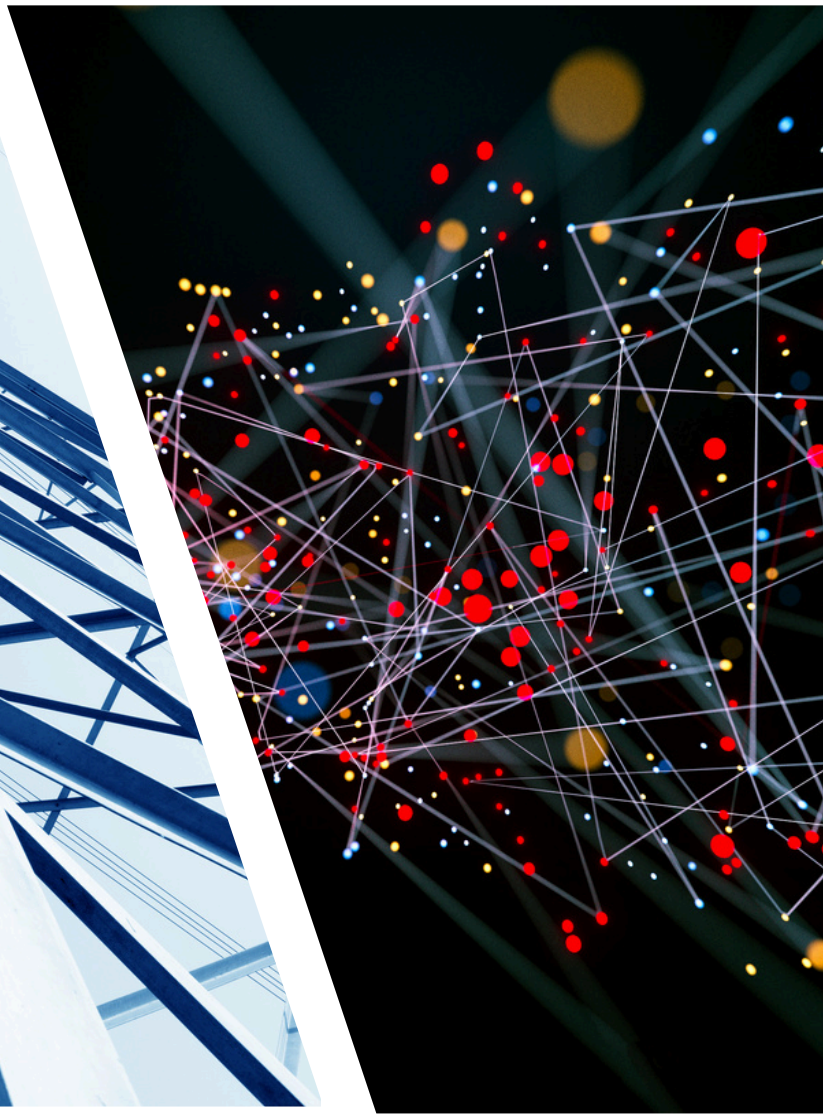


Metropolitan Washington Council of Governments

Data Centers in the DMV Series

LAND USE AND ECONOMICS PRIMER

May 2026

Metropolitan Washington:

Land Use & Economics Primer for Local Governments

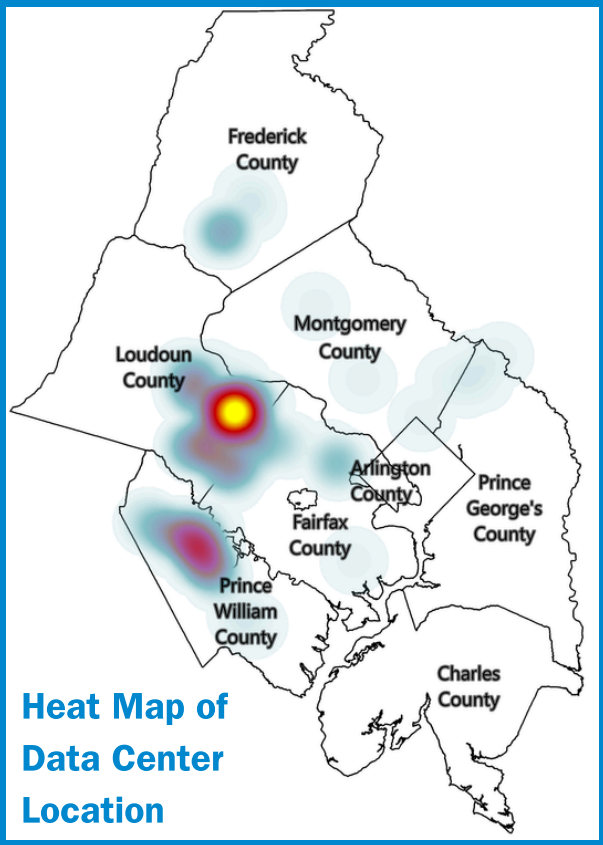
Local governments across the Washington metropolitan region are increasingly engaged with data center development proposals. These proposals often involve large parcels, intensive infrastructure needs, and evolving policy considerations related to land use, taxation, public engagement, and fiscal impacts.

This primer is designed to orient local officials and staff to the key land use and economic issues currently shaping data center decision-making across the region. The document highlights the tools available to local governments, the range of approaches already in use, and the primary choices jurisdictions are confronting, without promoting a specific policy outcome.

14 million ft² of operational data centers in the region.[1]

Loudoun County comprises **78%** of the total square footage in the region. Followed by **15%** in Prince William County.

Note: Map includes operational, under construction, and planned facilities.



Heat Map of Data Center Location

Types of Data Centers

Data centers are not a single, uniform land use type. Facility sizes and site footprints vary widely by market, regional infrastructure availability, cooling and power design, phasing strategy, and local zoning or approval conditions. Common types include:

Edge data centers are smaller facilities that are located closer to end users at the edge of a network to provide low-latency computing, often 5,000 to 50,000 square feet, sometimes located on sites of less than 5 acres or within existing commercial or industrial buildings.

Enterprise data centers are owned or leased by a single organization and used to support that organization's internal IT needs. Enterprise data centers are generally smaller in scale, commonly 20,000 to 200,000 square feet, on parcels ranging from 2–15 acres.

Internal data centers are typically integrated into larger buildings and managed by businesses with their own IT systems.

Co-location (multi-tenant) data centers provide space, power, cooling, and connectivity for the servers and other hardware of multiple organizations. Space in a co-location data center is often leased by the rack, cabinet, cage or room. individual buildings typically range from 100,000 to 500,000 square feet, often on 5–30 acre sites, with expansion occurring over time.

Hyperscale data centers are extremely large facilities built by or for one major technology company to serve its cloud or AI workloads, often typically spanning very large parcels (often 50–200+ acres) with multiple buildings that can collectively exceed 1–5+ million square feet and require high levels of power, water, and network infrastructure.

Learn more about data centers here: Data Center Primer

Setting the Context: Growth, Tradeoffs, and Local Decision-Making

Data center development is accelerating nationwide, driven by cloud computing, artificial intelligence, digital services, and data intensive applications across nearly every sector of the economy. The Washington metropolitan region sits at the center of this growth, with long-established infrastructure advantages that continue to attract new investment. Notably, Northern Virginia has the largest data center market in the world,[2] reinforcing the region's status as a major hub for this industry. As a result, many local governments are encountering data center proposals more frequently and often at a scale that differs from past commercial or industrial development.

Economic considerations are also complex and evolving. Data centers may generate significant tax revenue in some jurisdictions, but the benefits and impacts are not always evenly distributed. Local governments are increasingly examining who benefits, where costs are borne, and how fiscal outcomes align with broader community priorities, particularly as administrative demands, infrastructure coordination, and public engagement needs grow. Taxation frameworks and approaches to community benefits are also changing. State policies, local tax structures, and evolving public expectations are shaping how revenue, exemptions, incentives, and negotiated commitments are discussed. In response, local governments across the region are reassessing how existing tools align with current development realities.

What Local Governments Can Influence

Local authority over data center development differs by state and, in some cases, by city or county. However, most local governments influence data center development through a similar set of planning and regulatory tools. These typically include:

Because regulatory authority varies across Maryland, Virginia, and the District, tools available in one jurisdiction may not be available in another, and approaches should be understood within that legal context.

Comprehensive plans and future land use

Identify where data centers are appropriate, where they could be limited, and how they relate to industrial, mixed-use, or employment areas.

Review pathway

Set whether proposals are by-right, conditional, special exception, rezoning-driven, or otherwise subject to discretionary public review.

Development and community benefit agreements

Where available, secure project-specific commitments alongside, not in place of, baseline ordinance standards.

Use definitions and zoning permissions

Determine whether data centers are treated as industrial, utility, communications, or a distinct use and in which districts they are allowed.

Site and operational standards

Address setbacks, screening, massing, architecture, generator locations, noise, circulation, and emergency access.

Overlay districts

Focus data center growth in targeted areas or add requirements in sensitive geographies without changing base zoning everywhere.

Public engagement and hearings

Shape when neighbors are informed, what materials are public, and how concerns enter the decision record.

Zoning ordinance amendments

The primary mechanism for creating new use definitions, adding or modifying overlay districts, establishing review pathways, and codifying site standards. Requires action by the local approval authority, Board of Supervisors, County Council — often preceded by Planning Commission review and a public hearing. All other tools in this table operate within, or are created by, the zoning ordinance.

Regional Snapshot: Current Approaches Across MWCOG

Several jurisdictions now revising their data center policies previously allowed facilities to develop under more permissive, often by-right zoning frameworks. In places such as Loudoun County, home to "Data Center Alley," one of the largest concentrations of data centers in the world, this approach enabled rapid growth and early market leadership. Over time, however, this approach also highlighted the need to address considerations related to the scale and concentration of development, infrastructure coordination, compatibility with surrounding uses, and public engagement.

The policy shifts reflected in the regional snapshot are best understood as course corrections informed by experience, rather than reactions to a single project or proposal. For jurisdictions that are actively welcoming data centers or considering how to position themselves for future growth, this history underscores how early zoning and approval choices can shape long-term governance and community expectations.

Regional Transparency Tools

Loudoun County Existing and Proposed Data Centers Interactive Map

This map displays the locations of current and future data center parcels, substations, and permitted buildings in Loudoun County and is updated every 6 months. The map aims to clarify the impact of existing and proposed data centers within the county.

Prince William County Mapper

A countywide interactive map that allows residents, property owners, county staff and other stakeholders to easily track data center projects at every stage of development, from pending land use applications to projects under construction and completed facilities.

Across the MWCOG region, jurisdictions are taking different approaches to data center siting and regulation, reflecting local conditions, development histories, and policy priorities.

Both tools demonstrate that proactive public access to project-status information, made available early and updated regularly, can reduce reactive inquiry, support staff coordination across departments, and build a stronger foundation of public trust in the review process.

Jurisdiction	Status	Review Path	Locational Strategy	What It Shows
Fairfax County, VA	**Adopted**	Mix of by-right and Special Exception review, with heightened scrutiny for larger or sensitive locations	Permitted in industrial and selected commercial districts, with exclusions near Metro stations	A zoning framework strengthened through amendments, adding large residential setbacks (200–300 ft), mandatory noise studies, and heightened scrutiny near Metro stations.
Loudoun County, VA	**Under Revision**	Special Exception required for all new data centers; by-right approvals eliminated	Concentrated in industrial areas identified in the General Plan	Recalibrating from a permissive legacy model to fully discretionary review; Phase 2 is addressing noise, energy, substations, and building height.
Prince William County, VA	**Ongoing Review**	Overlay district governs most projects; larger campuses may also require rezoning or Special Exception	Growth directed to infrastructure-served areas through an overlay	An overlay-based framework using public transparency tools — including an interactive project-tracking map — to manage rapid growth and cumulative impacts across a large geographic area.
Frederick County, MD	**Adopted**	Floating overlay with rezoning required outside mapped areas	Growth limited to a defined ~2,600-acre area, capped at ~1% of county land	A concentration-and-limits model combining a defined ~2,600-acre growth area, large residential setbacks (500 ft), and agricultural land preservation requirements.
Montgomery County, MD	**Under Revision**	Proposed shift to conditional use approval in industrial zones only	Proposed clustering near Airpark, Shady Grove, and Dickerson areas	Redefining data centers as a distinct use, with proposed restrictions to industrial zones and new environmental and compatibility standards.
Prince George's County, MD	**Ongoing Review**	Existing framework under reconsideration; task force recommends discretionary approval	Recommended restriction to non-residential, non-sensitive areas	A policy reassessment triggered by public controversy, resulting in task force recommendations for Special Exception review, community benefits agreements, and stricter environmental standards.

Note: The table above focuses on jurisdictions where data center development is an active policy question. Other MWCOG member jurisdictions and most of the region's smaller cities have not developed dedicated data center frameworks, reflecting limited industrial land supply, urban density, and a smaller current market footprint. In these places, proposals are generally handled under existing commercial or industrial zoning on a case-by-case basis. Their absence from this table reflects current market conditions; these issues may become more relevant to them over time.

Key Land Use Decisions Being Considered

As data center development becomes more common, local governments across the region are encountering a similar set of land use decisions, regardless of the specific regulatory tools or legal authorities available to them. While the regional snapshot illustrates how different jurisdictions have answered these questions in practice, this section focuses on the underlying decision structure that keeps reappearing across jurisdictions. These decisions are interconnected and are shaped by local conditions, development history, infrastructure capacity, and community priorities.

Together, these decision areas illustrate that data center policy is not defined by a single lever, but by a set of coordinated choices that shape how growth is managed over time.

Where growth is directed: Use of broad industrial districts versus targeted overlays or designated growth areas.

Electricity, gas, and fiber access often align with land that could also support other employment or mixed-use development, raising long term land allocation and opportunity cost questions.

How projects are reviewed: By-right approval versus discretionary pathways (conditional use, special exception, overlays, rezonings)

Larger scale and cumulative impacts have led some jurisdictions to reassess predictability, transparency, and flexibility in review.

Compatibility with surrounding uses: Setbacks, buffering, height and massing, screening, noise, generator operations, traffic, and emergency access.

Facility size and operational intensity vary widely across data center types, shaping how impacts are addressed.

Public engagement and communication: Timing of engagement, information shared with the public, and explanation of tradeoffs and authority.

Increased public awareness has elevated expectations around clarity, transparency, and participation.

Community benefits and commitments: Standards embedded in ordinances versus negotiated commitments or development agreements.

Approaches intersect with taxation frameworks, infrastructure costs, and evolving community expectations.

In several jurisdictions, the land physically suitable or zoned for data centers is also among the most developable land for housing, mixed-use employment, or future growth nodes. The issue is not simply whether data centers are welcome — it is what alternative uses are displaced or priced out when large footprints are committed to them. Some jurisdictions are beginning to map this tradeoff explicitly.

Economic Considerations: Taxation Frameworks, Revenue and Employment

For this primer, economic considerations extend beyond whether a data center generates tax revenue. Local governments are also weighing:

- the scale of the industry
- how state tax policy shapes local fiscal outcomes
- how infrastructure and administrative costs are allocated
- what employment can realistically be expected during construction and operations, and
- how ratepayer concerns are entering public debate

These issues are increasingly interconnected. The same project that may broaden the tax base can also create new demands for staff capacity, utility coordination, and public communication.

Industry Scale and Capital Investment

The scale of the data center industry helps explain why these questions are emerging quickly. Data centers are unusually capital-intensive developments. A single campus can require major investments in land, shell buildings, IT hardware, cooling systems, substations, and backup generation—often at a scale that differs from more traditional commercial or industrial projects.

In Virginia, statewide reporting shows billions of dollars in annual capital investment alongside hundreds of millions of dollars in foregone state sales tax revenue under the existing exemption program, while industry groups cite tens of billions of dollars in broader economic activity. In Maryland, the market is newer and less mature. Statewide local fiscal reporting is therefore more limited, but project-level analyses already indicate substantial capital investment and meaningful local revenue effects where large campuses are developed.[3,4,5]

State policy plays a central role in shaping local fiscal outcomes, particularly through sales and use tax treatment, personal property taxation, and assessment practices. While these frameworks are largely established at the state level, they directly affect how and when local revenues materialize and how fiscal impacts are understood by elected officials and the public.

Managing Growth and Cumulative Impacts

In faster-moving markets, some jurisdictions have expanded internal coordination through tools such as public-facing dashboards, interdepartmental tracking systems, or specialized review capacity to manage application volume and cumulative impacts. These administrative costs are not arguments for or against individual projects, but they are an increasingly visible part of the economic context that local governments must be prepared to manage and explain.

Virginia	Maryland
	
State sales & use tax treatment	
Exempt from state sales and use tax for qualifying data centers meeting high investment and job creation thresholds. Currently, tax incentives are in place through 2035, and data centers operators must invest at least $150 million and create 50 new jobs locally to qualify.*	Sales and use tax exemption available through the Data Center Maryland program with lower investment and job thresholds for data centers; electricity is not exempt. The operator must create at least 5 qualified positions.[6]
Primary source of local revenue from facilities	
Local business personal property tax on servers and IT equipment is a major revenue source, in addition to real property tax	Real property tax is the primary local revenue source; IT equipment is not taxed in the same way
Accessibility across facility types	
High thresholds tend to align benefits with large, hyperscale facilities	Lower thresholds make incentives accessible to a wider range of mid-size and co-location facilities
Other local revenue streams	
Real property tax; Business, Professional, and Occupational License (BPOL) tax in some localities; permitting and review fees	Real property tax; permitting and review fees; impact fees where applicable
Open or active policy questions	
Ongoing legislative debate about the future of the state sales tax exemption and long term revenue concentration	State level studies and potential policy changes affecting oversight and fiscal structure
Takeaways	
A model that emphasizes scale and equipment based local revenue	A model that emphasizes accessibility and real property based revenue

* If the locality where the digital facility is sited is considered “distressed,” the required commitment shrinks to $70 million and 10 new jobs. Ongoing budget negotiations in Spring 2026 are considering proposed changes to the tax exemption.

Employment Impacts and Timing

Employment impacts are frequently raised in public discussions of data center development, but outcomes vary by project phase and facility type. Construction can generate substantial short term employment and related economic activity, often involving electricians, mechanical trades, concrete and steel contractors, equipment installers, and other service providers across multiple phases. Ongoing operations, by contrast, typically require relatively few permanent on site jobs given the scale of the facilities.

A commonly cited rule of thumb from Virginia's Joint Legislative Audit and Review Commission (JLARC) is that a typical 250,000 square foot data center may support roughly 50 full time workers—about one job per 5,000 square feet, with approximately half filled by contractors—while peak construction for an individual building may involve 1,500 workers on site. For this reason, distinguishing between construction phase and operational employment helps set realistic expectations and provides clearer context for evaluating economic claims.[7]

Infrastructure Costs and Ratepayer Impacts

Cost allocation and ratepayer impacts have become a core part of the economic conversation, even when discussions are primarily framed around land use. Large data center loads can require new substations, transmission upgrades, distribution improvements, and, increasingly, new generation capacity or long duration power purchase arrangements. The central public question is not simply whether these investments occur, but who pays for them and on what timeline.

In both Virginia and Maryland, policymakers, utilities, regulators, and community stakeholders are actively debating whether costs should be socialized across the broader customer base, borne directly by large load customers, or addressed through alternative arrangements such as dedicated generation, co-location, or bring your own power models. For local officials, these questions matter because energy cost allocation can influence siting pressure, project timing, public sentiment, and how infrastructure expectations are negotiated during the land use process.

The Virginia VEDP biennial report for fiscal years 2024 and 2025 offers a concrete reference point: in FY2025, data center operators self-reported 1,610 net new direct jobs and approximately $48.6 billion in investment, of which $33.2 billion was claimed as exempt from state sales tax, representing roughly $20 million in exemption value per net new direct job reported that year. A 2024 JLARC study separately found that the majority of data center employment is concentrated in the construction phase rather than ongoing operations.

Local Government Capacity and Administrative Costs

Local fiscal considerations also extend beyond tax revenue. Data center proposals can place significant demands on local government capacity, including staff time devoted to zoning interpretation, site plan review, interagency coordination, inspections, communications, and public engagement. These administrative and workload impacts are often front-loaded and may occur well before longer-term revenues are realized, shaping how local governments assess timing and resource needs.

Peer Examples and Promising Practices

Across the country, jurisdictions and developers are not relying on a single playbook for data center growth. Instead, they are developing tailored approaches around planning questions that matter most locally, including:

- where facilities should be allowed,
- how development review should occur,
- how compatibility standards should be defined,
- how infrastructure expectations should be addressed, and
- when and how community benefits should enter the conversation.

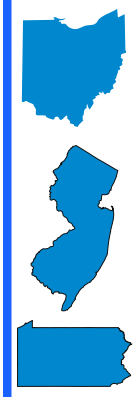
Some of the examples below are ordinance-driven and illustrate how local governments are adjusting land use frameworks directly. Others reflect industry-led responses to grid constraints and growing scrutiny over cost allocation, particularly through co-location or dedicated power strategies. Taken together, these examples show that the planning framework for data centers now extends beyond zoning text alone. It increasingly incorporates power sourcing, pacing tools, and public-value expectations alongside traditional siting and review decisions.

The examples below are included as reference points for forum discussion, not as templates. Their value lies in illustrating how different components of the planning framework are being addressed in practice today, and what each approach can help local officials clarify, require, or sequence more deliberately.

Industry-led Dedicated Power

Several major technology companies have signed long-term deals to buy electricity directly from specific power plants, rather than drawing power from the shared electric grid the way most homes and businesses do. For example, Amazon Web Services, Microsoft, and Meta are all in the process of contracting for dedicated nuclear power in PJM. All three are conventional electricity purchase contracts routed through the regional grid — distinct from co-location arrangements that would connect data centers directly to a power plant, which remain the subject of active FERC rulemaking.

One example of co-location currently in development within PJM is in Greene County, Pennsylvania, where a 944-megawatt planned natural gas plant is being built to power an adjacent data center on a 1,400-acre former coal mine site, explicitly designed to bypass the PJM interconnection queue entirely and avoid long wait times.
Closer to home: Vantage Data Centers operates a facility in Loudoun County that received a state air permit for eight natural gas turbines generating approximately 135 megawatts of electricity on-site — functioning essentially as a small power plant attached to a data center.

	Model type	What it Shows	Why it Matters
New Castle County, DE			
	Strict ordinance model	A comprehensive ordinance that sets clear siting, operational, and infrastructure expectations in advance, including a requirement that projects account for their own power supply	Shows how much clarity can be built into ordinance language before applications are filed, and how infrastructure responsibility can be addressed at the policy level
Forney, TX			
	Defined use + discretionary review	Creation of a distinct data center use category paired with conditional use approval, a fixed residential buffer, and requirements for enclosed operating equipment	Illustrates how zoning can translate compatibility concerns into straightforward, enforceable standards rather than handled only case by case.
Monterey Park, CA			
	Temporary pause/pacing tool	Use of a time limited approval pause to create space for policy deliberation when market interest outpaced existing regulations	Relevant for discussing how jurisdictions manage timing and sequencing of decisions, even where moratoria tools differ
Lancaster, PA / Liberty, MO			
	Community benefits model	Publicly documented, long term community benefit agreements that operate alongside zoning and extend beyond baseline requirements	Helps frame the distinction between what is addressed in ordinance language and what is handled through negotiated, enforceable commitments
PJM (OH, PA, NJ)			
	Industry-led dedicated power model	Data center developers in the PJM region have pursued co-location arrangements with nuclear plant restarts and proposed new gas generation to secure dedicated power supply outside the public utility grid, rather than drawing incremental load from shared transmission infrastructure.	Shifts the conversation beyond land use alone. As grid capacity constraints become a limiting factor for data center siting in the DMV region — and as utilities, ratepayers, and regulators weigh who bears the cost of new load — the supply-side strategies that developers are pursuing elsewhere are directly relevant to how local governments here frame infrastructure expectations and review conditions.

End Notes

[1] Data Center Map. https://www.datacentermap.com/.
[2] Joint Legislative Audit and Review Commission. 2024 Data Centers in Virginia. https://jlarc.virginia.gov/landing-2024-data-centers-in-virginia.asp.
[3] Virginia Department of Taxation and Virginia Economic Development Partnership, biennial report on the retail sales and use tax exemption for data centers; Virginia JLARC, Data Centers in Virginia.
[4] Northern Virginia Technology Council, 6th Biennial Data Center Report, for broader economic-output framing.
[5] Maryland Department of Commerce, Data Center Maryland Sales and Use Tax Exemption Incentive Program.
[6] Maryland Department of Commerce. https://commerce.maryland.gov/fund/data-center-maryland-sales-and-use-tax-exemption-incentive-program
[7] Virginia Department of Taxation and Virginia Economic Development Partnership, Biennial Data Center Retail Sales and Use Tax Exemption Report, Fiscal Years 2024 and 2025 (January 2, 2026), submitted to the Chairmen of the Senate Committee on Finance and Appropriations and the House Committees on Appropriations and Finance, pursuant to Virginia Code § 58.1-609.3. Available at rga.lis.virginia.gov/Published/2026/RD40/PDF. See also Joint Legislative Audit and Review Commission, Data Centers in Virginia (2024).

Data Center Land Use and Economics

A reference guide for local governments and planners

Business, Professional, and Occupational License (BPOL) Tax (Virginia): A local tax imposed by Virginia cities and counties on a business's gross receipts, with applicability and rates for data centers varying by locality and business classification.

By-right: A development approval pathway where projects are permitted if they meet objective zoning standards, without discretionary review.

Conditional Use / Special Exception: A discretionary approval process for uses that may be appropriate in certain locations, subject to findings and conditions set by the local government.

Overlay District: A zoning tool that applies additional standards or restrictions to mapped areas, supplementing base zoning.

Comprehensive Plan: A long-range policy document that guides land use, growth, and development priorities for a jurisdiction.

Personal Property Tax: A local tax assessed on business equipment, including servers and IT infrastructure, which may apply to data centers depending on state and local policy.

Sales and Use Tax: A state tax applied to the purchase of qualifying equipment; exemptions may be available for data centers under certain conditions.

Community Benefits Agreement (CBA): A negotiated commitment between a developer and a local government or community group, outlining benefits such as infrastructure improvements, workforce programs, or other investments.

Development Agreement: A formal contract between a developer and a local government, specifying project conditions, timelines, and community benefits.

Permitting / Review Capacity: The staff resources and administrative workload required to process, review, and inspect development proposals.

Employment Claims: Statements regarding the number of jobs created by a project, often distinguished between construction-phase and ongoing operations.

Fiscal Impact: The effect of a project on local government revenues and costs, including tax receipts, administrative workload, and infrastructure demands.

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