EUDCA - Feedback on the European Grid Package

1. Introduction

The European Data Centre Association ([EUDCA](#)) welcomes the opportunity to provide feedback on the European Grid Package.

Digital infrastructure is a critical foundation of both the European economy and its digital systems. Data centres are not just the visible presence of the internet, but the visible interconnection hub where digital transactions originate.

Data centres not only fuel innovation, but they also safeguard data sovereignty, providing essential support for cutting-edge technologies and AI. Beyond its technological significance, **the industry profoundly impacts Europe's socioeconomic fabric.** As our *2025 State of European Data Centres Report* outlines,[1] the data centre sector contributes billions of euros to GDP in the EU. The sector also fosters direct and indirect job creation, while annual investments in construction and operations inject billions of euros into local economies. In Europe, colocation data centres employ more than 15,000 full-time employees (FTEs), attracting investments for a total €100 billion between 2023 - 2030.

Data centres are not only energy consumers; in some cases, they also **play an active role in energy production**, as highlighted in EUDCA's *Report on the State of European Data Centres.*[2] Indeed, 12% of the energy usage in the colocation and hyperscale sector is derived from **Power Purchase Agreements (PPAs),** and this share is growing rapidly.[3] Moreover, a growing number of facilities are exploring **on-site renewable energy systems,** such as solar panels or wind energy solutions. Although the energy generated on-site currently accounts for a small portion of a data centre's total consumption, the trend is gaining momentum: over a quarter of colocation data centres in Europe have already implemented on-site renewable energy generation, and a significant share of others are planning to follow suit.

Data centres are therefore increasingly **playing an active role in contributing to a more resilient and decentralised energy grid.**

2. Summary of policy recommendations

Europe's digital future depends on its ability to **balance sustainability with technological advancement.** Data centres, with their potential to ease grid congestion, drive innovation, and accelerate the green transition, are essential to this vision. By fostering stronger partnerships between the private sector, grid operators, and government stakeholders, we can create a **resilient, sustainable, and competitive Europe.**

Europe stands at a pivotal crossroads in its journey toward achieving a **sustainable, competitive, and digitised economy.** In the coming five to ten years, despite significant investments in the energy grid, the continent will continue to face the critical challenge of transmission capacity scarcity and grid congestion.

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[1] EUDCA, State of European Data Centres 2025, pp. 38-47 – Link
[2] EUDCA, State of European Data Centres 2025, pp. 50-51 – Link
[3] State of European Data Centres report 2025, p. 51 – Link

Data centres in Europe rely on affordable, secure and stable energy access, as well as both centralised (e.g. Supergrid) and decentralised grids to grow. Reliable energy access is essential to ensuring that data centres remain the vital digital infrastructure supporting the EU's digital economy, and for Europe's competitiveness and AI development in Europe. Together with the Cloud and AI Development Act, the EUDCA believes the European Grid Package could create the enabling conditions for the continued growth of the data centre industry in Europe with secure and stable access to resources.

Therefore, the **EUDCA recommends the European Grid Package to undertake the following actions:**

- Develop a **digitalised, integrated, and decentralised European grid**, with more integrated cross-border transmission networks.
- Define a **clear roadmap to mobilise private and public investments** supporting the expansion, decentralisation, and modernisation of the grid.
- **Improve long-term planning and forecasts on capacity demand** through data-sharing between both System Operators and customers.
- Develop a framework for **fast-tracked permitting,** including guidance on digitalising permitting processes to support grid expansion timeframes.
- Harmonise rules on **priority access to the grid for critical and essential sectors**, including data centres.
- Promote the **uptake of grid-enhancing technologies and AI** to strengthen renewables and power security.
- Define **flexibility services and associated market-based compensation mechanisms** to unlock demand-side flexibility across transmission and distribution networks.

3. Detailed policy recommendations

- **Develop a digitalised, integrated, and decentralised European grid, with more integrated cross-border transmission networks**

The EUDCA believes that **cross-border grid integration and sustainable access through agile, strategic grid expansion** are crucial for a competitive European energy market.

This expansion can be strengthened by further digitalising the grid, for instance, through smarter grid management systems (e.g. load management, frequency regulation) and energy storage solutions.

The EUDCA also stresses the urgency for all Member States to meet their 10% interconnection target by 2025. Enhancing **grid interconnectedness** and optimising its use across Europe, especially when allocated closer to end-users, could lower the energy cost for consumers and increase the competitiveness and attractiveness of the EU market for all economic sectors, including the data centre industry.

Ultimately, we believe energy should flow freely across the Union, unhindered by national restrictions on allocation, across both **European centralised (Supergrid) structures and decentralised grid systems.**

- **Define a clear roadmap to mobilise private and public investments supporting the expansion, decentralisation and modernisation of the grid**

EUDCA members are large electricity grid users with substantial future capacity needs. This makes grid availability and reliability primordial for the EU's digital transformation.

European data centre operators consistently identify **access to energy** as the single most pressing challenge hindering the sector's development.[4] Together with **delayed access to power**, these **issues are significantly impacting the EU's ambitious AI expansion strategy.**

Developing a modernised, decentralised and digitalised electricity grid requires massive investment. As EUDCA, we acknowledge the European Commission's projected investment needs of €584 billion by 2030 and up to €2.3 trillion by 2050[5] as critical to supporting the growth of digital infrastructure.

While national network tariffs currently only fund basic grid development, these alone are insufficient. To match the accelerating pace of digital infrastructure expansion, they must be complemented by deeper **capital market participation** and **robust public-private partnerships.** The current prevailing **backwards-looking and reactive grid investment approach does not align with data centres' investment timelines and need for forward-looking capacity planning and deployment timelines.** In a growing number of locations, the grid is not able to supply the power needed. When available, there is often a mismatch between the time for data centre development (between 5 to 36 months) and grid access (7-10 years).

We therefore strongly **support anticipatory grid investments** as they are essential for data centre site selection and development, preventing delays in digital infrastructure deployment while maintaining affordability for all grid users. For instance, there could be proactive investments in areas with signals for future load (e.g. planned industrial parks or data centre clusters). This would allow grid operators to obtain permitting in time for laying the groundwork necessary to accommodate new demands (e.g. oversized substations, extra transformer bays, additional circuit capacity, etc.).

Establishing clear **pathways for private and public investment,** while shifting financial risks away from ratepayers, is crucial to ensure energy affordability in the EU during the energy transition, especially for cross-border projects. This is of particular importance to data centre operators, who require certainty around grid capacity availability when planning new facilities and expansions across multiple European markets.

In addition, **public investment** in energy infrastructure expansion and modernisation should be secured in the next Multiannual Financial Framework 2028-2034 (MFF) and embedded within relevant energy and digital-related funding programmes. Specifically, the modernisation and expansion of grid infrastructure should be prioritised within existing or future funding mechanisms. At the same time, AI-related initiatives and funding programmes (e.g. AI Gigafactories, InvestAI) should be directed towards projects capable of supporting the energy grid—such as those with their own power generation or backup systems—to ensure reliable energy availability for their operation.

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[4] EUDCA, State of European Data Centres 2025, p.5 – Link
[5] As outlined in the Commission's EU Action Plan for Grids, 28 November 2023 – Link

- **Improve long-term planning and forecasts on capacity demand through data-sharing between both System Operators and customers**

As EUDCA, we recognise that the complex structure of Europe's electricity grid poses substantial challenges to long-term planning and development. This fragmentation and lack of coordination directly hinders our members' ability to efficiently deploy data centre infrastructure across multiple jurisdictions.

We strongly support enhanced **cooperation among Member States to establish harmonised regulatory frameworks and schemes for long-term grid planning**. Such collaboration is essential for data centre operators, who require predictable, long-term visibility into grid capacity and development to inform their own infrastructure investment decisions. To this end, we call for the implementation of an **EU integrated, cross-border approach to grid planning** that promotes the development of a European centralised and harmonised grid.

In light of increasing energy demand from data centres, the EUDCA is keen to ensure **coordinated planning and timely delivery of the electricity capacity and infrastructure needed to meet the growing demands of the digital economy**. For this reason, we would encourage ENTSO-E to develop a standardised methodology for incorporating large customer demand forecasts into network development planning, to be implemented at Member State level. The methodology should ensure confidentiality of commercially sensitive data, with only aggregated, anonymised information shared with TSOs. This approach would enable more accurate long-term grid investment forecasts while protecting customer interests. Regular updates of this data could help continually refine planning scenarios, benefiting both System Operators and customers in their decision-making processes.

- **Develop a framework for fast-tracked permitting, including guidance on digitalising permitting processes to support grid expansion timeframes**

Access to energy is the single most pressing issue for the data centre industry. Currently, renewable energy accounts for 94% of the energy used by the European data centre sector, with 12% of that energy coming from corporate Power Purchase Agreements (PPAs). Where inaccessible or insufficient, the data centre industry is exploring ways to generate energy closer to consumption.

However, uncoordinated grid planning for new clean energy projects and energy infrastructure development and slow permitting, are hindering access to renewable energy where needed.

Progress and construction of new power plants are often hindered by **slow permitting procedures** and **divergent national procedures**, leading to project curtailments. Additionally, the **absence of a unified, forward-looking vision and planning of energy capacity and needs across the EU** and **insufficient investments in grid modernisation** restrict overall grid expansion.

The industry requires a **clear roadmap and guidance** to mobilise the necessary resources to support the development of **green or carbon-free off-grid energy solutions** such as green hydrogen, biofuels, and grid-scale storage. This should be coupled with **faster permitting processes and harmonised permitting regulations across the Member States for renewable energy projects** to unlock new capacity.

We recommend establishing **one-stop shops** in each Member State to centralise **energy infrastructure permitting**. These entities would consolidate administrative responsibilities under a single expert team, streamlining procedures, reducing bureaucratic complexity, and accelerating grid updates, developments and approvals by acting as a single point of contact.

In parallel, in each Member States, the Commission could require authorities to set up "**digital infrastructure liaison units**", comprising representatives from grid developers, operators, and permitting bodies. These units would facilitate a smooth approval process and coordination for strategic energy projects aligned with digital growth.

- **Harmonise rules on priority access to the grid for critical and essential sectors, including data centres**

The EUDCA recommends ensuring **access to the grid for projects** that play a **critical or essential role in our societies.**

As the backbone of the digital economy, data centres are recognised as a **critical and essential industry**, enabling many vital services and functions in our societies (for instance, banking, government services, healthcare, education, etc.). However, without access to energy, these critical roles may be severely undermined. Data centres rely on power 24/7, and without it, they simply cannot perform their role, which is essential to EU citizens and the economy.

For this reason, we strongly believe that the **rules on priority connection to the grid should be harmonised across the Member States for critical and essential projects**. Each project should be evaluated on its own merit based on objective criteria and guidelines, taking into account the strategic relevance of data centre projects and of their supporting infrastructure necessary to power their operation. Having certainty of a connection date is crucial for data centres to make investment decisions, as it directly impacts project timelines, costs, and overall feasibility. We recommend the Commission provide **clear guidance to Member States on harmonising connection reforms and ensuring efficient processing of applications**, including:

❖ Implementing **digital application processes** that reduce administrative burden

❖ Establishing **incentive mechanisms** for grid operators **to improve connection delivery times**

❖ Creating **transparent queue management systems** that recognise legitimate project development timelines

❖ Developing **clear criteria** to differentiate between speculative and genuine connection requests

❖ Requiring grid operators to **publish regularly updated, digital hosting maps showing currently available and planned grid capacity**

❖ **Accelerating the approval process for pilot initiatives and regulatory sandboxes** focused on innovative data centre projects, integrating data centres into the grid, including private microgrid networks that link multiple data centres to the power grid.

These measures would help ensure that real projects supporting the EU's economic growth and decarbonisation goals, such as data centres and other strategic infrastructure, can secure necessary grid connections and come online faster.

- **Promote the uptake of grid-enhancing technologies and AI to strengthen renewables and power security**

The data centre sector is uniquely positioned to support a secure, stable, and reliable electricity grid with grid-supporting technologies. These innovations could help data centre operators reduce their impact on the grid and, in some cases, offer additional capacity that benefits other industries and local communities.

The EUDCA urges the European Commission to **support the uptake of grid-enhancing technologies,** through investments into their development and deployment for manufacturers and procurement incentives for data centres. Grid-enhancing technologies such as advanced conductors, dynamic line ratings, advanced power flow control devices, topology optimisation, can bring significant benefits to grid, but require **dedicated funding and incentives** to be more widely adopted. Some of these benefits, can also be unlocked through the **increased digitalisation of the grid and integration of AI solutions.** For instance, AI allows operators to optimise the power flows based on weather conditions, grid congestion, and market signals, enabling sophisticated

prediction of network constraints and automated responses to system conditions.

Data centres offer unique opportunities to optimise Europe's energy system. Their ability to invest in energy storage, grid-balancing technologies, and decentralised energy generation makes them essential partners in stabilising and strengthening the grid.

Moreover, with a constant demand for electricity 24/7 and as major purchasers of long-term contracts (e.g. Power Purchase Agreements), the data centre industry can help facilitate solutions that support a more reliable, secure, and decentralised grid, closer to where energy is produced and consumed.

- **Define flexibility services and associated market-based compensation mechanisms to unlock demand-side flexibility across transmission and distribution networks**

As Europe transitions to a renewable energy system, we recognise the growing need for system flexibility to manage increasing variability in generation patterns. Grid operators are seeking new sources of flexibility to maintain system stability and enable further renewable energy integration. However, **data centres are critical infrastructure designed for continuous, uninterrupted operation to meet strict reliability requirements and service level agreements**. Unlike other industrial facilities, data centres cannot easily modify their power consumption patterns without risking essential services that customers rely on 24/7. The only technical potential for flexibility from data centres would be through hardware solutions such as backup generators. However, **using these systems for grid balancing presents significant technical, regulatory, and environmental challenges**, particularly given their design and permitting for emergency-only use, as well as concerns about emissions impacts on local air quality.

Still, with appropriate market design and technological advancement, **the energy system can attract dedicated flexibility resources while respecting operational constraints of critical infrastructure**. This requires several key elements:

1. A clear, harmonised EU-wide definition of flexibility services and their value
2. Market-based mechanisms that encourage voluntary participation rather than mandatory requirements
3. Recognition and rewards for flexibility resources that support decarbonisation

The most cost-effective path to achieving a carbon-neutral energy system is through purpose-built flexibility resources and market-based initiatives. Successful examples include Ireland's DS3 program, which introduced 14 distinct system service products to better reflect flexibility needs in a high-renewable system, and France's flexibility contracting scheme that provides long-term revenue certainty through multi-year contracts. Local flexibility markets, like those demonstrated in the UK, enabling over 4GW of flexible capacity procurement, and Portugal's E-REDES pilot using market-based contracts for demand-side reduction, show how **voluntary participation can effectively support grid stability while maintaining industrial competitiveness.**

These market-based approaches, combined with mechanisms that enable value stacking across multiple services and clear price signals that encourage consistent activation of flexibility, can create a robust framework for meeting system needs without compromising critical infrastructure reliability. To attract private investment in flexibility resources, **regulatory frameworks must provide long-term visibility and appropriate risk allocation, potentially through capacity-style mechanisms or flexibility-specific support schemes.** As the energy transition progresses, we need frameworks that balance system needs with industrial competitiveness while ensuring security of supply and creating the right conditions for sustained investment in purpose-built flexibility solutions.

About EUDCA

The European Data Centre Association (EUDCA) represents the interests of the European data centre community. Established in 2011, the EUDCA is the voice of the industry, with a diverse membership which includes European and international data centre operators, equipment suppliers, and a network of national trade associations.

Our policies and initiatives are consistently centred around data centre operators, both in defining the data centre of the future and in regulating markets.

The EUDCA has been at the forefront of the energy transition efforts of the data centre industry. As co-founder of the Climate Neutral Data Centre Pact, the EUDCA is deeply committed to taking the industry on the road to climate neutrality by 2030. As the voice of the industry, we call on European policymakers to help us realise this vision.

www.**eudca**.org