INDEPENDENT CASE STUDY

Henrico County, Virginia

A Data Center Case Study

How Two Neighborhoods Forced Virginia's Second-Largest Data Center Jurisdiction to Change Course

Companion to What Virginia Is Spending, What Virginia Is Getting (v5.3)

Henrico

Prepared by Tommy Turner

Williamsburg and Christiansburg, Virginia

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Author: Tommy N. Turner
Location: Williamsburg and Christiansburg, Virginia
Contact: 757-784-0979 · tommy@gofast.pro · linkedin.com/in/tommyturner
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ABSTRACT

Henrico County, Virginia spent two decades recruiting the data center industry and eighteen months learning to govern it. This case study documents the full arc: the $44 million semiconductor-era infrastructure bet of the 1990s, the 2009 Qimonda collapse, the 2010 QTS retrofit that converted a dead fabrication plant into a node of global internet traffic, the 2017 tax cut that brought Meta, the by-right approval framework that insulated the industry from public review, and the thirteen-month arc of community resistance that ended that framework on June 10, 2025.

The study finds that Henrico's regulatory reversal was produced by organized opposition in eastern Henrico: a predominantly Black, middle-income community that framed its objection as environmental justice and, across the 2024 Hourigan rezoning and the 2025 Darbytown proposal, arrived at a structural demand, no more by-right approvals. A second campaign, in the affluent West End community of Wyndham, arose after the reform and was directed at a Hanover County rezoning application across the county line. Side by side, the two communities show that the availability of a hearing was fixed by the classification rule in force where each site sat. It documents the legal test of the new rules through the Centra Logistics vested-rights claim and its unanimous rejection by the Board of Zoning Appeals in February 2026, the by-right warehouse plan the developer had already secured for the site in January 2026, and a grandfathered QTS pipeline, master plans for 17 data centers and about 7.9 million square feet approved administratively in February 2025 and reported in the press in May 2026, that the new ordinance cannot reach. It also documents the $60 million Housing Affordability Trust Fund, the first known program in the United States dedicating data center tax revenue to affordable homeownership, and the structural dependency of that revenue on operator equipment-refresh behavior.

The evidence is organized for use by an interdisciplinary research audience, with findings mapped throughout to five research frameworks: distributional justice, institutional behavior, utility finance, energy and labor infrastructure, and energy geography. The central finding belongs to all five: the county changed its rules only after the largest entitlements were granted, and the district that organized the resistance is the district that will absorb the grandfathered buildout.

PURPOSE, SCOPE, AND METHOD

This case study documents the arc of data center development in Henrico County, Virginia, from the county's early courtship of the industry in the late 1990s through the regulatory reversal of June 2025, the legal proceedings of February 2026, and the grandfathered expansion pipeline approved administratively in February 2025 and reported in the press in May 2026.

The primary intended readers are researchers studying the energy and social implications of data center expansion in the U.S. South, an interdisciplinary body of work spanning ethnographic and institutional analysis, environmental and distributional justice, energy geography, utility finance, and energy labor studies.[1] This document refers to these research frameworks by type of work. The evidence in this case study connects directly to those frameworks: the distributional justice framework applies to the Varina environmental justice story; the institutional behavior framework illuminates the by-right mechanism and the contrast between two counties' classification rules, under which the Wyndham residents got a hearing and the Varina residents did not; the utility finance framework speaks to the housing trust fund, the equipment replacement revenue cycle, and the ratepayer cost dimension; the energy, labor, and infrastructure framework applies to the grid capacity question and the cumulative-impact blind spot in the approval structure; and the energy geography framework applies to the conversion of rural eastern Henrico into a node of transatlantic data traffic. These connections are flagged inline throughout, and Part Eleven consolidates them into a reading guide organized by specialty.

The second audience is Virginia localities currently considering data center proposals. Henrico's experience is the most complete single-county record available of the full policy cycle: recruitment, incentive, buildout, resistance, reform, legal test, and the discovery of reform's limits. The third audience is citizens and journalists seeking to understand how the intersection of industrial policy, fiscal incentive, and community organizing can reshape governance in real time.

A note on method. This study is built entirely from public sources: county ordinances and resolutions, planning staff reports, rezoning case files and proffer sets, Board of Zoning Appeals proceedings, Virginia DEQ permit notices, JLARC reports, American Community Survey data, and sustained local news coverage, principally Richmond BizSense, the Henrico Citizen, VPM News, WTVR, WRIC, The Richmonder, and Time. Direct quotations from residents, developers, and officials are reproduced as reported in the cited coverage or recorded in public hearings. No interviews were conducted. Claims that rest on secondary sources rather than primary documents are flagged with an asterisk in Part Twelve, with the primary source identified for

verification. The companion report, What Virginia Is Spending, What Virginia Is Getting (v5.3), covers the statewide fiscal picture, the ratepayer exposure, and the employment evidence.[2] Readers who want the commonwealth-level argument should start there. This document is about what happens at the local level when a county tries to govern an industry it once simply welcomed, and when the people living next to the results force a reckoning with the framework that approved them.

PART ONE: THE INFRASTRUCTURE

Before the Park

Eastern Henrico was farm country for three centuries before it was anything else. The land east of Richmond along the I-64 corridor, the same ground that now carries some of the highest concentrations of digital infrastructure on the East Coast, was tobacco and truck-crop acreage within living memory, dotted with crossroads communities, Civil War battlefield remnants, and the kind of rural land prices that make industrial recruitment possible. The county's planners began assembling the area's industrial future as early as the 1960s, when land-use plans first designated the White Oak area for intensive development. What followed over the next six decades is a case study in how a locality's infrastructure decisions outlive every assumption that justified them.[3]

White Oak Technology Park: From Tobacco Fields to Global Internet Node

The White Oak Technology Park occupies approximately 2,270 acres at the intersection of Interstates 64 and 295 in eastern Henrico County.[3] Its transformation from rural land into one of the most consequential pieces of digital infrastructure on the East Coast unfolded across three distinct industrial eras: a semiconductor era that ended in bankruptcy, a data center era built on the semiconductor era's bones, and a subsea-cable era that converted a regional industrial park into a global network node. Each era was launched by a public decision. None of the decisions anticipated what the next era would do with them.

The semiconductor gamble. The park's modern history begins in the mid-1990s, when the Henrico County Economic Development Authority and the Board of Supervisors committed $44 million to $45 million in public infrastructure investment to recruit semiconductor manufacturers, then regarded as the most prestigious industrial tenants in the world.[4] The investment funded water and sewer networks, a redundant sewer pumping station with 13 million gallon per day capacity, and a 230-kilovolt transmission power system provided by Dominion Energy. The roads were built. The utilities were sized for heavy industrial demand. The bet was that semiconductor fabrication would anchor the county's economic future, and for a decade it looked like a winning bet.

The anchor arrived as a joint venture between Motorola and Siemens, which opened the White Oak Semiconductor facility in 1998.[5] The corporate genealogy that followed tracks the consolidation of the global memory chip industry: Siemens spun its semiconductor operations into Infineon Technologies in 1999, and Infineon in turn created Qimonda in 2006 as a dedicated DRAM memory manufacturer. At its

peak, the Qimonda facility employed approximately 1,500 workers in high-tech manufacturing, the largest concentration of advanced industrial employment in eastern Henrico's history.[6] Then the 2008 global financial crisis intersected with predatory pricing in the international memory chip market. DRAM prices collapsed below production cost. Qimonda filed for insolvency in Germany in January 2009 and on February 3, 2009 announced that it would close the Henrico facility, leaving behind a 1.3-million-square-foot fabrication plant on 212 acres and a county that had invested tens of millions of public dollars in infrastructure built around a tenant that no longer existed.[7]

The closure is worth pausing on, because everything that follows depends on it. A semiconductor fabrication plant is among the most infrastructure-intensive buildings on earth: redundant high-voltage power, industrial-scale cooling, ultra-clean water systems, hardened floors. In 2009 Henrico owned the surrounding infrastructure for such a plant and had no tenant. The county's options were to write off the investment or find an industry whose physical requirements matched a chip plant's. There was exactly one such industry, and it was about to enter the steepest growth curve in the history of commercial real estate.

The data center pivot. In 2010, Quality Technology Services purchased the shuttered Qimonda plant for $12 million, a fraction of what the county and the original tenants had invested in the site.[8] QTS recognized what semiconductor manufacturers had already proved: the massive electrical and cooling infrastructure required for chip fabrication was precisely what data center operations demanded. The facility was retrofitted and became operational as the QTS Richmond Mega Data Center, initially offering 1.3 million square feet with over 500,000 square feet of raised floor capacity.[9] QTS expanded steadily through the 2010s. In 2019 the company planned about 1.2 million square feet on an additional site, which with a separate 1.1-million-square-foot project to the south would bring its White Oak total to about 3.6 million square feet, and in 2022 it began construction on about 200 additional acres purchased from the Henrico EDA for nearly $18 million.[10] Those figures, which seemed large at the time, are now dwarfed by the company's 2026 expansion plans (see Part Eight).

The subsea cables and the Richmond NAP. The development that elevated White Oak from a regional data center site to a node in global internet traffic was the establishment of the Richmond Network Access Point, anchored by QTS and connected to transcontinental subsea fiber-optic cables landing at Virginia Beach, approximately 100 miles to the southeast.[11] Three cables are relevant:

MAREA, operational since 2018, connects Virginia Beach to Bilbao, Spain. It was funded by Telxius (50%), Facebook (25%), and Microsoft (25%), and is capable of

200 terabits per second of transmission capacity.[12] BRUSA, also operated by Telxius, connects Virginia Beach to Rio de Janeiro and Fortaleza, Brazil, and to San Juan, Puerto Rico.[13] DUNANT, operational since 2021, connects Virginia Beach to Saint-Hilaire-de-Riez on the west coast of France. Built and funded primarily by Google, it carries 12 fiber pairs and 250 terabits per second of capacity.[14]

These cables land at the Virginia Beach Cable Landing Station and connect via terrestrial fiber backhaul to Ashburn and to Richmond, where QTS's facility serves as the closest Tier 3 data center to the cable termination point.[15] In January 2019, QTS formally announced the establishment of the Mid-Atlantic Network Access Point of Virginia.[16] The geography matters more than the marketing. Ashburn's Data Center Alley was built on proximity to the federal internet exchange points of the 1990s. Henrico's claim is newer and physical: it sits on the shortest inland path from the transatlantic cable landings, outside the hurricane evacuation zone, with water and power infrastructure already in the ground. The energy geography framework will recognize the pattern: digital infrastructure does not disperse randomly; it follows entitled land, existing wires, and the path of least regulatory resistance.[3]

In 2022, Henrico EDA Executive Director Anthony Romanello said that "18 percent of East Coast internet traffic comes through QTS."[17] White Oak Technology Park's combined assessed property value reached approximately $2.25 billion.[18] The county's $44 million infrastructure bet from the 1990s had produced a return no one originally anticipated, but the terms of that return were about to become the central political question of the county's governance.

The Tax Rate and the Competitive Pivot

Data centers existed in Henrico's industrial zones before 2017, but the industry's explosive growth was catalyzed by a single fiscal decision. In 2017, the Board of Supervisors slashed the data center equipment tax rate from $3.50 to $0.40 per $100 of assessed value, a reduction of nearly 90 percent.[19] The cut was designed to compete with "Data Center Alley" in Northern Virginia, where Loudoun and Prince William counties had attracted the bulk of the world's hyperscale operators. Henrico could not match Loudoun's network density, so it competed on price and on the cable-landing geography described above.

The response was immediate. Meta (then Facebook) announced a $750 million investment for a 970,000-square-foot data center on 300 acres in White Oak.[20] County officials were so eager to accommodate the project that they prepared land-disturbance permits in advance of the formal announcement to expedite construction.[21] The sequence is a fair measure of the institutional posture of the era: the county processed the approvals before the public knew the project existed.

Meta subsequently expanded its footprint to over 800 total acres through multiple phases, with total investment surpassing $1.5 billion.[22]

The $0.40 rate, coupled with an aggressive depreciation schedule (Schedule 89, under which equipment is assessed at only 10 percent of original cost after four years), made Henrico one of the most cost-effective jurisdictions in the country for data center deployment.[23] The revenue consequences were real but modest at the incentive rate: from 2017 to 2024, Henrico's data centers contributed over $18 million to county funds through business property and real estate tax revenue combined.[24] The county's proposed budget for fiscal 2025–26 raised the equipment rate to $2.60 per $100, which the county put below the state average of $3.09, and the board approved that budget on April 8, 2025.[25] The rate was high enough to convert the industry from a recruitment trophy into a funding stream; the county said the increase would not affect its affordable housing initiative, which is funded through the real estate taxes associated with data centers.[25]

Data Center Inventory: What Henrico Built

By 2024, Henrico County hosted 37 data centers of varying sizes.[26] The major holdings: QTS Data Centers, the anchor tenant at White Oak, with 12 data center buildings operational on its campus by Richmond BizSense's account as revised in June 2026; Meta, the county's largest single investor with cumulative investment exceeding $1.5 billion across over 800 acres; Iron Mountain, whose plan of development provides for three two-story data centers totaling about 1,189,285 square feet, with a first-phase building of about 360,000 square feet, on a 66-acre site purchased for $8 million in late 2024, with Clark Construction as general contractor and the first facility targeted for completion in 2027; the 622-acre site approved for rezoning in May 2024 under Hourigan and since acquired by QTS as its RIC5 campus (see Parts Three and Eight); and DC Blox, a 65,000-square-foot facility on the former Azalea Flea Market site in eastern Henrico.[27]

Despite the multi-billion-dollar capital investment represented by these facilities, permanent operational employment remains thin. JLARC found that a typical 250,000-square-foot data center may employ approximately 50 full-time workers, about half of them contractors.[28] The developer's attorney told the planning commission that the Darbytown campus would employ about 50 people per building, or 400 at the site.[29] Whether those figures would have materialized is now academic. The labor profile is the industry's central socioeconomic paradox and a core concern of the energy and labor framework: construction generates thousands of well-paid temporary jobs, while operations generate fewer permanent positions per acre than nearly any other industrial land use. A county trades permanent land commitment for temporary employment and permanent equipment tax revenue.

Whether that trade is good depends entirely on the tax rate, which is why the rate is where the politics eventually went.

PART TWO: THE BY-RIGHT FRAMEWORK AND ITS FAILURE

Under Henrico's historical zoning framework, data centers were permitted "by-right" in the county's office, business, and industrial zoning districts.[30] The procedural meaning of "by-right" is important because it is the mechanism that insulated the industry from public accountability for more than a decade.

A by-right use requires only administrative site plan review by planning staff. The developer submits a plan of development. Staff reviews it against the technical requirements of the zoning code: setbacks, height limits, parking ratios, stormwater management, landscaping percentages. If the plan meets the code, the planning director is required to approve it. There is no public hearing. There is no vote by the Board of Supervisors. There is no formal mechanism for residents to raise concerns, impose conditions, or challenge the project before it is approved. The community's only notice was a standard adjacent-property mailing, which reaches the owners of abutting parcels and no one else.[31] A resident living a quarter mile from a proposed million-square-foot industrial campus, close enough to hear it for the rest of her life, had no procedural standing to learn of it before approval, let alone to object.

Two administrative details compounded the structure. First, the zoning ordinance adopted June 22, 2021 and effective September 1, 2021 assigns the decision on a plan of development to the Planning Director, with notification only and no Planning Commission review (Sec. 24-2314); news coverage describes the arrangement as a COVID-19-era change that was never revoked.[32] Second, the zoning confirmation letter, a routine document in which the planning office confirms a parcel's existing zoning classification, functioned in practice as the only written assurance a data center developer needed before committing capital. Both details return in Part Six, where they become the load-bearing facts of a vested-rights lawsuit.

This institutional structure, in which industrial-scale development proceeds without democratic review, is a core example of the kind of procedural opacity that the institutional behavior framework is designed to examine. The by-right mechanism did not merely permit data centers; it structured the absence of public accountability as a feature of the approval process. The energy, labor, and infrastructure framework applies here as well: the by-right framework meant that cumulative grid and water demand from successive data center approvals was never subjected to system-level review. Each project was evaluated against the zoning code, parcel by parcel. No one was assigned to add them up.[33]

For years, this framework produced no visible conflict because the projects stayed inside White Oak Technology Park, far from residential neighborhoods. The tax revenue grew. The complaints were minimal. The system worked as long as the industry stayed where it was expected to stay. It stopped working when the industry moved toward people’s homes.

PART THREE: THE 2024 INFLECTION — THE HOURIGAN REZONING AND THE FIRST ORGANIZED RESISTANCE

The conventional account of Henrico's data center reversal starts with the Darbytown Road fight in 2025. The record starts a year earlier. The May 2024 rezoning of 622 acres for the Hourigan data center campus is where organized resistance first appeared, where the county first conceded that data centers required conditions beyond the zoning code, and where the housing trust fund was born. It was also, though no one in the hearing room knew it, the last major data center rezoning Henrico would approve before changing its rules, and the land would shortly belong to QTS.

The Case

The proposal, rezoning case REZ-2023-100017, covered 12 parcels totaling 622 acres of undeveloped woodland, wetlands, and a small pond between Interstates 64 and 295, near East Williamsburg Road at Technology Boulevard.[24] Hourigan, a Richmond-based construction and development firm, brought the case. The Board of Supervisors held its public hearing on May 14, 2024, and worked through the plan in detail before a chamber that included skeptical residents and representatives of the Henrico Conservation Action Network, an environmental group organized around county land-use issues.[24]

The residents' core request was not denial. It was delay. The General Assembly had commissioned JLARC to study the cumulative impacts of Virginia's data center industry, and the report was due that fall. Speakers asked the board to wait for the evidence before entitling another square mile. "We need to come up with standards and protections for us, your constituents," Aileen Rivera told the board. "If you're going to err, I ask please err on the side of people… data centers are a liability to our community, to our economy and to our environment so why can't we just wait?"[24] John Montgomery pointed the board toward Northern Virginia: "Between what is being proposed here tonight, and what is already underway, we could find ourselves right on the heels where our neighbors to the northwest who are trying to unring the bell and fix the problems that we created for ourselves. I would suggest, again, that the time is now to take it right and take it slow."[24]

The Proffers

The board did not wait. It approved the rezoning, but the approval looked different from every data center entitlement that had preceded it. The accepted proffer statement carries 31 proffers, conditions volunteered by the applicant and binding on the land, which VPM reported planning staff had assembled by studying what high-concentration jurisdictions like Fairfax and Fauquier had learned the hard way,

and by incorporating demands raised by residents.[24] The set includes a cap holding impervious surface (buildings, structures, parking areas and drive aisles) to no more than 65 percent of the property; buffers and building setbacks of at least 100 feet along specified boundaries; a 93-foot height limit; limits on construction hours near existing homes; diesel generators restricted to emergency use, tested only as the DEQ permit allows and only between 7:00 a.m. and 7:00 p.m. on weekdays; construction to LEED Silver standards or a recognized equivalent such as EnergyStar, with best practices in noise attenuation and cooling technologies; operational noise limits of 70 dBA by day and 55 dBA at night at property lines adjoining homes, which do not apply to construction equipment; conservation areas for floodplain and stormwater management; a Phase 1 archaeological and cultural resource study; and the dedication of a quarter acre for a historic marker.[24] VPM's report of the hearing also listed an air-cooling commitment, air quality monitoring with DEQ and $5 million toward rooftop solar on 200 to 250 homes; none of the three is among the 31 accepted proffers.[24]

Two things are true about that proffer set. It was the most environmentally serious package ever attached to a Henrico data center project, and it was available only because the project required a rezoning. A data center approved by right carried no mechanism for any such conditions. The proffer set was, in effect, an admission against the by-right framework: the county had just demonstrated what it would ask for whenever it had the leverage to ask, which made the absence of leverage everywhere else impossible to ignore. The institutional behavior framework should treat the May 2024 hearing as the moment the by-right structure's days became numbered, thirteen months before the board formally ended it.

The Fund

Supervisor Tyrone Nelson, then board chairman, told the hearing room what he wanted done with the money. "There's a lot of revenue that will come in because of this case alone," he said. "We need to just dedicate this funding towards something that can really help people; help people who don't even know that we're even having this conversation."[24] Two days later, on May 16, 2024, Nelson and County Manager John Vithoulkas announced the Henrico Housing Affordability Trust Fund, seeded with $60 million in data center revenue. "The county will be dedicating revenue from new economic development that is not built into our budget," Vithoulkas told reporters. "This is not debt. This is cash."[24] Three Chopt District Supervisor Misty D. Roundtree had framed the vote in the same register: "This is the opportunity for us to be able to do really transformative, important, game changing things. You all elected us, all five of us, thinking that there was going to be a new day in Henrico — so please trust us."[24] Part Nine follows the fund. Part Eight follows the land, 400 acres of which Hourigan bought and resold to QTS on

the same day, July 1, 2024, seven weeks after the vote, at a markup that measured precisely what the board's vote was worth.

The 2024 inflection set the template for everything after: residents organized and lost the vote; the county extracted conditions and invented a redistribution mechanism; the entitlement went through anyway and grew. Every actor in the 2025–2026 drama learned their part here.

PART FOUR: TWO COMMUNITIES, TWO COUNTIES

Varina: The Socioeconomic Profile

The Varina District occupies the eastern portion of Henrico County, bounded by the James River to the south and the Richmond International Airport to its east. According to Census Reporter data drawn from the 2024 American Community Survey five-year estimates, the Varina District has a population of 60,588 across 125.9 square miles.[34] The median household income is $74,227, about 84 percent of the Henrico County median of $88,783.[35] Per capita income is $39,725, about three-quarters of the county figure. The poverty rate is 10.1 percent, about 15 percent higher than the county rate of 8.8 percent.[36]

The Varina Station area, which encompasses the neighborhoods closest to the proposed data center site, is 59.3 percent African American and 34.4 percent White (2019–2023 ACS; the most recent available at the subdivision level).[37] The median household income is $74,245. The median year of home construction is 1987.[38] The district has historically absorbed the county's most intensive industrial uses. Residents describe themselves as "sandwiched" between multiple landfills (including the Nine Mile Road Landfill), the Richmond International Airport, extensive warehousing and storage facilities, and the industrial operations in White Oak Technology Park.[39] In public forums during the data center fights, residents and advocates reached for a harder term: "sacrifice zone," the phrase environmental justice scholarship uses for places where industrial burden is concentrated by design while the benefits flow elsewhere.[39] The geographic concentration of industrial burden in Henrico's most heavily Black district, while the predominantly White, affluent West End remained protected as residential, is the foundation of the environmental justice argument that would reshape the county's politics. The pattern maps directly to the distributional justice framework: the benefits of data center revenue accrued countywide, while the environmental and quality-of-life costs were concentrated in communities defined by race and income.[40]

New Market Village and the Darbytown Proposal

New Market Village is a predominantly Black, middle-class residential subdivision in the Varina District, located along Darbytown Road near its intersection with Laburnum Avenue. The community of several hundred homes sits directly across the street from the 195-acre parcel at 2248 Darbytown Road where Centra Development proposed a data center campus whose by-right plan of development, filed in April 2025, showed seven two-story buildings of 231,603 square feet each, 1,621,221 square feet in all, and whose later permit concept plan showed eight buildings,

operating around the clock, with the diesel backup generator banks that around-the-clock operation requires.[41]

George F. Baker Elementary School sits less than half a mile from the proposed site, at 6651 Willson Road. According to the National Center for Education Statistics, the school enrolls 452 students in Pre-K through 5th grade. The student body is 89 percent Black. Ninety-three percent of students are classified as economically disadvantaged, and 92.7 percent qualify for free or reduced-price lunch. The student-teacher ratio is 15:1.[42] Baker Elementary is a Title I school serving one of the most economically vulnerable student populations in Henrico County. The proximity of a proposed 24-hour industrial facility with diesel backup generators to this school became the single most emotionally powerful argument in the community's opposition. Residents asked a question that had no good answer: who chose to put this here, next to these children, and why was no one required to ask them first?

The Developer: Centra Logistics and David Wagner

David Wagner, a Henrico native, founded Centra Development in 2022.[43] The company employs fewer than a dozen people. In 2023, Centra met with the Henrico Economic Development Authority to request space in White Oak Technology Park for a data center development. The approach matters: Centra did not stumble into Varina. It was, by its own later account, encouraged by county economic development staff, and when no suitable parcels were available in White Oak, the company identified the Darbytown Road site, which was zoned M-1 Industrial and therefore, under the rules of the time, available by-right.[44]

The zoning confirmation letter Centra would later rely on, ZCL-2024-100685 of June 12, 2024, had been issued by the county's Zoning Division Manager to a prospective greenhouse operator, BrightFarms, for part of the parcel. It confirmed the M-1 classification and that indoor greenhouse growing was a permitted principal use; data centers appeared only in the ordinance table attached to it.[45] Centra's legal counsel was Andy Condlin of Roth Jackson Gibbons Condlin, one of the region's most experienced land-use attorneys.[46] The project was structured through a subsidiary called Darbytown Road LLC. The property was put under contract in March 2025. A plan of development was submitted on April 28, 2025 for decision by the Planning Director, not the board. It was scheduled for the Director's agenda of June 26, 2025; the board adopted the new framework first, and the plan was deferred.[47] The land purchase came much later: Darbytown Road LLC bought the 195-acre parcel from Fareva Richmond, a French pharmaceutical company whose facility is adjacent to the site, for $13.5 million on November 14, 2025.[48] That purchase date, five

months after the rules changed, would become the central factual weakness in the developer's vested-rights claim.

The Community Response

The opposition in Varina was led by residents of New Market Village and organized around environmental justice, public health, and the historical burden the district had carried. It was not a professional campaign. It was neighbors, organized through churches, civic associations, and group texts, who taught themselves zoning procedure in real time and showed up at every meeting the process offered, and at several it did not.

Amy Burrell, a New Market Village resident, emerged as the most prominent community advocate. Burrell did something few opponents of any industrial project bother to do: she drove to White Oak Technology Park to experience the noise environment of an operating data center firsthand. She described the sound as "almost like the buzzing of a mosquito, except louder and constant, with no stopping."[49] At the planning commission hearing in September 2025, Burrell argued that "a data center industrial complex would fundamentally and permanently alter the rural and residential character of the area. Once built, we cannot go back."[50] She challenged the racial equity of the siting decision, asking publicly whether the site was chosen "because it's a Black community, that we don't matter."[51] After the BZA denied the appeal in February 2026, Burrell told WRIC: "I just felt like we've been fighting this and I felt like, finally, somebody heard us."[52]

Taryn Wynn, with Burrell among the most persistent voices from New Market Village, pressed the same argument across multiple hearings: the district had carried enough, and the burden kept arriving at the same doorsteps.[39]

Jacqueline Bruce, another New Market Village resident, described what the fight did to the neighborhood itself: "For our community, I think we're better off because we're a little closer, we're more interactive, we definitely have used the skill sets that we have to our advantage."[53] The observation deserves more weight than it usually gets in land-use analysis. The organizing was not free. It consumed evenings and weekends for over a year. But it built civic infrastructure that did not previously exist, and that infrastructure outlasted the project it was built to stop.

Koya Johnson, a New Market Village resident, answered the developer's $1 million proffer for schools over ten years: "The dangling of the million dollars, for three schools, that is nothing. You can't even replace a roof on one of those schools for a million dollars. And it's still not worth the health of our community. It's not worth it."[54] Residents rejected the proffer as an attempt to purchase consent, and the

rejection itself became an organizing argument: the community was not negotiating the price of the project. It was contesting the premise that the project belonged there at all.

Supervisor Tyrone Nelson of the Varina District told the board on June 10, 2025 that he had openly stated the year before, after the QTS case, that he did not want any more data centers in the area. At the same meeting, where the new regulations were adopted, Nelson stated: “If we don’t do this, we’ll have data centers everywhere in the district where there’s manufacturing, business or office zoning.”[55] Nelson’s arc tracks the county’s. He chaired the board that approved the Hourigan rezoning and announced the housing fund in May 2024. Thirteen months later he led the vote ending by-right approval. The same supervisor, in the same district, presided over both the peak of the recruitment era and its formal end.

Supervisor Roscoe Cooper of the Fairfield District spoke at the BZA hearing: “For too long Eastern Henrico, the Fairfield and Varina districts specifically have been inundated with industrial and manufacturing weight of the County. And we want you to then make sure that going forward we have a say in what happens in our side of town.”[56]

Wyndham: The Socioeconomic Profile

On the opposite side of the county, the Wyndham community presents a starkly different demographic profile. Wyndham is a census-designated place in Henrico’s far West End, a master-planned community established in 1992 by HHHunt on former farmland, spanning 1,271 acres with 1,727 residential units across 42 neighborhoods.[57] The community is governed by the Wyndham Foundation, a professionally managed homeowners association with quarterly dues of $174, an institutional capacity for collective action that most neighborhoods facing industrial proposals do not possess.[58]

According to Data USA’s analysis of 2023 ACS data, Wyndham has a population of 12,084. The median household income is $235,886. The median property value is $673,200, with current median sale prices reported around $760,000. The homeownership rate is 90.2 percent.[59] The racial composition is 54.1 percent White, 33 percent Asian, and 3.57 percent Black.[60] Wyndham feeds into Deep Run High School, ranked the number one public high school in Henrico County, with a 97 percent graduation rate.[61]

The HHHunt Proposal and the Wyndham Resistance

HHHunt, the same developer that originally built the Wyndham residential community, filed with Hanover County in August 2025 to rezone about 400 acres across the county line, north of Wyndham on the Hunting Hawk Golf Club land and

adjoining parcels, from agricultural to limited industrial for a ten-building data center campus of about 3.9 million square feet. The application also sought a comprehensive plan amendment, a special exception for building height and a conditional use permit for accessory uses.[62] The site lies in Hanover County and the application was Hanover's to decide; Henrico and its residents had no formal role. The history between developer and neighborhood gave the proposal its edge. In 2019, Henrico had blocked HHHunt from extending Dominion Club Drive to connect a new residential development through the Wyndham neighborhood, a dispute the neighborhood won,[63] and the 2025 filing was reported as HHHunt's latest attempt to develop the land since that dispute.[62]

The opposition in Wyndham was framed differently than in Varina. Wyndham residents did not invoke environmental justice or racial equity. In the reported testimony they invoked traffic, rural character and the newness of the comprehensive plan designation the application sought to change; property values and noise appear in reader comments on the coverage rather than in the reported record.[65] The coverage cited here does not show what part, if any, the Wyndham Foundation took in the opposition; it records about three dozen speakers against the project at the Planning Commission and a community meeting in November 2025 that drew more than 450 people.[65] Hanover's Planning Commission recommended denial unanimously in January 2026, and HHHunt withdrew by letter dated January 28, 2026, before the Hanover Board of Supervisors hearing scheduled for February 25.[67] The Hanover Board never heard the case.

Two Counties, Two Rules

The two campaigns did not converge. The Varina opposition produced Henrico's reform. The Wyndham campaign began two months after the reform passed and was directed at another county's application. What the two communities show side by side is the effect of the classification rule in force at each site. Hanover did not permit a data center on the Hunting Hawk land by right; HHHunt needed a rezoning, and the residents got a Planning Commission hearing, a unanimous recommendation of denial and a withdrawal before the Board hearing. Henrico permitted data centers by right on the Darbytown parcel until June 2025; the residents of New Market Village got no hearing on the by-right plan filed in April 2025, a hearing on the provisional use permit only because the ordinance intervened, and none on the warehouse that followed.[68] The demand "no more by-right approvals" is documented for Varina.[55] Whether the Wyndham residents would have made the same demand is not in the record; under Hanover's rules they did not need to. For the institutional behavior framework the contrast is one of rules, not of communities: a hearing existed where the rule required one, and its availability did not track the wealth or organizational capacity of the community that used it.

Varina–Wyndham Demographic Comparison

The following table summarizes the demographic contrast between the two communities. The Wyndham column describes residents who faced a Hanover County application; the contrast is demographic, and the difference in outcome is procedural.[69]

Metric	Varina / New Market Village (Henrico by-right parcel)	Wyndham (facing a Hanover County rezoning application)
Median Household Income	$74,227	$235,886
Racial Composition	59.3% Black, 34.4% White	54.1% White, 33% Asian, 3.57% Black
Homeownership Rate	Not separately reported (district-level)	90.2%
Nearest School Profile	93% economically disadvantaged (Baker Elementary, Title I)	Deep Run HS: ranked #1 in county, 97% graduation rate
Organizing Infrastructure	Churches, civic associations, volunteer networks	Not shown in the coverage cited (the community's HOA is the Wyndham Foundation)
Opposition Frame	Environmental justice; racial equity; public health; industrial burden	Traffic; rural character; comprehensive plan designation (as reported)
Outcome	Data center blocked after the ordinance made a hearing available; warehouse approved by right January 21, 2026	Hanover rezoning withdrawn by letter dated January 28, 2026, before the board hearing

Sources: Census Reporter, ACS 2024 5-year estimates (Varina District income); Point2Homes, 2019–2023 ACS (Varina Station area racial composition); Data USA, ACS 2023 (Wyndham); NCES (Baker Elementary); Niche/U.S. News (Deep Run HS). See endnotes.

PART FIVE: THE REGULATORY PIVOT

The Staff Analysis

The board moved first. In March 2025 it directed county staff to research and prepare zoning ordinance amendments for data centers.[70] On May 1, 2025, the Henrico County Planning Department published a staff analysis titled Potential Impacts of Data Centers, a document that read, in the context of the county's prior posture, like a quiet confession.[31] It catalogued what the by-right era had never required anyone to total: noise profiles and the particular carrying quality of low-frequency mechanical sound; the water consumption of evaporative cooling, which staff put at three to five million gallons per day for a single large facility; diesel generator emissions; the visual mass of windowless buildings approaching a million square feet; and the procedural fact that none of it had been subject to public review. The analysis became the evidentiary foundation for the ordinance that followed about six weeks later.

The June 10, 2025 Vote

On June 10, 2025, the Henrico County Board of Supervisors adopted Resolution 142-25 (a comprehensive plan amendment) and Ordinance 143-25 (a zoning ordinance revision) that fundamentally altered the permitting landscape for data centers in the county. The vote was unanimous, five to zero, a board that had cut the equipment tax to $0.40 eight years earlier now agreeing without dissent that the approval model built on that recruitment posture had failed.[70] The ordinance adopted was the board's amended version. At a joint public hearing on May 15, 2025, the Planning Commission had recommended an overlay district under which data centers would remain allowed in White Oak Technology Park while requiring a provisional use permit outside it; the board deferred action to June 10 and directed staff to remove the overlay so that a permit would be required throughout the county.[70]

The ordinance removed data centers as a by-right use in the county's office, business, and industrial zoning districts and established a mandatory Provisional Use Permit process. All new stand-alone data center projects must undergo public hearings before the Planning Commission and receive final approval from the Board of Supervisors. The board can impose site-specific conditions on noise mitigation, water management, aesthetics, and other impacts. Residents have a formal mechanism to participate in the review and to challenge proposals before they are approved.[71] The PUP requirement converted every future data center from an administrative transaction into a political event, which is precisely what the two communities had demanded.

The Design Guidelines

The comprehensive plan amendment adopted the same day introduced detailed Data Center Design Guidelines.[72] The guidelines recommend a minimum 500-foot setback from lot lines of adjacent residentially zoned property, up from the standard 200-foot industrial buffer. While described as “recommended,” these setbacks are effectively enforced through the PUP approval process: a developer who ignores them invites denial. The ordinance itself, amended on the floor on June 10, requires that any water cooling use a closed-loop or recycled water system unless another cooling system is approved for the data center as part of a provisional use permit, the direct legacy of the staff analysis’s three-to-five-million-gallon finding.[73] The same amendment restricts testing and maintenance of data center generators to Monday through Friday, 10:00 AM to 4:00 PM, confining the industry’s loudest routine activity to the hours when working residents are least likely to be home. Developers must conduct pre-construction and post-construction noise studies, an acknowledgment that predicted decibel levels and lived sound are different things. Principal building facades must include architectural “breaks” using at least two of the following: changes in building height, step-backs or recesses, fenestration, and variations in material, pattern, texture, or color. Electrical substations must be screened by opaque fencing and landscaped buffers.[74] Read as a set, the ordinance standards and the guidelines are a point-by-point answer to the testimony of 2024 and 2025: the noise, the water, the generators, the windowless boxes. The communities wrote the ordinance’s agenda. The staff wrote its text.

The Rate

The rate had moved two months earlier. On April 8, 2025, the board approved a fiscal 2025–26 budget that raised the data center equipment tax rate from $0.40 to $2.60 per $100 of assessed value, which the county put below the state average of $3.09; the county said the increase would not affect the housing initiative, which is funded through the real estate taxes associated with data centers.[75] The increase repriced the county’s relationship with the industry from recruitment to extraction. The fiscal logic is treated in Part Nine. The political logic was simpler: if the county was going to live with the facilities it had already approved, it would be paid for doing so.

PART SIX: THE LEGAL TEST

The June 2025 ordinance was a political settlement. The Centra case tested whether it was also a durable legal one. The test ran about twenty months, from the zoning confirmation letter of June 2024 to the Board of Zoning Appeals vote of February 2026, and the new framework survived it intact.

The PUP Application and the September Hearing

Centra filed the first Provisional Use Permit application under the new rules, for the same Darbytown campus the by-right framework would have approved administratively.[29] The planning commission heard the case in September 2025. The hearing lasted approximately one hour and drew more than a dozen speakers in opposition, residents of New Market Village and surrounding Varina neighborhoods making the arguments documented in Part Four.[76] County staff had recommended approval with conditions. The commission voted four to one, with one abstention, to recommend denial; the dissent was Chairman Robert Witte Jr. of the Brookland District.[45]

The hearing produced one unguarded moment that planning commissions rarely supply. During a break following the vote, Varina District Commissioner William Mackey Jr. was captured on a hot mic telling Chairman Witte: “I think it’s a matter of location, not a matter of the project.” The recording, from the first live-streamed Henrico planning commission meeting, caught the exchange.[77] The remark is more useful to researchers than to litigants. It confirms what the formal record implies: the county’s objection was siting, not industry. Data centers remained welcome in Henrico. They were no longer welcome across the street from subdivisions, and the new process existed precisely to enforce that distinction.

The Vested-Rights Claim

Facing a recommended denial, Wagner withdrew the PUP request on October 13, 2025 and changed legal theories. On October 1 he had filed a vested-rights claim, arguing that Centra was entitled to build under the old by-right rules on the strength of the June 2024 zoning confirmation letter, had been recruited and encouraged by county economic development staff, and had invested substantially in the project in reliance on those assurances.[45]

Virginia law sets a high bar for vesting. Under the Code of Virginia, a landowner’s development rights vest only upon a “significant affirmative governmental act,” a rezoning, a special use permit, a site plan approval, something in which government affirmatively commits to a specific project. On December 10, 2025, Planning Director R. Joseph Emerson, Jr., acting as zoning administrator and with the concurrence of

County Attorney Andrew R. Newby, denied the claim. The determination found no significant affirmative governmental act for a data center on the property: the April 2025 plan of development had not been approved, the minor subdivision approved in May 2025 approved no use, and the zoning confirmation letter addressed only a greenhouse use. It found that Wagner was not the landowner and so was outside the class of persons the statute protects, and that recruitment by the county's Economic Development Authority is not a governmental act of that kind. A zoning confirmation letter confirms a classification. It approves nothing.[78]

The BZA Hearing: February 26, 2026

Centra appealed the denial to the Henrico Board of Zoning Appeals. The hearing took place on February 26, 2026.[79] Andy Condlin presented Centra's argument: the company had acted in good faith, had been recruited by county economic development staff, had received verbal assurances from planning staff, and had paid over $13 million for the property after spending, before the ordinance passed, over $500,000 in non-refundable deposits and over $300,000 in engineering fees.[80]

Condlin argued that the letter and the county's plan-review notices satisfied the statute's written-determination clause, item (vii) of the list of qualifying acts, and that the clause required no more than issuance; he argued that a certificate of subdivision satisfied item (vi). Deputy County Attorney Ryan Murphy answered from the record. The letter had gone to a greenhouse company; "a greenhouse is not a data center, period." Under Board of Supervisors v. Crucible (2009) and Board of Supervisors v. McQueen (2014), zoning confirmation letters are not significant affirmative governmental acts, and Centra's position was weaker than those landowners' because its letter concerned another company's project. The verbal assurances, even if they occurred as described, did not constitute the governmental act required by statute.[83] And the most damaging fact: Darbytown Road LLC did not purchase the property until November 14, 2025, five months after the ordinance changed and six weeks after the vested-rights claim was filed.[81] The claim of good-faith reliance on the old framework sat awkwardly next to a land acquisition that postdated the new one. Community members who spoke at the hearing had noticed the same thing, and said so.

About a dozen speakers addressed the BZA. Residents spoke against the appeal. Supervisors Nelson and Cooper both appeared and spoke against it, an unusual show of board presence at a quasi-judicial proceeding.[82] Some business leaders spoke in favor, arguing that the denial would signal that Henrico was no longer a business-friendly jurisdiction, an argument that measured how completely the county's posture had inverted in two years. The BZA voted five to zero to uphold the Director of Planning and deny the appeal, on a motion adopting the reasons the county had

stated: no significant affirmative governmental act, and no good-faith reliance or expense on one.[83]

As of this writing in mid-June 2026, no appeal of the BZA decision to the Henrico Circuit Court has been reported. Asked after the February hearing whether Centra would pursue the court option, Wagner said he was still processing the decision and did not know whether the company would litigate or simply proceed with the warehouse plan already approved for the site.[84]

The Warehouse Pivot

Even before receiving the BZA denial, Wagner had begun developing an alternative plan. In mid-December 2025, after the county communicated its denial of the vested-rights claim on December 10, Wagner Urban Logistics filed a new development plan for the same 195-acre parcel: seven industrial warehouses totaling 1.82 million square feet, branded as the Airport West Industrial Campus. The largest building would occupy 635,400 square feet.[85]

Because warehouses are allowed by-right under the site's existing M-1 zoning, the new plan did not require a PUP, a public hearing, or a board vote. The planning director granted administrative approval on January 21, 2026, as POD-2025-103055, 1,821,340 square feet on 195 acres.[86] Supervisor Nelson noted that distribution centers typically employ more workers than data centers and predicted significant truck traffic on Darbytown Road.[87]

The irony deserves noting. The community had successfully blocked a data center through months of sustained opposition, only to see the same site approved for a use that would generate more traffic, more daily disruption, and 1.82 million square feet of industrial buildings, against 1.62 million square feet of data center space in the by-right plan of April 2025, through the same by-right mechanism that the community's resistance had been designed to challenge.[88] The warehouse approval did not require a public hearing. The ordinance's assignment of plan-of-development decisions to the planning director, without commission review, described in Part Two, did the rest.[32]

The broader structural point is this: Henrico's June 2025 regulatory reform addressed data centers specifically, but the by-right framework that enabled them remains intact for every other industrial use category. The warehouse approval demonstrates that the underlying governance problem, industrial-scale development proceeding without public review, was not solved by the data center ordinance; it was redirected. A community that organized for months to challenge one project discovered that the next project, larger in square footage and arguably more disruptive in daily traffic and noise, could be approved by a single administrator with

no public hearing at all.[89] This is precisely the kind of institutional behavior that the institutional behavior framework is designed to expose: the formal rules changed, but the structural logic of administrative discretion over industrial siting without democratic input persisted. The infrastructure and labor research applies as well: the warehouse pivot substitutes one category of industrial burden for another without any assessment of cumulative impact on the community’s transportation infrastructure, air quality, or quality of life.[90]

PART SEVEN: WATER AND GRID CAPACITY

As of early 2026, specific aggregate data on the water consumption and grid load of Henrico's 37 installed data centers is not comprehensively reported in available public sources. Several reference points frame the scale of the question.

The White Oak Technology Park's original infrastructure was built to serve semiconductor fabrication, including a redundant sewer pumping station with 13 million gallon per day capacity and a 230-kilovolt Dominion Energy transmission system.[91] That infrastructure was sized for an industrial demand profile that data centers have largely absorbed and, in some cases, exceeded. On the supply side, Henrico currently processes 30 to 40 million gallons per day countywide and is expanding the Cobbs Creek Reservoir toward a long-term target of 130 MGD, an expansion whose timing has tracked the industrial demand curve.[92] Henrico's June 2025 zoning amendment now requires that any water cooling at a data center use a closed-loop or recycled water system unless a provisional use permit approves another cooling system, an acknowledgment that older evaporative cooling technologies could consume three to five million gallons per day per large facility. Closed-loop systems recirculate water rather than losing it to evaporation; where the default applies, it converts the industry's largest consumptive use into a largely one-time fill.[92] The requirement binds only what the county can still condition. The facilities approved before June 2025 operate under whatever cooling commitments, if any, their era extracted.

On the grid side, JLARC's December 2024 report found that unconstrained demand for power in Virginia would double within ten years, driven primarily by data centers, and that almost all of the growth would fall in the Dominion transmission zone, which covers Northern and Central Virginia. Dominion's October 2025 plan update forecasts demand in that zone growing 6.3 percent a year over the next decade and more than doubling by 2045, and reports 16,913 MW of data center capacity under firm contracts as of July 31, 2025.[93] Henrico's share of that load is not separately reported in available public sources as of early 2026, but the county's 37 facilities, anchored by QTS's multi-million-square-foot campus and Meta's 800-acre footprint, represent a material portion of Central Virginia's data center demand, and the grandfathered pipeline of Part Eight will multiply it. The ratepayer cost implications of this demand, borne by all Dominion customers regardless of whether they live near a data center, connect directly to the utility finance framework and to how infrastructure costs are distributed across populations.[94] At the May 2026 community meeting documented in Part Eight, the first question residents put to county officials was not about noise or traffic. It was: "What's going to happen to our power bills?"[95]

Research priority: Specific water withdrawal and discharge data for Henrico data centers, and Henrico's share of Dominion's data center load forecast, should be obtainable from the Henrico Department of Public Utilities and the Virginia Department of Environmental Quality. Grid capacity data specific to the White Oak transmission corridor may be available through Dominion's PJM interconnection filings. These are flagged as research priorities in Part Twelve.

PART EIGHT: THE GRANDFATHERED PIPELINE

The June 2025 ordinance governs what Henrico approves next. It does not govern what Henrico already approved. The scale of that distinction was on the county's own record by February 2025, and it reached the press in May 2026.

The QTS Expansion: RIC4 and RIC5

QTS is proceeding with two campus expansions, designated RIC4 and RIC5, that would add roughly 1,100 acres to its footprint in Varina. The master plans the Planning Director approved on February 26, 2025 provide for ten data centers totaling 3,773,736 square feet on 478 acres at RIC4 and seven totaling 4,116,217 square feet on about 622 acres at RIC5.[96] Richmond BizSense, in its account as updated and revised June 12, 2026, reports that the plans could add as many as 17 data centers, that the new buildings would bring QTS's overall campus to 8 million square feet of data center space, and that QTS has already built over 3 million square feet at White Oak; the master plans and that campus total do not reconcile in the sources read.[96]

The entitlement history explains why the new ordinance does not reach this project, and it runs straight through Part Three. QTS purchased the 478-acre RIC4 site from the Henrico Economic Development Authority for $43.8 million in April 2024.[96] Weeks later, the Board of Supervisors approved the Hourigan rezoning of the 622-acre RIC5 site, the case with the 31 accepted proffers and the housing fund announcement. On July 1, 2024, Hourigan bought 400 acres of that land for $58 million and sold them to QTS the same day for nearly $119 million, a same-day markup that measures what a data center entitlement was worth in Henrico in 2024; QTS already owned the remaining 220 acres, bought in December 2023 for $17.3 million.[97] RIC5 was, in Richmond BizSense's description, the last major data center rezoning approved before the board eliminated by-right development.[96] Both master plans were approved under the administrative process. Richmond BizSense, as revised, reports initial land work at a site across Williamsburg Road from Technology Boulevard and states in a correction that construction is underway at Iron Mountain's site but not yet at RIC4.[96]

QTS Campus	Acreage	Buildings	Square Footage	Status
Existing campuses (3)	—	12 operational (BizSense, as revised June 12, 2026)	3M+ built	Operational / building
RIC4	478	10	3,773,736	Master plan approved Feb. 26, 2025; construction not begun as of June 12, 2026 (BizSense correction)
RIC5 (former Hourigan site)	622	7	4,116,217	Master plan approved Feb. 26, 2025

The construction apparatus assembled for the expansion indicates its scale and its timeline. HITT Contracting, one of the country's largest data center builders, is general contractor on RIC4. Civil engineering is handled by local firm Townes Site Engineering, structural by Texas-based AGE, mechanical-electrical-plumbing by Boston-based Vanderweil, telecom by Texas-based TD. The architect is SNHA of Chicago; the landscape architect is O2 of Minneapolis.[96] The development plans show buildings ranging mostly from 350,000 to 593,000 square feet, with the largest single structure at RIC5 totaling nearly 1.2 million square feet, fronting Williamsburg Road and flanked by chiller yards.[96] At RIC5, the buildings and supporting development will occupy 236 of the 622 acres, with 386 acres held as open space; at RIC4, 127 of 478 acres, with about 350 acres open.[96] Only RIC5 carries the Hourigan rezoning, whose accepted proffers cap impervious surface at 65 percent of the property; RIC4, zoned M-2, lists no applicable rezoning case in the county's February 2025 record.[96] QTS also acquired the former LL Flooring distribution center and its 100 acres for $104 million through that company's 2024 bankruptcy; no development plans for that property had been filed as of May 2026.[96] In a statement responding to press inquiries, QTS described a 575-acre expansion for five data centers in the permitting process and emphasized that its backup generators "are for emergency back-up purposes only and do not continuously run."[96] The sources read do not say how the statement's five buildings on 575 acres relate to the seventeen buildings on about 1,100 acres in the master plans.

The Generator Arithmetic

To support the expansion, QTS applied to the Virginia Department of Environmental Quality for permits covering 370 diesel-fired emergency generators. Those would add to 544 generators and 11 cooling towers the company is already permitted to construct and operate.[96] On April 22, 2026, DEQ approved a permit for QTS

Richmond V, LLC, the owner of record of the RIC5 site, covering 247 diesel generator sets and eight smaller units; whether those units are inside the 370 is not stated in the sources read.[96] A single operator in a single magisterial district would hold permits for more than 900 diesel generators. County representatives told residents that DEQ rules taking effect in July 2026 would require newly permitted backup generators to meet stricter Tier 4 emissions standards.[95] The requirement is in statute: HB 507 (2026 Va. Acts ch. 397) bars DEQ from issuing an air permit for a data center application submitted on or after July 1, 2026 unless each engine-generator's emission limit is equal to or less than that of a Tier 4 equivalent engine-generator.[95] The 544 already permitted are not subject to that requirement. The emergency-only operating profile is accurate as far as it goes; the count still represents a contingent emissions source of unprecedented local concentration, plus routine test cycles, conducted under the ordinance's weekday-daytime window for facilities the ordinance reaches and under older terms for facilities it does not.

The May 19 Community Meeting

Henrico officials convened a community meeting in Varina on May 19, 2026. The agenda did not include data centers. The residents did. Attendees held signs reading "No More Data Centers" and pressed officials on power bills, grid capacity, water consumption, air quality, and noise.[95] One attendee asked: "What's going to happen to our power bills? What's going to happen to the grid itself? So I'm just not understanding the sustainability and the feasibility." Another put the water question plainly: "Obviously, data centers, they drink water like nobody's business." Longtime Varina resident Brandy Covington described the stakes in sensory terms: "I walk outside and I'm terrified that I won't be able to look at the night sky anymore and have a constant hum in my ears."[95]

Supervisor Nelson, who led the meeting, told residents that many of the projects they are now seeing were approved years before the county changed course. "Last year, [I] committed with my colleagues that I don't want to see any more new data centers that were not previously approved prior to when we voted last year," he said, while acknowledging there is little officials can currently do to stop developments already in the pipeline.[95] Covington's response distilled the community's position: "We are getting what we're getting, so it's just dealing with it, I guess."[95] Between the 2024 hearings and the 2026 meeting, the register of citizen voice in Varina had shifted from opposition to resignation, and the shift is itself a finding. The process now offered residents a hearing for projects that did not matter and no hearing for the ones that did.

What the Pipeline Reveals About the Reform

The PUP ordinance operates prospectively. Every entitlement granted before June 10, 2025 proceeds under the old rules, and the largest of those entitlements were granted in the final eighteen months of the by-right era, while the political pressure that produced the ordinance was already building. The county changed its rules after the trajectory was locked in. This sequencing problem belongs squarely to the institutional behavior framework: the reform's binding force arrived precisely when the most consequential decisions had already been made, and the community meeting of May 2026 documents residents discovering that distinction in real time.[98]

The utility finance framework reads the same facts differently. The new data center floor in the approved master plans, about 7.9 million square feet, will carry equipment taxed at $2.60 per $100 rather than the $0.40 rate that applied when the existing campuses were filled, and the revenue consequences for the county, and for programs like the housing trust fund, will be substantial.[98] The distributional justice framework completes the picture: every building in the grandfathered pipeline lands in Varina, the district whose residents organized the resistance that ended by-right approval. The reform redistributed future discretion. The existing burden stays where the by-right era put it.[98]

PART NINE: THE REVENUE REINVESTMENT

Origin

The Housing Affordability Trust Fund was announced on May 16, 2024, two days after the Hourigan vote, by Supervisor Nelson and County Manager John Vithoulkas (see Part Three). The sequencing was deliberate: the board paired its most controversial data center approval with the most visible community benefit the revenue had ever produced. “The county will be dedicating revenue from new economic development that is not built into our budget,” Vithoulkas told reporters. “This is not debt. This is cash.”[24] The fund was seeded with a one-time appropriation of $60 million in unbudgeted revenue from data center developments, with funds available July 1, 2024.[99]

Mechanism and Performance

The fund is administered by the Partnership for Housing Affordability, a Richmond-area nonprofit, which reviews applications from builders who commit to reducing the sale price of homes for buyers earning between 60 and 120 percent of the Area Median Income, the “missing middle” of teachers, nurses, and service workers priced out of the county where they work.[100] In its first two years, the fund has awarded money toward the construction of 383 affordable units. Thirty buyers had closed on newly built homes as of early 2026, with average assistance of $80,000 per buyer. The fund includes a ten-year affordability clause to prevent rapid flipping, after which owners may sell at market rates and keep the gain, converting the subsidy into generational wealth rather than a permanent deed restriction. Participating developers receive waivers on building, permit, water, and sewer fees, along with expedited plan reviews in some cases, which is why builder interest has outrun the fund’s early disbursement pace.[101]

The $60 million figure is nearly equivalent to the housing trust fund for the entire Commonwealth of Virginia.[102] Time magazine profiled the program in March 2026, highlighting Emma Swainston, a 26-year-old math teacher who purchased a home for $180,000, roughly $92,000 below market value.[103] The program has begun drawing national attention as a replicable model: Senator Mark Warner says he has been “urging” the Urban Institute and other housing think tanks “to learn from the project,” and lawmakers in Lansing, Michigan are considering a similar model.[103] The housing trust fund is a direct application of the utility finance framework: revenue generated by an industry whose grid and infrastructure costs are socialized across all ratepayers is being reinvested in a targeted public benefit, affordable homeownership, rather than absorbed into general fund spending where its origin and purpose would be invisible.

The Refresh Dependency

A structural note is warranted here. The revenue from existing data center facilities is not a fixed asset; it is a function of ongoing operator investment. Under Schedule 89, the assessed value of installed equipment declines to 10 percent of original cost within four years.[104] If an operator stops replacing hardware, the taxable base erodes on a predictable curve. However, because Henrico's major campuses were built in phases over several years, and because the standard server replacement cycle runs approximately three to five years, the aggregate assessed value across a mature, actively operated campus tends toward a rolling steady state rather than a cliff.[105] Old equipment depreciates; new equipment resets at full value. The critical dependency is not on the original capital investment but on the operator's continued commitment to refresh. Industry analysis indicates that AI-era accelerators (GPUs and TPUs) are being replaced on cycles as short as 18 to 36 months, while general-purpose servers are increasingly "sweated" for six to ten years; the net effect on a diversified campus is that equipment turnover remains continuous, sustaining the taxable base at or near steady state as long as the operator remains active.[106] This dynamic is directly relevant to the utility finance framework: the fiscal sustainability of the housing trust fund, and of any local budget line dependent on data center revenue, is a function not of the original capital investment but of the operator's refresh behavior, a variable that localities do not control and that is not disclosed in public filings.

The board's decision to structure the $60 million housing fund as a one-time appropriation from unbudgeted surplus, rather than as a recurring budget commitment funded by projected data center revenue, reflects an implicit recognition of this dependency.[107] The program does not require the revenue to remain at current levels indefinitely. That is a structural advantage worth noting.

The dual-track strategy of restricting new approvals while harvesting revenue from existing facilities for direct community benefit is, as far as available evidence indicates, the first program of its kind in the United States specifically dedicating data center tax revenue to affordable homeownership.[108] The county is not rejecting the industry's money. It is refusing to accept the industry's growth without discretionary review while converting the existing revenue into identifiable public work. That is a model, not just a moratorium. The grandfathered pipeline documented in Part Eight will test the model's other half: whether the revenue from the roughly 7.9 million square feet in the approved master plans, taxed at the corrected rate, is matched by any corresponding mechanism for the district absorbing the buildings.

PART TEN: REGIONAL CONTEXT

Henrico's regulatory reversal did not occur in isolation. It is part of a pattern now visible across Central Virginia and increasingly across the commonwealth.

Loudoun County eliminated by-right data center development in March 2025, after a decade of permissive approvals and a transmission-line conflict that galvanized opposition in 2023.[109]

Hanover County rejected the Mountain Road Technology Park. The planning commission recommended approval of Tract's 900-megawatt campus of about 430 acres on a 6-1 vote on April 16, 2026, after two earlier deferrals to address community concerns about noise, traffic, and water.[110] On the night of May 27, 2026, after nearly six hours of debate that ran toward midnight, the Board of Supervisors rejected the rezoning when a motion to approve failed 3-4. Water was among the concerns each of the four members voting no raised in deliberation, beside energy demand and rates, the site's gateway location, proximity to homes and the speculative nature of data center development, by the adopted minutes. Project documents showed average demand of roughly 600,000 gallons per day, with peak projections reaching 2 million gallons under certain conditions. The developer's proffer package, which included $15 million toward water infrastructure improvements, $6 million tied to parkland preservation, transportation improvements along Route 33, and restrictions on generator use, did not move the majority. Opponents cheered as the vote was recorded.[111] The rejection is treated at length in the companion Hanover case study.[112]

Louisa County sold its 697-acre Shannon Hill Regional Business Park to Colorado-based EdgeCore Digital Infrastructure for $42 million.[113]

Charles City County saw Diode Ventures withdraw a 515-acre data center proposal in August 2025 after residents spoke for two and a half hours at a Board of Supervisors meeting.[114]

Chesterfield County adopted a new zoning ordinance effective January 1, 2026, making data centers a conditional use in industrially zoned land. On June 3, 2026, the county's Board of Zoning Appeals unanimously rejected a developer's vested-rights challenge to the new permit requirement, with a second appeal still pending, by the account of the Chesterfield case study in this series.[115]

Prince William County experienced the most dramatic political fallout. Supervisor Pete Candland resigned in December 2022 after the Commonwealth's Attorney concluded that he could not take part in any comprehensive plan or data center vote until the Digital Gateway rezoning process was complete; a recall petition against

him was made moot by the resignation. Board Chair Ann Wheeler, in office since January 2020, lost the June 2023 Democratic primary to a candidate who ran on curbing data center approvals.[116] The county has since raised its data center computer equipment tax rate to $3.70 per $100 of assessed value in April 2024, to $4.15 in April 2025, and to $4.50 for tax year 2026 on April 21, 2026.[117]

The Data Center Reform Coalition coordinates opposition efforts among dozens of activist, environmental, conservation, and homeowner groups across Virginia.[118]

The regional pattern now has two poles. Hanover demonstrates that a board majority will absorb the political cost of rejecting a 900-megawatt project outright. Henrico demonstrates the opposite lesson: a county that reformed its rules after granting its largest entitlements gets the reform’s politics without its protections, at least for the better part of a decade while the grandfathered pipeline builds out.

PART ELEVEN: READINGS BY RESEARCH SPECIALTY

This part consolidates the inline framework flags into a reading guide. Each subsection identifies what the Henrico record offers a given framework, where the richest evidence sits, and what remains unobserved.

The Distributional Justice Reading

Henrico is a natural experiment in burden distribution. The county's data center footprint, existing and pipeline, sits almost entirely in its lowest-income, most heavily Black district, while the fiscal benefits flow countywide and, of the proposals this case study documents through June 12, 2026, the one sited near affluent West End housing was a Hanover County rezoning application, withdrawn before its board hearing. The evidence base includes the demographic contrast table in Part Four; the Baker Elementary proximity record; the "sacrifice zone" and "sandwiched" testimony; the proffer-rejection episode, in which a community refused to price its own exposure; and the grandfathered pipeline's geography, which concentrates the next decade of buildout in the same district. The sharpest open question is cumulative exposure: no public document located as of June 2026 totals the generator emissions, truck traffic, noise, and water draw that Varina absorbs across all facilities and uses. The open items in Part Twelve are addressed to that gap.

The Institutional Behavior Reading

The Henrico record documents a complete institutional cycle: recruitment posture (pre-approved land disturbance permits for Meta), procedural insulation (by-right approval, adjacent-only notice, the ordinance's delegation of plan-of-development decisions to the planning director), concession under leverage (the 2024 Hourigan proffers), formal reform (the 2025 PUP ordinance), legal defense of reform (the vested-rights denial), and reform's structural limits (the warehouse pivot and the grandfathered pipeline). The hot-mic remark in Part Six and the two-county contrast in Part Four are the two most analytically valuable artifacts: the first reveals the institution's actual decision rule, the second shows that the availability of a hearing followed the classification rule at each site. The timeline appendix orders the full sequence for process-tracing work.

The Utility Finance Reading

Three mechanisms in this record reward financial analysis. First, the tax-rate arc, $3.50 to $0.40 to $2.60 within eight years, with the $18 million cumulative revenue figure of the incentive era against the projected yield of the corrected rate applied to a pipeline of about 7.9 million square feet in approved master plans. Second, the Schedule 89 depreciation structure and the refresh dependency analyzed in Part

Nine, which determines whether any locality's data center revenue is durable. Third, the housing fund's one-time-appropriation design, which insulates the program from revenue volatility the county cannot control. The ratepayer dimension, who pays for the transmission and generation that more than 900 permitted and proposed generators would back up, is documented in the companion statewide report and surfaced here in the residents' first question at the May 2026 meeting.

The Energy, Labor, and Infrastructure Reading

The labor evidence is consistent and thin: roughly 50 permanent workers per typical facility, half contractors, against thousands of temporary construction jobs, the inverse of the foundry-era employment profile that eastern Henrico's industrial land once carried. The infrastructure evidence is richer: a 230kV system and 13 MGD sewer capacity built for semiconductors and absorbed by servers; a reservoir expansion tracking industrial demand; a generator inventory approaching four figures for one operator; and a by-right process that never required cumulative load review. The construction apparatus detail in Part Eight, contractors and engineering disciplines, supports analysis of where the buildout's labor and supply chains actually sit.

The Energy Geography Reading

Henrico demonstrates how digital infrastructure follows entitled land and physical advantage rather than population or labor. The sequence runs: subsea cables land at Virginia Beach for reasons of ocean geography; the shortest inland path to existing fiber and power runs through a county holding a dead semiconductor plant with live infrastructure; the industry concentrates there, converting rural-edge farmland at the urban periphery into the densest data center corridor outside Northern Virginia. The rural dimension matters: Varina is the county's rural district, and its residents' testimony about night skies, hums, and "rural and residential character" is a record of rural place-identity under digital industrialization. The regional cascade in Part Ten, development pressure rolling outward to Hanover, Louisa, Charles City, and beyond as each jurisdiction tightens, is the framework's diffusion hypothesis observed in real time.

PART TWELVE: GAPS IN THE RECORD

Each item below is an open documentary question with an address. Items marked with an asterisk (*) correspond to claims in the body of this case study that rest on secondary sources (news articles, industry publications) rather than primary documents (county records, court filings, census tables), with the primary source identified for verification. The items are stated as of June 12, 2026.

Primary-Source Verification Priorities

*$44–$45 million infrastructure investment figure (Part One). This figure is cited in multiple industry publications (InterGlobix, RVA757 Connects) but has not been verified against Henrico County Board of Supervisors appropriation records or EDA bond documents. Primary source: Henrico County EDA records, Board of Supervisors minutes from the mid-1990s.

*Qimonda peak employment of 1,500 (Part One). Cited in industry coverage. Primary source: Virginia Employment Commission quarterly census data for White Oak Technology Park, 2006–2008.

*QTS purchase price of $12 million (Part One). Cited in Data Center Knowledge and DPR Construction case studies. Primary source: Henrico County Circuit Court deed records for the parcel.

*18 percent of East Coast internet traffic figure (Part One). Cited in industry publications. This figure is inherently difficult to verify independently. Research priority: Contact QTS corporate communications and the Virginia Economic Development Partnership for methodology.

*White Oak assessed value of $2.25 billion (Part One). Cited in regional news coverage. Primary source: Henrico County Commissioner of Revenue, real property assessment records for White Oak Technology Park parcels.

*$750 million initial Meta investment (Part One). Cited in Data Center Knowledge and VACO. Primary source: VEDP project files; Henrico EDA records.

*Meta total investment exceeding $1.5 billion (Part One). Cited in multiple news sources. Primary source: VEDP project files; Henrico County land records showing successive expansions.

*$0.40 rate date and prior $3.50 rate (Part One). Cited in news coverage. Primary source: Henrico County Board of Supervisors ordinance adopting the rate change, 2017.

*Cumulative data center revenue of $18 million, 2017–2024 (Parts One and Eleven). Reported by VPM from county figures. Primary source: Henrico Commissioner of Revenue; county budget documents.

*RIC4 purchase price of $43.8 million and Hourigan same-day resale figures of $58 million and $119 million (Part Eight). Cited in Richmond BizSense. Primary source: Henrico County Circuit Court deed records; EDA disposition records.

*Hourigan commitments reported by VPM outside the accepted proffer statement (Part Three): an air-cooling commitment, air quality monitoring with DEQ, and $5 million toward rooftop solar. Primary source: the Board of Supervisors minutes and recording of the May 14, 2024 hearing on REZ-2023-100017, to establish whether these were offered, and in what form, outside the 31 accepted proffers.

Records and Their Addresses

The QTS DEQ air permit application (Part Eight). The application covering 370 additional diesel generators should be obtainable from the Virginia DEQ public notice docket, including registration numbers, emissions calculations, and public comment period dates. Cumulative emissions modeling for the more than 900 generators QTS alone would hold permits for has not been performed in any public document located to date. This is a priority for the distributional justice and infrastructure frameworks.

Grandfathered entitlement inventory (Part Eight). A complete accounting of data center square footage approved before June 10, 2025 but not yet built, across all operators, would establish the true scale of the pipeline the PUP ordinance cannot reach. Primary sources: Henrico Planning Department development plan approvals and POD records. This is a priority for the institutional behavior framework.

Hourigan proffer enforcement under QTS ownership (Parts Three and Eight). The RIC5 proffers run with the land and bind QTS. Whether the 65 percent impervious-surface cap, the LEED Silver or equivalent building standard, the generator and noise limits, and the baseline sound study are being implemented, and who at the county is monitoring compliance, is not documented in available public sources as of June 12, 2026. Proffer enforcement is among the weakest links in Virginia land-use practice and a high-value research target.

Census tract-level demographics for New Market Village. This document uses Varina District and Varina Station area-level data from the American Community Survey. Subdivision-level demographic data for New Market Village specifically, including homeownership rate (which would complete the Varina–Wyndham comparison table), would require identifying the relevant census tract or block

group numbers through the Henrico County GIS portal (gis.henrico.us) and querying data.census.gov directly (ACS table B25003).

Annual data center tax revenue to Henrico County by fiscal year. The total revenue generated by the $0.40 rate and the projected revenue under the $2.60 rate are not comprehensively documented in available public sources. The address for year-by-year figures is the Henrico Commissioner of Revenue or the county Finance Department. The fiscal effect of the grandfathered pipeline's buildout at the $2.60 rate is a related modeling priority for the utility finance framework.

Parcel-level property records. The Darbytown site is identified as 2248 Darbytown Road. Specific tax parcel numbers, deed records, and the full chain of title are available through the Henrico County Circuit Court Clerk's office and the county's online GIS/property records system.

Water withdrawal and discharge data for Henrico data centers. As of early 2026, aggregate water consumption figures for the county's data centers are not reported in available public sources. The addresses for facility-level permit data are the Henrico Department of Public Utilities and the Virginia Department of Environmental Quality. This is a priority for the distributional justice and infrastructure frameworks.

Henrico's share of Dominion's data center grid load. JLARC reports statewide data center electricity demand, but, as of early 2026, county-level breakdowns are not reported in available public sources. Dominion's PJM interconnection filings and the White Oak substation load data may provide the necessary figures. This is a priority for the utility finance framework.

Full text of public testimony. The Henrico Citizen published a comprehensive investigative article on February 24, 2026, containing extensive direct testimony from community members, the developer, and county officials. The article is behind a subscriber paywall.[119] The May 2024 Hourigan hearing, the September 2025 planning commission hearing, the February 2026 BZA hearing, and the May 2026 community meeting were recorded; recordings may be available through the county clerk's office. For ethnographic purposes, the recordings are the primary sources; this document quotes only what made it into print.

Board of Supervisors minutes for the Hourigan hearing. The June 10, 2025 minutes held for this case study record both data center votes as unanimous (Schmitt, Cooper, Rogish, Roundtree, Nelson). The minutes of the May 14, 2024 hearing on REZ-2023-100017 were not read for this case study; they are the address for the commitments VPM reported outside the accepted proffers.[120]

Origin of the planning director's plan-of-development authority. Sec. 24-2314 of the zoning ordinance in force, adopted June 22, 2021, assigns the decision to the Planning Director. Whether a 2020 pandemic-era measure preceded it, as news coverage reports, is the open question; the addresses are the County Attorney's office and the Board's 2020 records. This is a priority for the institutional behavior framework.

Wyndham homeownership rate source. The 90.2 percent figure is from Data USA's analysis of 2023 ACS data. This should be verified against the Census Bureau's American Community Survey table B25003 for the Wyndham CDP.

Centra circuit court status. Whether Darbytown Road LLC filed an appeal of the February 26, 2026 BZA decision should be confirmed through the Henrico Circuit Court Clerk's online case information system.

APPENDIX: TIMELINE OF TURNING POINTS, 1995–2026

Date	Event
Mid-1990s	Henrico EDA and Board of Supervisors commit $44–45M to build out White Oak Technology Park for semiconductor recruitment
1998	Motorola-Siemens joint venture opens White Oak Semiconductor facility
Jan.–Feb. 2009	Qimonda files for insolvency in Germany (January); on Feb. 3 it announces closure of the 1.3M sq ft Henrico plant, letting go about 1,550 of 1,600 remaining employees
2010	QTS purchases shuttered plant for $12M; retrofit begins
2017	Board cuts equipment tax from $3.50 to $0.40 per $100; Meta announces $750M facility; permits prepared pre-announcement
2018–2021	MAREA, BRUSA, DUNANT subsea cables operational at Virginia Beach
Jan. 2019	QTS announces Mid-Atlantic Network Access Point of Virginia
2022	Henrico EDA director says 18% of East Coast internet traffic comes through QTS
Apr. 2024	QTS buys 478-acre RIC4 site from Henrico EDA for $43.8M
May 14, 2024	Board approves 622-acre Hourigan rezoning (REZ-2023-100017) with 31 accepted proffers over organized resident opposition
May 16, 2024	County announces $60M Housing Affordability Trust Fund, funded by data center revenue
Jul. 1, 2024	Hourigan buys 400 acres for $58M and sells them to QTS the same day for $118.8M
Dec. 9, 2024	JLARC publishes statewide data center study: unconstrained Virginia power demand forecast to double within ten years

The timeline continues below for 2025–2026.

Date	Event
Feb. 26, 2025	Planning Director approves QTS RIC4 and RIC5 master plans: 17 data centers, about 7.9M sq ft
Mar. 2025	Centra puts Darbytown parcel under contract; Loudoun County ends by-right approval; Board directs staff to draft data center zoning amendments
Apr. 8, 2025	Board approves FY2025–26 budget, raising the data center equipment rate from $0.40 to $2.60 per $100
May 1, 2025	Henrico planning staff publish Potential Impacts of Data Centers analysis
Jun. 10, 2025	Board unanimously adopts Ordinance 143-25 and Resolution 142-25: PUP requirement, design guidelines
Aug. 2025	HHHunt files with Hanover County to rezone ~400 acres beside Wyndham (Hunting Hawk Golf Club land)
Sep. 11, 2025	Planning commission recommends denial of Centra PUP, 4-1-1, against a staff recommendation of approval with conditions; hot-mic “location, not project” remark
Oct. 1–13, 2025	Centra files vested-rights claim, withdraws PUP application
Nov. 14, 2025	Darbytown Road LLC buys 195-acre parcel for $13.5M, five months after ordinance
Dec. 2025	Planning director denies vested-rights claim (Dec. 10); Wagner files 1.82M sq ft warehouse plan later that month
Jan. 2026 (reported Jan. 16)	Hanover Planning Commission recommends denial of the HHHunt rezoning, unanimously
Jan. 21, 2026	County administratively approves Airport West Industrial Campus warehouses (POD-2025-103055), no hearing
Jan. 28, 2026	HHHunt withdraws its Hanover County rezoning application for the 400-acre campus beside Wyndham (letter dated Wednesday, Jan. 28; reported Jan. 30)
Feb. 26, 2026	BZA unanimously denies Centra vested-rights appeal
Apr. 16, 2026	Hanover planning commission recommends Mountain Road approval 6-1
May 18, 2026	Richmond BizSense reports the QTS RIC4/RIC5 expansion and a DEQ application for 370 generators

Date	Event
May 19, 2026	Varina community meeting; “No More Data Centers” signs; Nelson concedes pipeline cannot be stopped
May 27, 2026	Hanover Board of Supervisors rejects Mountain Road 4-3 after six-hour meeting

ENDNOTES

[1] The research framework categories used in this case study are the author's analytic categories, applied by type of work.

[2] Tommy N. Turner, What Virginia Is Spending, What Virginia Is Getting: The Commonwealth Data Center Reference, v5.3, August 2026, 10.5281/zenodo.20679292.

[3] InterGlobix Magazine, "The Growth Story of White Oak Technology Park," 2022. interglobixmagazine.com. Acreage figure also cited in Anthony Romanello, "Expanding Digital Infrastructure in Virginia," RVA757 Connects, September 2022. Pre-industrial land-use history and 1960s planning antecedents per the author's Henrico research compilation, project files, March 2026.

[4] InterGlobix Magazine (2022); RVA757 Connects (2022). The $44–$45 million figure appears in both sources. Primary source verification priority: Henrico County EDA records and Board of Supervisors appropriation minutes, mid-1990s.

[5] Rich Miller, "QTS Plans Huge Virginia Data Center," Data Center Knowledge, April 5, 2010. Background on the Motorola-Siemens joint venture and subsequent corporate transitions.

[6] InterGlobix Magazine (2022). Primary source verification priority: Virginia Employment Commission quarterly data for the White Oak Technology Park site, 2006–2008.

[7] Data Center Knowledge (2010); DPR Construction, QTS Richmond 1 Data Center Case Study. dpr.com. Facility specifications. Filing and closure: WWBT NBC12, "Qimonda Seeks Bankruptcy Protection," January 23, 2009; Richmond BizSense, "Qimonda to Close Richmond Plant, Lay Off 1,500," February 3, 2009.

[8] Rich Miller, "QTS Plans Huge Virginia Data Center," Data Center Knowledge, April 5, 2010. Purchase price of $12 million. Primary source verification priority: Henrico County Circuit Court deed records.

[9] DPR Construction case study. Square footage and raised floor capacity figures.

[10] J. Elias O'Neal, "Another 1.5 Million Square Feet of Data Center Space Eyed in White Oak," Richmond BizSense, November 19, 2019. Reports about 1.2 million square feet planned on a 210-acre site east of the existing 1.3-million-square-foot campus and a separate 1.1-million-square-foot project to the south, for a White Oak total of about 3.6 million square feet. See also Michael Schwartz, "1.5M-Square-Foot Expansion Underway at QTS Data Center Site in Henrico," Richmond BizSense, July

14, 2022. Reports construction underway on about 200 acres purchased from the Henrico EDA for nearly $18 million.

[11] QTS, “QTS Announces Mid-Atlantic Network Access Point (NAP) of Virginia,” press release, January 16, 2019. qtsdatacenters.com.

[12] Submarine Networks, “MAREA.” submarinenetworks.com. Dgtl Infra, “Telxius Joins Trans-Atlantic Dunant and MAREA Subsea Cables,” February 2, 2022.

[13] Submarine Networks, “BRUSA.” submarinenetworks.com.

[14] Submarine Networks, “DUNANT.” submarinenetworks.com. Google corporate announcement on DUNANT capacity.

[15] Virginia Economic Development Partnership, “Going Below.” vedp.org. Data Centre Magazine, “Spotlight: Virginia Beach as a Growing Interconnectivity Hub,” January 2023.

[16] QTS, press release, January 16, 2019 (see note [11]). The release quotes QTS’s Sean Baillie and Telxius’s Enrique Valdés.

[17] Anthony Romanello, Henrico EDA Executive Director, stated that “18 percent of East Coast internet traffic comes through QTS,” as reported in Michael Schwartz, “1.5M-Square-Foot Expansion Underway at QTS Data Center Site in Henrico,” Richmond BizSense, July 14, 2022. Also cited in Data Centre Magazine, “Spotlight: Virginia Beach as a Growing Interconnectivity Hub,” January 2023, and Data Center Dynamics, “Virginia’s Land Dilemma,” January 2020. The figure is a county official’s claim based on QTS data; independent verification methodology is not disclosed. Flagged as research priority in Part Twelve.

[18] Rachel Kester, “Henrico Became a Data Center Hub Seemingly Overnight,” The Richmonder, April 6, 2025. Primary source verification priority: Henrico County Commissioner of Revenue assessment records.

[19] Rachel Kester, The Richmonder (2025). Rate figures also cited in Henrico County Proposed Budget FY2025–26. Primary source verification priority: Board of Supervisors ordinance adopting the rate change, 2017.

[20] Yevgeniy Sverdlik, “Facebook to Build $1B Data Center in Virginia,” Data Center Knowledge, October 4, 2017. VACO, “Henrico Officials Celebrate Facebook Facility Announcement,” October 2017.

[21] Liana Hardy, “Data Center Detour: Inside Henrico County’s Shifting Mindset,” Henrico Citizen, February 24, 2026.

[22] Data Center Knowledge (2017); VACO (2017); subsequent expansion coverage in Richmond BizSense.

[23] Henrico County, Schedule 89 depreciation methodology. Referenced in county budget documents and JLARC (2024).

[24] Lyndon German, “Henrico to Dedicate Data Center Revenue to Affordable Housing Fund,” VPM News, May 16, 2024. Coverage of the May 14, 2024 public hearing on rezoning case REZ-2023-100017 (Hourigan), including its description of approximately 30 proffers, resident and supervisor quotations, the cumulative 2017–2024 data center revenue figure of $18 million, and the May 16 trust fund announcement with availability of funds July 1, 2024. Accepted proffer statement: John A. Vithoulkas, County Manager, letter to HD CVA, LLC, re Rezoning Case REZ-2023-100017, May 21, 2024, proffers 1 to 31 (appellant’s exhibits in APP-2026-100056, binder pp. 247 to 259). VPM names the Three Chopt supervisor Misty Whitehead; the county’s 2025 Board minutes list Misty D. Roundtree.

[25] Henrico County, Proposed Budget FY2025–26: Tax Rate Changes and Data Center Revenue, February 2025. henrico.gov. Henrico County, “Henrico’s Proposed Budget Offers Sweeping Tax Relief for Homeowners, Businesses,” henrico.gov news, February 2025, with an update recording the Board’s unanimous approval of the fiscal 2025–26 budget on April 8: proposed rate of $2.60 against a state average of $3.09; the housing initiative funded through the real estate taxes associated with data centers.

[26] Count of 37 data centers as of 2024 compiled from Henrico County Planning Department staff analysis, county GIS data, and industry directories.

[27] Facility details compiled from Richmond BizSense coverage (2024–2026), Henrico County planning staff reports, and company press releases. Iron Mountain program: Henrico County plan of development POD-2025-100752, “IMDC RCH1 Phase 1 and Master Plan” (Director level, filed March 31, 2025): three two-story data centers totaling approximately 1,189,285 square feet, phase one approximately 360,000 square feet (county permit portal record). Richmond BizSense (May 18, 2026) reports four data centers totaling 365,000 square feet. $8 million land purchase (November 2024) and Clark Construction role per Richmond BizSense (November 13, 2024 and May 18, 2026). QTS operational count: Richmond BizSense, May 18, 2026, as updated and revised June 12, 2026 (note [96]).

[28] Virginia Joint Legislative Audit and Review Commission (JLARC), Data Centers report, 2024. Employment figure for a typical 250,000-square-foot facility.

[29] Richmond BizSense, “Henrico Reviewing First Permit Request Under New Data Center Rules,” September 10, 2025. Employment figure: Jonathan Spiers, “Varina

Data Center Proposal – First Under Henrico's New Rules – Gets Thumbs-Down from Planning Commission," Richmond BizSense, September 22, 2025 (Andy Condlin, attorney for the applicant: about 50 employees per building, or 400 workers total at the site).

[30] Henrico County, Ordinance 143-25 (June 10, 2025), amending among other sections Sec. 24-3406 (O-3 Office District), Sec. 24-4205 (Principal Use Table) and Sec. 24-4319 (Commercial Uses: Offices); Planning Department staff report PUP-2025-101460, September 11, 2025, p. 1 (data centers as a primary use "are only allowed in office, business, and industrial zoning districts with the approval of a provisional use permit"); minutes of the joint public hearing of May 15, 2025 (data centers "a by-right use in office, business, and industrial districts for over 40 years"), in the appellant's exhibits in APP-2026-100056.

[31] Henrico County Planning Department, Staff Analysis: Potential Impacts of Data Centers, May 1, 2025. henrico.gov.

[32] Henrico County Zoning Ordinance, Sec. 24-2314 and Figure 2314, Plan of Development (adopted June 22, 2021, effective September 1, 2021; text as amended through July 28, 2026): application submitted to and decided by the Planning Director; Planning Commission review "Does not apply." Richmond BizSense (January 27, 2026) for the COVID-era account.

[33] Author's framework analysis. Institutional behavior and infrastructure/labor framework designations.

[34] Census Reporter, "Varina District, Henrico County, VA." ACS 2024 5-year estimates. censusreporter.org.

[35] Census Reporter (2024). Henrico County median from same vintage.

[36] Census Reporter (2024). Per capita income and poverty rate figures.

[37] Point2Homes, "Varina Station, Henrico, VA Demographics." 2019–2023 ACS estimates. Primary source verification priority: ACS table B03002 for the relevant census tract(s).

[38] Point2Homes (2019–2023 ACS).

[39] Liana Hardy, Henrico Citizen (2026); Rachel Kester, The Richmonder (2025); community testimony at September 2025 planning commission hearing and February 2026 BZA hearing.

[40] Author's framework analysis. Distributional justice framework designation.

[41] By-right plan: Henrico County plan of development POD-2025-101009, “Airport West Data Center Campus” (Director level, filed April 2025, later withdrawn): “seven, two-story 231,603 square foot data centers, totaling 1,621,221 square feet” (county permit portal record). Permit concept plan of eight buildings: staff report PUP-2025-101460, September 11, 2025. Richmond BizSense (September 10, 2025) describes a 1-million-square-foot campus of eight 200,000-square-foot buildings, figures that do not agree with each other or with the plan of record.

[42] SchoolDigger, “George F. Baker Elementary School.” schooldigger.com. DonorsChoose, “George F Baker Elementary School.” National Center for Education Statistics data. U.S. News Education, “George F. Baker Elementary.”

[43] Liana Hardy, Henrico Citizen (2026). Wagner background.

[44] Liana Hardy, Henrico Citizen (2026); Richmond BizSense (September 10, 2025).

[45] Richmond BizSense (September 22, 2025); Liana Hardy, Henrico Citizen (2026). Zoning confirmation letter and vested-rights claim timeline. Letter: Henrico County Zoning Division, ZCL-2024-100685, June 12, 2024, to BrightFarms, re 2248 Darbytown Road, part of parcel 812-704-4612, Exhibit A to the appellant’s exhibits in APP-2026-100056 (Henrico County Board of Zoning Appeals, February 26, 2026). Planning Commission vote and staff recommendation: Henrico County Planning Department, staff report PUP-2025-101460, September 11, 2025.

[46] Richmond BizSense (September 2025 and February 2026 coverage).

[47] Henrico County Planning Department, plan of development post-action agenda, June 2025 (POD-2025-101009, Airport West Data Center Campus, deferred); vested-rights determination of December 10, 2025, note 1 (application submitted April 28, 2025, not approved, deferred; see note [78]); BZA transcript, February 26, 2026 (appellant’s counsel: the plans “were scheduled to be on the Director’s agenda for approval on June 26th, 2025”; see note [83]). Richmond BizSense (September 10, 2025) describes the project as set to be heard by county supervisors in June, which the plan-of-development record does not bear out.

[48] Special warranty deed, Fareva Richmond Inc. to Darbytown Road, LLC, made as of and recorded November 14, 2025, Henrico County Circuit Court Clerk’s Office, Instrument 202500030864, consideration $13,500,000 (in the appellant’s exhibits in APP-2026-100056). Richmond BizSense, “Henrico Denies Vested-Rights Appeal for Data Centers at Darbytown Site,” February 27, 2026.

[49] Liana Hardy, Henrico Citizen (2026). Burrell quote on noise.

[50] Richmond BizSense, “Varina Data Center Proposal Gets Thumbs-Down from Planning Commission,” September 22, 2025. Burrell quote at hearing.

[51] Liana Hardy, Henrico Citizen (2026). Burrell quote on racial equity.

[52] WRIC ABC 8 News, “Finally Somebody Heard Us: Henrico Residents React,” February 26, 2026.

[53] Liana Hardy, Henrico Citizen (2026). Bruce quote.

[54] Liana Hardy, Henrico Citizen (2026). Johnson quote on the proffer.

[55] Citizen Portal, “Henrico Supervisors Require Provisional Use Permits, Tighten Rules for Data Centers,” June 10, 2025. Nelson quote. Minutes, Henrico County Board of Supervisors, June 10, 2025, item 142-25 (in the appellant’s exhibits in APP-2026-100056), for Nelson’s statement on the QTS case.

[56] WRIC ABC 8 News, February 26, 2026. Liana Hardy, Henrico Citizen, February 26, 2026. Cooper quote at BZA hearing. Quotation as transcribed: BZA transcript, February 26, 2026, pp. 33 to 34 (see note [83]).

[57] The Wyndham Foundation, “Welcome to the Wyndham Community,” wyndhamfoundation.com (accessed March 2026). Confirms: “Established in 1992, Wyndham is a mixed-use community” spanning 1,271 acres with 1,727 residential units. HHHunt, “HHHunt Investing $200 Million in New Planned Communities,” blog.hhhunt.com, February 1, 2022. Confirms HHHunt as original developer of Wyndham. Homes.com, “Wyndham, VA City Guide,” homes.com.

[58] Wyndham Foundation website; community information.

[59] Data USA, “Wyndham, VA.” 2023 ACS data. datausa.io.

[60] Data USA (2023 ACS). Racial composition figures.

[61] Niche.com school rankings; U.S. News Education, Deep Run High School profile.

[62] Jonathan Spiers, Richmond BizSense, “HHHunt Eyes 10-Building, 400-Acre Data Center Campus Beside Wyndham,” September 8, 2025 (filed with Hanover County in August 2025; rezoning, comprehensive plan amendment, special exception, conditional use permit); Jonathan Spiers, Richmond BizSense, “Hanover Planning Commission Rejects HHHunt Data Center Project Near Wyndham,” January 16, 2026 (10 buildings, 3.9 million square feet, Hunting Hawk Golf Club land).

[63] Liana Hardy, Henrico Citizen (2026). Background on the 2019 Dominion Club Drive dispute.

[64] Not used.

[65] Richmond BizSense, January 16 and January 30, 2026: opponents' stated concerns were traffic, rural character and the newness of the comprehensive plan; property values and noise appear in reader comments, not in the article bodies. The January 16 article reports about three dozen speakers in opposition and two in support, and a November community meeting at South Anna Elementary School attended by more than 450 people; neither article mentions the Wyndham Foundation.

[66] Not used.

[67] Jonathan Spiers, Richmond BizSense, "HHHunt Withdraws Plan for 400-Acre Data Center Campus Beside Wyndham," January 30, 2026 (withdrawal letter "dated Wednesday," January 28, 2026; case had been scheduled for the Hanover Board's February 25 meeting); Richmond BizSense, January 16, 2026 (unanimous Planning Commission recommendation of denial).

[68] Sequence from the primary record: POD-2025-101009 (by-right plan of development, submitted April 29, 2025, in review when the ordinance passed) and PUP-2025-101460 (provisional use permit, Planning Commission September 11, 2025), per the appellant's exhibits in APP-2026-100056 and the Planning Department staff report; POD-2025-103055 (warehouses, approved January 21, 2026), per the county's January 2026 plan-of-development post-action agenda. Hanover sequence per notes [62] and [67].

[69] Table compiled from sources cited in the Varina and Wyndham profile sections.

[70] Henrico County Board of Supervisors, Resolution 142-25 and Ordinance 143-25, June 10, 2025. henrico.gov. Unanimous vote reported in Citizen Portal (June 10, 2025) and multiple news outlets, and recorded in the June 10, 2025 minutes (Schmitt, Cooper, Rogish, Roundtree, Nelson). Board resolution directing staff to research and prepare zoning ordinance amendments for data centers, and minutes of the joint special meeting of May 15, 2025 ("In March, the Board of Supervisors requested staff draft regulations"; the Planning Commission's recommendation of the overlay proposal; the Board's deferral and direction to remove the overlay), in the appellant's exhibits in APP-2026-100056. Ordinance 143-25, preamble: the June 10 ordinance is an "amended version of the Original Proposal" without an overlay district.

[71] Henrico County, Zoning Ordinance Amendment: Data Center Development Standards (Ordinance 143-25), June 10, 2025.

[72] Henrico County, Data Center Design Guidelines, June 10, 2025. henrico.gov/public-data/data-center-design-guidelines/.

[73] Henrico County Planning Department, Staff Analysis: Potential Impacts of Data Centers, May 1, 2025. Water consumption range for evaporative cooling systems. Cooling and generator-testing requirements: Ordinance 143-25 as amended on June 10, 2025, Sec. 24-4328.B.2 and B.3 (June 10, 2025 minutes, in the appellant's exhibits in APP-2026-100056; codified in Sec. 24-4328.B of the zoning ordinance as amended through July 28, 2026).

[74] Henrico County, Data Center Design Guidelines (2025). Setback, noise study, and architectural requirements.

[75] Henrico County, Proposed Budget FY2025–26, and the county news release and update cited in note [25].

[76] Richmond BizSense (September 22, 2025). Hearing duration and speaker count.

[77] Liana Hardy, Henrico Citizen (2026). Hot mic exchange. First live-streamed planning commission meeting.

[78] R. Joseph Emerson, Jr., Director of Planning, letter to Andrew M. Condlin re Vested Rights Determination, December 10, 2025, with the concurrence of Andrew R. Newby, County Attorney, findings 8 and 9 (appellant's exhibits in APP-2026-100056, binder pp. 127 to 134). Richmond BizSense, "After Withdrawing Data Center Plan, Developer Proposes Industrial Buildings at Same Varina Site," December 17, 2025.

[79] Liana Hardy, Henrico Citizen, "Henrico's Board of Zoning Appeals Denies Data Center Company's Appeal for Varina Site," February 26, 2026.

[80] Richmond BizSense (February 27, 2026). Condlin's argument. Figures as stated by counsel: BZA transcript, February 26, 2026, pp. 28 to 29 (see note [83]).

[81] Deed recorded November 14, 2025 (note [48]); Richmond BizSense (February 27, 2026).

[82] WRIC ABC 8 News, February 26, 2026. Nelson and Cooper appearances.

[83] Henrico County Board of Zoning Appeals, minutes of February 26, 2026, incorporating the Planet Depos transcript of the administrative hearing in APP-2026-100056: appellant's counsel on items (vi) and (vii), transcript pp. 24–27; deputy county attorney, pp. 10–13 and 18; motion and vote, pp. 69–70; minutes: upheld 5–0 (Broadway, Green, Johnson, Lawrence, Massie). The written-determination clause, item (vii), was added by 2010 Va. Acts ch. 315 (Board of Supervisors of Prince George County v. McQueen, 287 Va. 122 (2014), slip op. at 6 n.3); Board of

Supervisors of Stafford County v. Crucible, Inc., 278 Va. 152 (2009). Also WRIC ABC 8 News (February 26, 2026); Liana Hardy, Henrico Citizen (February 26, 2026).

[84] Richmond BizSense (February 27, 2026). Wagner comment on the circuit court option. Court filing status as of June 12, 2026 per author's review of available coverage; confirmation through the Henrico Circuit Court Clerk's case information system is flagged in Part Twelve.

[85] Richmond BizSense, "After Withdrawing Data Center Plan, Developer Proposes Industrial Buildings at Same Varina Site," December 17, 2025. Virginia Business, "Developer Proposes Henrico Industrial Park After Resistance to Data Centers," December 18, 2025.

[86] Henrico County Planning Department, plan of development post-action agenda, January 2026: POD-2025-103055 approved January 21, 2026, Varina District, GPIN 812-704-4612, 195.00 acres, 1,821,340 square feet. Reported in Richmond BizSense, "Henrico Approves Industrial Buildings for Darbytown Site as Developer Appeals Data Centers Denial," January 27, 2026.

[87] Richmond BizSense (January 27, 2026). Nelson comment on employment and traffic.

[88] Author's analysis. Square footage comparison: 1,621,221 (POD-2025-101009, by-right data center plan, April 2025; note [41]) versus 1,821,340 (POD-2025-103055, warehouse plan; note [86]).

[89] Author's analysis of the structural gap in Henrico's regulatory reform.

[90] Author's framework analysis. Institutional behavior and infrastructure/labor framework designations as described in the Purpose and Scope section.

[91] InterGlobix Magazine (2022); RVA757 Connects (2022). Infrastructure specifications.

[92] Cooling requirement: Ordinance 143-25, Sec. 24-4328.B.3 (note [73]). Water consumption figure from Henrico Planning Department Staff Analysis (May 2025). County treatment capacity (30–40 MGD) and Cobbs Creek Reservoir 130 MGD expansion target per Henrico Department of Public Utilities figures as compiled in the author's Henrico research files, March 2026.

[93] Virginia Joint Legislative Audit and Review Commission (JLARC), Data Centers in Virginia, Report 598, December 9, 2024, p. 27 (independent forecast; growth concentrated in the Dominion transmission zone). Dominion Energy Virginia, 2025 Integrated Resource Plan Update, Case No. PUR-2025-00184, filed October 15,

2025, p. 2 (6.3 percent annual growth; more than double by 2045 in the DOM Zone) and p. 18 (16,913 MW under executed ESAs or CLOAs as of July 31, 2025).

[94] Author’s framework analysis. Utility finance and infrastructure/labor framework designations as described in the Purpose and Scope section.

[95] Kelsey Jones, “Henrico Residents Push Back on Data Center Expansion Near White Oak Technology Park,” WTVR CBS 6, May 19, 2026. Community meeting account, resident and Nelson quotes, and county representatives' reference to DEQ Tier 4 emissions standards taking effect in July 2026. Statute: 2026 Va. Acts ch. 397 (HB 507), LIS bill summary.

[96] Jonathan Spiers, “Data Center Giant QTS Progressing on 1,100-Acre Expansion That Would Add 17 Buildings to Its Henrico Hub,” Richmond BizSense, May 18, 2026 (updated and revised June 12, 2026). RIC4 and RIC5 specifications, development plan approvals, DEQ generator application (370 sought; 544 plus 11 cooling towers already permitted), RIC4 purchase from Henrico EDA for $43.8 million (April 2024), LL Flooring property acquisition ($104 million), and RIC5’s status as the last major rezoning before the June 2025 ordinance. Also covered in WRIC ABC 8 News and WTVR CBS 6, May 18–19, 2026. County record: Henrico County Planning Department, plan of development post-action agenda, February 27, 2025: POD-2024-102609, QTS RIC 4 Master Plan, 478.14 acres, M-2, ten two-story data centers totaling 3,773,736 square feet, applicable rezoning cases “N/A”; POD-2024-102383, QTS RIC5 Campus Master Plan, 621.93 acres, M-1C, seven data centers totaling 4,116,217 square feet, owner QTS Richmond V LLC, applicable rezoning case REZ-2023-100017; both approved by the Director on February 26, 2025. Virginia DEQ, permit approval, QTS Richmond V, LLC, Registration No. 53259, April 22, 2026. Impervious-surface proffer: note [24].

[97] Mike Platania, “Hourigan Paid $58M for Henrico Land, Then Sold It the Same Day for $119M,” Richmond BizSense, July 23, 2024. Primary source verification priority: Henrico County Circuit Court deed records.

[98] Author’s framework analysis. Institutional behavior, utility finance, and distributional justice framework designations as described in the Purpose and Scope section.

[99] Andrew R. Chow and Connor Greene, “How One Virginia County Turned Data Center Money into Affordable Housing,” Time, March 13, 2026 (time.com/article/2026/03/11/data-centers-affordable-housing/). Henrico County, Proposed Budget FY2025–26.

[100] Henrico County housing trust fund program description. Partnership for Housing Affordability administration details.

[101] Time (March 2026). Program outcomes as of early 2026: 383 affordable units awarded construction funding; 30 closings at $80,000 average assistance; developer fee waivers and expedited reviews.

[102] Time (March 2026). Comparison with Commonwealth housing trust fund.

[103] Time (March 2026). Swainston profile. National replication interest: Urban Institute, “Turning Data Center Revenues into Affordable Homes,” Urban Wire, 2026; WKAR Public Media, “From Virginia to Lansing: How Data Center Revenue Could Be Used to Support Housing,” January 15, 2026.

[104] Henrico County, Schedule 89. Four-year depreciation to 10 percent of original cost.

[105] Author’s analysis of the rolling steady-state revenue dynamic. Replacement cycle data from industry sources and Tommy N. Turner, Data Center Technical Reference Guide, March 2026.

[106] Author’s technical reference document compiled from industry sources, project files, March 2026. AI accelerator 18–36 month cycle based on NVIDIA product cadence and hyperscaler procurement disclosures; general-purpose server 6–10 year extended cycle based on Uptime Institute and LBNL data center efficiency surveys. See also Carl Vinson Institute of Government, Tax Incentive Evaluation: Georgia Data Center Sales & Use Tax Exemption, December 2025, which notes a three-to-five-year equipment “refresh” cycle.

[107] Henrico County, Proposed Budget FY2025–26. One-time appropriation structure.

[108] Author’s assessment based on available evidence. No comparable program identified in other Virginia or U.S. jurisdictions as of June 2026.

[109] GovTech / Richmond Times-Dispatch, “Richmond, Va., Area Counties Split on Data Centers,” December 2025.

[110] Richmond BizSense, “Hanover Planning Commission Recommends Approval of 430-Acre Data Center Project,” April 17, 2026; VPM News, “Hanover Planning Commission Recommends Approving Mountain Road Data Center,” April 17, 2026. The 6-1 vote followed deferrals in February and at the developer’s request.

[111] Richmond BizSense, “Hanover Supervisors Reject Data Center Project on Mountain Road,” May 28, 2026; WTVR CBS 6, “Hanover Board of Supervisors Denies Controversial Mountain Road Data Center Development,” May 28, 2026; VPM News, “Hanover Supervisors Nix Mountain Road Data Center Project,” June 1, 2026. Vote breakdown: Prichard, Floyd, Stoneman, and Chairman Davis against; Dibble,

Herzberg, and Hudson in favor. Water demand figures and proffer package from project documents as reported. Adopted minutes, Hanover County Board of Supervisors, May 27, 2026: motion to approve REZ2025-00023 failed 3-4 (Davis, Stoneman, Floyd and Prichard voting no); deliberation remarks of the four members voting no.

[112] Tommy N. Turner, Case Study: Hanover County—Mountain Road, Tract, and the Search for Leverage, v3.0, September 2026, 10.5281/zenodo.20672048.

[113] GovTech / Richmond Times-Dispatch (December 2025).

[114] Data Center Watch, Local Activism and the U.S. Data Center Boom Report, 2026. datacenterwatch.org/report.

[115] GovTech / Richmond Times-Dispatch (December 2025). Board of Zoning Appeals decision of June 3, 2026 and the pending second appeal: the Chesterfield County case study in this series, 10.5281/zenodo.20672436.

[116] Tommy N. Turner, Case Study: Prince William County—Governance Capture, the Revolving Door, and the Democratic Correction, v3.2, October 2026, 10.5281/zenodo.20673498, Parts Two and Four.

[117] Prince William County, Notice of Public Hearing on the Annual Budget for Fiscal Year 2027, Calendar Year 2026 Tax Rates and Fees, and the Fiscal Year 2027-2032 Capital Improvement Program, pwcva.gov/assets/2026-03/AD2--PH_Annual_Budget_Tax_Rates_and_Fees.pdf: computer equipment and peripherals used in a data center, $4.15 per $100 adopted for FY2026 and $4.50 proposed for FY2027, public hearing April 7, 2026, Board action April 21, 2026. Adoption of $4.50 on April 21, 2026 and the April 2024 and April 2025 increases: the Prince William County case study in this series, v3.2, October 2026, 10.5281/zenodo.20673498, Part Six and notes [113], [114] and [124], which cite the Board’s April 18, 2024 action and the county's adoption releases of April 2025 and April 2026.

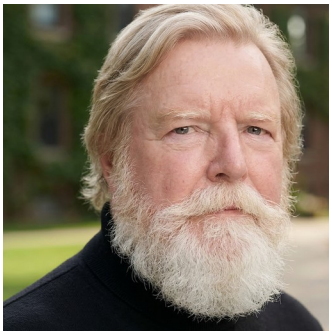
[118] Data Center Watch (2026). Coalition membership count: more than 42 groups. The Hanover County case study in this series (v3.0, 10.5281/zenodo.20672048) reports more than 50 member groups and records that its underlying document is not held. Neither count is established here against the coalition’s own member list.

[119] Liana Hardy, Henrico Citizen, February 24, 2026. henricocitizen.com (subscriber content).

[120] Henrico County Board of Supervisors, minutes, June 10, 2025 (in the appellant’s exhibits in APP-2026-100056); minutes of May 14, 2024, henrico.gov, not read.

This case study draws on Henrico County Board of Supervisors records, planning staff reports, rezoning case files, Board of Zoning Appeals proceedings, Virginia DEQ permit notices, census data, public testimony, and local and regional news coverage from 2024 through June 12, 2026. It supersedes v3.7 (September 2026). It is a companion to What Virginia Is Spending, What Virginia Is Getting: The Commonwealth Data Center Reference (v5.3, August 2026), which covers the statewide fiscal, ratepayer, and employment picture in detail.

About the Author



Tommy N. Turner is an independent researcher and writer who documents the local-government and energy dimensions of the data center build-out in Virginia. His series of jurisdiction-level case studies covers the counties and the fall-line corridor where Virginia's data center decisions have been made, refused, or contested, and the analytical volumes extend that work into the systems those decisions run on. Earlier volumes took the transmission network and the cost-allocation machinery, then generation, then water. This one takes Virginia’s second-largest data center jurisdiction, and the question of what a reform can reach once the largest entitlements have vested.

Like the rest of the series, it is assembled from primary records: the county's ordinances, resolutions, staff reports and plan-of-development agendas, the Board of Zoning Appeals minutes and hearing transcript, deed and parcel records, state air permits, the Code of Virginia and the Supreme Court of Virginia's vesting decisions, and the county's own published figures. He spent thirty years in corporate banking, banking technology and international consulting before this work, and holds an MBA from Emory. He writes opinion and analysis on Virginia public affairs for outlets including the Richmond Times-Dispatch, the Virginia Mercury, the Virginian-Pilot, the Roanoke Times, Cardinal News, and RTO Insider. The case studies and analytical volumes are published as open, citable living editions, revised as the record moves. He works from Williamsburg and Christiansburg, Virginia.

Contact tommy@gofast.pro · tommynturner.com · ORCID 0009-0005-7422-9881