

# Data centers, mirrors of the tensions in the digital world

*How digitalization exposes the  
physical limits of our models*

With projected energy needs of nearly 945 TWh by 2030<sup>1</sup>, roughly equivalent to Japan's annual consumption, the latest figures announced on the electricity consumption of data centers worldwide show a staggering increase of 119% projected between 2025 and 2030<sup>2</sup>, compared to 76% between 2019 and 2024.

Fueled by the explosion of digital usage, cloud computing, and the development of AI, these infrastructures now occupy a strategic position and are reshaping energy systems. In this respect, **they act as catalysts for the tensions that exist** between digital usage, energy dependence, environmental challenges, and data processing. Fundamental debates crystallize within them: resource allocation, territorial acceptability, and state sovereignty in relation to digital technology.

**Data centers are increasingly becoming key players in energy systems.**

Data centers are large consumers of electricity with a specific profile:

- They operate 24 hours a day, and therefore have a very predictable load profile.
- They require high power to meet all needs: from 5 kW for small edge data centers, to 50 MW for a colocation data center and up to 150 MW or even much more now for recent *hyperscales*, a major break with past industry standards.

It is this combination of high power over time that makes these loads particularly structuring for an electrical network.

Data center type	Total power*	Annual consumption**	Equivalent consumption
Edge Data Center	5 kW	43.8 MWh	Small bakery, cafe
	0.5 MW	4.4 GWh	Small town
Enterprise data center	1 MW	8.7 GWh	Municipality of 2,000 inhabitants
	5 MW	43.8 GWh	Town of 10,000 inhabitants
Shared accommodation	10 MW	87.6 GWh	~15,000 inhabitants (Briançon - France)
	50 MW	438 GWh	~65,000 inhabitants (Calais - France)
Hyperscale	100 MW	0.88 TWh	~200,000 inhabitants (Caen - urban area - France)
	150 MW	1.3 TWh	~300,000 inhabitants (Strasbourg - France)
Recent Hyperscale AI	200 MW	1.75 TWh	~400,000 inhabitants (Bologna - Italy)
	600 MW	5.2 TWh	~1.2 million inhabitants (Lille - urban area - France)

\* illustrative : power ranges vary significantly depending on usage and the size of the data center

\*\* without interruption, i.e. 8,760 operating hours

<sup>1</sup>IEA

<sup>2</sup>Gartner - <https://www.gartner.com/en/newsroom/press-releases/gartner-says-electricity-demand-for-data-centers-to-grow-16-percent-in-2025-and-double-by-2030>

Until the 2010s, the energy supply of data centers was mainly approached from an operational perspective, in a logic of service continuity, via relatively standardized contracts with electricity considered primarily as an operational input.

More recently, the period 2021–2023 was marked by a succession of major events that had significant consequences for the energy system:

- The start of the war in Ukraine, with a surge in gas prices in Europe. A rise in gas prices occurred in France starting in May 2026, due to the repercussions of the conflict in the Middle East
- Severe drought in Europe in 2022, with lower hydroelectric production
- The share of wind and solar power is increasing in the energy mix
- In France, a reduced availability of the nuclear power plant fleet

These events had two main consequences:

- A very sharp increase in the wholesale price, which for France rose from an average of €109/MWh in 2021 to over €276/MWh in 2022. Before Covid, in 2019, the figure was €50/MWh
- Very high volatility, illustrated by a historic peak in the Spot price at the end of August 2022 at nearly €610/MWh<sup>3</sup>

This crisis has had a significant impact on industrial companies and large electricity consumers. For the data center industry, whose number and size have steadily increased (due to the widespread adoption of cloud computing and the rise of AI), this has led to overexposure to energy prices. In France, this has been compounded by a significant risk to the supply of energy, a strategic concern for this industry, which became particularly apparent during the winter of 2022.

These phenomena have highlighted the weak points of an industry seeking abundant long-term, decarbonized energy at a stable price and deliverable in concentrated amounts at specific points in the grid.

## Securing projects and pressure on grids: stakeholders face several major challenges

### 1. Ensuring grid connection for their infrastructure:

In many countries, connection lead times are considered too long by operators (grid reinforcement, new transmission lines). According to Amazon, these delays can reach up to 7 years, particularly in Europe, while it takes an average of 2 years to build a data center<sup>4</sup>. This component is now key to ensuring the growth projects of the GAMAM companies (Google, Apple, Meta, Amazon, Microsoft). In response, several phenomena are being observed among operators:

- Some players are over-reserving grid capacity in anticipation of their future development
- Grid connection applications are submitted as early as possible, even before the final investment decision, directly to the transmission system operators. RTE

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<sup>3</sup> RTE

<sup>4</sup> <https://www.reuters.com/sustainability/boards-policy-regulation/power-grid-delays-challenge-amazons-data-center-expansion-europe-2026-02-03>

reports 4.5 GW of grid connection capacity signed as of September 2024 (approved technical and financial proposal or signed connection agreement). The same capacity was under review (at the exploratory study or technical and financial proposal stage). from mid-2025<sup>5</sup>

- In the United States, some players submit the same data center construction application to multiple grid operators, with the aim of lowering energy costs or artificially inflating their projects, which distorts the real forecasts of demand<sup>6</sup>

In a way, the industry is contributing to a **form of artificial grid reservation**. In France, RTE noted in its 2025 report that of the eight data centers connected to the transmission network since 2016, with a total contracted capacity of 800 MW, they were only consuming 120 MW, resulting in a "contractual" saturation of the available capacity. Faced with this phenomenon, the Energy Regulatory Commission (CRE) introduced a significant change in mid-2025 that applies more broadly to all large electricity consumers: RTE may now reduce connection capacity when the maximum power drawn is less than that specified in the connection agreement. CRE then clarified the terms of the evolution of the connection power: modification of the connection power after 5 years if the user chooses to be connected directly at the final connection power or commitment to a gradual increase in load over a maximum of 10, with intermediate power values to be respected.

## 2. Securing electricity supply:

Operators are increasingly using specific contracts, such as **Power Purchase Agreements (PPAs)**<sup>7</sup>, the number of which exploded in 2022. These long-term contracts between a buyer and a renewable energy producer secure significant volumes of energy at a fixed price, while offsetting a portion of greenhouse gas emissions. In France, for example, Equinix concluded a PPA with the producer wpd in early 2024 and signed seven contracts covering more than 300 GWh of green energy (wind and solar) annually over 20 years. Data4 and DigitalRealty also used PPAs in 2024. In the United States, Alphabet, Google's parent company, signed a 15-year PPA with TotalEnergies last November for a total of 1.5 TWh of certified solar electricity to power its data centers in Ohio<sup>8</sup>. It should also be noted that Data4 recently concluded a 12-year Nuclear Generation Allocation Contract (CAPN in french) with EDF, allocating to it a share of nuclear power of around 40 MW for 230 GWh delivered<sup>9</sup>.

## 3. Securing the electricity generation associated with data center usage:

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<sup>5</sup> [Data centers: 11 figures on their growth in France and their electricity needs | RTE](#)

<sup>6</sup> <https://www.ft.com/content/331f8e5c-a813-48d4-9af6-806c8482eede>

<sup>7</sup> For more information: [The Essentials of PPAs - Sia Partners.pdf](#)

<sup>8</sup> [United States: TotalEnergies to Supply Renewable Power to Google's Data Centers for 15 Years | TotalEnergies.com](#)

<sup>9</sup> [Data4 signs an agreement with EDF for the supply of low-carbon electricity to its data centers in France - 04/09/2025 | EDF FR](#)

In some countries – and especially in the United States – **some actors are trying to physically secure their electricity supply**, in a context of local shortages in certain areas or excessively long connection delays. Examples include:

- The extension of combined-cycle gas turbine (CCGT) power plants, whose principle is to recover heat from the flue gases to optimize the plant's energy efficiency. CCGTs are combined with renewable energy sources to compensate for their intermittency.
- Experiments with SMRs (for Small Modular Reactor), designed to provide small reactors of up to 300 MW per unit, easier to manufacture and deploy than conventional reactors and also cheaper. Projects are currently underway in the United States through partnerships involving Google and Amazon.
- growing interest from big tech firms in nuclear electricity, seen as stable and low-carbon. Microsoft signed a 20-year electricity purchase agreement (835 MW) with Constellation tied to the restart of one of the reactors at Three Mile Island in Pennsylvania to cover the electricity used by its data centers. Amazon did similarly with utility Talen (1.9 GW over 17 years)
- increasing interest in hydrogen production, a high-density, energy-rich gas. Fuel cell developer Bloom Energy has signed several agreements with data center players such as Equinix (100 MW across 19 data centers) and with energy suppliers such as AEP, which aims to deploy these fuel cells in AI data centers. Fuel cells offer modularity, redundancy capacity, and can simplify grid connection for facilities such as data centers, requiring less work or fewer reinforcements
- Other examples of interest include Chevron, in partnership with GE (a turbine supplier) and Engine No. 1 (in partnership with Crusoe, an AI campus developer), which will soon build several natural gas-fired power plants coupled with data centers located in the Southeast, Midwest, and West of the United States. In Europe, the Portuguese distributor EDP recently announced several partnerships with data center developers for the supply of renewable energy (with Merlin, and more recently with Start Campus).

A sign of the growing importance of power and supply issues is that the **GAMAMs have increasingly been moving up the value chain in recent years** in order to control site selection and acquisition of the most strategic land (large land reserves that can be developed progressively as needs arise), as well as to better control the supply of their sites (electrical equipment, transformers, backup generators, etc.). In this way, major players seek to minimize their dependence on third parties (real estate companies, operators, even utilities) for assets considered critical to their operations, and to reduce risk.

#### **4. Identify suitable locations while taking network constraints into account.**

Connectivity and proximity to markets remain key criteria in location selection. This logic continues to attract projects to a few major metropolitan areas. As a result, the concentration of large data centers is accelerating around major internet hubs, robust electrical grids, and at the heart of large economic markets. This is particularly true in Europe, where the main hub – FLAPD (Frankfurt, London, Amsterdam, Paris, Dublin) – concentrates more than a third of the nation's data centers in each of these cities. **This saturation heavily weighs on the electricity system in two ways:**

- In some areas, the strain on the electricity grid is so severe that **other uses are experiencing delays in accessing the network** (housing in London<sup>10</sup>). In Ireland, in 2022, the operator EirGrid suspended the granting of permits for new data center connections until 2028<sup>11</sup>. Construction projects that had already been approved (Amazon, Equinix) had to be halted due to a lack of available capacity. In Santa Clara, California, some completed data centers remain empty because the local operator is unable to provide the expected power<sup>12</sup>. This area of Silicon Valley, which has no fewer than 55 data centers in operation, has clearly reached its saturation point, posing real risks to household power supplies. Finally, in Belgium, a country where demand for data centers has increased ninefold since 2022, the operator Elia is considering a capacity allocation limit to prevent other sectors from being blocked from accessing the grid.
- In the event of significant disruptions to the grid, data centers can disconnect instantly or reduce their output, posing a **significant risk to the electrical grid**. In Ireland, in May 2025, no less than 387 MW of data center-related power was simultaneously withdrawn from the grid, causing a sudden fluctuation in the grid frequency.

To mitigate risks to the grid and facilitate the development of such projects in France, EDF launched a call for expressions of interest (AMI) at the end of 2025 for the construction of high-energy-consumption data centers on sites owned by the energy company (such as former thermal power plants) and located in areas with favorable grid connections. The location of these sites helps to alleviate pressure on the grid at certain critical points.

## 5. Securing the water supply:

Another major issue in the debate is water use. **A data center requires very large amounts of water—more than half of which still comes from potable water today**—both directly for cooling installations (air conditioning, evaporative cooling, humidification, etc.) and indirectly when taking into account semiconductor manufacturing and electricity supply. A small 1 MW data center is estimated to consume nearly 25.5 million liters of water per year, and a hyperscale facility up to 760 million liters, or more than 300 Olympic-sized swimming pools<sup>13</sup>. According to the IEA<sup>14</sup>, water consumption by data centers for AI alone reached 560 billion liters in 2023. That is roughly equivalent to the annual water consumption of a megacity of 10 million inhabitants such as London or Chicago. This could exceed 1,200 billion liters by 2030. To ensure sufficient water volumes, stakeholders are seeking to establish long-term partnerships with municipalities or are undertaking groundwater extraction (Meta in Arizona, Microsoft in Iowa).

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<sup>10</sup> <https://www.london.gov.uk/sites/default/files/2025-12/Planning%20Regeneration%20Committee%20-%20Energy%20Infrastructure%20Report%20FINAL.pdf>

<sup>11</sup> <https://www.datacenterdynamics.com/en/news/microsoft-aws-equinix-join-list-of-companies-pausing-data-center-projects-in-dublin>. The moratorium was ultimately lifted in December 2025

<sup>12</sup> [These Massive CA Data Centers Are Sitting Empty – And It Could Stay That Way For Years](#)

<sup>13</sup> UC Berkeley, Center for Law, Energy & The Environment – february 2026

<sup>14</sup> voir le World Energy Outlook Special Report – april 2025

In environments already experiencing water stress (or even water shortages<sup>15</sup>), data centers are increasingly under scrutiny. For example, in 2025, Bloomberg highlighted that two-thirds of data centers completed or under development in the United States since 2022 were located in areas facing water scarcity<sup>16</sup>. This has led to conflicts with other uses for water resources (agriculture, industry), project postponements, and cancellations. Warnings have already emerged in recent years: in Santiago, Chile, Google paused its hyperscale project in 2024 due to the risk of water impact and after its permit was revoked by the authorities. Regions experiencing chronic water stress (Arizona, California, Northeast Spain, England, and the Dublin region, to name a few) are calling for responsible water use by all stakeholders. It should be noted that, according to a study by BSI Group<sup>17</sup>, France is currently doing better than other countries thanks to stricter regulations and by promoting projects that implement efficient water management measures.

### Operators' greening efforts are being undermined by the explosion in uses and in AI

In a press release in early 2025, the German operator DE-CIX reported a doubling of global data traffic between 2020 and 2025<sup>18</sup>, driven by cloud services, internet applications, streaming services, online games, and particularly a constantly growing number of internet users.

Use case	Priority	Preferred Data Center Type				
		Colocation	Cloud	Hyperscale	HPC	Edge
Storage and hosting	<ul style="list-style-type: none"> <li>Physical and logical security</li> <li>Service continuity</li> <li>Regulatory compliance</li> </ul>	✓	✓	✓		
Web application	<ul style="list-style-type: none"> <li>Ability to handle major load variations (e.g. e-commerce)</li> <li>Traffic spike management</li> <li>Fast updates</li> </ul>	✓	✓	✓		✓
AI (training)	<ul style="list-style-type: none"> <li>Massive, highly intensive computing</li> <li>Long-duration compute capacity</li> </ul>			✓	✓	
AI (inference)	<ul style="list-style-type: none"> <li>High request density / simultaneous requests</li> <li>Real-time processing</li> <li>Proximity to users</li> </ul>	✓	✓	✓		✓
Scientific HPC	<ul style="list-style-type: none"> <li>Parallelization of intensive computations</li> <li>Massive data management</li> </ul>				✓	
Video games	<ul style="list-style-type: none"> <li>Geographic proximity to reduce latency</li> <li>Ability to handle simultaneous load spikes with real-time synchronization</li> </ul>	✓	✓ (back end)	✓ (back end)		✓
VPN, firewalls	<ul style="list-style-type: none"> <li>Geographic proximity to reduce latency</li> <li>Very high level of protection</li> <li>Availability</li> </ul>	✓	✓			✓
SaaS services	<ul style="list-style-type: none"> <li>Availability</li> <li>Securing customer data</li> </ul>		✓	✓		
Telecom operators	<ul style="list-style-type: none"> <li>Very low latency</li> <li>Presence as close as possible to users</li> <li>High resilience</li> </ul>	✓	✓			✓

**Examples of use cases hosted by data centers**

To keep pace with this explosion in data traffic, **the number of data centers has increased considerably, and in particular hyperscale data centers.** (approximately 1,300 worldwide by mid-2025, a number that has tripled since 2018). **The accelerating use of AI, which**

<sup>15</sup> ONU

<sup>16</sup> [How AI Demand Is Draining Local Water Supplies](#)

<sup>17</sup> [gl-grp-cross-thght-nss-sus-nsp-mp-tfc\\_watersecuritydatacenters-1225.pdf](#)

<sup>18</sup> <https://www.de-cix.net/en/about-de-cix/media/press-releases/de-cix-global-data-traffic-volume-hits-new-record-breaking-high-at-internet-exchanges>

**demands high performance levels, necessitates the construction of new sites** capable of both delivering the required power levels and being located near abundant energy sources. Indeed, the performance of an AI largely depends on its computing power, enabled by the GPUs (graphics processing units) allocated to it, which allow for the parallelization of calculation sequences during the training and inference phases. For example, an Nvidia B300 GPU chip with a power rating of 1,400 W, operating continuously, would consume approximately 12 MWh per year<sup>19</sup>. This is equivalent to driving 60,000 km in an electric car. Mistral AI plans to use 18,000 of these GPUs for its new computing platform, slated for deployment in 2026<sup>20</sup>. This represents a total annual energy consumption of nearly 216 GWh, equivalent to the annual energy used by 18,000 homes heated by electricity. Furthermore, the necessary cooling of the various equipment—estimated at around 37% of total electricity consumption for a data center<sup>21</sup>—further increases these needs.

Despite improvements in Power Usage Effectiveness (PUE) in recent years, **electricity consumption figures for data centers are mechanically increasing among GAMAM companies**: Google, for example, announced a 27% increase in consumption for its infrastructure in 2024 compared to 2023<sup>22</sup>. For Meta, the increase was +34% between 2022 and 2023<sup>23</sup>. The same trend is observed for water consumption: for instance, Amazon's data centers are projected to consume nearly 29 billion liters of water by 2030<sup>24</sup>.

**Regarding carbon footprint**, Scope 1 emissions (direct emissions such as backup generators, heating systems, and refrigerant leaks) and Scope 2 emissions (indirect emissions linked to the electricity consumed by the data center) seem relatively “manageable,” at least from an accounting standpoint: low-carbon electricity purchase agreements (renewable or nuclear PPAs), improved PUE, further gains through better cooling techniques, etc.

In parallel, operators are implementing solutions to reduce water consumption (and thereby improve WUE – Water Usage Effectiveness): air cooling (though more energy intensive), immersion cooling, closed-loop systems, and recovery of waste heat (for example Microsoft's project in Helsinki). The use of non-potable water is also developing (wastewater, industrial water, rainwater), although this requires additional treatment. Operators are also engaged in large-scale water compensation programs (rainwater harvesting, wetland restoration).

**Scope 3 emissions (other indirect emissions), however—within a context of continuous infrastructure growth and a race for ever greater power—remain much more difficult to control**, especially those linked to construction materials (concrete, steel) and the supply chains of equipment (chips, servers). In its 2025 report, Google attributes the 22% increase in its scope 3 emissions between 2023 and 2024 to the rise in the commissioning of its data center capacity<sup>25</sup>. The same is true for Amazon, which highlights a 6% increase in its

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<sup>19</sup> [NVIDIA Blackwell Ultra et B300 | Introl Blog](#)

<sup>20</sup> [La France renforce sa stratégie nationale d'IA avec l'infrastructure NVIDIA - NVIDIA France](#)

<sup>21</sup> <https://www.abiresearch.com/blog/data-center-energy-consumption-forecast>

<sup>22</sup> [Sustainable & Efficient Operations - Google Sustainability](#)

<sup>23</sup> <https://www.datacenterdynamics.com/en/news/meta-data-center-electricity-consumption-hits-14975gwh-leased-data-center-use-nearly-doubles>

<sup>24</sup> [Amazon strategised about keeping its datacentres' full water use secret, leaked document shows](#)

<sup>25</sup> [Google 2025 Environmental Report - Google Sustainability](#)

emissions in its 2024 report. Meta reports that in 2024<sup>26</sup>, nearly 63% of its emissions are attributed to its infrastructure (buildings, IT, equipment), while the company has just announced a 73% increase in its investments in its data centers for 2026<sup>27</sup>. Certainly, relevant solutions exist, such as the use of modular or prefabricated low-carbon constructions, but the modules include the essential technical equipment and components for their operation (steel, aluminum, copper) and remain dependent on complex supply chains over which operators have little control.

From an emissions reduction perspective, it seems difficult to keep pace with the growth of data centers, as the timeframes between expanding electrical grid capacity—which requires heavy investment, complex infrastructure, and regulatory delays—and the growth of digital technology (and especially AI) appear to be disconnected. This issue is even more pressing for water, a resource whose scarcity is increasing with climate change.

As a result, the ambitions of some players are being scaled back or postponed: in July 2024, Google announced it was pushing back its carbon neutrality to 2030. In its 2025 report, Meta now aims to try not to exceed its 2021 scope 3 emissions level by 2031.

### Encouraging data center projects: between acceptability, sovereignty, and economic stakes

Data center development remains a **major economic issue** for local areas. With significant capital expenditures (CAPEX), local indirect employment is boosted (civil engineering, electrical engineering, construction), and tax revenues (particularly the business property tax, CFE) are substantial for local authorities. When it is necessary to reinforce the electrical grid, the work carried out can simultaneously benefit other economic actors (creation of new electrical substations, improved grid reliability). The same applies to connectivity: when the creation of new nodes is required, data centers can attract new players seeking a high-level technical environment.

Depending on their location, data centers can also play an active role in network infrastructure: waste heat recovery, participation in demand response. In the United States, for example, Google signed an agreement in 2025 with two utilities in Tennessee and Michigan to reduce the consumption of its AI data centers during peak periods, thereby freeing up grid capacity. The ability to remotely reduce load for large installations (>75 MW) has been turned into an obligation by ERCOT (Texas) since January 1. In France, RTE, in partnership with Data4 and Schneider Electric, launched a demonstrator at its Marcoussis site in 2025 to "*anticipate the specific challenges of integrating numerous data centers into the grid*"<sup>28</sup>.

At the end of 2025, the French Ministry of the Economy unveiled a **guide for data center siting** aimed at providing a framework for the investment commitments announced earlier that year in the sector. This guide actually pursues a dual objective: reminding stakeholders of the rules and issues inherent in this type of project (urban planning rules, environmental constraints, procedures), while also facilitating their development on French territory by

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<sup>26</sup> [Meta 2025 Sustainability Report](#)

<sup>27</sup> [Meta is increasing its capital expenditures to advance "superintelligence" | Invest](#)

<sup>28</sup> [Launch of the first European demonstrator dedicated to the interaction between data centers and the electrical system | RTE](#)

bringing greater clarity. The rapid development of data centers—more numerous, more extensive for large facilities, and increasingly demanding in energy and data—has **led most countries to seek to regulate this growth** so as to make projects more acceptable locally, from both an environmental and societal standpoint

Thus, the European Energy Efficiency Directive (EED), updated in 2023, aims to reduce the environmental impact of all economic actors, local authorities, and governments. In France, it was transposed under the Eco Énergie Tertiaire (EET) scheme in 2019; it requires a gradual reduction, by 2050, in energy consumption in tertiary-use buildings larger than 1,000 m<sup>2</sup>—including data centers—based on 2010 levels. More recently in France, the **DDADUE law** clarified the obligations applicable to data centers from **October 1, 2025** onward: for facilities **over 1 MW**, the need to recover waste heat and carry out a cost-benefit analysis when they are created or significantly modified; and, for installations **over 500 kW**, the obligation to transmit environmental and energy data on a dedicated European digital platform.

At the same time, a **phenomenon of regionalization of data centers** has been emerging for several years: the main global hubs continue to attract players for data storage, large-scale analytical processing, AI, and cloud services, in a logic of resource pooling and therefore cost reduction. However, processed data are distributed according to use cases, user location, and existing technical or regulatory constraints. This is a response to the following constraints:

- Increased regulatory measures related to the location, processing, and use of data (GDPR, Data Act). Microsoft finalized its EU Data Boundary project in 2025, which aims to guarantee to European companies using its services that the storage and processing of customer data (including data generated by customer service) is carried out within the EU. Amazon (AWS European Sovereign Cloud) and Google (Cloud on Europe's) are examples of this. Terms ) have done the same. The French government, for its part, recently decided to relocate its Health Data Platform (PDS) to a sovereign European solution, which has yet to be finalized in compliance with the SecNumCloud label<sup>29</sup>
- the need for lower latency: streaming, online gaming (real-time), autonomous vehicles, industrial IoT
- unavailable network capacity or the need for major reinforcement work
- pressure from local authorities, which increasingly take infrastructure impacts into account, pushing operators to explore other locations
- reduced siting costs thanks to more favorable land, tax, labor, and sometimes energy access conditions (particularly visible in the United States)

The growing need for data has propelled data centers to the heart of major economic and energy dynamics. Long considered real estate assets, they now constitute a full-fledged

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<sup>29</sup> [https://www.lemonde.fr/economie/article/2026/02/05/l-etat-cherche-a-orienter-la-commande-publique-de-logiciels-vers-les-entreprises-francaises\\_6665591\\_3234.html](https://www.lemonde.fr/economie/article/2026/02/05/l-etat-cherche-a-orienter-la-commande-publique-de-logiciels-vers-les-entreprises-francaises_6665591_3234.html)

industry capable of weighing on energy systems. **Available power has become a key success factor**, on par with—or even ahead of—land and connectivity.

The race to gigantism appears to be underway, driven by AI, with a clear change in scale compared with what was seen until the early 2020s. However, this rise in power creates a growing disconnect between:

- The growth of digital technology and the capacity of electrical systems to support this growth are sometimes threatening the development plans of the GAFAM companies, which are engaged in a frantic race for AI. Some have recently paved the way for locating data centers in space to overcome current constraints, although this solution still faces numerous technical challenges.
- The growth of digital technology and the decarbonization efforts of various stakeholders have undeniably led to significant energy efficiency gains, and investments in and support for low-carbon energy remain substantial. However, the recent emergence of AI and the opportunities it offers across all sectors are slowing progress.

While the siting of data centers remains a major economic and sovereign issue for states, their acceptance—both societal and environmental—remains a challenge, and in doing so raises the question of the place that should be given to digital technology in trade-offs concerning the use of increasingly constrained resources.