

Powering Europe's Data Centres: Power cable infrastructure as key enabler of Europe's Digital Sovereignty

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Europacable, the voice of Europe's leading cable system manufacturers, urges EU policymakers to put power cable infrastructure at the heart of the current policy discussions on data centre build-out all across the Union and recognise power cable systems as key enablers of Europe's digital ambitions.

As Europe accelerates its digital transformation and invests in AI computing, hyperscale cloud services and digital platforms, reliable electricity grids are becoming increasingly strategic. The ability of new data centres to secure timely and reliable electricity connections, often referred to as "speed-to-power", is rapidly emerging as the key bottleneck for Europe's digital infrastructure deployment.

Evidence already shows that in several established European data centre hubs (Frankfurt, London, Amsterdam, Paris and Dublin), grid connection times can reach 7–10 years, while electricity demand from European data centres is projected to increase by approximately 150% between 2024 and 2035. Ensuring fast, resilient and secure electricity connectivity for data centres is therefore becoming a decisive factor for where AI-related investments locate in Europe.

Power cable infrastructure connecting data centres to electricity distribution networks, together with the low-voltage and medium-voltage cable systems operating within these facilities, form a critical backbone of Europe's digital sovereignty. By securing the European manufacturing of high-quality, sustainable, safe, CPR-compliant and secure cable system solutions made in Europe for Europe, EU policymakers will strengthen Europe's digital resilience, industrial competitiveness and strategic autonomy.

Europacable therefore urges EU policymakers to:

- 1. Recognise power cable systems both connecting data centres to distribution grids and powering them as strategic infrastructure for Europe's digital sovereignty;**
- 2. Embed higher safety, reliability, sustainability, CPR-compliant requirements for electricity infrastructure serving and powering data centres;**
- 3. Secure European industrial competitiveness: "Cables made in Europe for Europe";**
- 4. Streamline permitting procedures and improve coordination between energy and digital infrastructure planning.**

- 1. Recognise power cable systems both connecting data centres to distribution grids and powering them as strategic infrastructure for Europe's digital sovereignty**

EU's ambitions in AI, cloud computing and digital sovereignty depend on the rapid expansion of data centres. This development is already generating unprecedented electricity demand, making reliable electricity infrastructure and grid technologies a key prerequisite for EU's digital transformation. In the current European policy debate, data centres and their interconnectivity are increasingly recognised as strategic critical infrastructure. This implies that the electricity infrastructure, including the power cables connecting data centres to electricity networks, must also be considered critical infrastructure assets requiring enhanced resilience, security and trusted supply chains.

Three components of power cable infrastructure are particularly strategic in this field:

- a) Power cable systems connecting data centres to distribution grids:** Data centres require high-capacity and reliable connections to electricity distribution networks to support continuous operations and rapidly growing electricity loads. This is valid both for the connection linking the data centre to the DSO junction points as well as for the rest of distribution network. Robust, high-quality and scalable power cable connections are essential to ensure that Europe can deploy competitive AI and cloud infrastructure without compromising energy security or grid stability. Accelerating “speed-to-power” will therefore require not only grid reinforcement but also faster deployment of high-capacity cable infrastructure and improved grid connection frameworks.
- b) Medium-voltage power cable systems within data centres:** Inside data centres, power cable systems distribute electricity to servers, cooling systems and other critical infrastructure. High-performance, energy-efficient, fire-safe and CPR-compliant internal power cable infrastructure is essential to guarantee continuous operations, the safety of personnel and equipment, and energy efficiency within data centres. The rapid growth of AI and high-performance computing workloads is also driving a significant increase in power density at both facility and rack level. This evolution is increasing current levels, thermal loads and safety requirements for internal power cable systems. At the same time, the progressive shift toward higher low and medium voltage DC distribution architectures within data centres requires cable systems capable of supporting higher DC current densities, improved thermal performance and enhanced fire safety standards.
- c) Low-voltage power cable systems within data centres:** Data centres rely on extensive low-voltage cable systems as the final layer of electricity infrastructure, distributing power safely and efficiently to critical equipment such as servers, cooling systems, and backup units. High-quality, CPR-compliant cables ensure stable, continuous power delivery, supporting uptime and preventing disruptions. Their importance is increasing with higher rack densities, rising current loads, and the growing use of low-voltage DC architectures. Their reliability and efficiency make them essential for optimising energy use, enabling redundancy, and strengthening overall data centre resilience.

Hence, Europacable calls on EU policymakers to:

- **Recognise power cable infrastructure connecting data centres to electricity distribution networks as Strategic Critical Energy Infrastructure in relevant EU energy and digital policy legislation;**
- **Recognise the critical role of low-voltage and medium-voltage cable systems within data centres for operational safety, resilience and energy efficiency.**

2. Embed higher safety, reliability, sustainability, CPR-compliance requirements for electricity infrastructure serving and powering data centres

Europe is home to the world’s leading cable system manufacturers: They have the know-how, the technologies, the expertise and the industrial capacity need to empower the electrification of Europe’s digital infrastructure.

European cable manufacturers advanced cable systems that meet the highest standards of safety, sustainability, reliability and performance. They have heavily invested in research and innovation and developed innovative and disruptive solutions to increase performance levels of safety, sustainability, energy efficiency and reliability of their products.

Given the rapidly growing electricity demand of digital infrastructure and the increasing power density of AI-related workloads, high-performance cable systems will become even more critical to ensure operational reliability, safety, continuity and energy efficiency whilst keeping additional carbon emissions and pressure on resources to a minimum. In this respect, by promoting circularity in cabling systems, Europe can reduce its dependency on imported virgin materials and strengthen its industrial resilience.

As electricity demand from digital infrastructure continues to grow, Europacable calls EU policymakers to:

- ***Embed higher safety, reliability, sustainability, CPR-compliant requirements for low-voltage and medium-voltage electricity infrastructure serving and powering data centres in EU legislative frameworks related to digital infrastructure, energy efficiency and industrial policy;***
- ***Promote European standards for power cable systems deployed both outside and inside data centres (“from grid to rack”), supporting safety, resilience, efficiency and interoperability;***
- ***Ensure European standards for low-voltage and medium-voltage data-centre power cables account for innovative and disruptive solutions, notably in the field of DC;***
- ***Promote circularity in cabling systems and facilitate access to qualified secondary materials.***

3. Secure European industrial competitiveness through “Cables made in Europe for Europe”

Europe’s digital sovereignty and data centre build-out needs secure and resilient electricity infrastructure to power them. Given the critical nature of Europe’s electricity grids and components, both the European Commission and Member States should avoid dependence on non-trusted third country players by preventing them from supplying critical grid equipment for strategic digital infrastructure. European cable system manufacturers have, for many years, demonstrated a strong footprint, comprehensive control over the entire value chain, and a high level of reliability. Ensuring the continued competitiveness of Europe’s cable industry in this area will then be key for Europe to preserve its strategic autonomy in both electricity and digital technology equipment enabling Europe’s twin green and digital transition.

To secure European cable manufacturers’ industrial competitiveness, Europacable calls for “Cables made in Europe for Europe” approach to be applied all across the Union legislation and urges EU policymakers to:

- ***Introduce a “Buy European” clause in public procurement and EU-supported projects for low-voltage and medium-voltage power cable systems serving data centre build-out and strategic digital infrastructure;***
- ***Promote mandatory environmental, social and governance criteria in procurement to ensure the competitiveness of European manufacturing producing and supplying power cables made in Europe for Europe’s decarbonisation;***
- ***Promote mandatory resilience and security criteria in procurement to reduce dependency on non-trusted suppliers;***
- ***Introduce trusted supplier and security screening criteria for critical power cable infrastructure deployed in publicly supported projects;***

- ***Promote resilience-by design equipment solutions for power cable infrastructure connecting data centres to electricity networks to enable predictive maintenance, faster fault detection and improved grid resilience.***

4. Streamline permitting procedures and improve coordination between energy and digital infrastructure planning

Electricity infrastructure deployment must keep pace with the development of digital infrastructure. However, lengthy and fragmented permitting procedures remain a major bottleneck for electricity distribution upgrades needed to connect data centres.

In several European data centre hubs, grid connection waiting times already exceed the investment timelines of hyperscale and AI infrastructure projects. Improved coordination between energy, digital and industrial policies is therefore essential to support Europe's digital ambitions. Hence, Europacable urges EU policymakers to:

- ***Improve coordination between energy and digital infrastructure planning to avoid regulatory silos;***
- ***Introduce streamlined and harmonised permitting procedures for electricity infrastructure serving data centres;***
- ***Develop and implement more efficient, maturity- and readiness-based approaches to facilitate faster connection of data centres to the electricity network;***
- ***Enable anticipatory investments in transmission and distribution grids in areas earmarked for large-load growth, reducing 'first-mover penalty' for early projects;***
- ***Encourage smarter grid connection agreements, including phased or flexible connections that allow faster initial energisation of data centres while grid capacity is progressively expanded;***
- ***Enable data-centre microgrids as grid assets to reduce peak grid demand, accelerate connections, enhance resilience and provide system services.***

Europacable stands ready to work with EU institutions to ensure that Europe's data centres are powered by reliable, future-proof electricity infrastructure made in Europe for Europe.

About Europacable

Europacable is the voice of Europe's leading wire and cable producers. High-quality, sustainable power and telecommunication cables, produced by our members in Europe, empower the electrification and digitalisation of our societies. Founded in 1991, Europacable represents the largest cable makers in the world providing global technology leadership, as well as highly specialized small- and medium sized businesses from across Europe.

With our future being ever more electrified and digitalised, cable technology will be the core backbone of Europe's energy and telecommunication infrastructures. Sustainable, low-carbon manufacturing and high-performance cables are essential to achieve Europe's climate neutrality objectives by 2050. Europacable is committed to the principles of free enterprise and fair trade. Our members employ over 80.000 people of which more than 50% in Europe, generating a worldwide turnover over € 70 billion in 2025. Europacable is a member of Orgalim, RGI, WindEurope and a partner of CENELEC and EUEW. Europacable is listed in the European Commission's Transparency Register under 453103789-92. www.europacable.eu