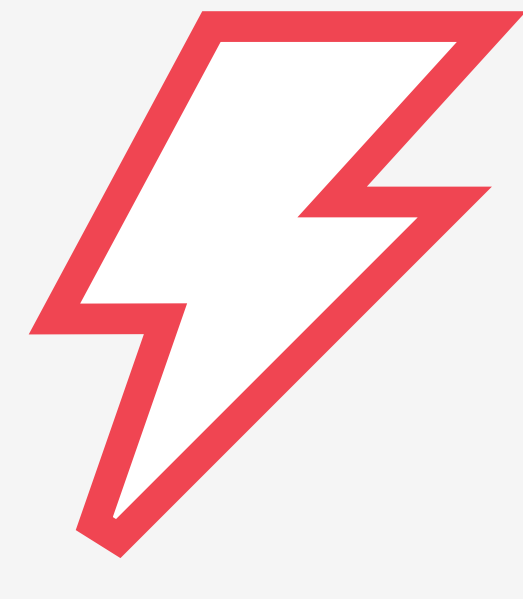


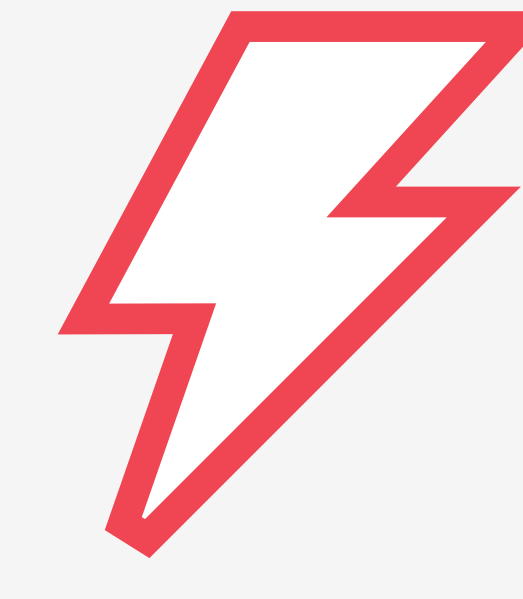
Data centres and their impact

Power



In 2022 data centres accounted for at least **12% of UK electricity consumption**

Carbon3IT



By 2030 data centres **are projected consume 8% of global electricity**

On Global Electricity Usage of Communication Technology: Trends to 2030. Andrae, Anders & Edler, Tomas.

Waste heat



Cooling accounts for 20-60% of a data centre's overall energy consumption

A review of air conditioning energy performance in data centers. Jiacheng Ni, Xuelian Bai.



The waste heat from one data centre could **provide hot water for 30,000 homes**

A large data centre might consume 80GWh/year. At a PUE of 1.6 this equates to 50GWh/year of IT power. Average daily UK domestic hot water energy use is: 1679kWh/year @~4.6kWh/day.

Wider impacts



Data centres are **preventing new housing being built**

The power requirements of data centres located along the M4 corridor are preventing new houses being built in Ealing, Hillingdon and Hounslow in West London. There might not be enough power until 2035.



Data centres use **5 million gallons of water per day**

Data centres that use water for cooling might use anywhere between 1 million and 5 million gallons of water a day. Thames Water is considering measures to cut down the water used by some data centres, including fitting flow restrictors or charging operators more at peak times.

Regulation



Lack of regulation to reduce data centres' carbon footprint

Upcoming regulation will begin to have an impact on data centres and the businesses using their services.

EED - Energy Efficiency Directive

CSRD - Corporate Sustainability Reporting Directive

TCFD - Task Force on Climate Related Disclosures

SEC - Securities and Exchanges Commission