

## [Green cloud and green data centres](https://digital-strategy.ec.europa.eu/en/policies/green-cloud) [\(https://digital-strategy.ec.europa.eu/en/policies/green-cloud\)](https://digital-strategy.ec.europa.eu/en/policies/green-cloud) [d\)](https://digital-strategy.ec.europa.eu/en/policies/green-cloud)

The Commission is exploring measures to improve the energy efficiency and circular economy performance in cloud computing and data centres.

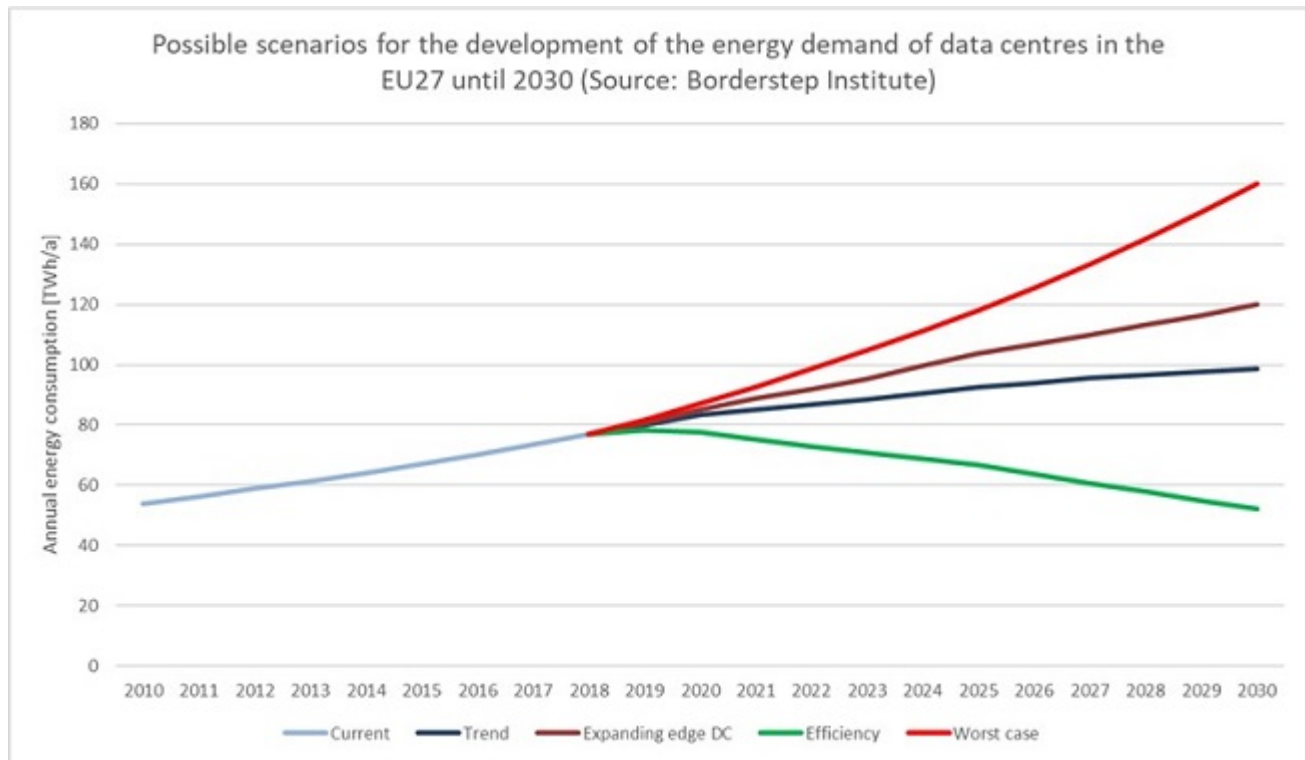


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Digital technologies can offer green solutions to different sectors of the economy. Equally important is the 'greening' of the digital sector itself.

It has been estimated that digital technologies account for between 5 to 9% of global electricity consumption. This is likely to increase with digitisation and emerging technologies such as artificial intelligence, the Internet of Things and blockchain. This may lead to problematic increase of greenhouse gas emissions if no proper action is taken.

The European Commission conducted a [study on Energy-efficient Cloud Computing Technologies and Policies for an Eco-friendly Cloud Market](https://digital-strategy.ec.europa.eu/en/library/energy-efficient-cloud-computing-technologies-and-policies-eco-friendly-cloud-market) (<https://digital-strategy.ec.europa.eu/en/library/energy-efficient-cloud-computing-technologies-and-policies-eco-friendly-cloud-market>) addressing the issue of growing energy consumption due to the expansion of cloud services in Europe.



The topic of energy-efficient cloud computing has become a priority for the EU. Data centres need to become more energy efficient, reuse waste energy such as heat, and use more renewable energy sources, with a view to becoming carbon-neutral by 2030.

To meet this goal, the Commission will rely on a mix of existing instruments, reviews of existing legislation and new initiatives.

Existing instruments include:

- the [Ecodesign Regulation on servers and data storage products](https://ec.europa.eu/info/energy-climate-change-environment/standards-tools-and-labels/products-labelling-rules-and-requirements/energy-label-and-ecodesign/energy-efficient-products/servers-and-data-storage-products_en) ([https://ec.europa.eu/info/energy-climate-change-environment/standards-tools-and-labels/products-labelling-rules-and-requirements/energy-label-and-ecodesign/energy-efficient-products/servers-and-data-storage-products\\_en](https://ec.europa.eu/info/energy-climate-change-environment/standards-tools-and-labels/products-labelling-rules-and-requirements/energy-label-and-ecodesign/energy-efficient-products/servers-and-data-storage-products_en))
- the [EU Code of Conduct on Data Centre Energy Efficiency](https://ec.europa.eu/jrc/en/energy-efficiency/code-conduct/datacentres) (<https://ec.europa.eu/jrc/en/energy-efficiency/code-conduct/datacentres>)
- the [EU Green Public Procurement criteria](https://publications.jrc.ec.europa.eu/repository/handle/JRC118558) (<https://publications.jrc.ec.europa.eu/repository/handle/JRC118558>) for data centres, server rooms and cloud services

The Commission is also linking energy efficient data centres to policy and funding initiatives, notably through:

- the Commission [Proposal for a Directive on energy efficiency \(recast\)](https://ec.europa.eu/energy/topics/energy-efficiency/targets-directive-and-rules/energy-efficiency-directive_en) ([https://ec.europa.eu/energy/topics/energy-efficiency/targets-directive-and-rules/energy-efficiency-directive\\_en](https://ec.europa.eu/energy/topics/energy-efficiency/targets-directive-and-rules/energy-efficiency-directive_en)) introducing new elements to improve the energy efficiency and sustainability monitoring of data centers;
- The [Taxonomy Regulation](https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32020R0852) (<https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32020R0852>) and its Delegated Act adopted in July 2021, which sets the framework for investments to be qualified as sustainable and whose delegated act is currently under finalisation, has a section on data centres;

- Its funding programmes: [Horizon Europe](https://ec.europa.eu/info/research-and-innovation/funding/funding-opportunities/funding-programmes-and-open-calls/horizon-europe_en) ([https://ec.europa.eu/info/research-and-innovation/funding/funding-opportunities/funding-programmes-and-open-calls/horizon-europe\\_en](https://ec.europa.eu/info/research-and-innovation/funding/funding-opportunities/funding-programmes-and-open-calls/horizon-europe_en)), [Connecting Europe Facility 2](https://digital-strategy.ec.europa.eu/en/activities/connecting-europe-facility) (<https://digital-strategy.ec.europa.eu/en/activities/connecting-europe-facility>), [Digital Europe programme](https://digital-strategy.ec.europa.eu/en/activities/digital-programme) (<https://digital-strategy.ec.europa.eu/en/activities/digital-programme>), [InvestEU](https://europa.eu/investeu/home_en) ([https://europa.eu/investeu/home\\_en](https://europa.eu/investeu/home_en)) and the [Recovery and Resilience Facility](https://ec.europa.eu/info/business-economy-euro/recovery-coronavirus/recovery-and-resilience-facility_en) ([https://ec.europa.eu/info/business-economy-euro/recovery-coronavirus/recovery-and-resilience-facility\\_en](https://ec.europa.eu/info/business-economy-euro/recovery-coronavirus/recovery-and-resilience-facility_en)) will support the deployment of an innovative, green and secure cloud.

The Commission is currently conducting a study to address the lack of commonly accepted definitions and methods to assess the energy-efficiency, climate-neutrality and overall sustainability of data centres: 'Greening cloud computing and electronic communications services and networks: towards climate neutrality by 2050'.

[The Ecodesign Regulation on servers and data storage products](#)

<https://ec.europa.eu/info/energy-climate-change-environment/standards-tools-and-labels/products-la>

[belling-rules-and-requirements/energy-label-and-ecodesign/energy-efficient-products/servers-and-data-storage-products\\_en](#)

[The EU Code of Conduct on Data Centre Energy Efficiency](#)

<https://ec.europa.eu/jrc/en/energy-efficiency/code-conduct/datacentres>

[The EU Green Public Procurement criteria](#)

[https://ec.europa.eu/environment/gpp/index\\_en.htm](https://ec.europa.eu/environment/gpp/index_en.htm)

Follow the latest progress and learn more about getting involved.

- [Follow @CnectCloud for updates on the Commission's cloud computing policies \(https://twitter.com/cnectcloud?lang=en\)](https://twitter.com/cnectcloud?lang=en)

## Latest News

NEWS ARTICLE | 15 May 2023

[Flash information on call results: Cloud Data and TEF](https://digital-strategy.ec.europa.eu/en/news/flash-information-call-results-cloud-data-and-tef)  
(<https://digital-strategy.ec.europa.eu/en/news/flash-information-call-results-cloud-data-and-tef>)

These are the results of the evaluation of the proposals submitted to the Cloud Data and TEF (Testing and Experimentation Facility) call under the Digital Europe Programme.

PRESS RELEASE | 24 March 2023

[€1.3 billion from the Digital Europe Programme for Europe's digital transition and cybersecurity](https://digital-strategy.ec.europa.eu/en/news/eu13-billion-digital-europe-programme-europes-digital-transition-and-cybersecurity-0)  
(<https://digital-strategy.ec.europa.eu/en/news/eu13-billion-digital-europe-programme-europes-digital-transition-and-cybersecurity-0>)

Today the Commission has adopted two multiannual work programmes for the Digital Europe Programme, outlining the objectives and specific topic areas that will receive close to €1.3 billion in funding.

NEWS ARTICLE | 03 February 2023

[Survey on synergies between data centres and energy systems](https://digital-strategy.ec.europa.eu/en/news/survey-synergies-between-data-centres-and-energy-systems)  
(<https://digital-strategy.ec.europa.eu/en/news/survey-synergies-between-data-centres-and-energy-systems>)

A new study about Data Centre and Energy Systems Synergies (DCESS) will analyse how local energy systems can use the waste heat and water generated from data centre operations. The contractors carrying out the study are now approaching stakeholders for feedback and other input.

PRESS RELEASE | 09 January 2023

[First cooperation and monitoring cycle to reach EU 2030 Digital Decade targets kicks off](https://digital-strategy.ec.europa.eu/en/news/first-cooperation-and-monitoring-cycle-reach-eu-2030-digital-decade-targets-kicks)  
(<https://digital-strategy.ec.europa.eu/en/news/first-cooperation-and-monitoring-cycle-reach-eu-2030-digital-decade-targets-kicks>)

The Digital Decade policy programme 2030, a monitoring and cooperation mechanism to achieve common targets for Europe's digital transformation by 2030, has entered into force.

[Browse Cloud Computing](#)

<https://digital-strategy.ec.europa.eu/en/related-content?topic=73>

## **Related Content**

### **Big Picture**

<https://digital-strategy.ec.europa.eu/en/policies/cloud-computing>

[Cloud computing \(https://digital-strategy.ec.europa.eu/en/policies/cloud-computing\)](https://digital-strategy.ec.europa.eu/en/policies/cloud-computing)

The Commission aims to enable access to secure, sustainable, and interoperable cloud infrastructures and services for European businesses.



## See Also

[European Alliance for Industrial Data, Edge and Cloud](https://digital-strategy.ec.europa.eu/en/policies/cloud-alliance)  
(<https://digital-strategy.ec.europa.eu/en/policies/cloud-alliance>)

The European Alliance for Industrial Data, Edge and Cloud aims to foster the development and deployment of next generation edge and cloud technologies.

(<https://digital-strategy.ec.europa.eu/en/policies/cloud-alliance>)

## Explore this site

[Green digital sector \(https://digital-strategy.ec.europa.eu/en/policies/green-digital\)](https://digital-strategy.ec.europa.eu/en/policies/green-digital)

Europe's digital transition goes hand in hand with the European Green Deal.

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**Source URL:** <https://digital-strategy.ec.europa.eu/policies/green-cloud>