

European Commission
Directorate-General CNECT
Call for evidence for an impact assessment
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Public consultation on the legislative proposal for a Cloud and AI Development Act

I welcome the opportunity to respond to the European Commission's public consultation on the proposed AI Cloud and Development Act. I make this submission in my capacity as an academic with expertise in European Union (EU) data centres sustainability policy.¹ In my submission I will address the following issues:

1. EU's sustainability commitments in relation to digitalisation and, in particular, data centres;
2. The requirements for data centre sector sustainability; and
3. The case for public value-oriented digital infrastructure.

1. EU's sustainability commitments in relation to digitalisation and, in particular, data centres

To begin with I would like to recall a number of commitments the EU institutions or the European Commission (Commission) have entered into which are relevant in relation to achieving sustainable data centres infrastructures:

The EU Green Industrial Plan for the Net Zero Age declared a 'twin transition of digitalisation and decarbonisation'² in line with the goals of the EU Green Deal to achieve climate neutrality by 2050.³

The 2023 European Declaration on Digital Rights and Principles for the Digital Decade, though non-binding, recognises the environmental risks of digital products and services.⁴ The European

¹ See Jessica Commings and Kristina Irion, '[Towards Planet Proof Computing: Law and Policy of Data Centre Sustainability in the European Union](#)' (2025) Technology and Regulation 1; Jessica Commings and Kristina Irion, '[Towards Planet-Proof Computing: Ten Key Elements EU Data Centre Sustainability Policy Should Take Onboard](#)' European Law Blog 18 March 2025.

² European Commission, 'A Green Deal Industrial Plan for the Net-Zero Age' COM (2023) 62 final.

³ European Commission, 'The European Green Deal' (Communication) COM(2019) 640 Final, 4; Regulation (EU) 2021/1119 of the European Parliament and of the Council of 30 June 2021 establishing the framework for achieving climate neutrality and amending Regulations (EC) No 401/2009 and (EU) 2018/1999 (European Climate Law), OJ 2021 L 243/1 arts 2, 5.

⁴ European Declaration on Digital Rights and Principles for the Digital Decade, OJ 2023 C 23/1 Chapter VI.

Parliament, the Council and the Commission nonetheless committed to ‘supporting the development and use of sustainable digital technologies that have minimal negative environmental and social impact’.⁵

In 2020, the Commission’s strategy ‘Shaping Europe’s Digital Future’ announced ‘initiatives to achieve climate-neutral, highly energy-efficient and sustainable data centres by no later than 2030’.⁶ However, the ambition has not been renewed in the Commission’s priorities 2024-2029.

The ‘Call for Evidence for an Impact Assessment’ announced that Commission is preparing a proposal for the ‘Cloud and AI Development Act’.⁷ The initiative aims to ‘triple the EU’s data centre capacity within the next 5-7 years by promoting and creating the right conditions for attracting and supporting investment in sustainable data centres across the EU.’

Today the ‘Call for Evidence for an Impact Assessment’ closes. However, respondents to the public consultation could not take into account up to date data on the energy efficiency of data centres and on the electricity consumption of the data centres’ sector as a whole. The recast Energy Efficiency Directive provides that by 15 May 2025, the Commission shall submit a report to the European Parliament and to the Council which will assess the feasibility of transition towards a net-zero emission data centres sector.⁸ The Commission has not yet released this report that should contain for the first time data reported by data centre operators under the Common Union Rating Scheme for Data Centres Regulation.⁹

The question is thus if it will be feasible to triple EU’s data centre capacity without sacrificing the 2030 goal to achieve climate-neutral, highly energy-efficient and sustainable data centres. The answer to this question very much depends on which notion of sustainability the Commission will operationalize the ‘Cloud and AI Development Act’. As will be demonstrated in the next section, data centres’ sustainability can be framed in different ways whereby certain ways would not achieve a sustainable data centres sector in the EU.

2. The requirements for data centre sector sustainability

In recent years, there has been considerable development of hard and soft law at the EU level that address aspects of data centres sustainability. It is possible to speak of the first iteration of the EU legal framework on data centres’ sustainability. In our research article, we argue that despite measures to increase energy efficiency and renewable energy consumption, the unfettered growth of the data centres sector jeopardizes the achievement of the 2030 sustainability goal.¹⁰

There is a fundamental difference between energy efficiency and sustainability of data centres. A common metric used by the sector to measure how energy efficient a data centre operates is Power Usage Effectiveness (PUE). The lower the PUE the less energy is used for other processes than computing operations. Improving a data centre’s PUE can improve energy efficiency but without additional measures it will not achieve sustainability. Defining minimum energy efficiency requirements of AI application will thus be a useful backstop but not enough to ensure sustainable AI.

In order to achieve sustainable data centres they must be powered by additional renewable energy that is locally sourced and available around the clock. Carbon offsetting schemes through renewable

⁵ *Ibid.*

⁶ European Commission, ‘Shaping Europe’s Digital Future’ COM(2020) 67 Final, 12.

⁷ European Commission, ‘Call for Evidence for an Impact Assessment’ Ref. Ares(2025)2878100.

⁸ Directive (EU) 2023/1791 of the European Parliament and of the Council of 13 September 2023 on energy efficiency and amending Regulation (EU) 2023/955 (recast), ELI: <http://data.europa.eu/eli/dir/2023/1791/oj>, Article 12(5).

⁹ Commission Delegated Regulation 2024/1364 of 14 March 2024 on the first phase of the establishment of a common Union rating scheme for data centres (Common Union Data Centre Rating Scheme Regulation) OJ 2024 L 2024/1639.

¹⁰ Commings and Irion, ‘Towards Planet Proof Computing’ (n 1).

energy certificates by contrast are no guarantee that data centres actually consume renewable energy. Industry standards such as the European Code of Conduct on Data Centre Energy Efficiency¹¹ and the CEN-CENELEC document CLC TR50600-99-1 ‘Data centre facilities and infrastructures – Part 99-1: Recommended practices for energy management’¹² currently do not preclude carbon offsetting schemes through renewable energy certificates. While these standards represent relevant best practices in the data centre industry, they remain voluntary unless they are incorporated by for example by the EU Green Public Procurement criteria.¹³

Finally, the Commission should consider how the data centre sector’s growing renewable energy needs affect the EU’s overall carbon budget and objectives for decarbonising other sectors.¹⁴ The Committee of the Regions for instance emphasised that currently available renewable energy sources are not capable of absorbing the increasing energy demand of data centres.¹⁵ The current approach does not resolve the conflict of who gets this limited renewable energy and what it is used for. While the major data centre operators advertise their commitment to the use of renewable energy, this takes energy from local communities and other industries. In the words of Hannah Daly: “If growing renewables generation is simply met by growing demand, then fossil fuel use won’t fall – it will be like walking up a downwards-moving escalator.”¹⁶

The ‘Call for Evidence for an Impact Assessment’ is quite vocal about the need for accelerating ‘sustainable’ data centre capacity in the Union. Likewise, the debate on Boosting Cloud and AI Development in the EU at the Working Party on Telecommunications and Information Society (WP TELECOM) on 11 March this year calls for incentivising sustainable data centre.¹⁷ What matters now is how EU policymakers will substantiate the notion of sustainable data centre infrastructure. Currently, it seems that the policy discourse wilfully conflates sustainability with energy efficiency which would even corresponds to existing industry best practices. That however will not suffice to make the Union’s data centre sector climate-neutral, highly energy-efficient and sustainable.

Sustainability means that a data centre runs on fossil-free energy whereby the renewable energy is locally produced, additive to the grid, and publicly verifiable. Every new data centres structure should be required to meet the so defined sustainability targets and, in addition, the 2030 goal for achieving climate-neutral, highly energy-efficient and sustainable data centres should become entrenched in the legal initiative for a Cloud and AI Development Act. Other issues that the EU approach to sustainable data centres should take on board are mandatory sustainability requirements on direct and indirect water consumption, electronic equipment and the recycling of electronic waste.

3. The case for public value-oriented digital infrastructure

The EU’s current approach to regulating data centre sustainability does not sufficiently integrate public value-oriented requirements. Instead of leaving the construction of data centre infrastructure solely to private sector imitative, the Union should prioritise sovereign, public value-oriented, and

¹¹ European Commission and others, ‘2024 Best Practice Guidelines for the EU Code of Conduct on Data Centre Energy Efficiency’ (European Commission, Ispra 2024)
<https://e3p.jrc.ec.europa.eu/sites/default/files/documents/publications/jrc136986_2024_best_practice_guideline_s.pdf>

¹² See CEN/CENELEC/ETSI Coordination Group on Green Data Centres, ‘Review of Standardisation Activities Energy Management and Environmental Viability of Data Centres Based on the Edition 10 Report of the CEN/CENELEC/ETSI Coordination Group on Green Data Centres’ (2023).

¹³ European Commission, ‘EU green public procurement criteria for data centres, server rooms and cloud services’ SWD(2020) 55 final.

¹⁴ Commins and Irion, ‘Towards Planet-Proof Computing’ (n 1).

¹⁵ Committee of the Regions, ‘Opinion of the European Committee of the Regions — Amending the Energy Efficiency Directive to meet the new 2030 climate target’ C 301/139 28 April 2022 [20].

¹⁶ Hannah Daly, ‘Data Centres in the Context of Ireland’s Carbon Budgets’ (2024).

¹⁷ Council of the European Union, ‘[Main takeaways from the debate on Boosting Cloud and AI Development in the EU](#)’ WK 5272/2025 INIT, 11 March 2025.

sustainable data centres. The Commission and the Member States should incentivize the construction and operation of public value-oriented digital infrastructures that can be shared by and cater to the needs of public sector organisations, and other public interest users, such as educational establishments, cultural institutions, civil society groups etc. The Union and its Member States can jointly support the development of a modular data centre design that can be assembled and operated in locations that have access to local renewable energy and participate in e-waste recycling.