DCByte

MARKET SPOTLIGHT

Data Centers in Virginia, VA:

The Move Away from Loudoun

Virginia Overview

The Move Away from Loudoun

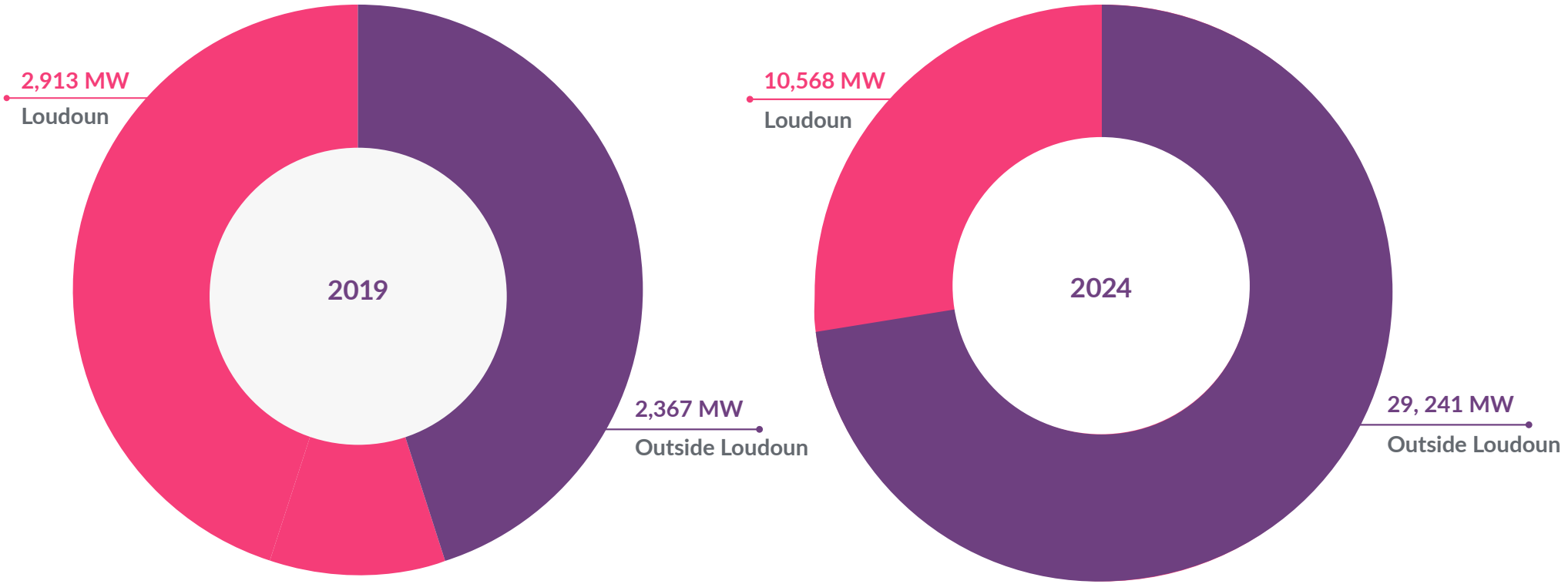
Virginia is home to the data center capital of the world: Ashburn. Ashburn and the surrounding Loudoun County form the backbone of "Data Center Alley," which sees 70% of global internet traffic flow through the area daily and houses hundreds of active data centers from hyperscalers, colocation providers, and enterprise companies. Fueled by low-latency connectivity, strong incentives, and a well-established power infrastructure, Ashburn has remained the epicenter of data center development for decades.

In 2022, Dominion Energy announced a power capacity crunch in Northern Virginia, limiting the ability to supply large-scale power loads to new developments. This power constraint, combined with rising land costs and increased zoning restrictions, has begun pushing data center expansion further south into Virginia's other counties, such as Prince William, Stafford, Henrico, and Fauquier, where land availability and power accessibility are more favorable.

In 2024, Loudoun County further reshaped the market by removing by-right zoning for data centers, meaning that new developments now require additional approvals rather than automatic allowances. This regulatory shift has created opportunities for more welcoming counties to attract new data center investment, offering incentives and streamlined approval processes to accommodate the industry's rapid expansion.

Despite these challenges, Virginia as a whole remains the undisputed leader in the global data center market, with sustained demand, ongoing infrastructure investments, and an evolving geographic footprint.

Inside Loudoun vs. Outside Loudoun



County Overviews

Growth outside of Loudoun County

Prince William County is the next largest county in terms of data center activity. However, the area's biggest projects, Devlin Technology Park and Prince William Digital Gateway have been hit with resident backlash as well as litigation. The county has created a Data Center Opportunity Zone Overlay District in designated areas with the intent to leverage existing infrastructure and minimize impacts on nearby communities.

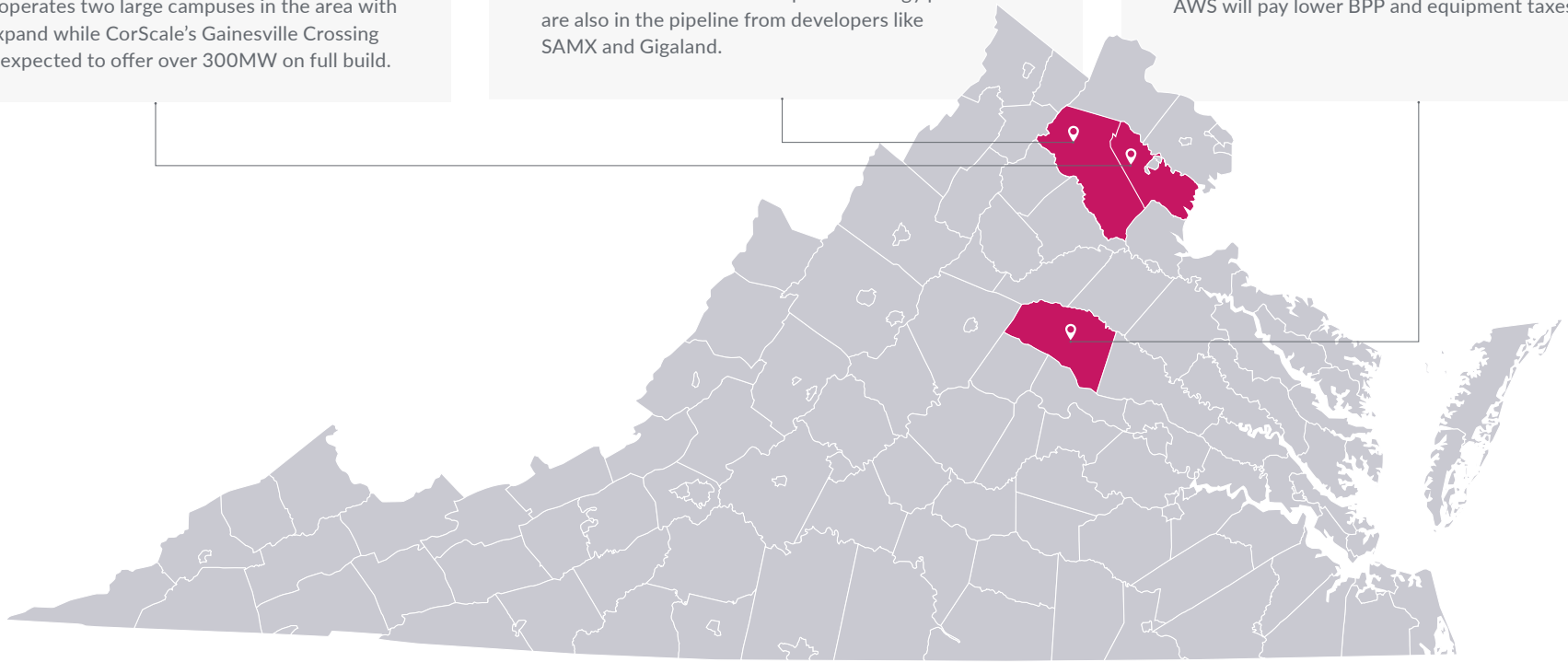
- Amazon has a major presence in the county, with Google and Microsoft also planning campuses in the area.
- Major campuses by colocation giants are in the pipeline: CloudHQ operates two large campuses in the area with plans to expand while CorScale's Gainesville Crossing campus is expected to offer over 300MW on full build.

Fauquier County has a sizeable development pipeline, but the county recently adopted some new regulations for data centers which have been called some of the strictest in the state. Facilities larger than 50,000 sqft will be subject to a much more rigorous zoning process going forward, this could be a serious deterrent for new developments, but a few projects have been made exempt from the new permitting process, including an expansion to OVHCloud's existing data center campus.

- PointOne, CyrusOne, and AWS are all planning data centers in the area and multiple technology parks are also in the pipeline from developers like SAMX and Gigaland.

Louisa County's Technology Overlay District was created to encourage development and concentrate it near existing transmission lines and other necessary infrastructure, but away from residential or historically significant areas.

- Amazon Web Services is planning to establish two data center campuses in the county, the Lake Anna Tech Campus and the Northeast Creek Technology Campus. These campuses consist of a combined 327 acres.
- Louisa County has entered into a performance agreement through 2050 with AWS to develop its campuses, meaning AWS will pay lower BPP and equipment taxes.



Caroline County is entirely a designated technology zone, and offers tax incentives to relevant businesses.

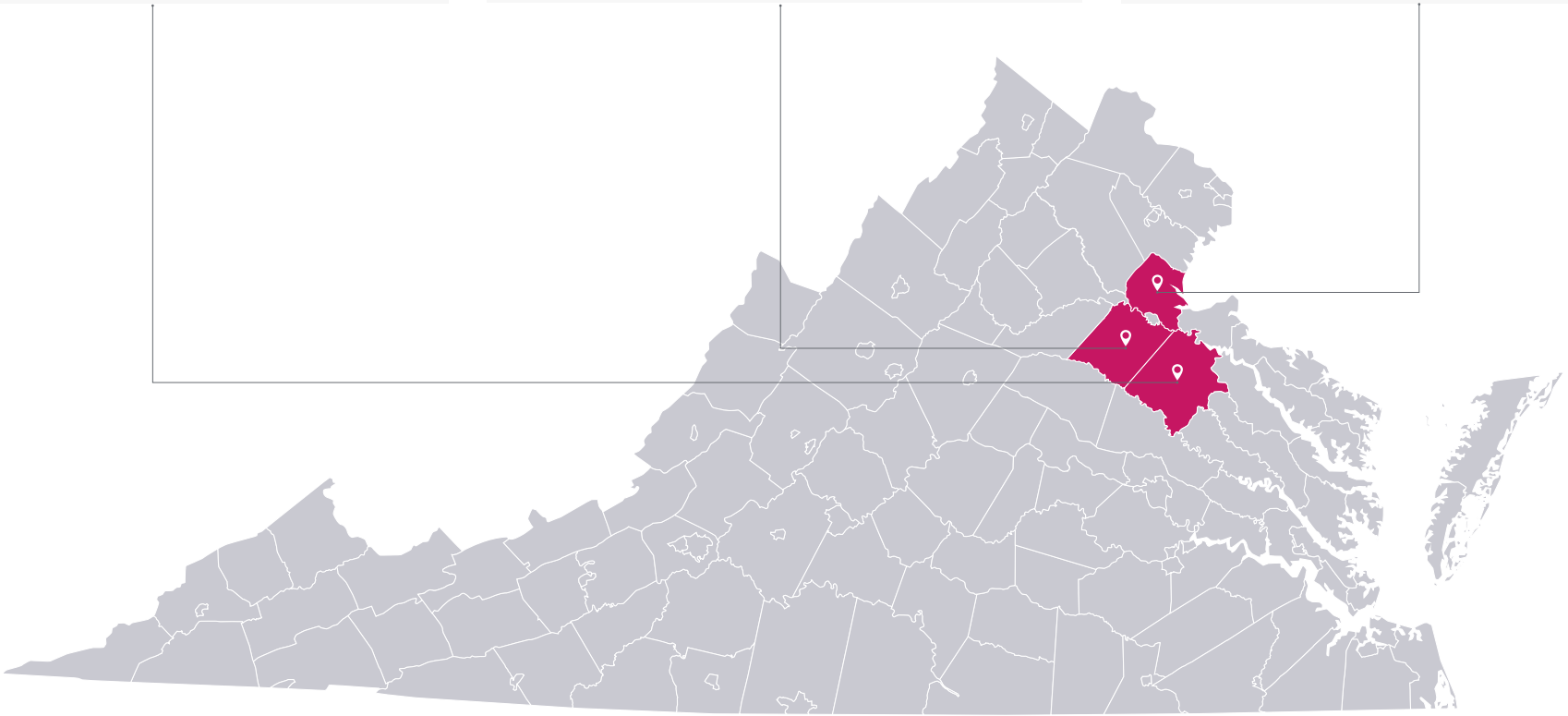
- CleanArc is planning a 600MW data center campus, with 200MW expected to come online in 2026 and a further 300MW in 2027.
- AVAIO's Carmel Church Data Hub is planned to offer 300MW. Its first phase is expected to go live in H1 2026 with 130MW.

Spotsylvania County has two designated technology zones for tech-related businesses. Qualified businesses see fast-tracked development and tax rebates. The county's comprehensive plan refers to data centers as a "target industry."

- Spotsylvania is home to PowerHouse's planned 145-acre Powerhouse 95 campus and the planned Hunter's Ridge campus which is expected to have eight data center buildings.
- The 315-acre SpotsyTech mixed-use technology park in Spotsylvania could offer up to nine 187,500 sqft data centers.

Stafford County offers reduced tax rates for data centers. While it does not yet have a data center presence, it has a sizeable development pipeline from colocation operators and AWS.

- AWS' Potomac Tech Church Park will offer 510,000 sqft across two data centers.
- Stack is planning two campuses in Stafford County, one in Fredericksburg and one in Falmouth, where the company is planning a 1.1GW campus with six 300MW substations from Dominion.
- Vantage has acquired 82 acres in the county.



The **Richmond area** includes the capital city and surrounding counties like Henrico, Chesterfield, and Powhatan Counties. These counties have all introduced a reduced tax rate for data centers. However, legislature has been proposed in Henrico in 2025 to raise the rate again, though it would remain lower than counties in Northern Virginia. Henrico and Chesterfield also house specified technology zones; Henrico's two White Oak Technology Parks, one of which was recently acquired by QTS, and Chesterfield's five tech zones. Henrico is also home to a recently expanded Meta data center, which is adjacent to a large QTS campus.

- Colocation operators include Flexential and EdgeConneX, with pipeline developments by Tract, QTS and Iron Mountain spread across nearly 1,900 acres in plots within Hanover, Sandston and Henrico.
- Chirisa Technology Parks operates a 28MW data center in Richmond with plans to expand the campus for AI use in a partnership with PowerHouse.
- Growing interest from real estate groups have surfaced in filed plans – with projects proposed by WestDulles Properties and Province Group.

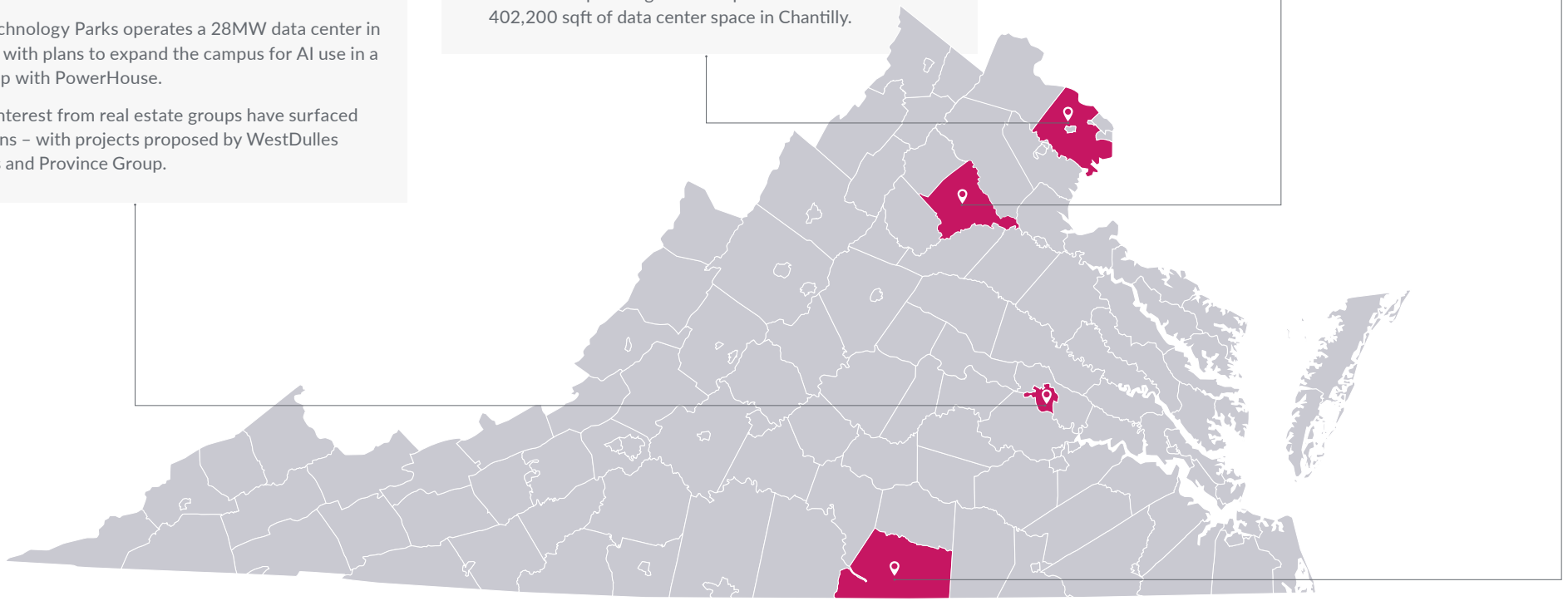
Fairfax County is already a fairly well-established data center market with proposed developments set to triple its existing live capacity. Fairfax has recently introduced regulations on data centers: data centers must be 200+ feet from residential areas, a mile from a Metro station, and noise studies must be conducted for proposals. Ground-mounted equipment will need an additional 500 ft setback.

- AWS has multiple data centers in the county, with two more planned campuses in the pipeline.
- Colocation operators like CoreSite, DataBank, Digital Realty, and Equinix are likewise present, with H5 redeveloping three former Digital Realty data centers in the county.
- A Penzance planning to develop around 402,200 sqft of data center space in Chantilly.

Mecklenburg County is home to Microsoft's massive campus in Boydton, which sees continued expansion.

- Microsoft has two active campuses in Boydton and Hillcrest with another landbanked in Clarksville.
- TECFusions is planning up to 220MW in Clarksville.

Culpeper County is currently a small data center market with only a live presence from Equinix. However, due to the establishment of the Culpeper Technology Zone, the county has seen major pipeline growth in the past few years.



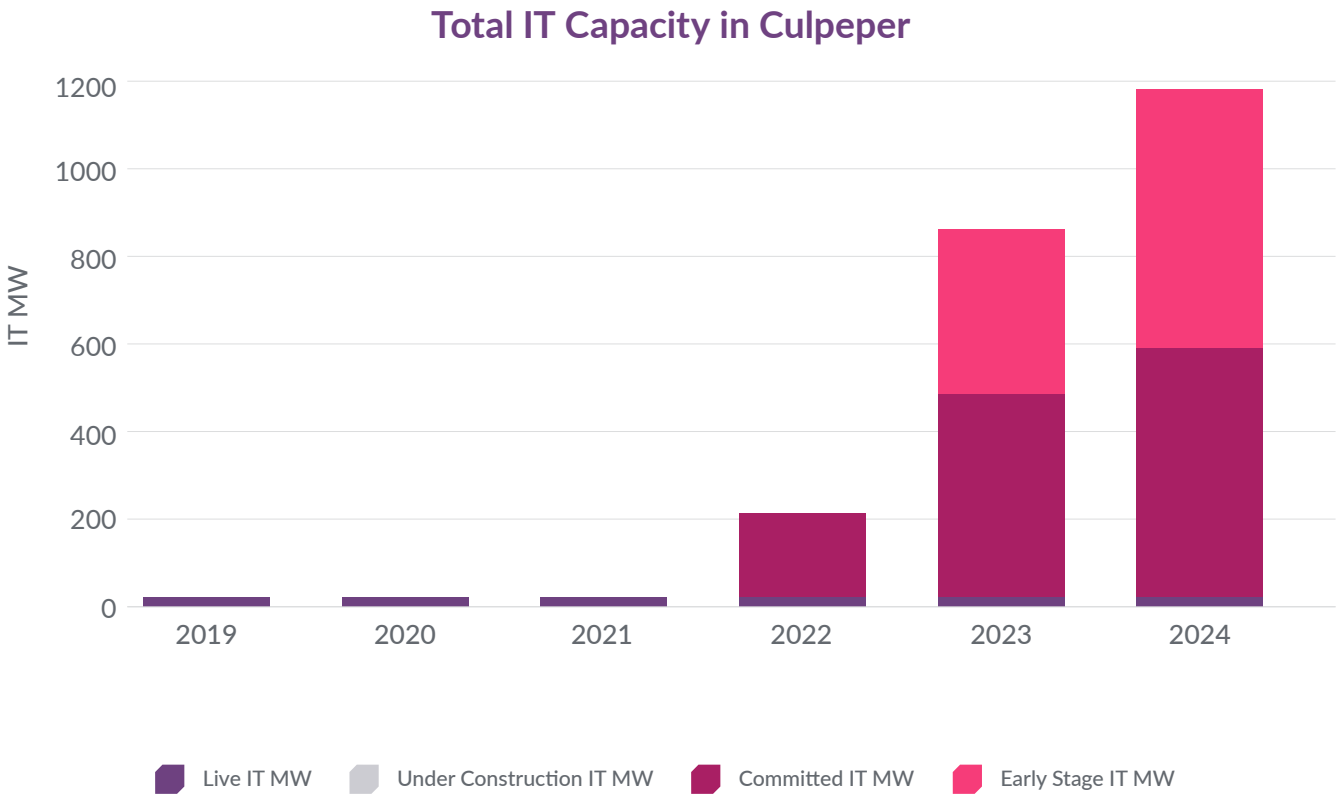
Culpeper

A Growing Submarket

While Culpeper is currently a small submarket, the county has proved a welcoming area for data centers. The development pipeline includes projects from AWS, CloudHQ, EdgeCore, and DataBank.

Equinix is currently the only operator with data centers live in the county, with four facilities built to serve government clients. Due to Loudoun's power crunch and the creation of the Culpeper Technology Zone (CTZ), Culpeper's data center development pipeline has grown from around twenty megawatts and no new projects, to roughly a gigawatt of potential capacity in the last five years. In addition to the above operators, campuses have been proposed by real estate developer Peterson Companies, investment firm Red Ace Capital Management, and the Culpeper Town Planning Commission.

Created in 2024, the CTZ designated 690 acres for data centers and other STEM initiatives. It allows data centers to utilize existing power infrastructure and avoid sprawl – a major contributor to the backlash the industry has seen in Loudoun County. The zone also offers tax benefits and increased building. Dominion Energy is planning to add transmission lines within the CTZ to build four substations, connect them to the grid, as well as upgrade existing transmission lines in Culpeper and nearby Orange and Fauquier Counties. These factors have paved the way for developments in the CTZ, with major projects from EdgeCore, Copper Ridge, Peterson Companies, CloudHQ, and DataBank now committed within the zone.



Energy

In 2022, Dominion Energy announced that it would not be able to meet data center power demands in Northern Virginia. Demand for power remains high, and Dominion has been building the infrastructure it lacks. The company connects around 15 data centers to the grid annually, with around a gigawatt of power added in both 2023 and 2024. In July 2024, Dominion had 21GW under contract, which nearly doubled to around 40GW just five months later by December 2024.

Dominion is currently expanding its transmission lines across Virginia and has partnered with American Electric Power and First Energy to propose new transmission projects across the PJM region, which includes thirteen states and the District of Columbia. This partnership would add 345kV, 500kV, and 765kV transmission lines across Virginia, West Virginia, and Ohio. 765kV transmission lines were approved in 2025 and will primarily impact Virginia.

In early 2025, Dominion Energy filed a request to construct a 1GW gas plant in Virginia featuring four 250MW gas turbines. If approved by the Virginia State Corporation Commission, the plant would begin construction in 2026.

Rappahannock Electric Cooperative (REC) is another big name in data center power. REC has partnered with AWS, CleanArc, EdgeCore, and SpotsyTech on projects in Virginia. REC is leveraging existing infrastructure and will deliver power for operators as soon as 2026.

Sustainability

Dominion is heavily involved with sustainability efforts in Virginia. The Virginia Clean Economy Act (VCEA) introduced in 2020 mandates that Dominion Energy and another area power provider, Appalachian Power, must deliver 100% of power from renewable sources by 2045 and 2050 respectively. The VCEA also establishes Energy Efficiency standards and declares onshore, offshore, and energy storage to be in the public interest.

In early 2025, Virginia lawmakers passed House Bill 2537 and Senate Bill 1394, which increase energy storage requirements for Appalachian Power and Dominion Energy. The requirements set by the VCEA have been raised from a combined 3,100MW to 10,000MW by 2040-2045. Energy storage bolsters the grid in the event of outages and can store power from more variable sources like solar and wind, increasing the viability of renewable power.

Alternative, renewable energy is of major interest in Virginia, with Dominion Energy especially committed to diversifying its power sources.

Wind

Dominion Energy is planning to build a 2.6GW offshore wind farm in Virginia – the Coastal Virginia Offshore Wind (CVOW). The CVOW would consist of 176 wind turbines and is expected to be fully built out by the end of 2026. This timeline is still expected despite pushback to wind power from the current administration. In its 2024 Integrated Resource Plan (IRP), Dominion discussed its plan to bring on an additional 3.4GW of offshore wind capacity over 15 years.

In late 2024, Google signed a Power Purchase Agreement with Apex Clean Energy. Apex's Rocky Forge Wind Project in Botetourt County, Virginia will consist of 13 wind turbines to generate 79.3MW of onshore wind.

Solar

Dominion Energy is planning 12GW of new solar power to add to the existing 4.75GW live or in development, 4.5GW of new battery storage, and is hoping to bring Small Modular Reactors (SMRs) online in the mid-2030s.

Sumitomo Corporation subsidiary Perennial Power Holdings has partnered with CEP Solar LLC to deliver renewable energy across Virginia. This joint venture will consist of solar and battery storage projects, with its portfolio reaching 1.5GW. Construction is expected to begin in late 2025. CEP Solar already has 20 solar projects in Virginia in development.

Natural Gas

Additionally, Dominion is expanding the natural gas Possum Point Power Station in Prince William County, Virginia. Dominion is adding a further 44MW of capacity through gas and steam turbines to meet growing data center power demands.

Nuclear

Nuclear power is also part of Virginia's clean energy conversation. AWS and Dominion Energy have partnered to explore the development of an SMR project at the North Anna nuclear power station in Louisa County. Appalachian Power has also identified a potential site for an SMR project in Campbell County.

Fusion

Commonwealth Fusion Systems, a fusion energy company, is planning to develop its grid-scale ARC power plant in Chesterfield County, Virginia. The company is aiming to bring its 400MW ARC power plant online as soon as the early 2030s in collaboration with Dominion Energy.

Conclusion

The Virginia data center market continues to expand beyond Loudoun County as demand persists and operators seek new locations with available land and power infrastructure. Several counties have positioned themselves as data center-friendly through legislation, alongside utilizing existing power transmission and available land.

Culpeper County stands out as a key emerging market. The county's proactive approach towards welcoming data center growth – by designating space for data centers via the CTZ, investing in power infrastructure, and providing incentives – has resulted in the county's expanding pipeline of projects from major players such as AWS, CloudHQ, and DataBank.

Meanwhile, Loudoun County continues to see consistent demand, but power constraints, tightening regulations, and community backlash is driving market growth into the rest of Virginia. As Dominion Energy navigates an energy crunch, interest in alternative energy sources like wind, solar, and natural gas is and even Small Modular Reactors (SMRs) is growing, although implementation timelines may be lengthy.

Looking ahead, data center development will continue spreading across the state, but counties such as Culpeper that embrace the industry with technology zones and incentives as well as work to mitigate issues like sprawl and power crunches are best positioned to capture this momentum.

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