NACo Informational Primer and County Considerations:

Data Centers

Introduction

The rapid growth of artificial intelligence and high-capacity cloud computing is accelerating data center development nationwide. AI ready data center capacity is expected to grow about 33 percent annually from 2025 to 2030, driving a surge in local data center proposals.[1] In preparation, county officials are making urgent decisions about land use, energy and water needs and documenting if, where and how these facilities can be sited through local ordinances. Even without express zoning authority, county leaders play a central role in contextualizing proposals and ensuring development balances projected economic benefits with community priorities and long-term community well-being. Understanding local impacts is essential for evaluating new projects, managing existing facilities and planning for long-term infrastructure needs.

Data centers differ from traditional industrial developments in market pace, scale and economic structure. Recognizing these differences helps county leaders set realistic expectations and communicate clearly with departments, residents and private partners.

This resource provides county elected officials, administrators and planning leaders with a high-level framework to evaluate, permit and oversee data center development. Instead of focusing on technical details, it highlights key challenges across the project lifecycle and offers guidance for steering development toward long-term economic and environmental goals.

DATA CENTERS

Data centers are specialized facilities designed to store, process and transmit digital information. Data centers warehouse servers, storage systems, networking equipment and supporting infrastructure under relatively high security. While data centers have existed for decades, a new class of 'hyperscale' facilities designed for generative AI and cloud computing has grown significantly. Modern data centers differ from traditional enterprise data centers in size and resource intensity and require specialized power and cooling infrastructure that may impact local utility grids and water resources.

WHAT TO EXPECT FROM DATA CENTER DEVELOPMENT

High capital investment and tax revenue potential, significant construction and modest high quality permanent jobs

Ongoing tax-base growth from continuous equipment reinvestment

Significant power demand and potential need for infrastructure upgrades

Fast development timelines and demand, which counties can leverage to negotiate \community benefits

Is your county prepared for data center development? Use the County Consideration Checklist at the end of this brief to assess readiness and assign responsibilities across departments.

County Considerations

Local Land Use and Zoning Authorities

County governments are often charged with considering the zoning and land use requests that permit the siting and construction of data centers, while ensuring that increased energy and water demands do not negatively impact the community.

Counties typically implement these considerations through zoning ordinances and land use designations, conditional or special use permits that establish site-specific requirements, and site plan review or development agreements that address infrastructure impacts and long-term operational commitments. Depending on the authority within a particular state, a county's land use and zoning authority related to the siting and construction of data centers may be limited or shared, shaping the county's role in local development decisions.

BEST PRACTICES FOR DATA CENTER DEVELOPMENT

Alignment with County Goals: Ensure data center development supports long-term economic and land use objectives

Infrastructure Readiness: Confirm availability and timing of power, water, wastewater and transportation capacity before approvals
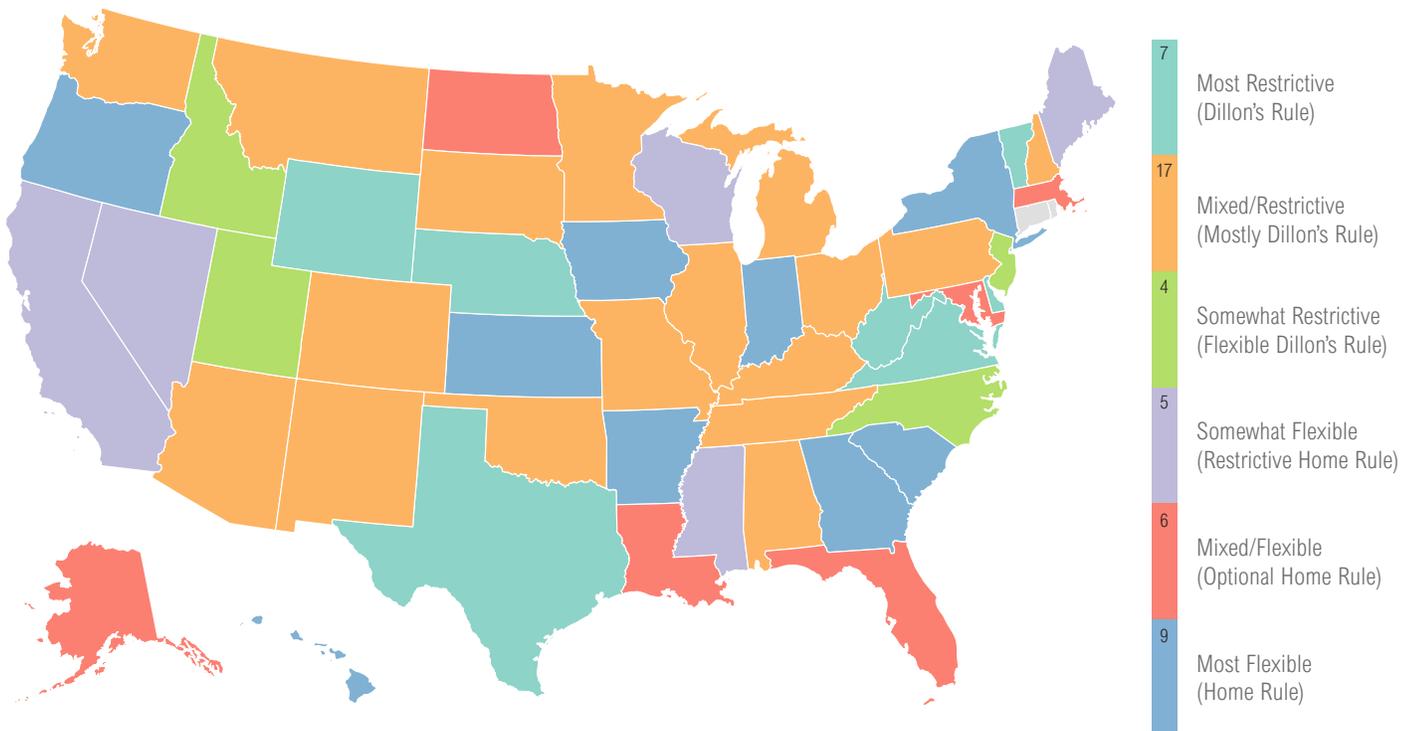
Clear Development Conditions: Establish enforceable requirements tied to permits, zoning ordinances or development agreements, such as water balance studies, setbacks, noise limits and architectural standards

Transparent Communication: Provide clear timelines, responsibilities and decision points to residents and stakeholders

COUNTY AUTHORITY PROFILES

7	Most Restrictive (Dillon's Rule)
17	Mixed/Restrictive (Mostly Dillon's Rule)
4	Somewhat Restrictive (Flexible Dillon's Rule)
5	Somewhat Flexible (Restrictive Home Rule)
6	Mixed/Flexible (Optional Home Rule)
9	Most Flexible (Home Rule)

Source: NACo research, 2022

Zoning

Setbacks

While data centers often look indistinguishable from office buildings, their operations and infrastructure requirements more closely match those of a factory. Because of this, jurisdictions have begun establishing considerably larger setback requirements for data centers than for standard buildings. Typical building setback requirements from property lines range from 200 feet to up to 500 feet from a residential property or zoning district. In areas where 'smart growth' is a priority, such as near transit stations, these setbacks can be extended much further to ensure prime land is reserved for high-density housing and retail. However, when data centers are grouped within a dedicated 'overlay district,' these requirements can be reduced between the centers themselves by more efficiently sharing power and fiber infrastructure.

Noise

Data centers require large cooling systems to function, and these systems emit a steady hum that can disturb nearby residents. To address this, local governments are setting noise limits, often 65 decibels at the property line and 55 decibels in quieter or residential areas. How these limits are met is up to the data center designer, but common approaches include sound-absorbing or sound-blocking structures, berms or increased setbacks. Ordinances are also beginning to require testing for both A-weighting, which captures high-pitched sounds like fans, and C-weighting, which measures low-pitched vibrations from heavy machinery. Because backup generators used during power outages are often louder than cooling fans, ordinances can establish permissible testing schedules that limit routine testing to daylight hours.

Architecture

Large data centers can require large buildings that, without clear design requirements, may clash with the community aesthetic. To address this, local governments have begun requiring developers to incorporate architectural features that resemble typical office buildings. These requirements often include variations in building height and depth to break up the building mass and reduce visual scale, along with the addition of real or faux windows and doors to create a more human-scale appearance. Additionally, modern ordinances may forbid the use of overly reflective or industrial-looking materials, helping the facility to fit its surroundings, especially when located near residential areas.

Power

Large data centers can span hundreds of acres and can have unique power and water infrastructure needs. Data centers can require large amounts of power similar to a medium-sized city, accounting for nearly 4.4 percent of U.S. annual electricity in 2023.[1] In response to transformations in technologies including AI, hyperscale development across the country and new domestic manufacturing, the total national energy demand is estimated to increase 20 percent by 2030.[2] This level of power demand can trigger the need for additional generation sources and new grid infrastructure. County leaders can best serve their communities by understanding these power needs, the potential impacts on rates and reliability, and the steps they can take to better insulate their communities from those effects.

Water

Data centers require significant levels of cooling for operation. This cooling, especially when utilizing evaporative cooling systems, can require large quantities of water. Water use associated with data center cooling can range from minimal to substantial depending on facility design and local conditions. In some cases, facilities may rely on reclaimed water and generate wastewater that affects the capacity of local wastewater treatment systems. County leaders can ensure these water needs are met without negatively impacting the host community by including the following requirements as part of the permitting process: water balance studies, discharge water quality standards and long-term monitoring programs with defined curtailment plan triggers.

DEVELOPMENT AGREEMENTS

Counties may use tools such as development agreements or community benefit agreements to help align data center development with local priorities, including infrastructure improvements, workforce development or other community needs. These agreements can be used to identify short-term costs associated with large scale facilities such as construction phase economic impacts, cost sharing and offsetting early costs. Long-term impacts to be considered in these agreements include infrastructure improvements that benefit residents and businesses and workforce development. When used alongside local permitting and land use processes, such tools can support coordination between counties and developers as projects move from planning to construction to operation, particularly in communities where local codes lack specific provisions for data centers. Considerations for community input can include construction traffic, road wear, traffic routing and duration of activity as well as provisions for repowering, reuse or decommissioning and emergency preparedness.

Data center being constructed in Sterling, Loudoun County, Va.

County Considerations Checklist

Category	Key Actions
Infrastructure Capacity	❑ Plan for power and substation upgrades ❑ Evaluate water and wastewater systems under peak demand ❑ Define responsibility for infrastructure upgrades and maintenance ❑ Explore water reuse and energy-shifting strategies
Governance & Economic Impacts	❑ Clarify how data centers fit within county development goals ❑ Balance local impacts with community benefits ❑ Sequence approvals with confirmed utility capacity ❑ Establish enforceable conditions tied to permits or agreements
Land Use & Zoning	❑ Update codes for building height, setbacks, buffers and screening ❑ Define noise and lighting standards ❑ Require traffic routing and construction management plans ❑ Include provisions for repowering, reuse or decommissioning

Get Involved!

Join **Energy Counties Exchange** to see local zoning ordinances related to data centers and crowd source information from fellow county leaders

Visit **NACo's Energizing Counties Resource Hub** for more considerations on this and more energy related projects

Visit **NACo's Rural Energy Academy** program page for more ways to get involved

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[1] A. Shehabi et al., 2024 United States Data Center Energy Usage Report, Lawrence Berkeley National Laboratory (LBNL), LBNL-2001637, December 2024, p. 5.

[2] United States Department of Energy. Clean Energy Resources to Meet Data Center Electricity Demand. Energy.gov Available at: https://www.energy.gov/gdo/clean-energy-resources-meet-data-center-electricity-demand. (Accessed: February 17, 2026.)

February 2026