritative source of global energy analysis and projections. Updated annually to reflect the latest

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International Energy Outlook 2023

Monthly and yearly energy forecasts, analysis of energy topics, financial analysis, congressional reports. Financial market analysis and financial

Jun 03, 2026

Growing data volumes drive need for ICT energy

Exponential growth in ICT data is increasing demand on energy grids, requiring energy innovation and collaboration to meet this challenge

Nov 26, 2025

Energy Consumption of ICT

Energy Consumption of ICT This POSTnote gives an overview of the energy use of Information and Communication Technology (ICT), including data centres, communication networks and user

Sep 14, 2025

Electricity Consumption by ICT: Facts, trends, and

By enhancing workload forecasting through machine learning, we can optimize the resource utilization and profoundly impact this energy consumption,

Jan 30, 2026

Evaluating Energy Consumption of Internet Services

These forecasts beckon the question: Will this expansion of the internet result in an increase of the energy consumption of the internet, as discussed in , ? Historically, increased tra c has not

May 12, 2026

Global trends – Global Energy Review 2025 – Analysis

Global Energy Review 2025 - Analysis and key findings. A report by the International Energy Agency.

Jun 06, 2026

Impact of growth of data centres on energy consumption

This report examines how the growth of digital services, and the data centres that support them, affects energy consumption in the UK.

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Demand – Electricity 2025 – Analysis

The electricity consumption associated with the manufacturing of mechanical, electrical and transport equipment does not include the electricity consumption of

Feb 14, 2026

Energy consumption of the internet

Powering the internet consumed 800 TWH of electricity in 2022, as 5bn users generated 4.7 Zettabytes of traffic. Our best guess is that the energy

Feb 23, 2026

U.S. Energy Information Administration

Data source: U.S. Energy Information Administration, Annual Energy Outlook 2025 Reference case Data values: Commercial Sector Key Indicators and Consumption In our Annual

Aug 17, 2025

New perspectives on internet electricity use in 2030

There is not much expectation that future consumer ICT infrastructure can actually slow its overall electricity use until 2030. With the current knowledge, there are more circumstances

Jun 26, 2025

Electricity 2024

Given these trends, the International Energy Agency''s Electricity 2024 is essential reading. It offers a deep and comprehensive analysis of recent policies and market developments, and provides

Feb 14, 2026

Data Centers and AI Energy Consumption: The Surge in

Overview: The Digital Economy''s Energy Appetite The digital infrastructure powering our connected world has become one of the fastest

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Electricity 2025 – Analysis

The International Energy Agency''s Electricity 2025 provides a deep and comprehensive analysis of all these trends as well as recent policy

Oct 13, 2025

Between 10 and 20% of electricity consumption from the ICT* sector

Disruptive changes, but rather difficult to establish market projections Currently, ICTs account for between 5% and 9% of total electricity consumption, and their development suggests a deep

## Contact Us

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