POLICY BRIEFING PAPER

Powering Europe's Digital Future: Investing in Sustainable and Resilient Data Centres

Why Long-Term Institutional Capital is the Right Partner to Deliver Europe's Data Centre Infrastructure

Authors
Alessandro Pecorari, EU Policy and Public Affairs Manager, GIIA
Harvey Chandler, Director of Policy and Public Affairs, GIIA

September, 2026

The Global Voice of Infrastructure Investors

giia.net

Contents

About GIIA **03**

Executive summary **04**

1. Introduction and context 05

2. European Policy Landscape 07

3. Challenges and Opportunities for Data Centres 09

4. Snapshot of National and EU Frameworks 10

5. Case Studies 13

6. Conclusion **17**

ABOUT THIS PAPER

This paper draws on the perspectives of infrastructure investors within the Global Infrastructure Investor Association's (GIIA) membership with interests in European data centres. The paper is intended as a contribution to the discourse surrounding Europe's approach to data centres' challenges and opportunities around sustainability, efficiency and resilience, and why institutional investors are well-placed to invest in this asset class.

About GIIA

The Global Voice of Infrastructure Investors

A trusted global partner helping governments and policymakers make informed decisions that

attract and deploy private capital for public good.

Representing more than US $2 trillion in infrastructure assets across 68 countries, GIIA gives decisionmakers direct access to the world's leading investors and advisors. We work with governments to help them understand investor priorities, strengthen policy frameworks, and build the confidence needed to attract long-term private investment in critical infrastructure.

Every country is competing in a global race for capital. GIIA helps governments strengthen their investment proposition and bring external capital into national infrastructure.

We help policymakers understand what drives investment decisions: how stability, clarity, and effective regulation shape where funds are deployed, and how policy can be improved to make markets more attractive to global investors.

KEY FIGURES

€ 1.9tn

GIIA MEMBERS' COMBINED AUM

2,223

TOTAL NUMBER OF DATA CENTRES GIIA MEMBERS ARE INVESTED IN

75%

OF ALL NEW CAPITAL RAISED BETWEEN 2020-2025 HAS BEEN BY GIIA MEMBERS*

*Calculated from Infrastructure Investor's 'Fundraising in 2025' Report

Executive summary

GIIA investor members are well-placed to deliver on Europe's data centre ambitions.

In July 2026 the European Commission set an ambitious target of tripling EU data centre capacity on the continent within five to seven years as part of its mission to boost European competitiveness and strategic security.[1] However, public budgets have become increasingly constrained across Europe, making private capital an essential part of delivering on that ambition. For context, in 2024 the infrastructure investment industry collectively had €286 billion of capital ready to be committed to projects including data centres.[2]

Without private capital, the EU will struggle to reach its target of tripling EU data centre capacity and fall further behind the United States and China in the global race for advanced computing power to leverage the opportunities that artificial intelligence and cloud computing present.

Institutional and long-term patient capital is available at the scale Europe needs, and it comes with the sustainability and resilience outcomes Europe wants, not as an add-on, but as a feature of who's providing it. To deliver on both, policymakers need to address the delivery constraints set out below. The capital is positioned and ready. Policy needs to match it.

Public budgets have become increasingly constrained across Europe, making private capital an essential part of delivering on that ambition.

[1] European Commission, 'AI Continent Action Plan' (2025): the Commission has proposed a Cloud and AI Development Act with the aim of at least tripling EU data centre capacity within five to seven years, alongside the InvestAI initiative mobilising €200 billion in AI infrastructure investment, including €20 billion earmarked for AI Gigafactories. https://commission.europa.eu/topics/competitiveness/ai-continent_en (accessed July 2026)

[2] Preqin 'Infrastructure dry powder as share of AUM falls to record low of 24% in 2024 – Preqin reports' (2024) https://www.preqin.com/about/press-release/infrastructure-dry-powder-as-share-of-aum-falls-to-record-low-of-24-in-2024-preqin-reports

SECTION 1

1. Introduction

As part of efforts to boost European competitiveness and strategic security, the European Commission's Cloud and AI Development Act (CADA), published on 15 July 2026, sets an ambitious target to triple EU data-centre capacity across the continent within five to seven years.[3] Public budgets have become increasingly constrained across Europe, making private capital an essential part in delivering on that ambition. For context, the infrastructure investment industry collectively holds €286 billion of capital ("dry powder") ready to be committed to projects including data centres.[4] Within that broader market, GIIA investor members have raised 75% of all new capital entering the infrastructure sector globally in the last five-year rolling period, making them the dominant channel through which new infrastructure capital actually reaches the ground.[5]

GIIA members typically invest in data centres through operating platforms rather than single standalone facilities. They invest in vehicles that commit capital across a site's full lifecycle: development, expansion, and decades of subsequent operation. Increasingly, a single platform spans several European markets at once, which suits the continent-wide scale-up the European Commission is targeting, and the same model extends to the supporting infrastructure data centres depend on, including energy generation and battery storage.

That same long-term investment horizon is what makes the sustainability and resilience case hold together too. Because GIIA members hold these assets for decades rather than a handful of years, they carry the cost of any failure, in efficiency, in power sourcing, in resilience, for the life of the investment. That gives them a direct incentive, not just a stated commitment, to build sustainability and resilience in from day one.

The case studies later in this paper illustrate this in practice: how GIIA members have translated long-term ownership into sustained investment in efficiency, grid partnership and community-facing resilience commitments across both established and emerging European markets.

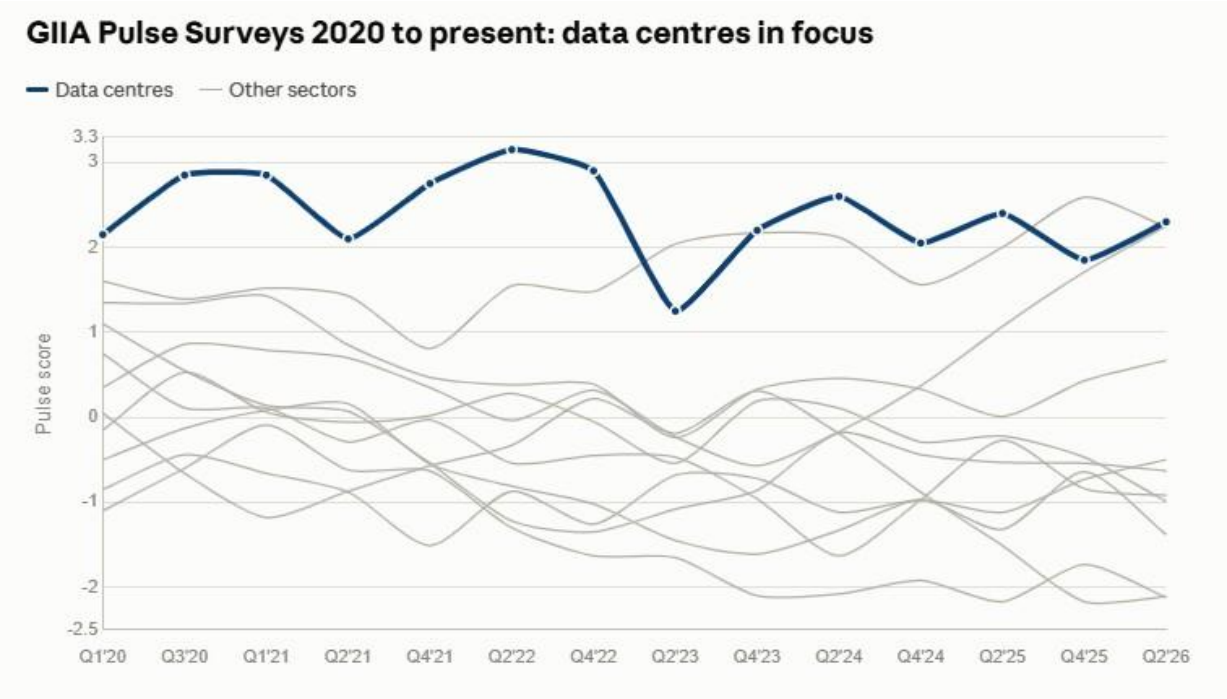
1.1 Patient Capital Matched to Long-Duration Resilient Assets

Data centres demand substantial up-front capital investment in land, power infrastructure and specialised construction stages, while relying on decades of stable, contracted cash flow from investment-grade tenants. These characteristics closely align with the structural liabilities of many GIIA investor members, who need assets generating predictable returns over twenty-to thirty-year horizons, not the three-to-five-year hold periods typical of opportunistic or venture capital. As Graph 1 shows, data centres have largely maintained their position since 2020 as the subsector with the most positive outlook in the eyes of investors in terms of opportunities to invest.

[3] European Commission, 'AI Continent Action Plan' (2025): the Commission has proposed a Cloud and AI Development Act with the aim of at least tripling EU data centre capacity within five to seven years, alongside the InvestAI initiative mobilising €200 billion in AI infrastructure investment, including €20 billion earmarked for AI Gigafactories. https://commission.europa.eu/topics/competitiveness/ai-continent_en (accessed July 2026)

[4] Preqin 'Infrastructure dry powder as share of AUM falls to record low of 24% in 2024 – Preqin reports' (2024) https://www.preqin.com/about/press-release/infrastructure-dry-powder-as-share-of-aum-falls-to-record-low-of-24-in-2024-preqin-reports

[5] Infrastructure Investor, 'Fundraising in 2025 smashes all records (2026), https://www.infrastructureinvestor.com/download-fundraising-in-2025-smashes-all-records/



Graph I: Extract of GIIA and A&M Infrastructure Pulse Report data (2020-26)

1.2 Sustainability and Resilience Commitments as Fiduciary Duties

For many GIIA members, sustainability and resilience commitments are not optional add-ons but a direct incentive to underwrite efficient design, renewable power procurement, water stewardship and heat-reuse investment as core investment criteria from day one.

This discipline is reflected in the wider performance of the European co-location data centre sector, which now sources approximately 94% of its energy from renewable sources and reports an average Power Usage Effectiveness (PUE) of around 1.39[6]. Several GIIA members' portfolio companies are signatories to the Climate Neutral Data Centre Pact, which commits operators to matching electricity demand with 100% renewable or carbon-free energy by the end of 2030[7].

Institutional owners are also structurally incentivised to plan for resilience against grid constraints, extreme weather and cyber risk because the cost of downtime or a stranded asset falls directly on long-term unitholders. This alignment between investor incentive and infrastructure resilience is a genuine point characterising infrastructure investors.

[6]European Data Centre Association (EUDCA), State of European Data Centres 2025: colocation data centres source approximately 94% of energy from renewable sources; reported average Power Usage Effectiveness (PUE) of c.1.39 and Water Usage Effectiveness (WUE) of c.0.31 litres/kWh; over half of facilities incorporate heat-reuse systems; sector GDP contribution projected to rise from €30bn (2023) to €83.8bn by 2030. (https://www.eudca.org/state-of-european-data-centres-2025 (accessed July 2026)

[7]Climate Neutral Data Centre Pact: signatories commit to PUE targets of 1.3 (cool climates) / 1.4 (warm climates) for new facilities, and to matching electricity demand with 100% renewable or carbon-free energy by 31 December 2030. (2025): https://www.climateneutraldatacentre.net/

SECTION 2

2. European Policy Landscape

2.1 The Transatlantic Gap, European Inference and the Colocation Layer

A significant capacity gap persists between the United States and Europe. As of mid-2026, the United States not only has a substantially larger pool of AI-dedicated data center capacity but is also adding hyperscale facilities designed to support the concentrated compute requirements of frontier-model training. Europe is expanding its own training capacity, but its more fragmented infrastructure and emphasis on sovereignty, regional deployment and proximity to users make distributed inference an especially important part of its AI-infrastructure strategy.

The European Union is also pursuing a number of frontier-scale AI gigafactories alongside private investors and dedicated to training.[8] However, a substantial portion of the data centre capacity GIIA members invest in across Europe sits in the inference and colocation layer: the low-latency processing that must sit close to end-users and, increasingly, close to available power. Industry forecasts expect inference to overtake training as the dominant AI workload by late 2026 or early 2027 reinforcing the case for sustained investment in this layer. [9] As such for the strategic gigafactories Europe, including the United Kingdom, is aiming to develop, a key driver is reliable, well-located inference and colocation capacity.

2.2 FLAP-D and Tier II Markets

The established FLAP-D markets (Frankfurt, London, Amsterdam, Paris and Dublin) remain the core of European data centre capacity, offering deep connectivity, established tenant demand and market liquidity. Power scarcity and planning delays in these primary markets are increasingly directing new investment towards Tier II markets across continental Europe, where power availability and land are more accessible.

This spillover effect reflects a structural change in how location decisions are made. For many members, a key consideration is where projects can be planned, permitted, powered and expanded on predictable timelines. Grid capacity, approval timelines and environmental requirements now determine whether a project proceeds on schedule, and locations are increasingly assessed on their ability to absorb additional capacity over five, ten and fifteen year horizons without redesign or regulatory deadlock[10]. Under this constraint-led model, Tier II locations frequently score well: larger sites, available grid headroom and clearer expansion sequencing allow an owner to define a long-term development pathway at the point of entry, rather than negotiating each phase against a saturated market.

The investment case for each tier follows from this. Tier I assets retain unmatched interconnection density and tenant depth and remain the natural home for latency-critical and network-dense workloads; the discipline lies in underwriting realistic expansion assumptions against known power and planning constraints. Tier II assets offer deliverability, lower entry costs, available capacity and expansion optionality. However,

[8]European Commission, 'AI Gigafactories', https://commission.europa.eu/topics/competitiveness/competitiveness-coordination-tool-projects/ai-gigafactories_en (accessed July 2026)

[9]JLL, 'EMEA Year-End Data Centre Report 2025' (2026): https://www.jll.com/en-uk/insights/emea-data-centre-report

[10]Data Center Dynamics, 'Rethinking location strategy: How long-term planning is reshaping Europe's data center map' (2026): https://www.datacenterdynamics.com/en/opinions/rethinking-location-strategy-how-long-term-planning-is-reshaping-europes-data-center-map/.

they require an owner to be able to hold throughout the market-maturation period as connectivity and tenant ecosystems build out around the site.

Both strategies are being pursued across GIIA's membership[11], and both point to the same conclusion: a constraint-led market is one in which the full value of a site is realised over decades, not a single development cycle. That is a market that structurally favours long-horizon institutional ownership. This is because the returns to disciplined lifecycle planning such as securing asset expansion, phasing capacity against grid delivery, sustaining local and regulatory relationships, accrue to the owner who remains present throughout the asset's lifecycle.

2.3 Industry Sustainability Performance

Sustainability performance across the European sector is already substantial. Industry data from the European Data Centre Association (EUDECA) indicates that most of the energy consumed by European data centres is now sourced from renewables, supported by voluntary commitments such as the Climate Neutral Data Centre Pact, which targets climate neutrality by 2030[12]. Reported efficiency metrics such as average power usage effectiveness (PUE) around 1.4, water usage effectiveness (WUE) below 0.35 litres per kWh, and heat-reuse systems now present in over half of facilities.[13] These point to an industry investing in line with, and at times, *ahead of* regulatory requirements such as the EU Energy Efficiency Directive's reporting obligations.

Despite this progress, the sector consistently identifies power access, permitting delays and skills shortages as its most pressing constraints. It is long-term owners and developer who have the greatest incentive to solve them.

[11]GIIA member engagement and investment experience, 2026.

[12]Ibid. See note 2.

[13]EUDCA, 'Energy Efficiency Directive': datacentre operators with installed IT power demand of 500kW or more must report annually to the European database, with data assessed at EU and Member State level. https://www.eudca.org/energy-efficiency-directive

SECTION 3

3. Challenges and Opportunities for Data Centres

3.1 Grid Connectivity: A Key Bottleneck

Of all the constraints on European data centre buildout, grid connectivity is one of the most salient. In many European markets, grid connection queues extend to around a decade, while data centre projects can typically be built and energised in a fraction of that time. This mismatch between the pace of demand and the pace of grid delivery is now a key determinant of whether committed institutional capital translates into operating capacity.

Investors are responding directly: deployment of grid-forming inverters, on-site generation and private wire arrangements is increasingly used to bridge the gap between project readiness and formal grid connection, allowing facilities to begin operating ahead of, or independently of, constrained public network capacity.

A European country that offers an example of both the scale of the challenge, and the direction policy is taking to overcome the hurdles is the United Kingdom. The country's demand connections pipeline includes more than 100GW of large-scale demand projects, predominantly data centres; following the National Energy System Operator (NESO)'s 2025 connections reform, approximately 13GW of firm demand is now expected to connect before 2030, with a further 86GW expected for connection between 2030 and 2035[14]. NESO's own analysis of data centre locational flexibility and latency requirements is now informing how the system operator plans for and prioritises this demand within its wider strategic energy planning[15].

NESO is looking at factors such as siting relative to grid constraints, the degree of demand-side flexibility a facility can offer, and how closely the timing of demand growth is matched to supply-side capacity additions are becoming the primary levers through which a data centre project can be positioned as a net contributor to grid stability. This is a distinction that other European markets and their respective grid operators should be paying close attention to.

3.2 Circularity and Resilience: Heat Reuse and Back-up power

The heat generated by data centres is increasingly being captured and fed into district heating networks, turning what was previously a waste by-product into a source of value and local benefit. This aligns directly with EU heating and cooling decarbonisation objectives and offers investors a tangible way to strengthen the social licence of new facilities.

Resilience commitments extend beyond grid planning and heat reuse to on-site engineering. If a data centre experiences a grid failure and its backup generators fail to start, the facility depends entirely on its uninterruptible power supply (UPS) battery systems, which typically bridge outages for five to fifteen

[14]Data Center Dynamics, 'NESO reveals results of UK's grid connection reforms' (2025): https://www.datacenterdynamics.com/en/news/neso-reveals-results-of-uks-grid-connection-reforms/

[15]Redefining Energy Podcast:'GB's NESO – the 'cool operator'(2026) https://open.spotify.com/episode/1lWvGqD8iJLQydzmG8wBG8 and National Energy System Operator (NESO) 'Options for optimising GB Data Centres' (2025): Options for optimising GB Data Centres | National Energy System Operator

minutes[16] (with extended-runtime configurations providing longer, in some cases significantly longer, margins) before load must transfer to generators or be adequately shed. Engineering this level of redundancy, alongside heat-reuse infrastructure, requires upfront capital that long-term institutional owners are best placed to underwrite, since they bear the operational and reputational consequences of any failure for decades.

SECTION 4

4. Snapshot of National and EU Frameworks

4.1 National Frameworks

European national approaches are diverging from one another, while stricter controls on data centres is the central theme, fractured approaches prevail across Europe.

- United Kingdom: data centres are being fast-tracked as Nationally Significant Infrastructure Projects (NSIP), backed by an AI Growth Zones programme (initial zones in Oxfordshire, South and North Wales, and the North East); alongside this there is a forthcoming data centre-specific National Policy Statement, a proposal to grant 'Critical National Priority' status, and a target to cut consent times from an 18-month average to 12 months.[17]

- Ireland: Dublin operated under a de facto EirGrid connection moratorium from 2021 to late 2025; new rules reopen connections but require every project to install on-site generation or storage matching its full import capacity and pass a System Stability Assessment.[18]

- Netherlands: the Dutch government combined a 2019 Amsterdam municipal moratorium (lifted in 2020, reinstated in 2023) with a 2022 nationwide ban on new hyperscale data centres above 10 hectares or 70MW outside designated zones such as Hollands Kroon and Middenmeer; the government has since conceded it lacks the legal power to block projects that hold pre-2022 permits, leaving a two-tier market of grandfathered hyperscale campuses and a de facto ban on everything else.[19]

- Denmark: takes a rationing rather than moratorium approach. Energinet paused all new large-load grid connections in March 2026 after the queue reached around 60GW against just 7GW of peak demand, scrapped first-come-first-served allocation, and is moving toward a framework that explicitly deprioritises data centres behind households, industrial electrification and renewables.[20]

[16] MEP Academy, 'How Data Center UPS Systems Work' (2026), and Cadolto, 'UPS systems in data centres: what you need to know' (2026): https://mepacademy.com/data-center-ups-systems/ and Guaranteeing a constant power supply: UPS systems in data centres - CADOLTO DATACENTER

[17] Baker McKenzie, 'UK Government Policy Paper – Delivering AI Growth Zones' (2026): https://www.bakermckenzie.com/en/insight/publications/2026/01/uk-government-policy-paper-delivering-ai-growth-zones

[18] William Fry, 'Ireland's Data Centre Connections: Back Online' (2026), and Pinsent Masons, 'New Irish data centres must generate power back into national grid, rules regulator' (2025): https://www.williamfry.com/knowledge/irelands-data-centre-connections-back-online/ (accessed July 2026), and https://www.pinsentmasons.com/out-law/news/irish-data-centres-power-national-grid-regulator

[19] Data Center Dynamics, 'The ongoing impact of Amsterdam's data center moratorium' (2026): https://www.datacenterdynamics.com/en/analysis/the-ongoing-impact-of-amsterdams-data-center-moratorium/

[20] MLQ News, 'Denmark's Energinet Halts New Large-Load Grid Connections as Queue Hits 60 GW' (2026), and Data Center Knowledge, 'Denmark Rations Grid Access as AI Buildout Floods Nordic Systems' (2026): https://mlq.ai/news/denmarks-energinet-halts-new-large-load-grid-connections-as-queue-hits-60-gw/ and https://www.datacenterknowledge.com/build-design/denmark-rations-grid-access-as-ai-buildout-floods-nordic-systems

- Finland and Iceland show two different Nordic philosophies on managing large power users. Finland is using the tax code: from 1 July 2026, data centre electricity moves from a preferential rate (€0.0005/kWh) to the general rate (€0.0224/kWh) — a roughly 40-times increase.[21] This policy reverses a scheme originally designed to attract investment, with a smaller, more targeted replacement incentive for 'value-added' data centres under discussion. Iceland instead uses capacity ceilings and dynamic, time-of-use pricing for its largest power users, rather than a data-centre-specific levy.[22]

- France pairs some of Europe's most investor-friendly power economics with a permitting reform that is itself now contested. On energy, Data4 became the first French operator to sign a direct nuclear allocation contract (CAPN) with EDF. This includes 40MW for 12 years, priced against a €70/MWh ceiling under the post-ARENH framework in force from January 2026.[23] Alongside this, France's new Multiannual Energy Plan (February 2026) increases nuclear output targets while cutting wind and solar targets, reinforcing nuclear baseload, rather than intermittent renewables, as the default power source for new capacity. On permitting, the *loi de simplification de la vie économique* (promulgated 26 May 2026) allows large data centres to be designated as nationally significant projects. However, the same law lets permits be refused where local water resources are under structural stress.[24]

- Germany runs the EU's strictest data centre efficiency regime, embedded directly in its Energy Efficiency Act (EnEfG). New facilities commissioned from July 2026 must reach a Power Usage Effectiveness of 1.2 within two years; minimum energy reuse factors rise from 10% (2026) to 15% (2027) and 20% (2028); renewable electricity sourcing ramps to 100% from January 2027; and facilities of 1MW or more must certify an energy management system from 2026, reporting annually to a national register[25]. A draft amendment published in April 2026 would ease some existing-facility PUE targets, but the direction of travel of mandatory, verifiable performance standards, is unlikely to reverse.

- Italy has moved the furthest and fastest on permitting. Its *Decreto Bollette* (Law Decree No. 21/2026, converted into law in April 2026) introduces a single national authorisation procedure for data centre construction, expansion and grid connection. This means one point of contact replacing a fragmented process that previously took two to three years, now bound to a maximum of 10 to 13 months, with environmental impact assessment timelines significantly shortened.[26]

[21]Finnish Government, 'Government safeguards Finland's competitiveness in attracting data centre investments'(2025/2026): https://valtioneuvosto.fi/en/-/government-safeguards-finland-s-competitiveness-in-attracting-data-centre-investments

[22]The Reykjavík Grapevine, 'Artificial Iceland: Data Centres Use Up Much Of Iceland's Energy, But For What?' (2025): https://grapevine.is/mag/articles/2025/07/24/artificial-iceland-data-centres-use-up-much-of-icelands-energy-but-for-what/

[23]Data Center Dynamics, 'Data4 signs 40MW nuclear supply deal with EDF' (2025), and Industrial Info Resources, 'France Prioritizes Nuclear over Renewables in New Energy Law' (2026): https://www.datacenterdynamics.com/en/news/data4-signs-40mw-nuclear-supply-deal-with-edf-to-power-french-data-center-portfolio/

[24]DC MAG 'La loi de simplification économique consacre l'article 15 dédié aux datacenters, adopté !'(2026) https://dcmag.fr/la-loi-de-simplification-economique-consacre-larticle-15-dedie-aux-datacenters-adopte/ and 'Ministere de l'Economie, des Finances et de la Souverainete industrielle, energetique et numerique (2026) https://www.economie.gouv.fr/actualites/loi-de-simplification-de-la-vie-economique-ce-qui-change-pour-les-entreprises
and https://www.economie.gouv.fr/actualites/loi-de-simplification-de-la-vie-economique-ce-qui-change-pour-les-entreprises

[25]White & Case, 'Data center requirements under the new German Energy Efficiency Act', (2026): https://www.whitecase.com/insight-alert/data-center-requirements-under-new-german-energy-efficiency-act and Gleiss Lutz, 'Data centre update – draft bill to amend the Energy Efficiency Act' (2026): https://www.gleisslutz.com/en/know-how/data-centre-update-draft-bill-amend-energy-efficiency-act

[26]A&O Shearman, 'Italy Streamlines Data Center Permitting' (2026): https://www.aoshearman.com/en/insights/italy-cuts-red-tape-for-data-centers

4.2 Towards a Single EU Data Centre Rating Scheme

The European Commission's Delegated Regulation establishing a common Union rating scheme for data centres has been through rounds of revision.[27] As of the most recent text available at the time of writing, it has not yet completed the EU's formal adoption process.[28] Once finalised, the scheme will be a welcome step toward the transparency and comparability investors need to assess assets and counterparties consistently across Member States and is positioned to become a genuine underwriting input over time, feeding directly into the Cloud and AI Development Act's (CAIDA) own sustainability assessments and the EU Taxonomy Regulation, rather than remaining a standalone compliance disclosure.

GIIA supports the scheme's core design choices: automatic label generation drawn from existing Energy Efficiency Directive reporting, which minimises duplicative administrative burden, and a clear A to G grading built on PUE and WUE as the primary performance indicators, with renewable and low-emission energy sourcing, grid flexibility and waste heat reuse readiness reported alongside the core grade rather than folded into it. That support is for the scheme's direction, not yet its completeness. Most important of all for investors, the current draft would apply Guarantees of Origin eligibility rules, including temporal, geographic and asset-age restrictions, that exist nowhere else in EU renewable energy law, and that would sit awkwardly against the long-term power purchase agreements and long-lived renewable assets GIIA members already underwrite, as both buyers and generators.

4.3 Recommendations for EU policymakers on the Data Centre Rating Scheme

Before the scheme becomes the reference framework for the binding minimum performance standards it is designed to lead to, EU policymakers should:

- Embed climate and water-depletion adjusted scoring into the PUE and WUE classification bands themselves, rather than leaving Cooling Degree Day data as contextual information alongside an otherwise unadjusted grade. Without this, the scheme risks rating facilities in warmer or drier regions worse for reasons outside operators' control, and steering investment toward favourable climates rather than genuine efficiency.

- Commit to introducing an aggregated score at the Commission's scheduled review, due by 31 March 2029, rather than leaving it as one option among several the review may or may not take up. A single score would materially improve the scheme's usefulness for the procurement and investment-screening purposes the Cloud and AI Development Act already envisages for it.

- Build on the voluntary participation now available to design-stage and under-construction facilities by establishing a clear methodology for how design-phase, ramp-up and steady-state performance should be distinguished within the rating itself. Allowing earlier participation without showcasing that distinction shifts the risk of misleading comparisons rather than removing it.

[27] EUR-Lex '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' (2024) https://eur-lex.europa.eu/eli/reg_del/2024/1364/oj/eng
[28] Emma De Koster, 'Sustainability labelling for European data centres', Linklaters Sustainable Futures (2026): https://sustainablefutures.linklaters.com/post/102ne37/sustainability-labelling-for-european-data-centres

SECTION 5

5. Case Studies

Borealis Data Center: A Nordic Infrastructure Investment Case Study

Vauban Infrastructure Partners holds a 92.2% stake in Borealis Data Center, acquired in July 2021, through its Core Infrastructure Fund III[29]. Founded in 2014, Borealis operates three campuses in Iceland, Blönduós and Fitjar along with Reykjavík, acquired in 2022; and a site in Kajaani, Finland, acquired in 2024[30] [31].

Strategy rationale: Borealis differentiates itself through three factors: a competitive Power Usage Effectiveness (PUE) ratio across its campuses (a 2025 weighted average of 1.08), strong reliance on renewable energy, and secured land/electricity contracts to meet growing demand.[32] These features are explicitly designed to ensure visibility of long-term stable cashflows, a hallmark of infrastructure investment.[33]

Kajaani campus. Photo courtesy of Borealis Data Center, August 2026.

Site selection: Expansion follows a deliberately repeatable formula: a competitive total cost of ownership (TCO) for colocation, cold-climate free cooling and low PUE ratio, and largely decarbonised power from renewables and geothermal sources[34]. Energy price/availability is the primary TCO driver; subsea cable connectivity and land availability for future expansion are also weighted, alongside screening for a low-risk, business-friendly regulatory environment.[35] Kajaani exemplifies the model: built into a former paper mill using locally sourced timber and delivered in seven months, it sits beside the LUMI supercomputer, used across Europe for AI, climate modelling, medicine, and quantum computing research; and Borealis' Kajaani site was one of Finland's first colocation sites to deploy full-site direct liquid cooling.[3637]

Power sourcing: Borealis relies mainly on long-term Power Purchase Agreements for its data centres, which Vauban describes as key to securing its pipeline, with grid connections providing reliability; Borealis sites run on renewables, on hydro and geothermal power in Iceland and hydro and wind in Finland. [38]
Cooling and community, the Kajaani-Loiste model: Borealis is retrofitting toward direct liquid and closed-loop cooling to increase energy efficiency while minimising water use.[39] At Kajaani, a long-term partnership with district heating utility Loiste transfers waste heat via a closed-loop system, cutting cooling energy needs

[29] White & Case LLP 'White & Case advises lenders on Borealis Data Center financing'(2025) https://www.whitecase.com/news/press-release/white-case-advises-lenders-borealis-data-center-financing (accessed July 2026)
[30] Ibid.
[31] Baxtel, Borealis 'Borealis Data Centre' (accessed July 2026)
[32] Borealis Data Center, 'Reykjavík Campus', 'Blönduós Campus' and ' Fitjar Campus' (accessed July 2026)
[33] GIIA interview with Vauban Infrastructure Partners, June 2026.
[34] Ibid.
[35] Ibid.
[36] Borealis Datacentres Press Release 'Borealis and Loiste Sign Agreement to Reuse Data Center Waste Heat in Finland' https://bdc.is/insights/borealis-and-loiste-sign-agreement-to-reuse-data-center-waste-heat-in-kajaani-finland (2025), (accessed July 2026)
[37] Sweco, 'Borealis Data Center's Kajaani campus is delivered in record time...' (accessed July 2026)
[38] Interview with Vauban Infrastructure Partners, June 2026.
[39] Ibid.

while supplying local heating — covering an estimated 10% of Kajaani's heating needs.[4041] As of June 2026, the site generates an estimated 3–5MW of usable heat, with a longer-term target of up to 10MW as the project scales, and Loiste aims to raise the share of its annual district-heating output sourced from waste heat to 80%. [42] CEO Björn Brynjúlfsson: "Data centers... when done right, they can contribute directly to the communities around them... industrial byproducts like waste heat can be transformed into everyday value for local residents and businesses".[43]

Community engagement: Borealis's community engagement extends beyond Kajaani's heat reuse. At Blönduós, the company has committed to a three-year reforestation and environmental improvement programme launched in May 2025, including roughly 1,000 native trees planted in summer 2025, with further planting and sustainability measures planned in subsequent years.[44] Borealis also supports a feasibility study with Kajaani University on data centre reuse initiatives, runs a Reykjavík office internship programme every summer, sponsors local sports and community groups. Borealis also hosts school and university visits across all sites to foster regional talent and interest.

Regulatory positioning: Vauban & Borealis Data Center have proactively engaged with authorities across the Nordics' regulatory space, for example on Iceland's energy-industry policy framework and Finland's alignment with EU waste-heat directives, particularly on waste-heat valorisation, policies which are both cited as structural advantages.[45] This engagement is deliberately forward-looking; anticipating regulatory evolution and adapting the development roadmap accordingly, rather than reacting to constraints. Vauban frames the combined regulatory position not as a constraint but as a driver of cost efficiency, ESG positioning, and long-term scalability.[46]

Outcome: Vauban has backed Borealis' successful repositioning as a high-performance computing (HPC) / AI-focused platform, capturing strong demand in digital infrastructure through reliable and sustainable energy, strong grid connections, high efficiency, and scalable infrastructure.[47] This repositioning illustrates Vauban's broader thesis: that active asset management, combining industrial synergies, Nordic energy-cost advantages, and ESG initiatives such as renewables and heat reuse, functions as a core value driver rather than a side commitment.

[40] Data Centre Dynamics, 'Borealis signs heat reuse agreement with public utility Loiste in Kajaani, Finland' https://www.datacenterdynamics.com/en/news/borealis-signs-heat-reuse-agreement-with-public-utility-loiste-in-kajaani-finland (2025) (accessed July 2026)
[41] Sweco, 'Borealis Data Center's Kajaani campus is delivered in record time…' (accessed July 2026)
[42] GIIA interview with Vauban Infrastructure Partners, June 2026.
[43] Data Centre Dynamics, 'Borealis signs heat reuse agreement with public utility Loiste in Kajaani, Finland' https://www.datacenterdynamics.com/en/news/borealis-signs-heat-reuse-agreement-with-public-utility-loiste-in-kajaani-finland (accessed July 2026)
[44] Ibid.
[45] GIIA interview with Vauban Infrastructure Partners, June 2026.
[46] Ibid.
[47] Ibid.

VIRTUS Data Centres: One of Europe's Leading Data Centres

Macquarie Asset Management holds a 40% stake in VIRTUS Data Centres, acquired in 2022, with STT GDC holding the remaining majority stake.[48] Macquarie describes the pairing as combining its own critical infrastructure asset management expertise, including utilities and green energy, with STT GDC's data centre operating track record, a collaboration that has secured over 350 MW of new co-location data centre projects across the UK and Europe since early 2023.[49] [50]

Strategic rationale: VIRTUS develops, owns and operates mission-critical digital infrastructure underpinning cloud computing, AI, financial services, government and other essential digital services.[51] It currently operates 13 data centres across the UK providing c.230MW of operational capacity, making it the UK's largest operator, with further capacity under development in the UK. In continental Europe, the company has multiple megacampus projects under construction in Germany and one development in Italy bringing the total footprint to c.650MW in the near term, backed by a development pipeline beyond that[52].

Stockley Park Campus. Photo courtesy of Virtus Data Centres, June 2026.

In the UK, VIRTUS has invested approximately £2 billion (€2.33 billion) to date, with a pipeline reflecting multi-billion-pound investment ambition and a long-term commitment to resilient, sustainable digital infrastructure delivered in response to evidenced customer demand — the kind of capital commitment horizon consistent with Macquarie's long-term sustainable infrastructure investment approach.[53]

Site selection: VIRTUS states that site selection is driven by customer demand, access to resilient power supplies, digital connectivity, planning considerations and operational resilience, with facilities developed where there is long-term demand and the supporting infrastructure to operate efficiently, prioritising cloud zones offering customers low-latency connectivity.[54] Wherever possible, VIRTUS prioritises brownfield and previously developed industrial land, designing developments to integrate with local communities while supporting regeneration and minimising impact on undeveloped land.[55] This is consistent with the underwriting logic behind Wustermark, VIRTUS' German campus located right next to one of the largest German power substations and next to onshore windfarm capacity to be able to utilise excess local renewable generation that otherwise could be curtailed.[56]

Power sourcing: VIRTUS secures electricity supply through close collaboration with electricity network operators, utilities and local stakeholders, with reliable grid access as the primary power source while continuing to explore complementary solutions to support long-term resilience.[57] Across its portfolio, the

[48] Macquarie Group — 'Investing in VIRTUS Data Centres to support the development of digital infrastructure and Europe's adoption of cloud computing and AI | Macquarie Group (accessed July 2026).
[49] Ibid.
[50] Virtus Data Centres, Intelligent Colocation, Connectivity & Support by VIRTUS (accessed July 2026).
[51] Interview with Macquarie Asset Management, July 2026.
[52] Ibid.
[53] Ibid.
[54] Ibid.
[55] Ibid.
[56] Ibid.
[57] Ibid.

company procures 100% renewable electricity, with approximately 17% supplied directly from offshore wind generation, supporting its commitment to net zero Scope 1 and Scope 2 emissions.[58]

Efficiency (PUE/WUE): All modern VIRTUS data centres are designed to achieve a Power Usage Effectiveness (PUE) of 1.25 or below, and all facilities built over the past decade use closed-loop cooling systems requiring only minimal water top-ups.[59] VIRTUS's LONDON8 facility (18MW IT load) required just 527 litres of water to top up its cooling loop across the whole of 2025 — around 0.3% of the annual water consumption of a typical four-person UK household.[60] [61]

Heat reuse: VIRTUS supports heat reuse where technically feasible, commercially viable and supported by local infrastructure, assessing opportunities site-by-site according to nearby heat demand and network availability.[62] Its next Slough Trading Estate facility (LONDON19) has been designed to connect to a future district heating network should suitable infrastructure become available, with the same approach applied to its German developments, where heat offtake is stated to be readily available should demand exist.[63] [64]

Community engagement and socio-environmental programmes: VIRTUS works closely with national and local authorities, communities and stakeholders throughout the planning, construction and operational lifecycle, focused on long-term partnerships, transparency and lasting local value, with a predominant focus on brownfield industrial sites offering regeneration, investment and job creation benefits.[65] Concrete commitments include £20 million (€23 million) in planning contributions tied to the Saunderton development over ten years; environmental contributions supporting air quality, carbon offsetting and sustainable transport; the VIRTUS Professional Development Programme supporting industry-recognised qualifications; and the Digital Futures Programme, offering internships and engagement with University Technical Colleges.[66] In 2025, VIRTUS developments supported more than 1.07 million construction hours and over 700,000 operational contractor hours.[67]

Regulatory navigation: VIRTUS proactively works with regulators, network operators, local authorities and infrastructure partners, and states it supports regulatory frameworks that provide certainty for long-term infrastructure investment alongside high environmental standards, framing coordinated planning and predictable investment environments as fundamental to sustainable delivery.[68]

[58] Ibid.
[59] Ibid.
[60] Ibid.
[61] Water UK 'Water you thinking? Brits way off on daily usage', (2025), https://www.water.org.uk/news-views-publications/news/water-you-thinking-brits-way-daily-usage, (accessed July 2026)
[62] Interview with Macquarie Asset Management, July 2026.
[63] Ibid.
[64] Data Centre Dynamics, 'Virtus to develop 32.5MW data center in Slough, UK' (2026) https://www.datacenterdynamics.com/en/news/virtus-to-develop-325mw-data-center-in-slough-uk/
[65] Interview with Macquarie Asset Management, July 2026.
[66] Ibid.
[67] Ibid.
[68] Ibid.

SECTION 6

6. Conclusion

The constraint on European data centre capacity growth is not investor appetite. It is firmly on delivery. Grid connection timelines, permitting fragmentation across Member States, among other issues, are the practical barriers standing between committed long-term capital and operating infrastructure.

The message for policymakers is not that private capital is hesitant. It is that long-term institutional capital is positioned, committed, and structurally aligned with the sustainability and resilience outcomes Europe's digital infrastructure requires, and the policy framework needs to be designed to meet it there.

The Global Infrastructure Investor Association welcomes continued engagement with the European Commission and Member States on the realisation of the stated objectives surrounding data centre investment and deployment. This includes through the development of the Cloud and AI Development Act and the common EU data centre rating scheme.

This paper provides a contribution to the ongoing development of European policy and regulatory frameworks and will be followed by further engagement to better support and inform policymakers' understanding of the challenges and opportunities investors face within the data centre investment landscape.

ABOUT GIIA

GIIA unifies the strength of the world's leading infrastructure investors and advisors into one powerful, global voice. Our mission is to shape policy, unlock capital, and accelerate the transition to a sustainable and connected world.

Contact us about this paper

GIIA Policy and Public Affairs
policyteam@giia.net
+44 (0)20 3468 1350

Global Infrastructure Investor Association
37 Lombard Street, London
EC3V 9BQ, United Kingdom

Disclaimer: this paper represents the collective view of GIIA members. It is provided for information and does not constitute investment, legal or tax advice. © GIIA 2026. All rights reserved.