DataCenterBoom!

Land purchasing and zoning for data centers

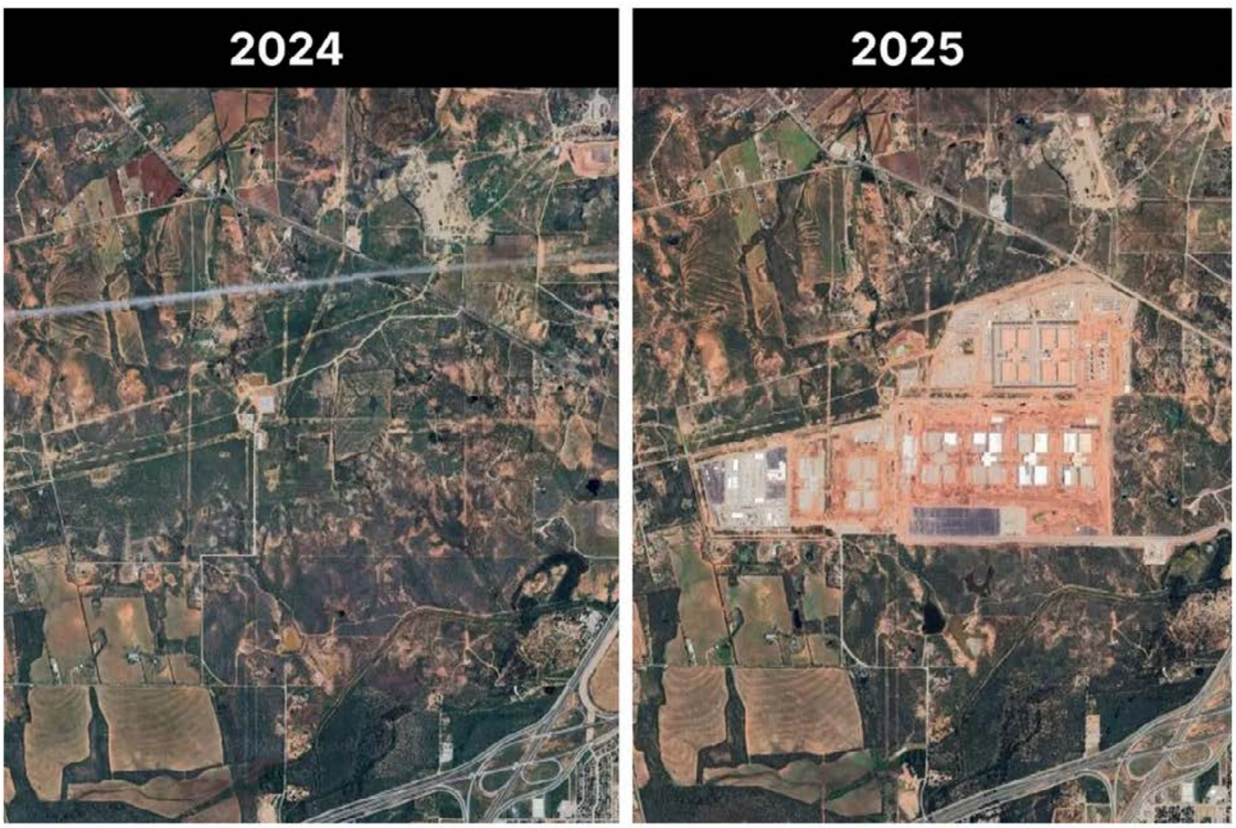
A beginner's guide

November 2025.

I. AI requires larger plots of land

There seems to be a correlation between the size of data centers for Artificial Intelligence (AI) and the amount of land required for their construction. Moreover, the more frenzy there is around AI, the greater the demand for large plots of land. The easiest way to understand the scale of these projects is to observe their infrastructure via satellite, as Michael Thomas (2025) does.

For example, just over a year ago, OpenAI's Stargate data center in Abilene, Texas (USA) had nothing more than a few permits and a few hundred acres of land in West Texas. Today, 100,000 of NVIDIA's most advanced chips consume 200 MW of power in the project's first two buildings. During 2026, the developer plans to build six more buildings, bringing the site's total power consumption to 1.2 GW.



El proyecto Stargate de OpenAI en 2024 vs. 2025

Another example is Amazon. In early 2024, the site where Amazon's data center in Indiana (USA) stands today was nothing more than corn and soybean farms. Today, the first seven buildings consume around 525 MW of energy. Furthermore, Amazon plans to build 23 more buildings, bringing total energy consumption to 2.2 GW. When the 30 buildings on the site are completed, the total space will be two and a half times larger than the Empire State Building.

El nuevo centro de datos de Amazon en Carlisle, Indiana

II. Features of these land purchases

a. Access to energy

Ideally, data centers are located in industrial or high-commercial activity areas with existing infrastructure and sufficient buffer space from residential areas. They are no longer typically found in existing business parks and are more commonly located on farms, in old factories (STREAM Data Centers, 2025), or within technology parks and specially designed data campuses that provide the space, connectivity, and utility access these facilities need (LightBox, 2025).

However, given the enormous energy requirements of artificial intelligence, what makes these acquisitions particularly noteworthy is their strategic positioning near energy infrastructure. This pattern reveals a deliberate strategy to control not only the immediate built environment but also entire energy corridors capable of sustaining long-term expansion (Kaul, 2025). Thus, in some regions, proximity to renewable energy sources, such as wind and solar farms, is a strategic advantage.

Energy availability is now prioritized over geography. Hyperscalers even request Letters of Intent (LOI) from electric utilities before closing land purchase agreements. This means that every land transaction is based on an energy prioritization strategy, and technical advisors are crucial in assessing capacity, redundancy, and future expansion potential (Datacenters, 2025).

b. Strategic secrecy

Technology companies do not issue press releases about acquiring real estate for data centers. These projects are often executed under code names or through shell companies to avoid drawing attention. However, by paying attention to weak signals—like a zoning application here or an electrical substation upgrade there—an aggressive pattern of strategic land acquisition becomes clear, with both hyperscalers and infrastructure developers competing to secure prime sites for AI infrastructure.

This clandestine approach allows tech giants to amass large land portfolios without alerting competitors or triggering premature price increases by sellers who might realize the strategic value of their properties.

c. Land banking

These facilities require extensive infrastructure planning, and the growing delays by utility providers in supplying sufficient electricity to a site, force selecting the sites much further in advance. Long lead times for sites ensure proper coordination with local electric utilities to supply electricity to the sites.

This reservation is typically made especially by hyperscalers (big tech) companies. This is for two main reasons: hyperscale companies have access to capital, meaning they have discretionary funds to acquire land and wait patiently, whereas colocation providers need to generate quicker returns for their investors. Another possible explanation is that hyperscale facilities tend to be larger and have higher electrical loads. Because of these greater electricity needs, these facilities often take longer to develop and are therefore purchased much earlier than originally planned.

d. Land with all the facilities for "plug and play"

To avoid delays, developers seek pre-titled land that is already zoned for industrial or digital infrastructure use. But even then, managing environmental studies, heat mitigation requirements, and community engagement processes requires specialized expertise. In many cities and counties, residents and officials oppose the uncontrolled proliferation of data centers. Their concerns include: high water consumption, especially for evaporative cooling; visual and noise pollution from mechanical systems; and strain on the grid due to massive energy consumption (Datacenters, 2025).

III. The challenges of zoning

What is zoning?

Zoning refers to laws and regulations that determine how a property can or cannot be used. For example, a zoning law might aim to prevent the construction of a noisy or aesthetically unpleasant building near homes, while the same law might allow this type of construction in industrial areas or on vacant land.

Zoning laws are typically established by local municipalities, which are also responsible for enforcing them. Individuals and businesses can often challenge zoning restrictions if they believe they are unfair or unevenly applied, but the appeals process is often lengthy and complex, meaning that existing zoning laws are often decisive in determining what can and cannot be built.

These large facilities, with their intensive use of utilities, do not fit neatly into traditional commercial or industrial land use categories, forcing local governments to struggle to keep pace with development. From energy demand to community impact, data centers raise a variety of zoning considerations.

a. Definition of data centers in zoning codes

Many jurisdictions now recognize "data centers" or "server farms" as specific land uses, but definitions and classifications vary. Some zoning codes group them with light industrial uses. In contrast, others treat them as separate categories due to their unique combination of high energy consumption, low employment density, and physical security needs.

This presents a key challenge for the data center industry when trying to build new facilities: when zoning rules do not specify whether data centers are allowed, they create a gray area that can complicate the process of obtaining approval to construct a new data center (Tozzi, 2025).

b. What elements should zoning for data centers take into account?

Data centers place a unique burden on local utilities (LightBox, 2025). They consume enormous amounts of electricity and, in some designs, water for cooling. Zoning and land use reviews must consider whether the local electrical grid and water systems can supply the facilities, especially in areas with limited infrastructure.

Environmental considerations also play a role. Cooling systems and backup diesel generators can cause air quality and noise issues. Some municipalities may require public hearings, environmental impact studies, or operating limits to ensure compliance with sustainability goals.

Local governments may offer tax incentives, infrastructure improvements, or expedited permitting to attract data centers that align with their economic development and sustainability goals.

Security is a fundamental requirement for data centers, which typically feature perimeter fencing, surveillance, and restricted access. These elements must comply with local ordinances regarding landscaping, lighting, and building aesthetics, especially in areas adjacent to residential zones.

Zoning codes must also address height limits, mechanical shielding for rooftop equipment, and special considerations for sound attenuation, especially for backup generators and cooling infrastructure.

Not all data centers are built the same way or require the same zoning approach. Hyperscale facilities, typically developed by cloud giants, require large tracts of land, robust infrastructure, and physical security. In contrast, colocation data centers often operate in suburban office parks, while edge and micro data centers, designed to reduce latency for end users, can be integrated into modern shopping malls or located near telecommunications hubs.

This wide range of spaces and functions requires adaptable zoning frameworks. Applying the same rules to all facilities risks stifling innovation or burdening smaller projects with unnecessary red tape. Communities seeking to boost digital infrastructure need zoning codes that are flexible enough to accommodate growth without compromising oversight.

At the same time, the long-term implications of land use must be considered. While data centers generally have a low impact on schools, housing, and traffic, their presence, especially in rural or transitional areas, can transform development patterns over time. Aligning data center planning with broader economic, environmental, and infrastructure goals will be key to ensuring that these facilities foster sustainable, community-centered growth.