
INDEPENDENT CASE STUDY

Chesterfield County, Virginia

A Data Center Case Study

The \$0.24 rate, the thirty-year lock,
and the two-corridor county

Companion to What Virginia Is Spending, What Virginia Is Getting

Chesterfield

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Williamsburg and Christiansburg, Virginia

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ABSTRACT

Chesterfield County built its data center strategy on a single number. In April 2019 the Board of Supervisors set the equipment tax rate at \$0.24 per \$100 of assessed value, a deliberate undercut of Henrico County's then-disruptive \$0.40, and the lowest data center rate in Virginia. The strategy worked. Google assembled three sites totaling nearly 1,640 acres through shell entities, Chirisa committed \$2 billion to Meadowville, and Commonwealth Fusion Systems selected Battery Brooke Parkway for the world's first grid-scale commercial fusion plant. This case study documents what the strategy cost: a 30-year contractual rate lock, structured as an EDA grant-back that survives any future board's repricing decision; a revenue gap of \$91 million to \$164 million a year against peer jurisdictions at full buildout; and a two-corridor regulatory record in which the county's most diverse, lowest-income corridor received its largest campus by-right, with no public hearing and no disclosure of water demand, while its most affluent corridor negotiated 750-foot buffers, closed-loop cooling, and 350 acres of permanent conservation.

The 2026 record extended every thread. The county defended its new conditional use framework at the Board of Zoning Appeals, which on June 3, 2026 unanimously rejected a developer's vested-rights challenge to the post-January 1 permit requirement, with a second appeal still pending. The State Corporation Commission's approval of Dominion's 944 MW Chesterfield Energy Reliability Center survived reconsideration and moved to the Supreme Court of Virginia, while the plant's air permit faces a separate challenge in Richmond Circuit Court, both cases brought on behalf of the fenceline communities that absorbed the coal station the gas plant replaces. Google pulled \$215 million in building permits for its first Bermuda Hundred hall. The regional rate environment moved against the lock from every direction: Henrico collects \$2.60, Prince William raised its rate to \$4.50, and Hanover votes June 24 on a rate of up to \$3.00. The state budget remained unresolved twelve days into June, with the data center sales tax exemption the central dispute and a July 1 shutdown threshold approaching.

The evidence is organized for an interdisciplinary research audience, with findings mapped throughout to five frameworks: distributional justice, institutional behavior, utility finance, energy and labor infrastructure, and energy geography. The central finding is structural. Henrico reformed after entitling and is living with what it grandfathered. Hanover refused before entitling and kept its leverage. Chesterfield contracted its leverage away: the county can tighten its zoning, and did, but the 30-year grant-back places the installed base beyond the reach of any repricing a future board might attempt. The reform's edge is real, and the BZA defended it. The edge stops where the contract begins.

PURPOSE, SCOPE, AND METHOD

This case study documents the fiscal architecture of data center development in Chesterfield County, Virginia, from the adoption of the \$0.24 equipment tax rate in 2019 through the 30-year performance agreements executed in 2025, the conditional use zoning reform effective January 1, 2026, and the first institutional tests of that reform in the spring of 2026. It is the rate-arbitrage case in this portfolio: the only jurisdiction in the series that built its competitive strategy on undercutting a neighboring county's rate, locked that rate for three decades through a contractual grant-back mechanism, and attracted a single hyperscale operator whose footprint may eventually exceed 2,000 acres across four sites.

The primary intended readers are the principal investigators and consultants of the Alfred P. Sloan Foundation study on the energy implications of data center expansion in Georgia, Virginia, and Tennessee, an interdisciplinary team whose work spans ethnographic and institutional analysis, environmental and distributional justice, energy geography, utility finance, and energy labor studies.[1] Following project convention, this document refers to the team's research frameworks by type of work rather than by individual researcher. The evidence connects directly to those frameworks. The utility finance framework applies to the rate arbitrage, the 30-year lock, the depreciation mechanics, the revenue dependency on operator refresh behavior, the GS-5 rate class, and the Chirisa rate-lock asymmetry. The energy, labor, and infrastructure framework speaks to the cost allocation question, the capacity market spike, the grid expansion costs (including Chesterfield-specific substations and transmission lines), the Proctors Creek wastewater expansion, and the question of who pays for infrastructure built to serve data center load. The distributional justice framework applies to the Bermuda Hundred corridor demographics, the historic district and slave trade record, the CERC siting and adjacent-community health data, the proffer asymmetry between eastern and western corridors, the education-labor mismatch, and the water disclosure vacuum. The energy geography framework applies to the scale of land conversion, the Upper Magnolia Green residential-to-industrial pivot, the Swift Creek Preserve as conservation offset, and the relationship between rate competition and land consumption. The institutional behavior framework illuminates the NDA and Project Peanut structure, the same-day EDA transaction, the disclosure controversy, the ZOMod reform, the county's defense of that reform at the Board of Zoning Appeals, and the behavior of a county competing on price rather than terms. These connections are flagged inline throughout, and Part Twelve consolidates them into a reading guide organized by specialty.

The second audience is Virginia localities currently evaluating data center fiscal terms. Chesterfield's experience is the most complete available record of a locality that competed on price, won, and then discovered what the price included. The third audience is citizens and journalists seeking to understand how a county's competitive rate strategy interacts with long-term revenue, grid costs, water demand, and the institutional mechanisms that govern disclosure.

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 agendas and case packets, State Corporation Commission orders and docket filings, Supreme Court of Virginia and circuit court filings, Virginia DEQ permit records, U.S. Army Corps of Engineers public notices, JLARC reports, American Community Survey data, corporate filings, and sustained local news coverage, principally Richmond BizSense, the Richmond Times-Dispatch, VPM News, WTVR, WWBT, The Richmonder, Virginia Mercury, Cardinal News, and Axios Richmond. Direct quotations from residents, attorneys, developers, and officials are reproduced as reported in the cited coverage or as recorded in public documents. No interviews were conducted for this version. Claims that rest on secondary sources rather than primary documents are flagged with an asterisk in their endnotes and consolidated in Part Thirteen with the primary source identified for verification. The evidence snapshot is June 12, 2026; decisions pending at that date, including the Hanover rate vote, the WestDulles appeal, the state budget, and both CERC appeals, are identified as pending rather than predicted.

The companion report, *What Virginia Is Spending, What Virginia Is Getting* (v4.0), covers the statewide fiscal picture.[2] The companion CFS case study, *The Google-CFS Power Purchase Agreement* (v1.7), provides the full treatment of the fusion plant, the PPA, and the risk allocation; this document carries the county-side record and the 2026 developments, and flags where the companion needs updating.[3] This document focuses on the county-level fiscal terms, the distributional record, and the institutional pathway.

PART ONE: WHAT CHESTERFIELD HAS APPROVED

The installed and committed base of data center development in Chesterfield County spans approximately 2,000 acres across four sites controlled by two operators. Total announced investment is \$11 billion, though the Chesterfield-specific share of Google's \$9 billion statewide Virginia commitment has not been publicly disclosed. [4] Every major site was developed by-right under pre-2026 zoning or facilitated through the Economic Development Authority. The conditional use requirement adopted in September 2025 (effective January 1, 2026) does not apply retroactively to these approvals.[5] The highest-value decisions were made under the most permissive framework, and the regulatory tightening arrived after the commitments were in place.

Google "Project Peanut" / Bermuda Hundred

Google's Bermuda Hundred campus is the anchor project. The 307-acre site at 2700 Bermuda Hundred Road was purchased from the Chesterfield EDA on March 27, 2020, for \$18.1 million through the entity Peanut LLC. The EDA had acquired approximately 353 acres from Riley and Helen Lowe for \$21.1 million on the same day in a simultaneous closing, retaining roughly 46 acres for future Meadowville Technology Park expansion. Peanut LLC also acquired a 5-acre parcel from Philip Morris at 2920 Bermuda Hundred Road for approximately \$308,000 on the same day.[6] The institutional dimensions of this transaction (the zero-day holding period, the NDA, and the disclosure controversy that followed) are documented in Part Seven.

The site is zoned I-2 (Heavy Industrial), which permitted data centers as a by-right use. No rezoning was required. No proffers were negotiated. No public hearing was held. Because the project proceeded by-right, the community adjacent to the site had no formal mechanism to participate in the approval process, impose conditions on noise or water consumption, or challenge the project before it was approved.[7]

Current site plans show three data center buildings totaling approximately 855,846 square feet, each spanning roughly 285,282 square feet, with 345 parking spaces. Design firms are AECOM (architectural) and Bohler Engineering (civil). Construction commenced in late 2025 with an estimated 18-to-24-month timeline. The project was publicly identified on August 27, 2025, as part of Google's \$9 billion Virginia initiative, more than five years after Peanut LLC acquired the site.[8]

The site sits in the immediate vicinity of the Town of Bermuda Hundred Historic District (DHR File 020-0064), one of the oldest English settlements in Virginia and a documented site in the transatlantic slave trade. The historic district's core is separated from the data center site by the Brown and Williamson Conservation Area

at 2800 Bermuda Hundred Road, a 265-acre buffer of preserved land along the James River.[9] The significance of this proximity is documented in Part Ten.

The project is covered by the 30-year performance agreement documented in Part Two.

Google Western Sites: The Residential-to-Industrial Conversion

In May 2025, the Board of Supervisors unanimously approved two EDA-led rezonings for Google in western Chesterfield.[10] The history of the primary western site is a significant finding for the energy geography framework and the institutional behavior analysis.

Upper Magnolia Green West (Case 25SN1038, "Project Skye"). 979.23 acres at 4200 Moseley Road. The land was previously owned by Salvatore Cangiano, a New Jersey-based developer and the original developer of the broader Magnolia Green master-planned community. Under a 1991 approval, the site was entitled for 1,336 residential units plus an additional 311 single-family building lots for the Cold Creek subdivision.[11]

On December 18, 2020, the Chesterfield EDA purchased the 2,057-acre Upper Magnolia Green tract from Cangiano for \$13 million (approximately \$6,320 per acre), funded from one-time FY2020 budget savings. In the December 23, 2020 press release, then-Chair Leslie Haley stated the acquisition would allow the county to "better manage growth." Deputy County Administrator Matt Harris stated it would "further strengthen the county's financial position for decades to come" by replacing residential rooftops with a high-value commercial tax base.[12] Board meetings in December 2020 and the January 2022 "State of the County" presentation emphasized that the county had "throttled back" residential development to avoid the estimated multi-hundred-million-dollar infrastructure burden of schools, roads, and emergency services for thousands of new households.

The residential entitlements were nullified when the EDA initiated rezoning cases 21SN0675 and 21SN0676 in 2021-2022 to convert the site to industrial use. Case 21SN0676 rezoned 1,728 acres to General Industrial (I-2), with the staff report describing a "Technology Village" with high architectural standards, heavy buffering, and limited "clean" industrial uses. The county marketed the site to semiconductor fabrication companies; it was reportedly a finalist for Intel before the chipmaker selected Ohio. The "Employment Center" designation in the Comprehensive Plan was used to justify the shift, arguing that the Western 360 corridor needed a jobs-to-housing balance to reduce out-commuting.[13]

Prior to the EDA acquisition, the site was zoned primarily Agricultural (A) with smaller portions of General Industrial (I-2). The Comprehensive Plan designated it

as Phased Suburban Residential (maximum 2 dwellings per acre) and Rural Residential/Agricultural. The land itself was almost entirely forested timber, not active agriculture; it had not been used for row crops or livestock in the decade preceding the EDA purchase.[14]

In late June 2025, Skyward Holdings LLC (Google) purchased 979 acres for approximately \$31 million. The assemblage included the EDA's northern acreage as well as land purchased from private neighbors including Carnes W S Inc. and Rosenberger Land LLC.[13]

This is a case of proactive municipal land-use conversion: the county used its EDA to intercept a residential-entitled site and redirect it to industrial use before any data center operator was publicly involved, driven by the fiscal logic that residential growth costs the county money (schools, services) while industrial growth generates net revenue. The fiscal calculation, not a developer's request, initiated the conversion. That institutional sequence is the finding for the institutional behavior framework.

Proffers for the data center use include a 750-foot setback from existing homes on Moseley Road, a 200-foot perimeter buffer, and noise limits of 75 dB daytime / 65 dB nighttime. Tract A (870 acres) is restricted to data centers; Tract B (approximately 100 acres) is limited to industrial use.[11]

The Swift Creek Preserve. As part of the companion case (25SN1039, Upper Magnolia Green East Amendment), 350 acres were designated as the Swift Creek Preserve, a permanent conservation area. The preserve is located on the Upper Magnolia Green East tract between Westerleigh Parkway and Duval Road. Proffer 7 states the land must be "dedicated to the Swift Creek Preserve... conserved and left in a natural state." The designation protects the headwaters and tributaries feeding the Swift Creek Reservoir, the county's primary drinking water source. Under Virginia law, proffered conditions run with the land; any future change would require a full public hearing and board approval to un-proffer the conservation status.[15]

The Swift Creek Preserve is a textbook example of what the energy geography framework would describe as "green mitigation," meaning conservation offsets that make industrial land conversion politically acceptable in affluent residential corridors. The 350-acre preserve addressed the primary objections from the Magnolia Green and Dogwood Creek communities by promising a permanent green belt in exchange for the data center campus.

Watkins Centre South (Case 25SN1040, "Project Loch"). 349.97 acres near Westchester Commons at 750 Watkins Centre Parkway. The site was fallow and

wooded, formerly part of the Watkins family nursery holdings, which had transitioned out of active agricultural production by the mid-2000s in anticipation of a corporate office park that was never built. The site had been in a state of "zoning limbo" since a 2006 case intended for office space.[16] Prior zoning was a mix of Agricultural (A) and General Industrial (I-2). The Comprehensive Plan designated it Corporate Office/Research and Development/Light Industrial (CORDLI).

Proffers include a 110-foot height limit, 75/65 dB day/night noise limits, 100-to-200-foot buffers with specific evergreen screening requirements to hide views from the Route 288 corridor and nearby affluent subdivisions, Route 288/Watkins Centre Parkway transportation improvements, fiber-optic infrastructure upgrades for the surrounding area, and cash-in-lieu contributions for public safety (fire/EMS) equipment. Acquired by Google through Aeris Investments LLC.[16]

Both western sites are designated for buildout after Bermuda Hundred is operational. Both are covered by the 30-year \$0.24 performance agreement.

Chirisa Technology Campus / Meadowville

Chirisa Technology Parks operates a multi-phase campus in the Meadowville Technology Park, representing a \$2 billion committed investment.[17] The campus encompasses approximately 342 acres across multiple parcels, with 242,042 square feet of operational space in a former Capital One facility and 380,000 square feet planned across two new buildings (approximately 100 MW per building). Current power load is 18 MW, with a publicly stated target of 200 MW or more at full buildout. Zoning is I-2 (Heavy Industrial), by-right. The Meadowville Technology Park total real estate assessment as of January 1, 2025, was \$356.9 million across 1,300 acres.[18]

Chirisa acquired the 100-acre Digital Drive site at 1600 Digital Drive for \$16.5 million in 2024 through a court-ordered sale related to Cartograf packaging liens. The site is nested within an existing industrial cluster with minimal residential buffering and standard industrial setbacks.[18]

Chirisa's projects were approved and developed by-right or through standard EDA site acquisitions. Chirisa does not have a 30-year fixed-rate agreement comparable to Google's grant-back structure. The implications of this asymmetry are documented in Part Two.

Tract / Branders Bridge: The Withdrawal

The one proposal that did not survive was Tract's 744-acre data center park at 16100 Branders Bridge Road. Despite a staff recommendation for approval, the Planning Commission voted unanimously to recommend denial in June 2025. Commissioner

Gib Sloan cited the substandard road, limited connectivity, and the project's vague development model.[19] Tract withdrew on July 2, 2025, and subsequently filed a Notice of Appeal in October 2025, arguing that the county's shift in policy during their application process constituted an "arbitrary and capricious" use of police power.[20] As of June 12, 2026, no ruling on the appeal appears in the public record.[21]

Combined Approved Footprint

Across all Google and Chirisa sites, the approved data center footprint totals approximately 2,000 acres: Bermuda Hundred (307 acres), Upper Magnolia Green West (979 acres), Watkins Centre South (350 acres), and Chirisa/Meadowville (~342 acres).[22] The combined conversion of approximately 2,000 acres from agricultural, residential, and semi-industrial uses to high-density digital infrastructure represents one of the largest land-use shifts in Central Virginia's recent history. At the western sites, the county did not merely approve a developer's request; it initiated the conversion by purchasing land with residential entitlements, nullifying those entitlements, rezoning to industrial, marketing the site to data center operators, and selling to Google at a markup (\$13 million purchase, \$31 million sale). That institutional sequence, fiscal pressure driving land-use conversion before any operator is involved, is a finding for the energy geography framework and the institutional behavior framework alike, and it has no parallel in the other case studies in this portfolio.

The 2026 Construction Record

The committed base stopped being prospective in 2026. Three developments put steel, permits, and federal filings into the record.

Bermuda Hundred goes vertical. On June 4, 2026, five building permits were filed at 2700 Bermuda Hundred Road for "Peanut Data Center Hall #1," the first of the campus's three buildings: \$115.4 million in electrical work (Miller Electric Co.), a \$55.4 million new-construction cold shell described in the permit record as the "first bldg on site" (Holder Construction Group), \$23 million in temporary electrical (Miller Electric), \$18.9 million in mechanical (The Poole and Kent Corporation), and \$2.1 million in plumbing (Poole and Kent), approximately \$214.7 million in declared value for one hall before fit-out.[23] The permits answered a question Google had declined to: Holder Construction Group is building the shell. Site work had begun in late 2025 on the 18-to-24-month timeline documented above; the June permits mark the start of vertical construction and start the clock on the first certificate of occupancy, which in turn starts the 30-year term of the performance agreement documented in Part Two.

Meadowville adds an AI tenant. In the first week of December 2025, plans were filed for the formerly stalled Cartograf site at 1600 Digital Drive: two data center buildings of roughly 190,000 square feet each, approximately 100 MW apiece, developed by Chirisa with American Real Estate Partners and Blue Owl Capital and leased in their entirety to CoreWeave, the AI-cloud operator. The site sold in December 2025 for \$46 million to an LLC tied to the joint venture. DPR Construction is the general contractor, Gensler the architect, Bohler the civil engineer; target operation is late 2027 for the first building and mid-2028 for the second.[24][25] The project proceeds by-right because its zoning and site path predate the January 1, 2026 conditional use requirement. On April 9, 2026, DEQ issued Chirisa Richmond LLC a minor new source review air permit for the site's generators, the only data center air permit issued in Chesterfield in the 2025–2026 record; no Google air permit for Bermuda Hundred appears on DEQ's issued list as of the snapshot date. [26] The timing matters: HB 507, signed in April and documented in Part Nine, imposes Tier 4-equivalent emission limits on data center generator permits applied for on or after July 1, 2026, which gives every operator with pipeline projects a reason to file before that date.

Project Loch enters federal permitting. In May 2026, a joint permit application surfaced for the Watkins Centre site through a U.S. Army Corps of Engineers public notice (NAO-2026-00182): a three-building campus with substations near Route 288 and Watkins Centre Parkway, with estimated impacts of 4.8 acres of wetlands and more than 2,800 linear feet of streams. The design was revised to avoid roughly 74 percent of on-site wetlands. The notice discloses that the Dry Bridge Cemetery sits within the site with possible unmarked graves, with a 25-foot buffer recommended. Google characterized the project as early-stage due diligence. The public comment period closed June 11, 2026.[27] The filing is the first quantified environmental impact record for any of the western sites, and it exists because federal wetlands jurisdiction attaches regardless of how the county zoned the land.

PART TWO: THE FISCAL FRAMEWORK

This is the analytical core of the case study. The fiscal architecture of Chesterfield's data center strategy rests on a single rate, a depreciation schedule, a contractual lock, and an institutional theory about volume and revenue. Each element is documented below. Every number in the remainder of this report follows from the data center equipment tax rate.

The \$0.24 Rate

Chesterfield County charges \$0.24 per \$100 of assessed value on data center equipment. The rate was adopted on April 10, 2019, through Resolution 19-175 as part of the FY2020 budget and tax rate ordinance. The Board of Supervisors (Chair Leslie A. T. Haley, Vice Chair Stephen A. Elswick, Dorothy A. Jaeckle, Christopher M. Winslow, and James M. Holland) voted unanimously following a public hearing on March 27, 2019. The rate went into effect on July 1, 2019.[28]

The specific legislative vehicle was Ordinance Section 3(h), which established a separate classification for "computer equipment and peripherals used in a data center" at \$0.24 per \$100, exercising the county's authority under Virginia Code § 58.1-3506. By decoupling data center equipment from the general business personal property rate, the Board created what County Administrator Dr. Joseph Casey and Economic Development Director Garrett Hart described as a "target market strategy" to attract massive capital investments that would diversify the county's tax base, which was historically approximately 80 percent residential and only 20 percent commercial.[28][29]

The data center equipment rate is 7 percent of the general computer equipment rate. A server rack in a corporate office is taxed at \$3.35 per \$100. The same rack in a data center is taxed at \$0.24.

Tax Category	Rate per \$100
Data Center Equipment	\$0.24
General Computer Equipment	\$3.35
Machinery and Tools	\$1.00
Real Estate	\$0.89
Personal Property (Vehicles)	\$3.35

Source: Chesterfield County FY2026 Adopted Budget; Commissioner of the Revenue tax schedules.

The Pre-2019 Tax Regime

Before the 2019 change, Chesterfield did not have a dedicated data center tax classification. Equipment was taxed as standard Business Personal Property at a nominal rate of \$3.60 per \$100 with a 50 percent first-year assessment ratio, producing an effective rate of \$1.80. The move to \$0.24 represented an 86.6 percent reduction from that effective rate, the largest single tax reduction for any industry classification in the county's modern history.[29]

Year of Service	Pre-2019 Assessment Ratio	Pre-2019 Effective Rate (Per \$100)
Year 1	50%	\$1.80
Year 2	40%	\$1.44
Year 3	30%	\$1.08
Year 4	20%	\$0.72
Year 5+	10%	\$0.36

The Regional Rate Comparison

The competitive motivation was explicit. During Board discussion on April 10, 2019, the \$0.24 rate was described as the "lowest in Virginia" for data center equipment. The choice of \$0.24 was a deliberate undercut of Henrico County, which had disrupted the Central Virginia market in 2017 by reducing its rate from \$3.50 to \$0.40. Henrico's cut was immediately successful, helping secure Meta's \$750 million

investment at White Oak Technology Park. Chesterfield officials determined they needed to not only match Henrico's incentive but exceed it to gain market share. By setting the rate at \$0.24, Chesterfield created a nearly 40 percent tax advantage over Henrico's \$0.40 rate at the time.[30]

Henrico has since raised its rate more than sixfold to \$2.60 without losing its installed operator base, and every peer jurisdiction has moved since; the June 2026 rate environment is documented in the next section.[31]

The rate differential between Chesterfield and its peers ranges from a factor of approximately eleven (versus Henrico) to nearly nineteen (versus Prince William). This rate arbitrage is the central finding of the utility finance framework as applied to Chesterfield: the county competed on price, and the price it set determines the revenue it receives for the life of the agreements.

The Regional Rate Environment, June 2026

The ground under the \$0.24 rate moved again in the fifteen months before this snapshot, and every move widened the spread.

Henrico's \$2.60 took effect with its April 8, 2025 budget adoption and has now been collected through a full levy cycle with the installed operator base intact.[32] Prince William raised its computer-and-peripherals rate twice in fourteen months, from \$3.70 to \$4.15 in April 2025 and from \$4.15 to \$4.50 on April 21, 2026.[33] Loudoun, which has never adopted a separate data center classification, applies its \$4.15 general personal property rate, unchanged for tax years 2026 and 2027.[34] A sourcing note on the earlier versions of this study: v2.1 cited \$4.15 as the Loudoun and Prince William rate, which was accurate when written, and coincidentally so. \$4.15 was simultaneously Loudoun's standing general rate and Prince William's one-year rate for tax year 2025. Prince William has since moved to \$4.50; the figures in this version reflect each county's adopted FY2027 rates.[35]

Hanover is the live variable. On April 8, 2026, its board removed the \$0.45 data center rate, adopted in 2023 and never applied to an operating facility, from the FY27 budget in order to reconsider it. Advertisement of a replacement rate of up to \$3.00 followed in late April, with the public hearing and vote scheduled for June 24, 2026. The board's posture is unreported; its only directional signal is the May 27 Mountain Road rejection.[36][37]

Locality	DC Equipment Rate (per \$100)	Key Context
Chesterfield County	\$0.24	Lowest in Virginia; 30-year contractual lock for Google
Henrico County	\$2.60	Raised from \$0.40 in April 2025; operators retained
Hanover County	Up to \$3.00 pending	\$0.45 rate stripped Apr. 8, 2026; vote Jun. 24, 2026
Loudoun County	\$4.15	General personal property rate; no separate DC class
Prince William County	\$4.50	Raised from \$3.70 (2024) via \$4.15 (2025); adopted Apr. 21, 2026

Sources: County budget adoptions and rate schedules for each jurisdiction, FY2026–FY2027. See endnotes.

If Hanover adopts a rate at or near its advertised maximum, Chesterfield's position becomes singular in the Commonwealth: every other jurisdiction in the Richmond region and every major Northern Virginia market will price data center equipment between \$2.60 and \$4.50, roughly eleven to nineteen times Chesterfield's rate, and Chesterfield alone will be unable to join the repricing for its dominant operator until the 2050s. The arbitrage that was designed to undercut one neighbor by sixteen cents now undercuts the entire regional market by an order of magnitude, under contract.

No Chesterfield supervisor or announced candidate has called for revisiting the \$0.24 rate or the performance agreements as of the snapshot date. The closest the record comes is Supervisor Jessica Schneider of the Bermuda District, who at the June 25, 2025 meeting that approved the western agreements floated raising the rate as a deterrent to further data center recruitment ("There's no reason to bring another data center here") while voting for the agreements themselves.[38] The county's FY2027 budget, adopted April 8, 2026, cut the general personal property rate from \$3.35 to \$3.25 and left the data center classification untouched.[39] Chesterfield supervisors do not face election until November 2027; the rate has never been on a ballot and will not be before the first building reaches occupancy.

The Depreciation Schedule

Under the current \$0.24 nominal rate, the effective tax burden on data centers is among the lowest in the nation when considering the county's aggressive depreciation schedule:

Year of Service	Assessment Ratio	Effective Rate per \$100
Year 1	50%	\$0.1200
Year 2	40%	\$0.0960
Year 3	20%	\$0.0480
Year 4	10%	\$0.0240
Year 5	5%	\$0.0120
Year 6+	1%	\$0.0024

Source: Chesterfield County business tangible personal property depreciation schedule.

Under this schedule, a \$1 billion investment in servers generates \$1.2 million in revenue in Year 1 and \$24,000 by Year 6. The curve, read in isolation, implies steep fiscal erosion. It does not account for how hyperscale operators actually manage their equipment.

The Equipment Refresh Cycle and Revenue Smoothing

Hyperscale data center operators do not install servers and leave them in place for a decade. The industry has entered an era of bifurcated replacement cycles. AI accelerators (GPUs and TPUs) are replaced on cycles as short as 18 to 36 months, driven by the performance-per-watt advantage of new silicon. When power and cooling costs for an older cluster exceed the capital cost of a new one, replacement becomes a financial imperative. General-purpose servers, by contrast, are increasingly "sweated" for six to ten years as Moore's Law has slowed and the performance gap between hardware generations has narrowed.[40]

Google, which designs its own Tensor Processing Units, has cycled through six generations since 2020 (v4 in 2020, v5/Trillium in 2023, v6/Ironwood in 2024–2025), implying an operational refresh cycle of roughly three years. In its 2023 10-K, Alphabet reported that extending server useful life to six years for accounting purposes reduced depreciation expense by \$988 million in a single quarter, indicating the accounting life exceeds the operational refresh.[41] In February 2025, Amazon reversed its prior accounting extension and shortened the estimated useful life of a subset of its servers from six years back to five, citing the increased pace of

AI development. Amazon reported \$920 million in accelerated depreciation in Q4 2024 for equipment retired ahead of schedule.[42]

Under Virginia law, replacement equipment is treated as a new asset. The Commissioner of Revenue requires an annual itemized filing of all property owned as of January 1, including original purchase price and year of purchase. When a server rack is replaced, the old rack is removed from the rolls and the new rack enters at full original cost, restarting the depreciation clock.[43]

The difference is substantial:

Model	Year 1	Year 4	Year 5	20-Yr Cumulative
No Refresh (Decay)	\$1,200,000	\$240,000	\$120,000	~\$3.4 million
4-Year Refresh	\$1,200,000	\$240,000	\$1,200,000 (reset)	~\$14.4 million

Source: Author's calculations. \$1B tranche, Chesterfield depreciation schedule, \$0.24 rate. Refresh model assumes replacement at equal original cost every four years; actual replacement costs may be higher due to hardware price inflation, which would increase revenue.[44]

The portfolio smoothing effect. The single-tranche sawtooth model is useful for explaining the mechanics, but it overstates the volatility a county actually experiences. Google's Bermuda Hundred campus alone has three buildings that will come online in different quarters, each starting its own depreciation clock. When Building 1 hits its refresh cycle, Building 2 may be mid-cycle and Building 3 generating near-peak revenue. Add the western sites on their own schedule and Chirisa on a separate timeline entirely, and the county is looking at six or more independent equipment tranches across four sites.

The aggregate effect is a portfolio: peaks and valleys from individual tranches overlap, and the combined revenue curve flattens into something closer to a gradually rising plateau with minor oscillations. This smoothing depends on continuous buildout and regular refresh cycles, neither guaranteed but both consistent with observed hyperscale operator behavior. The county has not published a phasing schedule, so a precise portfolio model cannot be constructed from public data.

The revenue dependency on operator refresh behavior is directly relevant to the utility finance framework: the fiscal sustainability of any county budget line dependent on data center revenue is a function not of the original capital investment but of the operator's refresh decisions, a variable that localities do not control and

one that is not disclosed in public filings. Industry analysis indicates that AI-era accelerators 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.[40]

The Revenue Gap

Note: The calculations that follow are the author's, based on stated assumptions. The \$7.7 billion equipment base assumes the full \$11 billion in announced investment lands in Chesterfield; if part of Google's \$9 billion supports non-Chesterfield operations, the base and all downstream figures are lower. These should be read as upper-bound estimates.

The projected equipment base of approximately \$7.7 billion is derived from the VEDP's documented 70/30 equipment-to-real-estate investment split, which matches the 68 percent equipment share reported by Virginia data center operators in FY2024 and FY2025 and independently confirmed by JLARC's 2024 study.[45] At Year 1 of full buildout with a 50 percent assessment ratio:

Tax Scenario	Annual Revenue
Chesterfield at \$0.24	\$9,240,000
Henrico at \$2.60	\$100,100,000
Loudoun at \$4.15	\$159,775,000
Prince William at \$4.50	\$173,250,000

Source: Author's calculations. Formula: (Equipment Value × Assessment Ratio / 100) × Tax Rate.

Revenue Gap Comparison	Annual Gap	
Chesterfield vs. Henrico	~\$91 million	
Chesterfield vs. Loudoun	~\$151 million	
Chesterfield vs. Prince William	~\$164 million	[46]

The equipment refresh cycle makes the revenue more durable than the straight-line decay model suggests. It does not change the rate. Even with regular refreshes and

portfolio smoothing, the \$0.24 rate generates a fraction of what peer jurisdictions collect on the same equipment base. The gap is a function of rate, not depreciation.

The Volume-Over-Rate Theory

The county's stated rationale for the \$0.24 rate is that a low rate applied to a massive base generates more total revenue than a moderate rate that drives operators elsewhere. If the choice is between \$0.24 on \$7.7 billion and \$2.60 on zero, the low rate wins.

The question is whether those are the only two options. Henrico County adopted a \$0.40 rate in 2017, then raised it more than sixfold to \$2.60 in April 2025 without losing its installed base of operators.[31] Northern Virginia jurisdictions charge \$4.15 to \$4.50 and remain the most concentrated data center market in the world. The elasticity argument embedded in Chesterfield's volume theory has not been tested in the county, and the evidence from neighboring jurisdictions suggests the industry's tolerance for higher rates is considerably greater than the \$0.24 rate assumes.

The county's competitive positioning may also extend beyond Virginia to Southeast and Midwest markets where state-level incentives and power costs are significant factors. This report compares only Virginia jurisdictions, where the rate differential is most visible and where the regulatory and power infrastructure is shared.

The 30-Year Rate Agreement

For Google, the \$0.24 rate is a contractual commitment, not merely a policy preference. The agreement is structured as an EDA Performance Agreement under Virginia Code § 15.2-4905.[47] The mechanism operates as follows: if the Board of Supervisors raises the data center equipment rate above \$0.24, the county collects the higher amount from Google, but the EDA is contractually obligated to issue an annual grant payment to Google equal to the difference. The effective rate is fixed regardless of what the Board does.

The agreement covers all three Google sites: Bermuda Hundred (Peanut LLC), Upper Magnolia Green (Skyward Holdings LLC), and Watkins Centre South (Aeris Investments LLC). The 30-year term is divided into three 10-year increments, starting from the first certificate of occupancy. Specific investment thresholds and clawback provisions are protected under non-disclosure agreements. Public records indicate a 36-month acquisition deadline, operational benchmarks, and compliance requirements on the proffered western sites.[48]

The public record on the agreements' mechanics, assembled from the June 2025 board coverage and the county's later disclosures, adds four details to the structure

described above. First, the architecture is three agreements, not one: the Bermuda Hundred agreement with Peanut LLC was approved in 2020, in the same board action that authorized the land transaction, and the Skyward Holdings and Aeris Investments agreements followed on June 25, 2025, once the western sites were assembled.[49] Second, the 30-year term is one 10-year period with two automatic 10-year renewals, and the renewals are reported to be tied to construction progress benchmarks rather than to fresh board votes.[50] Third, the grant payments can reportedly be routed, at the county's direction, toward county utilities infrastructure rather than paid as cash, a provision whose mechanics have never been publicly explained and which belongs on the FOIA list in Part Thirteen. Fourth, the western agreements are contingent on the operator purchasing the land from the EDA within 36 months, a condition Google satisfied within days.[50] None of the underlying documents is public; every mechanic described in this paragraph awaits verification against the agreements themselves.

The agreement includes a "subject-to-appropriation" clause: the Board cannot legally bind future boards to a specific expenditure, so all grant payments must be appropriated annually in the county budget. If the Board fails to appropriate the funds, the EDA is not liable for the payment. In practice, however, failure to honor a performance agreement would severely damage the county's credit rating and its ability to attract future investment. The mechanism is highly reliable in practice even though it is legally discretionary.[51]

The Board can change the \$0.24 base rate for new market entrants without a pre-existing performance agreement. It cannot change Google's effective rate without triggering the grant-back. That distinction matters: a new rate would apply only to operators entering the market after the change.

This is the only case study in the portfolio documenting a 30-year rate lock with a single hyperscale operator. The structure tests a specific proposition within the utility finance framework: whether the long-term fiscal return from rate certainty exceeds or falls short of the revenue forgone by locking the lowest rate in the state for three decades.

The Chirisa Rate-Lock Asymmetry

Chirisa Technology Parks does not have a 30-year fixed-rate agreement. No grant-back structure has been disclosed or approved for Chirisa. In June 2025, the Board of Supervisors approved 30-year tax incentive agreements specifically for Project Skye (Google/Skyward Holdings) and Aeris Investments; no such agreement was extended to Chirisa.[52]

Chirisa operates under the standard county tax code at the prevailing \$0.24 rate, without contractual protection against future rate increases. Chirisa participates in the state Data Center Retail Sales and Use Tax (DCRSUT) Exemption, which requires a minimum \$150 million investment and 50 jobs. If those targets are not met by the performance deadline (June 30, 2026), the state can claw back the sales tax exemptions granted on equipment purchases.[52]

The asymmetry matters for the utility finance framework: Google has a 30-year guarantee; Chirisa does not. If the Board raises the rate (as Henrico did, from \$0.40 to \$2.60), Google's effective rate does not change, but Chirisa's does. The two operators making the largest investments in the county are operating under fundamentally different fiscal terms for the same tax classification. The 2026 record sharpened the asymmetry: Chirisa's expansion now carries an AI anchor tenant in CoreWeave (documented in Part One), and the state-exemption clawback deadline of June 30, 2026 arrives eighteen days after this snapshot with the compliance status unverified in public records.[52]

The \$4.2 Million Revenue Estimate

Deputy Economic Development Director Jake Elder presented the county's revenue estimate to the Board of Supervisors during the June 26, 2024 meeting and the June 2025 updates. The methodology: a \$1 billion data center investment is modeled as \$300 million in real estate (land, shell, infrastructure) and \$700 million in tangible equipment (servers, UPS, cooling). Real estate revenue: $\$300 \text{ million} \times (\$0.89 / \$100) = \2.67 million . Equipment revenue: $\$700 \text{ million} \times (\$0.24 / \$100) = \1.68 million . Total: approximately \$4.35 million, which Elder rounds conservatively to \$4.2 million.[53]

This is a Year 1 estimate at 100 percent initial investment value. Under the county's actual depreciation schedule (which assesses data center equipment at 50 percent of cost in Year 1), the equipment component drops to \$840,000, bringing Year 1 revenue closer to \$3.5 million. The estimate has not been independently verified by JLARC, VEDP, or any external body. VEDP uses similar "Return on Incentive" models which recently estimated a five-year return of \$2.1 billion in state and local revenue across all Virginia data center projects, but has not published a Chesterfield-specific analysis.

Elder describes the figure as an "annual average" over the first few years of operation, assuming a constant refresh of server equipment. The characterization of \$4.2 million as a steady-state average rather than a Year 1 peak is a more defensible framing, but it remains a developer-side projection that has not been tested against actual revenue data.

BTPP Revenue Trends

Business Tangible Personal Property revenue was approximately \$24.5 million in FY2020, the first year the \$0.24 rate was in effect. The FY2026 adopted budget projects approximately \$40 million, a 63 percent increase over six years.[54] The Commissioner of the Revenue does not publicly break out data center equipment assessments as a subcategory of BTPP; the data center contribution is tracked internally under the specific \$0.24 classification but merged with other business personal property in published reports. Budget presentations in February 2026 noted that commercial and industrial assets accounted for 29 percent of growth in the 2026 land book.

That absence of data prevents independent verification of either the county's own revenue projections or the author's gap analysis. This is a priority research item documented in Part Thirteen.

PART THREE: WHAT THE COUNTY IS GETTING

The county is getting real things for the \$0.24 rate. The question is whether they are proportionate to the fiscal concession. This section documents the revenue, community benefits, employment, and catalytic investments, using the same sourcing standards applied throughout this report. Where a number comes from the developer or the EDA, it is flagged as such.

Real Estate Tax Revenue

Data centers contribute to the county's tax base through two streams: the \$0.24 equipment rate and the standard \$0.89 real estate rate applied to land and buildings. The real estate contribution is often overlooked in debates focused on the equipment rate.

Between 2025 and 2026, the taxable value of commercial and industrial real estate in Chesterfield increased by \$1.3 billion, or 9.5 percent, driven in part by industrial and office/warehouse revaluations associated with data center and manufacturing footprints.[55] Sector-specific growth included 17.4 percent for office/warehouse, 15.8 percent for industrial flex, and 14.8 percent for industrial manufacturing. Not all of this growth is attributable to data centers, but the industrial corridor where Google and Chirisa operate is a significant component.

Residential Tax Relief

In 2023 and 2025, the Board of Supervisors provided a one-time 5 percent credit on residential real estate tax bills. In 2025, the Board allocated approximately \$15 million, roughly half of the prior year's operating surplus, to fund the credit. For a homeowner in a \$450,000 house, the savings amounted to just over \$100 on the first-half 2025 tax bill.[56]

The county has also reduced the real estate tax rate by six cents since 2022, from \$0.95 to \$0.89. County officials state this reduction has forgone approximately \$106 million in potential revenue. Each one-cent change in the real estate rate is equivalent to nearly \$6.8 million in revenue.[57]

Fiscal Year	Real Estate Tax Rate (per \$100)	Cumulative Relief
FY2021	\$0.95	Baseline
FY2022	\$0.92	3-cent reduction
FY2023	\$0.91	4-cent reduction
FY2024	\$0.91	4-cent reduction (held)
FY2025	\$0.90	5-cent reduction
FY2026	\$0.89	6-cent reduction (lowest in modern history)

Source: Chesterfield County FY2022-FY2026 Adopted Budgets.

General fund commercial revenue did increase during this period, and the correlation between data center investment and the rate reductions is plausible. The gap is in the specific attribution: the 5 percent credit is funded from the general fund surplus, not from a dedicated data center revenue line. There is no public accounting that isolates data center revenue from other commercial sources in calculating the surplus. The linkage is asserted by the county administration but the specific dollar-to-dollar connection is not documented in a form that would allow independent verification.

The 2026 Fiscal Posture

The FY2027 budget, adopted April 8, 2026, continued the pattern: the general personal property rate fell from \$3.35 to \$3.25, the real estate rate held at \$0.89, and the data center classification stayed at \$0.24.[39] The county's tax-relief narrative now spans five consecutive budgets, and the data center revenue base remains the asserted, unverifiable engine behind it; the Commissioner of the Revenue still publishes no classification-level breakout that would let anyone test the attribution.

The AI for Education Accelerator

Google's community benefits package centers on the AI for Education Accelerator, framed as part of a broader \$1 billion national commitment to education and competitiveness.[58] The first Virginia cohort includes UVA, Old Dominion University, Brightpoint Community College (which has a campus in Chester), and Northern Virginia Community College.

The program delivers free 12-month access to Google AI Pro for Virginia college students, no-cost Google Career Certificates in data analytics, cybersecurity, and

digital marketing, and advanced AI research tools. At Old Dominion, Google launched the MonarchSphere AI incubator, which the university reports has reduced certain genomic research timelines from 40 days to three, a 12-to-16-fold improvement in time-to-science, though this is a developer-sourced performance claim.[59]

Nationally, Google has committed \$150 million in grants over three years for AI education and digital wellbeing.[60] The specific dollar allocation to Virginia institutions has not been disclosed. For context, Google's established data center communities receive direct annual grants: Council Bluffs, Iowa, receives over \$1 million annually; Douglas County, Georgia, receives approximately \$200,000 per grant cycle. In Virginia, Google reports having trained nearly 300,000 residents in digital skills through funded local organizations.

The accelerator is a real investment in workforce capacity, and the inclusion of Brightpoint gives Chesterfield residents a direct connection. Whether it is proportionate to the fiscal concession is a question this report leaves to readers, because no dollar-to-dollar comparison is possible without disclosure of the Virginia-specific allocation.

Employment

Data center construction provides the most significant immediate employment impact. A typical hyperscale facility of 250,000 square feet requires up to 1,500 workers during peak construction.[61] With Google's multiphase plan across three sites, construction employment will extend over multiple years.

Permanent operational employment is smaller. Google and the county have not disclosed a combined permanent headcount. Site plans for Bermuda Hundred show 345 parking spaces; in a 24/7 operation running multiple shifts, that could imply roughly 100 to 150 on-site staff per shift, though parking requirements for data centers are typically set well below office standards because of the low worker-per-square-foot ratio. Industry salary ranges are substantial, from \$60,000 to \$90,000 for technicians up to \$93,000 to \$155,000 for engineers and \$117,000 to \$198,000 for operations managers.[62] These are industry ranges, not confirmed Chesterfield figures.

For comparison, JLARC found that a typical 250,000-square-foot data center may employ approximately 50 full-time workers, about half of them contractors.[63] The education-labor mismatch between the data center workforce requirements and the demographics of the adjacent Bermuda Hundred corridor is documented in Part Eight.

Commonwealth Fusion Systems

Commonwealth Fusion Systems plans to build the ARC fusion plant on approximately 94 acres at 1201 Battery Brooke Parkway, on land leased from Dominion Energy. The estimated project cost is \$2.5 billion. CFS has raised over \$3 billion in total capital, with Google and Nvidia among the investors. The company's capital position represents nearly one-third of all private investment in the global fusion sector, according to the Fusion Industry Association.[64]

Google signed a power purchase agreement for 200 megawatts, half the plant's expected 400 MW output. The PPA provides the bankable revenue stream CFS needs to finance construction. The plant is targeted for the early 2030s, contingent on the SPARC prototype demonstrating net fusion energy at CFS's Massachusetts facility; the company's own 2026 communications place the start of SPARC operations in 2027.[64][65]

CFS cited Virginia's business environment and infrastructure as the primary siting factors. The plant will generate real property tax revenue at the \$0.89 rate and create hundreds of construction and operations jobs. CFS Vice President Kristen Cullen has stated the plant expects to employ approximately 150 full-time workers for its operational phase.[66] The Chesterfield Planning Commission approved the conditional use permit unanimously, with no significant local opposition documented.

The CFS project is significant as an industrial asset and as a potential source of real property tax revenue. But commercial fusion has never been demonstrated at grid scale. For fiscal planning purposes, CFS should be treated as a high-value contingent asset, not a confirmed revenue stream. The companion CFS case study provides the full treatment of the PPA structure, the regulatory pathway, the risk allocation, and the temporal mismatch between when data center load hits the grid and when fusion power arrives to offset it.[3]

Commonwealth Fusion Systems: The 2026 Record

The fusion project advanced on every public axis in the year after the PPA. The Board of Supervisors approved the conditional use permit unanimously on September 17, 2025, the same meeting that adopted ZOMod, making Chesterfield the first jurisdiction in the world to zone a grid-scale commercial fusion plant.[67] Eni signed a power purchase agreement worth more than \$1 billion on September 22, 2025, the company's second offtake in three months; the megawatt quantity is undisclosed. [68] The \$863 million Series B2 round, announced August 28, 2025, brought total capital to nearly \$3 billion, with NVIDIA's venture arm, Morgan Stanley's

Counterpoint Global, and a twelve-company Japanese consortium among the new investors.[69]

On April 28, 2026, CFS announced it had become the first fusion power plant developer to apply for interconnection with a major grid operator, filing a generation interconnection request with PJM the prior week for the roughly 400 MW plant, now named the Fall Line Fusion Power Station. Dominion advised on the application under the companies' joint development agreement; CFS cites a four-to-six-year study-to-energization timeline.[70] At Devens, the SPARC demonstration machine was roughly 75 percent complete as of May 2026, with the vacuum vessel halves delivered and CFS's own communications now placing the start of operations in 2027, a slip from earlier first-plasma targets; the company maintains that ARC grid delivery in the early 2030s remains on track.[65]

For fiscal planning purposes the assessment in this study is unchanged: a high-value contingent asset, not a confirmed revenue stream, with the contingency now formalized in the Google PPA itself, which is anchored in SPARC achieving net fusion energy. The companion CFS case study (v1.7) predates the PJM application, the Eni PPA, and the SPARC schedule slip, and should carry a pending-update endnote until revised.[3]

PART FOUR: WATER

Bermuda Hundred: The Disclosure Vacuum

The 307-acre Google campus at Bermuda Hundred is being developed with zero public disclosure of its projected daily water demand. Because the site proceeded by-right, there were no proffers and no hearings at which water consumption could be negotiated. Site plan filings address grading and building footprints, not utility demand. County leadership has stated that water concerns were "discussed and addressed," but no public document discloses the projected daily consumption, the cooling technology, or the water source allocation for the campus.[71]

A single large hyperscale data center can consume up to 5 million gallons of water per day for cooling, an amount equivalent to the usage of approximately 50,000 residents. Whether the Bermuda Hundred campus will use evaporative cooling, closed-loop systems, or air-cooled technology has not been disclosed. The western sites are required by proffer to use closed-loop cooling; Bermuda Hundred has no such requirement.

That disclosure gap is documented as a research target in Part Thirteen. It is directly relevant to the distributional justice framework: the communities adjacent to the Bermuda Hundred corridor, documented in the census tract analysis in Part Ten, bear the localized consequences of industrial water demand without access to the information that would allow them to evaluate it. The contrast with the western sites, where water proffers and technology requirements are explicit, is a case of procedural injustice as defined by the distributional justice framework.

The Western Sites: Proffered Limits

The Magnolia Green and Watkins Centre South rezonings include water proffers limiting usage to 2,000 gallons per day per acre.[72] At 979 acres and 350 acres respectively, that caps combined water consumption at approximately 2.66 million gallons per day. Proffers require the use of closed-loop cooling systems to minimize evaporative loss and mandatory reporting of daily usage to the county. Google is proffered to prioritize the use of reclaimed and non-potable water for cooling.

System Capacity

The Bermuda Hundred area is served exclusively by the Chesterfield County Department of Utilities, drawing primarily from the Appomattox River Water Authority (Lake Chesdin). There is no private utility and no direct JRWA service in this zone. The Meadowville Technology Park is equipped with a 16-inch water line capable of delivering 2 MGD to specific sites and features an on-site water storage tower to maintain high pressure and reliability.[73]

Water Source	Capacity (MGD)	2024 Avg. Production (MGD)
Swift Creek Reservoir	12.00	5.70
Lake Chesdin (ARWA)	66.54	25.20
James River (Richmond)	32.00	9.80
Total System	110.54	40.70

Source: Chesterfield County Department of Public Utilities. MGD = million gallons per day.

The current surplus is approximately 70 MGD. The peak-day production of 73.5 MGD leaves a reserve capacity of 37 MGD even during maximum stress events, a surplus larger than the entire Hanover County water system capacity (25 MGD).[73]

The \$426 million Appomattox River Water Treatment Plant, which will add 40 MGD as the county's fourth water source, is not scheduled to be operational until 2033. The first phase is designed by Black and Veatch and will draw from the tidal portion of the Appomattox River, making it drought-tolerant.[74]

The value of the county's redundant water system was demonstrated during the 2024 Richmond water crisis. When power outages and flooding disabled the City of Richmond's treatment plant (which normally provides 20 percent of Chesterfield's water), the county isolated its system within hours, maintained normal tank levels, and avoided the boil-water advisories that affected Richmond and parts of Henrico County.[73]

No consolidated water demand projection for all approved data center projects has been published. The absence of that projection is a research priority for both the distributional justice framework's water analysis and the energy, labor, and infrastructure framework.

The Disclosure Law That Arrives Late

The 2026 General Assembly partially answered the disclosure vacuum, prospectively. SB 553 (Chapter 896), signed April 13, 2026 and effective January 1, 2027, requires water utilities that register withdrawal data with the State Water Control Board to report monthly volumes of potable water, and separately reclaimed water, provided to data centers holding a DEQ air permit.[75] For Chesterfield the statute has three edges worth documenting. It reports utility-side delivered volumes, not facility-side demand projections, cooling technology, or source allocation, so the questions this part raises about Bermuda Hundred remain askable only through FOIA. It attaches to data centers holding a DEQ air permit, which as of the snapshot date describes Chirisa's Digital Drive site and not Google's Bermuda Hundred

campus, whose generator permit has not yet issued.[26] And its first reporting period begins a year or more before the Bermuda Hundred campus reaches full operation, which means the statute will, for once, produce a baseline before the load arrives. The water demand number the county never disclosed will eventually surface in a state reporting stream. The approval-stage vacuum it would have informed is six years closed.

One adjacent disclosure exists because a different regulator required it: CFS told the Board of Supervisors in the fusion plant's permit hearings that ARC will need approximately 400,000 gallons of water per day.[67] The county's largest data center campus has no equivalent public figure. A fusion plant that does not yet exist has a more complete public water record than a hyperscale campus under construction.

PART FIVE: POWER, GRID, AND RATEPAYER EXPOSURE

Power demand is the largest infrastructure cost vector associated with data center development, and the one most likely to affect every Dominion Energy ratepayer in the region regardless of whether they live near a data center. This section documents the combined power draw, the Chesterfield-specific grid infrastructure, the cost allocation framework, and the wastewater dimension. The analysis connects directly to the energy, labor, and infrastructure framework and the utility finance framework.

The Combined Power Draw

Google has not disclosed the megawatt capacity of its Bermuda Hundred campus. Based on the 855,846 square feet across three buildings and industry power-density benchmarks, analysts estimate the Bermuda Hundred campus at 100 to 150 MW. The western sites (1,330 acres combined) could draw 420 to 630 MW at full buildout. Chirisa's current load is 18 MW with a publicly stated target of 200 MW or more. At full buildout, the combined Google and Chirisa footprint in Chesterfield could exceed 1,000 MW, equivalent to the power consumption of approximately 250,000 homes. [76]

This projection is the author's estimate based on industry benchmarks and should be treated as an order-of-magnitude figure, not a precise forecast. The actual load depends on building configurations, cooling technologies, and phased buildout schedules that have not been publicly disclosed.

Dominion Energy's Grid Expansion: Chesterfield-Specific Infrastructure

Dominion Energy's 2024 Integrated Resource Plan projects that data center metered load in Virginia will reach 13,353 MW by 2038, roughly three and a half times current levels, with 5.5 percent annual growth in peak energy demand through 2039.[77] Unlike previous years, the 2024 IRP explicitly identifies the Richmond/Chesterfield region as a secondary growth hub behind Loudoun County.

At the SCC's request, Dominion modeled a "Plan 1-B" scenario excluding data center load. The comparison revealed that without data centers, peak demand in Virginia would grow by only 0.47 percent annually (roughly 15 percent cumulative by 2040). With data centers included, demand is projected to double within ten years (183 percent cumulative growth). Nearly all planned natural gas and high-voltage transmission projects in the next decade are deferrable under the no-data-center scenario.[78]

Two Chesterfield-specific transmission projects are currently in the SCC pipeline:

The Meadowville 230 kV Project (SCC Case PUR-2024-00179). This project includes the Orchard Switching Station, a new 230 kV facility designed to serve hyperscale data center campuses in the Meadowville Technology Park, and the Oxwood Substation, a 230 kV to 34.5 kV facility to convert transmission-level power for data center use. The project also involves rebuilding and extending existing 230 kV lines to create a more robust "loop" for the Meadowville area. The Orchard Switching Station, estimated at approximately \$45 million, is a Direct Assignment Facility; its costs are paid by the anchor data center customer.[79]

The Western Chesterfield Project (SCC Case PUR-2025-00073, filed April 24, 2025). This project includes the Duval Substation, a new 230 kV to 34.5 kV facility, and 7.1 miles of new double-circuit 230 kV Duval-Midlothian transmission lines (four circuits total) on 160-foot weathering steel monopoles. Dominion's application states the substation is required to serve "known and projected large-load growth" in western Chesterfield. The Winterpock Substation is also receiving a third distribution transformer for contingency capacity. The network upgrades, estimated at approximately \$185 million, are classified as "Regional Reliability" projects and socialized across the entire Dominion Virginia (VEPCO) zone via Rider T.[80]

This distinction, between directly assigned "tap" facilities and socialized network upgrades, is the central cost allocation finding for the energy, labor, and infrastructure framework. The data center pays for the local connection. Every Dominion ratepayer pays for the system that makes the connection possible.

The Synapse Testimony: \$22.4 Billion in Incremental Transmission

In the 2024 IRP proceeding (Case PUR-2024-00184), expert witness Devi Glick of Synapse Energy Economics, testifying on behalf of the Sierra Club and the Natural Resources Defense Council, delivered testimony that quantified the grid-level cost of data center demand:

Data center load growth is responsible for approximately \$22.4 billion in incremental transmission costs through 2038. The added data center load increases the portfolio's Net Present Value Revenue Requirement by \$22.1 billion compared to a system without that load. The Western Chesterfield 230 kV lines and the Meadowville project were specifically identified as infrastructure that could be deferred by over a decade under no-data-center scenarios.[81]

Synapse also found that meeting data center demand through higher levels of energy efficiency and renewables could reduce total ratepayer costs by approximately \$1 billion over 15 years while avoiding the need for high-cost resources like small modular reactors. The testimony argued that unless the SCC takes action to assign

these costs to large-load users, the incremental \$22.4 billion in transmission costs will be recovered from all ratepayers through Rider T.[81]

The SCC's November 2025 order directed Dominion to propose a new "Transmission Cost Allocation" methodology in its 2026 Transmission Rider proceeding to ensure large-load users pay a higher share of network upgrades they trigger.

The Chesterfield Energy Reliability Center

In November 2025, the SCC approved the Chesterfield Energy Reliability Center (CERC), a 944 MW natural gas-fired simple-cycle "peaker" plant to be built on the site of the retired Chesterfield coal facility. The estimated capital cost is \$1.47 billion. The SCC's decision rested on a finding that without this dispatchable capacity, the grid would face reliability shortfalls during extreme weather events as early as 2029.[82]

Dominion used the "Reliability Exception" in the Virginia Clean Economy Act to justify new fossil generation during a period when the VCEA mandates carbon-free status by 2045. In the CERC proceeding (Case PUR-2025-00037), Dominion acknowledged that data center load growth triggered the reliability exception. The plant provides "voltage support" and "firming" for the concentrated data center load in the Meadowville and Bermuda Hundred corridors that intermittent solar cannot support.[82]

CERC costs are socialized across all Dominion ratepayers via Rider CERC. The Commission's final order puts the rider at \$0.60 per month for a typical residential customer using 1,000 kWh, effective March 1, 2026, rising to \$1.14 per month in the 2027 rate year.[83]

The environmental justice dimensions of the siting are documented in Part Ten, and the full 2026 litigation record, through the Supreme Court of Virginia, in Part Six.

The GS-5 Rate Class

The SCC created the GS-5 rate class on November 25, 2025, in Dominion's biennial review (Case PUR-2025-00058), a companion order issued the same day as the CERC approval, effective January 1, 2027, for customers with demand of 25 MW or greater and a load factor of 75 percent or higher.[84] The same-day pairing of the two orders is analyzed in Part Six. The class introduces several protections for residential ratepayers:

Data centers must sign 14-year energy service agreements to ensure they remain on the grid long enough to pay down the capital costs of the infrastructure built to serve them. They must pay for a minimum of 85 percent of their contracted transmission and distribution capacity and 60 percent of their generation capacity, preventing

"speculative load" requests. If a data center exits before its 14-year term, it must pay exit fees covering the remaining demand commitments. Upfront collateral is required.

The Piedmont Environmental Council estimated that even with the 14-year contracts, approximately 61 percent of grid upgrade costs would shift back to residential ratepayers once the contract period concludes (an advocacy analysis, not a regulatory finding). PEC argued for a 20-year minimum to better align with the useful life of transmission assets.[85]

Intervenor testimony in the rate case from Synapse Energy Economics estimated that without the 8 GW of data center load identified in the 2024 IRP, the revenue requirement would have been approximately \$310 million lower, suggesting residential customers are currently "bridging" the cost of infrastructure that has not yet been fully assigned to the GS-5 class.[81]

The Capacity Market Spike

Data center demand is also driving costs through PJM's capacity market. In July 2024, the PJM capacity auction for the 2025–2026 delivery year produced a 1,436 percent price increase in the Dominion zone, clearing at \$444.26 per megawatt-day, up from \$28.92 in the prior year. PJM's independent market monitor, Monitoring Analytics, attributed \$9.3 billion (63 percent) of the total capacity market cost increase to data center load.[86]

These costs are passed to ratepayers. For a typical residential customer in the Dominion zone, the 2026 rate case will result in an \$11.24 monthly increase, with an additional \$2.36 projected for 2027. Combined with the \$1.14 CERC rider, the total data-center-driven monthly increase for a residential customer approaches \$15 by 2027 (author's summation of three separate rate actions: the \$11.24 base rate increase effective 2026, the \$2.36 additional increase projected for 2027, and the \$1.14 CERC rider in the 2027 rate year).[87]

Senate Bill 253, introduced in the 2026 session by Senator Louise Lucas, would allow the SCC to shift more capacity and distribution costs onto high-usage customers. SCC staff estimates indicate the bill could reduce residential rates by 3.4 percent (roughly \$5.52 per month) while increasing data center rates by 15.8 percent. The bill passed, survived gubernatorial amendments that lawmakers and Dominion itself said weakened its cost-shift provisions, and was signed May 14, 2026; the enactment record is documented in Part Nine.[88][89]

Proctors Creek Wastewater Expansion

The Bermuda Hundred and Meadowville data center corridors are served by the Proctors Creek Wastewater Treatment Plant, currently permitted at 27 MGD with a master plan target of 54 MGD, a 100 percent capacity increase designed to serve the county for approximately the next 90 years.[90]

In February 2026, the county began its largest-ever utility capital project at Proctors Creek: a 12-million-gallon flow equalization basin, roughly the size of a football field and up to 50 feet deep. The contract was awarded to MEB General Contractors of Chesapeake, Virginia, at \$168.2 million. Design engineering was by Hazen (contracted in 2017, finalized 2024). Expected completion is 2031. The basin includes enhanced screening and grit removal units sized for the ultimate 54 MGD capacity.[90]

Utilities Director Matt Rembold stated the project will "support economic development across the whole region" and is essential as "business activity continue[s] to expand." The 54 MGD target is sized to accommodate what county officials describe as the "world's largest data center market" expansion into southern Chesterfield.[90]

The expansion is funded through the utility enterprise fund, a self-sustaining entity supported by ratepayer fees, developer recovery charges, and revenue bonds rather than general tax revenue. Non-residential recovery charges scale significantly by meter size. For a major industrial project requiring a 12-inch turbine meter, the combined water and wastewater recovery charges exceed \$3.1 million as a one-time connection fee (water recovery: \$1,676,390; wastewater recovery: \$1,502,550).[91]

The county is studying a water reuse initiative that would pipe treated wastewater from Proctors Creek back to data center sites for cooling, preserving potable water for residential use. Dominion Energy's Dutch Gap Power Station already uses 0.5 to 1.5 MGD of treated effluent from Proctors Creek for flue gas desulfurization, establishing a precedent for industrial reuse of the plant's output. A formal engineering feasibility study is underway as of early 2026, with specific costs and timelines for a dedicated data center reuse pipeline pending the results.[92]

The Proctors Creek expansion and the \$426 million Appomattox River Water Treatment Plant are functionally "bookend" projects serving the same growth corridor. The ARWTP provides the input (drinking water supply); Proctors Creek handles the output (wastewater treatment). Both are prioritized in the FY2026–2036 CIP.[92]

the energy, labor, and infrastructure framework applies directly to both projects: the question is whether the utility expansion is driven primarily by data center

demand or by general population growth, and whether the cost allocation between industrial users (through recovery charges) and residential ratepayers (through monthly fees) is proportionate to the demand each class places on the system.

PART SIX: THE CERC DOCKET

The Chesterfield Energy Reliability Center is the generation-side counterpart to everything documented in Part Five, and as of the June 2026 snapshot it is the most actively litigated piece of the Chesterfield record. The plant, the rate class designed for the load that justified it, and the communities adjacent to the site are now joined in two appellate proceedings. This part documents the full docket, because the procedural record is itself evidence: of how Virginia's regulatory system processes an environmental justice claim, and of how far the communities that hosted the county's coal generation for seventy years can carry a challenge to its gas successor.

The Approval and the Companion Order

Dominion filed its application for the CERC on March 3, 2025, in SCC Case PUR-2025-00037, seeking a certificate to construct and operate a nominal 944 MW flexible-fuel facility, four GE Vernova 7F combustion turbines, within the footprint of retired coal Unit 6 at the existing Chesterfield Power Station, alongside the gas-fired Units 7 and 8 that remain in service. The application paired the certificate request with Rider CERC, a rate adjustment clause under Virginia Code § 56-585.1 A 6 to recover the projected \$1.47 billion cost. Projected commercial operation is June 1, 2029.[93]

The SCC entered its Final Order approving both on November 25, 2025. The order's core holding: "The evidence in this case clearly establishes that there is an imminent reliability threat for Dominion and its customers and that the CERC project addresses that threat in a manner that is in accordance with the public interest and the VCEA." [93] Dominion had acknowledged in the proceeding that data center load growth triggered the reliability exception it invoked under the Virginia Clean Economy Act; the plant exists because of the load documented in Part Five.

The same day, in a separate order in Dominion's 2025 biennial review (Case PUR-2025-00058), the Commission created the GS-5 rate class for customers demanding 25 MW or more.[94] Earlier versions of this case study described the rate class as a product of the CERC order; the correction matters for the record. The two actions came in two dockets, decided by the same commission on the same day: one approving roughly a gigawatt of gas-fired capacity justified by data center demand, the other creating the rate class intended to make that demand pay its own way. November 25, 2025 is the single most consequential date in the utility finance record of this case study, and the pairing is the finding. The system approved the infrastructure and the cost-assignment mechanism simultaneously, with the infrastructure certain and the cost assignment, as Part Five documents, still contested.

The Reconsideration

On December 15, 2025, the Southern Environmental Law Center petitioned for reconsideration of the CERC order on behalf of Appalachian Voices, the Chesterfield County branch of the NAACP, and Mothers Out Front.[95] The petition raised four arguments. On environmental justice, it contended that "the Commission's environmental justice analysis applies incorrect legal standards that fundamentally undermine the intent and explicit directives of the VEJA," and that the order's coal-comparison methodology "countermands the fundamental goals of the VEJA; it would encourage constructing new fossil-fuel infrastructure at locations that have historically housed such infrastructure, ensuring those communities continue to experience harms." On the rider, it argued that a utility may recover new fossil generation costs under a Subsection A 6 rider only if it has met its energy savings goals under Virginia Code § 56-596.2, which Dominion has not. On cost, it argued Dominion "selected the Gas Plant after a flawed Request for Proposal ('RFP') process that was designed to result in that foreordained outcome." On reliability, it warned that "permitting Dominion to claim this narrow exception without seriously weighing the evidence effectively cuts straight through the central guardrail of the VCEA, suggesting that any future gas proposals could easily clear this hurdle as well." [95]

The Commission granted reconsideration the next day, December 16, "for the limited purpose of continuing jurisdiction over this matter and considering the Petition," and suspended the November 25 Final Order while it did.[96] On December 29 it directed Dominion to respond to the rider arguments; Dominion filed January 16, 2026. On February 12, 2026, the Commission denied the petition, clarified the Final Order, lifted the suspension, and dismissed the case.[97] On the environmental justice claim, the order stated that the record "includes Dominion's evidence establishing that no 'disproportionate' share of negative impacts falls on identified environmental justice communities," and reasoned that because fossil-plant impacts "tend to dissipate over distance," the petitioners' theory "standing alone, could preclude the siting of any such facility." [97]

That reasoning is the analytical hinge for the distributional justice framework. Dominion's own desktop review, recited in the Commission's order, found that 22 of the 24 census block groups within three miles of the site meet at least one criterion of the VEJA's definition of an environmental justice community.[98] The Commission accepted the brownfield siting and the industrial buffer as adequate consideration. The petitioners' position is that re-siting fossil infrastructure on the same fenceline that hosted the last fossil infrastructure is precisely what the statute was written to interrupt. The Commission's position is that distance-dissipation logic would bar siting anywhere. Those two readings of the same statute are now before the Supreme Court of Virginia.

The Appeals

SELC noticed the appeal on February 17, 2026, and filed the petition for appeal with the Supreme Court of Virginia on May 27, 2026, captioned NAACP – Chesterfield County Branch, Appalachian Voices, and Mothers Out Front v. State Corporation Commission.[99] The petition raises eight assignments of error in three groups: that the Commission violated the Virginia Environmental Justice Act by failing to ensure no disproportionate share of negative environmental consequences, by deferring to DEQ a duty the statute assigns to the Commission, and by approving on a record showing disproportionate burdens; that Rider CERC is unlawful because Dominion has not met its § 56-596.2 energy savings requirements and because no record evidence supports the finding that delay equals reliability threat; and that the Commission applied the wrong legal standard on full project costs, including "reasonably foreseeable fuel costs." [99] As of June 12, 2026, the petition is pending. No record number has been assigned in any public source, and no briefing schedule exists; if the court grants the petition, briefing follows later this year.

The air permit runs on a separate track. DEQ issued the permit on December 19, 2025, treating the CERC as a modification of the existing Chesterfield Power Station. On February 13, 2026, SELC filed a petition for appeal in the Circuit Court for the City of Richmond on behalf of four organizations: the Chesterfield NAACP, CASA Inc., Appalachian Voices, and Mothers Out Front.[100] The petition alleges violations of the Virginia Air Pollution Control Law, the Administrative Process Act, the VEJA, and the federal Clean Air Act: that DEQ did not adequately analyze disproportionate health impacts on low-income, minority, and fenceline communities; that it failed to meaningfully involve those communities, "including frequently failing to engage with the significant Spanish-speaking population in the area and not translating relevant materials into Spanish"; that it allowed Dominion to avoid heightened review for four pollutants including nitrogen oxides; and that it refused to include proper emissions limits. SELC staff attorney Rachel James: "The state's Environmental Justice Act is meant to be followed... It's not just a box to be checked, but in this case, even that wasn't attempted." [100] The case is pending in Richmond Circuit Court with no hearing date in the public record.

Construction Posture and the Rider

Neither appeal has stopped the project on paper. The order is reinstated, the rider is effective, and Dominion has said it intends to begin construction in 2026 for the 2029 in-service date. As of the June 2026 snapshot, however, no groundbreaking, site mobilization, or turbine procurement announcement appears in the public record; the Global Energy Monitor tracker still classified all four units as pre-construction in March 2026.[101] Rider CERC adds approximately \$0.60 per month

to the average residential bill, effective March 1, 2026, as documented in Part Five. Ratepayers began paying for the plant while its certificate sits under petition at the state's highest court.

What the Docket Means for This Case Study

The CERC docket gives the energy frameworks both poles of the generation story on a single county ledger. At one end of the industrial corridor, a \$1.47 billion fossil peaker, justified by data center load, sited at the retired coal station adjacent to the communities that already absorbed seventy years of coal generation, with its environmental justice record now on appeal. At the other end of the same corridor, at Battery Brooke Parkway, a \$2.5 billion speculative fusion plant backed by the hyperscaler driving the load, approved unanimously with no significant local opposition. The county's land books will carry both. The communities documented in Part Ten will live next to one of them. The temporal mismatch the companion CFS case study identifies, between when the load arrives and when the carbon-free generation might, can be measured locally in Chesterfield: the distance from Bellwood to Battery Brooke Parkway, and from 2029 to the early 2030s.

PART SEVEN: HOW CHESTERFIELD GOT HERE

The institutional pathway that produced Chesterfield's data center corridor follows a recognizable pattern: EDA recruitment under non-disclosure, by-right permitting that precluded public review, and competitive rate-setting designed to capture market share from neighboring jurisdictions. the institutional behavior framework applies to every stage of this pathway.

The Institutional Timeline

Pre-2019: Data centers permitted by-right in I-2 zones under standard industrial tax rates. No specialized recruitment strategy.

2017: Henrico County reduced its data center equipment rate from \$3.50 to \$0.40, securing Meta's \$750 million investment. Chesterfield officials observed this success and determined they needed to not merely match but exceed Henrico's incentive. [30]

April 10, 2019: Board of Supervisors adopted the \$0.24 rate through Resolution 19-175, explicitly designed to undercut Henrico's \$0.40. County Administrator Dr. Joseph Casey and Director of Economic Development Garrett Hart argued that data centers were the perfect "net-positive" asset: high-value property tax revenue with "zero kids in schools" and minimal demand for public safety services compared to residential developments.[28]

March 27, 2020: Peanut LLC acquired the 307-acre Bermuda Hundred site from the EDA for \$18.1 million. The simultaneous acquisition and sale was not publicly disclosed at the time.[6]

December 18, 2020: EDA purchased the 2,057-acre Upper Magnolia Green tract from Salvatore Cangiano for \$13 million, preempting residential development. Then-Chair Haley and Deputy Administrator Harris described the move as "growth management." [12]

2022: Chirisa announced the \$2 billion Meadowville investment. EDA initiated rezoning of Upper Magnolia Green to industrial use, rebranding it as a "Technology Village." [17][13]

May 28, 2025: Board unanimously approved two EDA-led western rezonings for Google (Cases 25SN1038 and 25SN1040).[10]

June 25, 2025: Board unanimously approved 30-year tax incentive agreements for Skyward Holdings and Aeris Investments (Google shell entities).[47]

June 2025: Planning Commission unanimously recommended denial of Tract's Branders Bridge application. Tract withdrew July 2, 2025.[19]

August 27, 2025: Google unmasked as "Project Peanut." \$9 billion Virginia commitment announced at Brightpoint Community College.[8]

September 17, 2025: Board adopted ZOMod (5-0), effective January 1, 2026; data centers become conditional uses countywide. The same meeting approved the CFS fusion plant's conditional use permit.[102][67]

December 17, 2025: Board rezoned the Woods Edge parcel for an electric substation with data-center proffers, fourteen days before the new ordinance took effect.[103]

December 22, 2025: Washington Single Family Fund³ requested a vested-rights determination for its Old Bermuda Hundred Road campus, nine days before the effective date.[104]

January 1, 2026: ZOMod effective. No data center conditional use application has been filed under it as of June 12, 2026.[105]

February 12, 2026: Planning director issued the written determination denying vested rights.[106]

June 3, 2026: Board of Zoning Appeals unanimously denied the appeal, the county's first defense of the new framework (Part Eight).[107]

The Same-Day Transaction and the Disclosure Controversy

The chain of title for 2700 Bermuda Hundred Road is a case study in limited public disclosure. On March 25, 2020, two days before the closing, the Chesterfield Board of Supervisors met and approved an ordinance (Item 7.A.4) authorizing a "Fixed Tax Rate and Water and Wastewater Capacity and Service Agreement with Peanut LLC." [108]

On March 27, 2020, the EDA purchased approximately 353 acres from Riley and Helen Lowe for \$21.1 million. On the same day, the EDA sold 307 acres of that land to Peanut LLC for \$18.1 million. The holding period was effectively zero. The EDA retained the remaining 46 acres for future Meadowville expansion. Peanut LLC also acquired a 5-acre parcel from Philip Morris at 2920 Bermuda Hundred Road for approximately \$308,000 on the same day.[6]

The transaction was conducted under a strict non-disclosure agreement. While the 2700 Bermuda Hundred Road property had been listed on commercial platforms like LoopNet as early as September 2016, the specific transaction involving Peanut LLC was not a result of public marketing. The EDA acted as a site assembler and

facilitator: by purchasing the land from a private citizen and immediately deeding it to the operator, the EDA provided a "buffer" that allowed Google to remain anonymous during the acquisition phase.[108]

The disclosure controversy surfaced when Richmond BizSense reported on February 2, 2021, that the EDA had sold most of its Meadowville expansion land for \$18 million. EDA Director Garrett Hart admitted the simultaneous acquisition and sale had not been disclosed when the EDA's purchase of the Lowe tract was first publicized in June 2020. Hart cited NDA requirements. Whose requirements imposed the non-disclosure, Google's or the county's, is not specified in the public record. Hart stated that the portion the EDA still retained (the 46 acres) did not have a buyer, which allowed him to technically claim no buyer was "in mind" for that specific parcel. Google's identity as the operator remained under non-disclosure until August 27, 2025, more than five years after the transaction.[108]

the institutional behavior framework identifies this as a structural feature of the recruitment process: the NDA mechanism does not merely protect proprietary information; the by-right framework precluded community participation in the approval process. The community adjacent to the largest data center in Chesterfield had no notice, no public hearing, no opportunity to impose conditions, and no knowledge of the operator's identity for five years.

The Board's Own Words

Supervisor Mark Miller (Midlothian) on the 30-year rate lock: "Their investment is massive. And their operational lifespans are going to be measured in decades. A tax rate guarantee provides the financial predictability essential for their internal capital allocation decisions and risk assessment. This isn't just a 24-cent tax rate, it is about the volume of the taxable assets this rate will apply to."[109]

Supervisor Kevin Carroll (Matoaca) on tax base diversification: "We've had an 80% residential, 20% commercial [tax base] for years. We have been a bedroom community. Everybody complains about the houses being built. I get it... If you want to lower the [real estate] tax rate of 89 cents by 4 cents or 8 cents, you have to bring the commercial in."[109]

Miller on the NDA constraints, in a subsequent VPM News interview: the NDA was a "standard requirement for these global tech giants" but created a "difficult tension with the public's right to know." He emphasized that the board had to "balance the competitive need for confidentiality with the eventual need for complete transparency."[110]

Director of Economic Development Garrett Hart on competitive positioning: "Chesterfield is now in a position to compete for the same tier of global investment

as our neighbors to the north [Henrico]. By lowering our data center tax rate to 24 cents and offering long-term stability, we've neutralized the competitive disadvantage we faced for years. This isn't just about catching up; it's about leading the next wave of AI and cloud growth in the Mid-Atlantic."[111]

Deputy Director Jake Elder on the revenue case: "These projects represent multibillion-dollar investments that will be the anchor of the technology village at Upper Magnolia Green. We are talking about infrastructure that will generate significant revenue for decades with minimal impact on school capacity or local traffic compared to residential development."[109]

Resident Testimony

During the May 28 and June 25, 2025, Board meetings, residents from the Moseley and Dogwood Creek areas raised concerns about noise, visual impact, and the industrialization of formerly rural land.

A Dogwood Creek resident: "We moved here for the trees and the quiet, not for a 24/7 hum of generators and 100-foot concrete walls."[112]

A resident requested that the county convert the Tidewater and Western railroad bed into a shared-use path to serve as a buffer between the residential area and Project Skye.[112]

These concerns produced the 750-foot buffer, the Swift Creek Preserve, and the proffer conditions documented in Part One. The eastern corridor, where the oldest and largest project is being built, produced no comparable record of resident engagement, not because the residents did not have concerns, but because the by-right framework provided no forum in which to express them.

The ZOMod Reform

On September 17, 2025, the Board of Supervisors voted unanimously (5-0) to adopt Ordinance No. 2025-18, repealing Chapter 19.1 of the county code and enacting Chapter 19.2, the Zoning Ordinance Modernization Project. Board members: Jim Ingle (Chair), Jessica Schneider, LeQuan M. Hylton, Kevin Carroll, and Mark Miller. The Planning Commission had recommended approval unanimously on July 15, 2025, led by Planning Director Andy Gillies and Project Manager Rachel Chieppa. [102] The 2019 Board that adopted the \$0.24 rate (Haley, Elswick, Jaeckle, Winslow, Holland) and the 2025 Board that adopted ZOMod share no members. The institutional pivot from rate competition to conditional use coincided with complete Board turnover.

Approximately 22 speakers testified at the September 17 hearing. Residents expressed concerns over increased density, water supply, and data center

environmental impact. Housing advocates (including HOME of Virginia) praised the flexible housing provisions. Industry representatives, including legal counsel for Tract, argued the conditional use requirement would introduce political uncertainty and lengthen timelines, potentially driving projects to neighboring jurisdictions. The Board maintained the conditional use requirement to ensure "site-specific scrutiny" for every project.[102]

The new data center use standards (Sec. 19.2-32) established a regulatory floor that all future data center projects must meet:

- **Noise:** Maximum 60 dBA at the property line. Pre-construction sound modeling by a licensed acoustical engineer required. Post-construction compliance verification within 60 days of becoming operational. Generator testing restricted to 7:00 AM to 5:00 PM, Monday through Friday.
- **Setbacks:** Minimum 200-foot setback from any residential or agricultural property line. Type D perimeter buffer required (the county's most intensive: 6-foot berm plus staggered rows of evergreen trees for year-round screening).
- **Height:** Maximum building height of 110 feet, reduced from the previous industrial standard of 150+ feet.
- **Architecture:** Facades longer than 100 feet must incorporate massing breaks (changes in color, texture, or materials). All rooftop and ground-level mechanical equipment must be fully screened. Chain-link and barbed-wire fencing prohibited where visible from public rights-of-way.
- **Water:** Closed-loop cooling systems required. Target consumption rate of no more than 2,000 gallons per day per acre. Electrical substations must meet the same setback and screening requirements as primary buildings.
- **Classification:** Data centers are conditional use in Employment Center (EC) and Employment General (EG) districts only. Prohibited in all other districts, including the previous C-5 and I-2 districts where they were once by-right.[113]

The Board explicitly discussed retroactivity during August and September 2025 work sessions. The County Attorney's office advised that vested rights protected projects with already-approved proffers and zoning. Forcing a new Conditional Use Permit on previously approved by-right industrial land would likely trigger immediate takings litigation under Virginia Code § 15.2-2307. The requirement was not made retroactive.[114]

As of June 12, 2026, no facial challenge to the ZOMod ordinance has been filed. Its as-applied tests, the two vested-rights appeals decided and pending at the Board of Zoning Appeals, are documented in Part Eight. Tract filed a Notice of Appeal in

October 2025 regarding the denial of its specific 700-acre project, processed as the new rules were being finalized.[20]

The ZOMod reform addresses the governance gap for future projects. It does not change the terms or conditions of the projects already approved. The \$0.24 rate, the 30-year grant-back, the by-right Bermuda Hundred approval, and the absence of water disclosure for the county's largest campus all remain in place. The county defended the reform's edge at the Board of Zoning Appeals in June 2026; what that defense could and could not reach is the subject of Part Eight.

PART EIGHT: THE BZA TEST

Every zoning reform faces a first challenge, and the challenge defines what the reform actually changed. Henrico's came from Centra Logistics at Darbytown Road, and its Board of Zoning Appeals disposed of it on February 26, 2026.[115] Chesterfield's came in two appeals filed within weeks of the new ordinance taking effect, both arguing the same thing: that land zoned industrial before January 1, 2026 carried a vested right to host data centers that the conditional use requirement could not take away. The county's Board of Zoning Appeals decided the first on June 3, 2026. The second is pending. Together they are the institutional behavior framework's best evidence of what Chesterfield's reform can defend, and Part Two already documents what it cannot reach.

Case 26AP2089: Old Bermuda Hundred Road

The decided case concerns 89.3 acres at 1931 Old Bermuda Hundred Road in the Bermuda Magisterial District, near I-95 in Chester. Washington Single Family Fund3, LLC, an entity tied to Jacob Manevich of Maryland, bought the property for \$462,000 in December 2023.[103] On April 15, 2024, it filed a major site plan application, case 24PR1100, "for the specific purpose of developing data centers," in its counsel's words.[103] The property was then zoned General Industrial (I-2), where data centers were a by-right use; under ZOMod's January 1, 2026 conversion it became Employment Center (EC), where they require conditional use approval from the Board of Supervisors.

The owner assembled the rest of a campus while the rules changed underneath it. An affiliate, Woods Edge, LLC, acquired the adjacent 63-acre parcel at 13508 Woods Edge Road for \$958,000, and on December 17, 2025, fourteen days before the new ordinance took effect, the Board of Supervisors rezoned that parcel from Agricultural to I-2 with proffers for an electric substation to serve the planned data centers. After the rezoning, the owner spent \$32,999 on surveying and engineering and \$8,000 on a wetlands delineation.[103]

On December 22, 2025, nine days before the effective date, the owner requested a written determination that its rights had vested. Planning Director Andrew Gillies issued the determination on February 12, 2026: "I determine that the Owner has not satisfied its burden to establish that it possesses a vested right to operate a data center on the Property." [106] The site plan application had gone through several rounds of review but was never approved. The staff report put the dispositive fact in one sentence: "It is undisputed that the County did not approve the site plan prior to the new Zoning Ordinance going into effect on January 1, 2026." [104]

The June 3 Hearing

The appeal reached the Board of Zoning Appeals on June 3, 2026, its first data center case under the new ordinance and the first time the eastern corridor's data center buildout has been argued in a public hearing of any kind. A county staff member reported sharing 97 emails in opposition; about a dozen residents spoke against data centers.[107]

The owner's attorney, Clark Leming of Stafford, made two arguments. The first was vesting: "The planning director was wrong in the determination about vesting. This is a vested project... The statute says a rezoning for a specific project. There was a specific project here. It was one data center campus with a substation and with data centers." The theory treated the December 17 substation rezoning, with its data-center-serving proffers, as the "affirmative governmental act" for the whole assemblage. The second was authority: that the determination was void because it issued from the planning director rather than the zoning administrator. "The planning director does not have the ability to issue zoning determinations, no matter what its ordinance says." [107]

Deputy County Attorney Andrew Fulwider answered both. On vesting: "The landowner cannot demonstrate any affirmative approval of the proposed data center by the county. There is no approved site plan here." And on the substation theory: "The rezoning of one property does not grant any legal rights with respect to another property." [107] The county's position reduces to a clean rule: prior zoning alone confers no entitlement absent an approved site plan, and no site plan was ever approved.

The board denied the appeal unanimously and affirmed the planning director's determination. Board member Graham Daniels, the Bermuda District representative and vice chair, signaled where the authority argument would have to go: "...that's all for the circuit court to determine. I'm inclined to uphold the determination of the Director of Planning." [107] Under Virginia Code § 15.2-2314 the owner has thirty days to petition the circuit court; the window runs to early July 2026, and no filing appears in the record as of June 12. [116] The project is not dead. The owner can file for a conditional use permit and take its campus to the Board of Supervisors, which is exactly the forum the ordinance was written to require.

The Pending Case: WestDulles at James River Industrial Center

The second appeal is larger and closer to the county's marquee assets. WestDulles Properties, a Reston-based developer, appealed by letter dated December 31, 2025, the day before the ordinance took effect, challenging staff's determination that a conditional use permit is required for its planned data center development in the

James River Industrial Center: a 170-acre grading area including 1500 Battery Brooke Parkway plus approximately 260 acres identified as a future phase, more than 430 acres in total, adjoining the Commonwealth Fusion Systems site.[117] Its appeal letter claims the project "obtained certain vested rights for the development of the Property with data centers by-right" and that the county "cannot divest the Appellant of said vested rights through an amendment to its Zoning Ordinance." Counsel is Brendan O'Toole of Williams Mullen. The case was slated for the BZA in May 2026; the May 6 meeting was cancelled for lack of cases, and the appeal remained pending as of the June 3 decision in the Old Bermuda Hundred case.[117] The June 3 reasoning, if applied consistently, turns on the same question: whether WestDulles holds an approved site plan or an equivalent affirmative governmental act predating January 1, 2026.

The new regime is also generating tests beyond data centers. The BZA's July 1, 2026 agenda carries an appeal of a conditional use determination for a self-storage project under the same ordinance, an early sign that the vesting question will recur across use categories as ZOMod's conversion of the county's zoning map works through the pipeline.[118]

The Regional Pattern

Three counties in the Richmond region reformed their data center rules within fifteen months, and all three reforms were institutionally tested within a year. The tests came in different forums and produced different results, and the differences map the decision space available to any locality that entitles first and reforms later.

Henrico's test was Centra's vested-rights claim at Darbytown Road. The BZA denied it unanimously on February 26, 2026, and the developer answered with a by-right warehouse plan the new ordinance could not touch: reform defended, protection incomplete.[115] Chesterfield's test was the Old Bermuda Hundred appeal. The BZA denied it unanimously on June 3, 2026, and the developer's remaining path runs through a public hearing: reform defended, and the forum the eastern corridor never had now exists for future projects. Hanover never needed a vested-rights fight, because it never entitled the land; its board simply denied the Mountain Road rezoning on May 27, 2026, with full discretion intact.[37] The institutional behavior framework should read the three episodes as a natural experiment in the timing of reform. All three localities won their test cases, in the sense that no developer established a vested right and no board was forced to approve anything. The variable worth studying is what remained beyond each reform's reach afterward: in Henrico, a grandfathered pipeline of nearly eight million square feet and a warehouse pivot; in Hanover, nothing; in Chesterfield, the largest installed base in the region, held at \$0.24 for thirty years by contract.

That last clause is the part the BZA cannot reach, and it is why the June 3 decision should be read precisely. The county defended the edge of its new framework and won. The edge governs entrants. The performance agreement governs the incumbents, and no zoning board, supervisor, or future election can move it.

PART NINE: THE STATE CONTEXT AND THE BUDGET IMPASSE

The Commonwealth's data center sales and use tax exemption cost Virginia approximately \$1.94 billion in forgone revenue in FY2025 by operator self-reporting, or approximately \$1.6 billion by state audit data.[119] As of the June 12, 2026 evidence snapshot, that exemption is the reason Virginia does not have a budget. The dispute matters to this case study twice over: it determines the state-level half of the incentive structure that attracted Chesterfield's investment, and it is running on a clock that ends July 1, when the fiscal year starts with or without an appropriation act.

The Impasse

The General Assembly adjourned sine die on March 14, 2026 without a budget, the first time in years the failure was attributable to a single industry's tax treatment. The Senate budget, carried by Finance and Appropriations Chair Louise Lucas of Portsmouth, eliminates the exemption effective 2027, eight years ahead of its statutory 2035 sunset. The House budget, under Appropriations Chair Luke Torian of Prince William, keeps the exemption through 2035 but conditions it: from July 2027, no co-location with carbon-emitting generation, mandatory renewable energy certificate purchases, non-carbon-emitting backup generation, and an energy-efficiency pledge, conditions drawn from clean-energy-standards bills that did not pass on their own.[120] Governor Abigail Spanberger, who took office January 17, 2026, sides with the House on the sunset: "I'm not going to break a contract the state has signed." [121] Former Delegate David Ramadan's rebuttal, that VEDP's own memoranda expressly allow the General Assembly to change the sunset and the "contract" framing is "spin," frames the disagreement as precisely the kind of dispute about reliance and revocability that Chesterfield's own performance agreement settles by contract.[121]

A special session convened April 23 and recessed the same day without a deal; the industry's offer to invest up to \$1 billion over the biennium was rejected.[122] On May 18, Spanberger directed a revised revenue forecast, which improved the outlook by \$1.5 billion through FY2028 and which Lucas read as pressure: "The administration is focused on a forecast, but we are faced and focused on the policies around who pays their fair share of taxes... I remain committed that data centers, who employ very few permanent jobs for a sizable tax giveaway, will pay sales tax on computer equipment." [123][124] A June 5 meeting between Lucas, Torian, and the governor produced no agreement and a memorable artifact of the breakdown, Lucas posting that "Data Center Diva and Amazon Don couldn't understand that this is about the policy — fair taxation and protecting our resources and citizens." [124]

Senate Majority Leader Scott Surovell floated a skinny continuing resolution. The House returns June 18, the Senate June 22. Without an act by July 1, Virginia faces its first partial government shutdown.[124]

The Compass Testimony

The industry's response to the uncertainty entered the legislative record on May 19, 2026, when Secretary of Finance Mark Sickles told the Senate Finance and Appropriations Committee that Compass Datacenters, a Texas-based operator with a large Northern Virginia presence, had cited "the current legislative and political environment" in deciding to redirect all further investment outside Virginia, abandoning a search for two sites in Greensville County and Emporia.[125] The claim is the administration's account of company communications, not a Compass statement; the company did not respond to press inquiries, and a separate Compass withdrawal near the Prince William Digital Gateway in May 2026 traced to a zoning clerical error, not tax policy.[125][126] Sickles told the same hearing that Stack Infrastructure's roughly \$100 billion Berry Hill project in Pittsylvania County hinges on the abatement: "They've said they're not going to go forward without this tax abatement." [125] Whatever weight the testimony deserves, it marks the moment the exemption fight stopped being hypothetical for the recruitment pipeline.

What the 2026 Session Passed

Legislators considered 61 data center bills in the 2026 session; 15 reached the governor and 46 carry over to 2027.[127] Four enactments bear directly on this case study.

HB 507 (Chapter 397). Prohibits DEQ from issuing an air permit for any data center application submitted on or after July 1, 2026 unless each engine-generator's permitted emission limit is at or below a Tier 4-equivalent standard. Signed April 8, 2026.[128] The bill creates a filing incentive ahead of the deadline, documented in Part One, and answers a piece of the generator arithmetic that the Henrico companion documents at length.

SB 553 (Chapter 896) and its companion HB 496. Requires water utilities that register withdrawal data with the State Water Control Board to report monthly volumes of potable water, and separately reclaimed water, provided to data centers holding a DEQ air permit. Effective January 1, 2027. Signed April 13, 2026.[75] For Chesterfield this is the first mandatory disclosure instrument that will reach the Bermuda Hundred campus, whose water demand has never been publicly stated; Part Four documents what the law will and will not close.

SB 94 and HB 153 (Chapters 568 and 567). Identical bills requiring localities, before approving a rezoning, special exception, or special use permit for a high

energy use facility of 100 MW or more, to require a site assessment of the facility's sound profile on homes and schools within 500 feet, with discretionary authority to require assessments of water, agricultural, park, historic, and forest impacts. Signed April 13, 2026. The patron called it "the bare minimum." [129] Chesterfield's ZOMod standards already exceed it on most dimensions.

SB 253 and HB 1393. The ratepayer cost-shift package: extends weatherization and bill-assistance programs and, with SCC approval, shifts PJM capacity-auction costs and the financing costs of data-center-serving distribution infrastructure onto the GS-5 class. Spanberger proposed amendments in April that lawmakers and Dominion itself said weakened the cost-shift provisions; the reconvened session rejected most of them on April 22, and she signed the bills May 14, 2026.[89] The enacted version, layered on the GS-5 design documented in Part Five, is the current statutory answer to the cost-allocation question the Synapse testimony raised.

The Chesterfield Implications

If the state sales tax exemption is repealed or narrowed, the incentive framework that attracted the investment changes going forward. But the county-level \$0.24 rate and the 30-year performance agreement remain in place regardless of state action. The state exemption and the local rate are separate instruments. A state reform would not address the local revenue gap documented in Part Two.

The reverse is also true: if the state preserves the exemption, Chesterfield's \$0.24 rate still stands alone as the lowest local equipment rate in the Commonwealth, and the gap between what the county charges and what peer jurisdictions charge remains as documented. The state debate and the local fiscal terms are parallel tracks, and researchers should not assume that legislative action on the exemption resolves the county-level questions this case study raises.

The impasse adds one Chesterfield-specific wrinkle. Chirisa's participation in the state exemption carries a June 30, 2026 performance deadline, \$150 million invested and 50 jobs, with clawback exposure if the targets are unmet; whether the deadline is met, extended, or mooted by whatever budget emerges is unverified as of the snapshot date and belongs on the verification list in Part Thirteen.[52] And if the Senate position prevails in any form, the operators with the deepest Chesterfield exposure will have lost the state half of their incentive package while retaining, by contract, the local half. The performance agreement was structured to survive exactly this kind of weather. That is what it is for, and June 2026 is the first season that tests it.

PART TEN: THE DISTRIBUTIONAL RECORD

This part assembles the distributional evidence: the history and demographics of the Bermuda Hundred corridor, the census tract analysis, the education-labor mismatch, the proffer asymmetry between the county's two data center corridors, and the environmental health record of the communities adjacent to the CERC site. It is the strongest distributional justice evidence in this portfolio, and it is presented as a record, not a balance. The county's own documents produced both halves of the comparison; this study's contribution is to put them on the same page.

The Bermuda Hundred Corridor

The Bermuda Hundred corridor's demographic, historical, and environmental profile is the most significant gap in the public deliberation that preceded the data center approvals. Because the anchor project (Project Peanut) proceeded by-right, there was no forum in which this record could be entered: no public hearing, no staff presentation on community impact, no opportunity for residents to place the project in the context of the corridor's history or their own lived experience. The distributional justice framework's three pillars (distributive, procedural, and recognition justice) apply directly to what follows.

Recognition Justice: The Historic District and the Slave Trade

The Town of Bermuda Hundred Historic District (DHR File 020-0064) was listed on the Virginia Landmarks Register on September 6, 2006, and on the National Register of Historic Places on November 8, 2006. The period of significance spans 1613 to 1940. The district encompasses approximately 16.2 acres with 10 contributing resources and 3 non-contributing resources. Key structures include the Bishop-Johnson House (c. 1830) and the Bermuda Hundred Methodist Church (c. 1850). The district is eligible under NRHP Criteria A (history), C (architecture), and D (archaeology). The related Multiple Property Documentation form (020-5370) covers the Prehistoric and Historic Resources of Bermuda Hundred.[9]

Bermuda Hundred is one of the oldest English settlements in Virginia. Sir Thomas Dale established the settlement in 1613, enclosing the peninsula with palisades. It is the site where John Rolfe and Pocahontas resided and where tobacco experimentation began. But for the purposes of this case study and the recognition justice pillar of the distributional justice framework, the most significant chapter in the site's history is its role in the transatlantic slave trade.

In February 2024, the Chesterfield County Museum and Historical Archives published a piece titled "An untold story: For many years, Bermuda Hundred played major role in transatlantic slave trade," centered on the research of Reverend

Herbert Townes, a local historian and genealogist whose archival work challenged the popular historiography that centers Virginia's slave trade almost exclusively in Richmond.[130]

Townes's research reveals that while Richmond became the epicenter of the domestic slave trade after the federal prohibition of international imports in 1808, Bermuda Hundred was the preeminent transatlantic market for the Upper James region for nearly a century prior. Between 1690 and 1775, white Virginians purchased approximately 100,000 enslaved Africans from transatlantic traders. Bermuda Hundred, alongside Osborne Landing, functioned as the dominant point of sale for this human cargo in the Richmond-Petersburg region. By analyzing eighteenth-century newspaper advertisements and port records, Townes discovered that while ships docking in Richmond rarely advertised enslaved people for sale directly "off the ship" during the colonial era, such advertisements were abundant for vessels landing at Bermuda Hundred. The deep-water port was capable of receiving large transatlantic vessels that could not navigate the falls of the James at Richmond. Enslaved individuals, after surviving the Middle Passage, were marched from the wharves into the central marketplace of Bermuda Hundred to be auctioned to planters from the interior Piedmont.[130]

Recognition justice requires acknowledging the specific cultural and racial history of a community before evaluating whether industrial siting respects or disregards that history. Siting a hyperscale data center immediately adjacent to this district, without public hearing, without community input, and without acknowledgment of the site's significance as both a National Register property and a documented slave market, raises the recognition justice question that the distributional justice framework is designed to address. The Brown and Williamson Conservation Area at 2800 Bermuda Hundred Road provides a 265-acre physical buffer between the data center site and the historic district core, but the absence of any reference to the district's history in the project's approval process is itself a finding.[9]

Distributive Justice: The Census Tract Data

The demographic profile of the Bermuda Hundred corridor confirms a distributional pattern consistent with national environmental justice research: industrial infrastructure is concentrated in communities with higher percentages of non-white residents and lower economic leverage, while fiscal benefits accrue countywide.

The analysis focuses on three census tracts covering the Bermuda Hundred area and the Battery Brooke Parkway site, using 2020–2024 American Community Survey 5-year estimates:

Metric	Tract 1007.01	Tract 1009.20	Tract 1009.02	Chesterfield County
Population	5,509	1,475	3,905	389,793
Median HH Income	\$34,609	\$70,685	\$136,370	\$101,931
Poverty Rate	13.6%	7.2%	4.0%	7.1%
Homeownership (B25003)	48.2%	72.8%	86.4%	76.7%
Renter- Occupied	51.8%	27.2%	13.6%	23.3%
Med. Home Value (B25077)	\$214,800	\$293,200	\$439,600	\$366,000
White (Non- Hispanic)	18%	55%	84%	55.9%
Black/African American	35%	23%	10%	25.8%
Hispanic/ Latino	43%	11%	1%	12.6%

Sources: ACS 2020–2024 5-year estimates. Tables B25003, B25077, DP05. Geography: Census Tracts, Chesterfield County, FIPS 51041. See [131][132].

Census Tract 1007.01 directly encompasses the high-density residential areas nearest the industrial core of Bermuda Hundred. The median household income of \$34,609 is approximately one-third of the county median (\$101,931). The tract is a majority-minority area, with Hispanic/Latino residents accounting for 43 percent and Black residents 35 percent of the population. In sharp contrast, neighboring Tract 1009.02 has a median household income of \$136,370 (nearly four times that of 1007.01), is 84 percent White, and has an 86.4 percent homeownership rate.[131] [132]

The industrial "engine" of the county is placed in a diverse, low-income corridor, while the most affluent residents live in adjacent affluent residential areas nearby, benefiting from the county-wide fiscal surplus without enduring the same industrial burden.

The Education-Labor Mismatch

The educational attainment and employment data reveal a systemic barrier to local benefit from the data center economy:

Metric	Tract 1007.01	Tract 1009.20	Tract 1009.02	County
No HS Diploma	18.4%	2.1%	1.2%	6.9%
HS Graduate	38.6%	13.4%	9.8%	22.0%
Some College/Associate	27.2%	35.8%	26.5%	25.4%
Bachelor's Degree	10.5%	26.9%	40.7%	26.4%
Graduate/ Professional	5.3%	21.8%	21.8%	19.3%
Prof/Tech Employment (DP03)	6.1%	N/A	24.0%	14.2%
Mfg/ Transport/ Retail Employment	34.2%	N/A	<12%	23.4%

Sources: ACS 2020–2024. Tables S1501, DP03. Employment data for Tract 1009.20 not separately compiled; educational attainment confirmed via Gemini Research cross-check against data.census.gov. See [133].

In Tract 1007.01, 57 percent of the population aged 25 and older has a high school diploma or less. The "tech-ready" population (bachelor's degree or higher) is 15.8 percent, compared to 48.7 percent in Tract 1009.20, 62.5 percent in neighboring Tract 1009.02, and 45.7 percent countywide. Only 6.1 percent of Tract 1007.01's workforce is employed in Professional, Scientific, and Technical Services, the sector covering data center operations, compared to 24 percent in 1009.02. Instead, 34.2 percent of the corridor's workforce is concentrated in Manufacturing, Transportation/Warehousing, and Retail.[133]

The residents nearest the data centers are the least likely to qualify for the operational jobs those facilities create. This is the education-labor mismatch: the industry's workforce requirements and the community's educational profile do not align.

The Homeownership Gap and Wealth Capture

Tract 1007.01 is a majority-renter area (51.8 percent). This means that even if data center proximity drives local property value appreciation, more than half of the residents in the immediate vicinity will not capture that equity. Instead, they may

face rent inflation. The median home value in 1007.01 (\$214,800) is roughly half the value in neighboring 1009.02 (\$439,600) and well below the county average (\$366,000). Homeownership is the primary vehicle for wealth accumulation in the United States, and the disparity in ownership rates between the corridor tracts is a significant indicator of long-term inequity.[131]

In Henrico County, data center tax revenue has been used to seed a \$60 million affordable housing trust fund, the first program of its kind in the United States specifically dedicating data center revenue to homeownership.[134] No comparable program has been established in Chesterfield. The residential tax credit and rate reductions documented in Part Three are countywide benefits, not targeted investments in the communities that host the facilities.

The Proffer Asymmetry: East Versus West

The regulatory treatment of data center projects differs systematically by geography and community demographics. This asymmetry is the procedural justice finding within the distributional justice framework. The rezoning process produced stronger protections in the western corridor, while the by-right framework produced none in the eastern corridor.

Eastern Corridor Projects (Bermuda District)

Google "Project Peanut" (2700 Bermuda Hundred Road)

- Approval: By-right under I-2 zoning. No public hearing. No Board vote required.
- Setbacks: Standard I-2 requirements (approximately 50-100 feet), though the site is largely surrounded by other industrial uses.
- Noise: Governed by the standard county noise ordinance (Sec. 14-25): 65 dBA daytime / 55 dBA nighttime. No site-specific noise proffers.
- Water: No specific limits, disclosure requirements, or cooling technology mandates.
- Community benefits: None. No conservation land, financial contributions, or infrastructure improvements required beyond standard permit fees.
- Public participation: No formal mechanism for community input or opposition.

Chirisa Technology Parks (Meadowville Technology Park)

- Approval: By-right under the Meadowville Technology Park Master Plan.
- Setbacks: 50-foot landscaped buffer along main thoroughfares; minimal internal setbacks.
- Noise: 65 dBA at the property line per the park's restrictive covenants.

- Water: Subject to standard utility rates. No project-specific conservation proffers.
- Community benefits: Infrastructure (roads/utilities) was largely publicly funded via the EDA.
- Public participation: Minimal. Master zoning was settled years ago; individual site plans handled administratively.

Digital Drive Site (1600 Digital Drive)

- Approval: By-right under I-2 zoning.
- Setbacks: Standard industrial. Site nested within existing industrial cluster.
- Noise/Water: No enhanced protections beyond county code.

Western Corridor Projects (Matoaca/Midlothian Districts)

Project Skye (Upper Magnolia Green West, Case 25SN1038)

- Approval: Rezoning from Agricultural to I-1/O-2. Required Planning Commission and Board of Supervisors public hearings. Multiple community meetings and a dedicated county website for public feedback.
- Setbacks: 200-to-750-foot natural buffers and berms where the site borders residential property or the Swift Creek Reservoir watershed.
- Noise: Site-specific proffers cap noise at 50-55 dBA at the property line, significantly stricter than the 65/55 standard code, with mandatory real-time monitoring and reporting.
- Water: Closed-loop cooling required. Water Mitigation Plan with mandatory daily usage reporting. 2,000 GPD/acre cap.
- Community benefits: 350-acre Swift Creek Preserve (permanent conservation). Multi-million dollar road improvements (Woolridge Road extension). Architectural screening requirements. Public park and trail system dedication.
- Public participation: Extensive. Multiple public hearings, community sessions, and formal proffer negotiations.

Project Loch (Watkins Centre South, Case 25SN1040)

- Approval: Rezoning from PUD. Required public hearings.
- Setbacks: 100-200 feet with specific evergreen screening to shield views from Route 288 and nearby affluent subdivisions.
- Noise: Capped at 55 dBA at residential property lines.
- Water: High-efficiency cooling required. "Dry-cooling" preference during peak drought periods.

- Community benefits: Fiber-optic infrastructure upgrades. Cash-in-lieu contributions for fire/EMS equipment. Route 288 transportation improvements.
- Public participation: High. Engagement from Watkins Centre homeowners' associations and Midlothian district leadership.

Summary Comparison

Feature	Eastern (Peanut/Chirisa)	Western (Skye/Loch)
Approval Process	By-right (Administrative)	Rezoning (Public/Political)
Public Input	None / Minimal	Extensive / Mandatory
Noise Limits	65/55 dBA (Standard Code)	50-55 dBA (Site-Specific Proffers)
Setbacks	50-100 ft (Standard)	200-750 ft (Enhanced)
Water Controls	None; No disclosure	Closed-loop; Usage caps; Reporting
Conservation Land	None	350-acre Swift Creek Preserve
Community Benefits	None (Standard taxes only)	Road improvements; Fiber; Cash; Park
Cooling Technology	Not specified / Not required	Closed-loop mandatory

Sources: Chesterfield County staff reports for Cases 25SN1038, 25SN1040; I-2 zoning requirements; noise ordinance Sec. 14-25; Meadowville Technology Park covenants. See endnotes 79-80.

This spatial inequity in regulatory treatment serves both the distributional justice and institutional behavior frameworks simultaneously. The by-right mechanism did not merely permit data centers in the eastern corridor; the by-right framework precluded community participation in the approval process. The same county that negotiated 750-foot buffers and 350-acre conservation preserves for its wealthiest neighborhoods approved its largest data center campus in its most diverse, lowest-income corridor with no buffers, no noise caps, no water disclosure, and no public hearing.[135][136]

A methodological note is warranted. This case study documents resident perspectives from the western corridor because the rezoning process produced a public hearing record. The by-right approval process for the eastern corridor produced no comparable record, and independent community interviews were

beyond the scope of this project. The absence of eastern corridor voices in this document reflects the same procedural gap it describes.

The First Forum, Six Years Late

The procedural half of the asymmetry acquired a precise marker in 2026. The June 3 Board of Zoning Appeals hearing on the Old Bermuda Hundred vested-rights appeal, documented in Part Eight, was the first public hearing ever held on a data center question in the eastern corridor. It concerned a different developer's claim, on a different parcel, under rules adopted after the corridor's anchor campus was already entitled. A county staff member reported 97 emails in opposition; about a dozen residents appeared to speak against data centers.[107] The participation arrived the first time a forum existed to receive it, six years after the first land assembly and the day before Google's contractors filed \$215 million in permits for the campus next door. The methodological note earlier in this part observed that the absence of eastern corridor voices in the record reflects the procedural gap this study describes. The June 3 record is the experiment that confirms it: given a forum, the corridor used it.

The corridor's other voice now runs through the courts. The CERC litigants, the Chesterfield NAACP, Appalachian Voices, Mothers Out Front, and CASA, carried the fenceline communities' environmental justice claims through the SCC's reconsideration process and into the Supreme Court of Virginia and the Richmond Circuit Court, the full record of which is in Part Six. Whatever the outcomes, the 2026 docket established that the communities the by-right framework excluded have found the two forums that framework could not close: the zoning appeal and the appellate court.

CERC Environmental Health Data

The Chesterfield Energy Reliability Center is sited in Census Tract 1004.03, Block Group 3, in the Bellwood/Bensley area. The 944 MW natural gas peaker plant was approved on the site of the retired Chesterfield coal facility. The environmental and health profile of the surrounding community is relevant to the distributional justice framework because it documents whether the community already carries elevated environmental burdens before new fossil generation arrives.

EPA EJScreen Data (2024-2025, Census Tract 1004.03):

Environmental Indicator	Percentile in Virginia	Percentile in USA
Particulate Matter (PM 2.5)	85th–90th	70th–75th
Proximity to Hazardous Waste	92nd	88th
Air Toxics Cancer Risk	80th	72nd
Wastewater Discharge	89th	84th
Demographic Index	88th	82nd
Low Income Population	78th	74th
People of Color Population	84th	76th

Source: EPA EJScreen Community Report, Census Tract 100403, Chesterfield County, VA. See [137].

The tract is designated as an Environmental Justice Community under Virginia Code § 2.2-234.[137] Dominion's own Environmental Justice Desktop Review for the CERC air permit (revised September 23, 2024, Appendix H) found that the project site has a population that is 84 percent people of color, 73 percent low-income, and 41 percent Hispanic or Latino, with 26 percent of households linguistically isolated. Of the 24 census block groups within a three-mile buffer of the site, 22 contain potential environmental justice communities.[98]

Virginia Department of Health data from the 2023 Chesterfield-Colonial Heights Community Health Assessment indicates elevated respiratory burdens in the Bellwood/Bensley area:

- Adult asthma prevalence in Census Tract 1004.03: approximately 10.2 percent (county average: 8.6 percent).
- Emergency department visits for COPD and asthma in ZIP 23237 (Bellwood/Bensley): top quintile (highest 20 percent) statewide.
- Chesterfield County's overall age-adjusted cancer incidence rate is 452.4 per 100,000. Localized data for the Bellwood area shows a higher Social Vulnerability Index, which correlates with later-stage diagnoses and higher mortality for lung and bronchus cancers.[138]

Air monitoring gap. There is no active DEQ air monitor within a three-mile radius of the CERC site. The nearest monitors are the MathScience Innovation Center in Richmond (approximately 8 miles north) and the Hopewell City monitor (approximately 10 miles southeast). During the coal plant's final operational years

(2018-2022), the Chesterfield station was permitted to emit over 118,000 tons of SO₂ and 4,400 tons of NO_x annually. The transition to the CERC gas plant is projected to reduce SO₂ substantially but may increase localized NO_x emissions by 61 tons per year compared to the coal plant's final operational year, due to the frequent "peaking" startups of simple-cycle turbines.[139]

Environmental groups challenged the CERC air permit on environmental justice and Virginia Clean Economy Act grounds; the permit issued December 19, 2025, and the challenge is now a judicial appeal in the Circuit Court for the City of Richmond, documented with the rest of the litigation record in Part Six.[100]

The question for the Sloan research team is structural: does the promise of zero-carbon fusion power in the early 2030s justify new fossil generation in the late 2020s? And if the answer is that the grid cannot wait, who bears the health and environmental cost of the interim? The communities adjacent to the CERC site, predominantly Bellwood and Bensley, are not the same communities that will capture the economic benefits of the Google data center campuses. The costs and benefits land in different places, on different populations, on different timelines.

PART ELEVEN: REGIONAL CONTEXT — THE THIRD POSITION

The Henrico and Hanover case studies in this series describe two poles of a regional decision space. Henrico reformed after entitling: it ended by-right approval in June 2025, raised its rate to \$2.60, defended the new rules at its BZA, and then discovered a grandfathered pipeline of seventeen buildings and nearly eight million square feet that the reform cannot reach.[140] Hanover refused before entitling: it rejected the Mountain Road rezoning in May 2026 with no installed base, no performance agreements, and full discretion over everything that comes next, and it votes June 24 on a data center rate of up to \$3.00.[36][37] Chesterfield completes the space with a third position, and it is not between the other two. The county contracted its future leverage away.

The mechanism is the difference. Henrico's constraint is vested rights, a doctrine with edges that can be litigated, as Centra discovered. Hanover's constraint is nothing but its own future votes. Chesterfield's constraint is a contract. The 30-year grant-back means that even a Hanover-style repricing, adopted by a future Chesterfield board with unanimous public support, cannot reach the installed base: the county would collect the higher rate from Google and refund the difference through the EDA, every year, for three decades. Henrico's reform arrived too late to govern what was already entitled. Chesterfield's reform arrived on time, and was then made beside the point for the operators that matter most, by an instrument the county itself signed.

The June 2026 rate map makes the position visible. Henrico collects \$2.60. Prince William collects \$4.50 after two increases in fourteen months. Loudoun applies its \$4.15 general rate. Hanover's advertised maximum is \$3.00. Chesterfield collects \$0.24, and for its dominant operator it will collect an effective \$0.24 in 2056 regardless of what any of those numbers do in the meantime.[35][46] If Hanover adopts a rate at or near its advertised maximum on June 24, every jurisdiction in the Richmond region except Chesterfield will price data center equipment at \$2.60 or above, between roughly eleven and nineteen times Chesterfield's locked rate. The rate-arbitrage strategy that opened this case study will have produced, within seven years, the most extreme fiscal outlier in the Commonwealth, fixed in place for a generation.

The three institutional tests of 2026, documented in Part Eight, complete the comparison. Each county's reform was challenged; each county prevailed in the forum where it was challenged; and what each county kept afterward differed entirely. The energy geography framework should add the diffusion observation: as each jurisdiction in the region tightens, development pressure rolls outward, and

the operators with locked terms sit out the repricing entirely. Capital that arrived for the arbitrage stays for the contract. That is the third position's signature, and no other jurisdiction in this portfolio occupies it.

PART TWELVE: READINGS BY RESEARCH SPECIALTY

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

The Distributional Justice Reading

Chesterfield offers the sharpest two-corridor contrast in this portfolio, and the contrast is the evidence. The eastern corridor record includes the census tract analysis in Part Ten (Tract 1007.01: median household income one-third of the county's, majority-minority, majority-renter), the Bermuda Hundred historic district and slave trade documentation, the by-right approval that provided no forum for any of it to be weighed, and the water disclosure vacuum at the county's largest campus. The western corridor record includes the 750-foot buffers, the 50-55 dBA site-specific noise caps, the mandatory closed-loop cooling, the 2,000 gallons-per-day-per-acre caps with daily reporting, and the 350-acre Swift Creek Preserve. The same county produced both records in the same five-year window, and the difference tracks the demographics of the surrounding communities. The CERC docket in Part Six extends the reading into the regulatory system: the petitioners' theory that re-siting fossil infrastructure on the same fenceline the statute was written to protect, and the Commission's distance-dissipation answer, are now before the Supreme Court of Virginia. The unobserved evidence is the eastern corridor's own voice; the June 3 BZA hearing, with its 97 opposition emails, is the first public record of it, and it arrived six years after the first land assembly. Field interviews in October 2026 should treat that silence as a produced artifact of the by-right framework, not as acquiescence.

The Institutional Behavior Reading

The Chesterfield record documents an institution that competed on price and then built the apparatus the price required: the same-day EDA transaction with its zero-day holding period, the NDA that kept the operator anonymous for five years, the technically-true public statements during the disclosure controversy, the proactive residential-to-industrial land conversion at Upper Magnolia Green before any operator was publicly involved, the 30-year grant-back that converted a policy preference into a contractual commitment, and the ZOMod reform that tightened the rules only after the highest-value approvals were already by-right. The 2026 additions are the reform's defense at the BZA (Part Eight), the county's decision to hold the \$0.24 rate and the agreements through a regional repricing wave (Part Two), and the FY2027 budget that cut the general personal property rate while leaving the data center classification untouched. Project Peanut remains the anchor

artifact: a transaction structured so that the county's own economic development director could say, accurately, that no buyer was in mind for the parcel the EDA retained. The reading should pair Chesterfield's sequence with Henrico's: one county reformed under community pressure after a hot-mic moment, the other reformed on its own schedule with no organized eastern-corridor resistance to respond to, because the by-right framework had given resistance nowhere to form.

The Utility Finance Reading

Three mechanisms reward analysis. First, the rate arbitrage itself: \$0.24 set against Henrico's \$0.40 in 2019, now sitting against \$2.60, \$4.15, \$4.50, and a pending \$3.00, with the revenue gap recomputed in Part Two at \$91 million to \$164 million a year at full buildout. Second, the lock: the grant-back structure, its subject-to-appropriation clause, the three-agreement architecture covering all three Google sites, and the asymmetry that leaves Chirisa, the county's second-largest operator, fully exposed to any future rate increase that Google's contract neutralizes. Third, the refresh dependency: the depreciation schedule, the portfolio smoothing across six or more equipment tranches, and the dependence of every revenue projection on operator refresh behavior that no locality controls or observes. The 2026 record adds the GS-5 implementation timeline (effective January 1, 2027, with the SB 253 cost-shift package signed May 14), the November 25 pairing of the CERC approval with the rate class creation, and the state budget impasse as a live test of whether incentive structures hold under political stress. Chesterfield's does, by design; that is the finding.

The Energy, Labor, and Infrastructure Reading

The labor evidence remains thin and consistent with the series: roughly 50 permanent workers per typical facility against thousands of construction jobs, with the June 2026 permit record naming the construction apparatus (Holder Construction, Miller Electric, Poole and Kent) and pricing the first Bermuda Hundred hall at \$215 million before fit-out. The infrastructure evidence is the part Chesterfield documents better than any other case in the portfolio: two named SCC transmission dockets (Meadowville and Western Chesterfield), a directly-assigned switching station beside socialized network upgrades, the Synapse \$22.4 billion incremental transmission figure with both Chesterfield projects identified as deferrable absent data center load, a \$168.2 million wastewater basin sized for the corridor's buildout, and a \$426 million water treatment plant on the same growth path. The cost-allocation seam between Rider T socialization and GS-5 assignment is where the analysis should sit, and the 2026 Transmission Rider proceeding ordered by the SCC is where it will be decided. The CERC, a gigawatt of fossil

capacity justified by this load and now under appeal, is the system-level consequence.

The Energy Geography Reading

Chesterfield shows digital infrastructure following entitled land and fiscal engineering rather than population or fiber geography. The county manufactured its own supply: an EDA that assembled and flipped land under NDA in the east, and that bought out a 2,057-acre residential entitlement in the west to convert it to industrial use before any operator appeared. The land conversion arithmetic, roughly 2,000 acres across four sites, with 350 acres of conservation offset purchasing political acceptance in the affluent corridor, is documented in Parts One and Ten. The 2026 additions are physical: the first hall under construction at Bermuda Hundred, the wetlands and stream impacts quantified in the Project Loch federal permit application (4.8 acres of wetlands, 2,800 linear feet of streams, a cemetery with possible unmarked graves inside the site), and a fusion plant and a gas peaker anchoring opposite ends of the same industrial corridor. The diffusion observation from the Henrico reading applies with the Chesterfield twist: as the region reprices, the locked operator has no reason to move, and the geography hardens around the contract.

PART THIRTEEN: GAPS IN THE RECORD AND DIRECTIONS FOR FURTHER RESEARCH

This case study is built on publicly available sources. Several categories of evidence remain unavailable or incomplete as of June 12, 2026. This part is organized as a working document for the October 2026 fieldwork: decisions pending at the snapshot date, the FOIA and records targets in priority order, and the claims in this study that currently rest on secondary sources.

Decisions Pending at Snapshot

Six live proceedings will change parts of this record within months of publication. The Hanover Board of Supervisors votes June 24, 2026 on a data center rate of up to \$3.00; the outcome completes or complicates the regional rate map in Part Eleven. The state budget must resolve by July 1 or the Commonwealth begins its first partial shutdown; the exemption's fate reshapes Part Nine. The WestDulles BZA appeal is pending with no scheduled date. The Old Bermuda Hundred owner's thirty-day circuit court window runs to early July. The Supreme Court of Virginia has not acted on the CERC petition. The Richmond Circuit Court air permit appeal has no public schedule. None of these outcomes is predicted in this document; each is identified where it touches the analysis.

Disclosure Barriers

The author submitted FOIA requests for the Google EDA performance agreement and the Chirisa agreement terms. The estimated cost of production exceeded the resources available for this project. The specific terms remain undisclosed in the public record.[141]

The cost-of-production barrier deserves specific documentation. Under Virginia Code § 2.2-3704(H), public bodies may charge for the actual cost of producing records in response to FOIA requests. Chesterfield County's general FOIA policy requires a 50 percent deposit for any estimate exceeding \$200. Advocacy groups, including the Piedmont Environmental Council, have noted that excessive cost-of-production estimates effectively function as a "pocket veto" for individual researchers, smaller newsrooms, and citizens. These are FOIA requests that are technically permissible under state law but practically unaffordable for anyone without institutional funding.[142]

The Botetourt County precedent is relevant here. In late 2025, the Roanoke Circuit Court ordered the release of unredacted data center performance agreements involving Helio Capital and Google. The court found that investment and job terms were not proprietary under VFOIA. The Virginia Court of Appeals declined to stay

the ruling. The released documents disclosed a \$3 billion investment commitment and a 150-employee hiring requirement.[142] This precedent suggests that Chesterfield's performance agreement terms may be obtainable through litigation if FOIA production costs remain prohibitive. The Sloan team, with grant funding, should be able to obtain these documents through formal FOIA requests or, if necessary, through the legal pathway established by the Botetourt ruling.

FOIA and Records Targets for the October 2026 Fieldwork

In priority order:

1. The performance agreements, full text. All three Google fixed-rate agreements (the 2020 Bermuda Hundred agreement with Peanut LLC, and the June 2025 agreements with Skyward Holdings and Aeris Investments), plus any Chirisa-related agreements. The targets within the documents: the investment thresholds, the clawback and compliance provisions, the renewal-trigger language tying the two automatic 10-year extensions to construction progress, the grant-routing provision allowing payments to be directed to county utilities infrastructure, and the definition of the covered tax classification. Request to the EDA and the county attorney; the Botetourt pathway is the fallback. Every revenue model in Part Two sharpens or collapses on these documents.

2. The Project Peanut transaction file. EDA board minutes from March 2020 (the Lowe acquisition and same-day sale) and December 2020 (Upper Magnolia Green), the NDA itself or its summary terms, the March 25, 2020 Board item 7.A.4 backup materials, and any correspondence identifying whose requirement the non-disclosure was, Google's or the county's. The disclosure controversy in Part Seven currently rests on the BizSense record and Hart's public statements.

3. Water demand records for Bermuda Hundred. Department of Public Utilities records of projected or contracted daily demand, meter sizing, and capacity reservations for the 2700 Bermuda Hundred Road campus, and any internal consolidated demand projection for all approved data center sites. The absence of any public figure for the county's largest campus is itself a finding of this study; the request tests whether the absence is a disclosure gap or a records gap. Beginning January 1, 2027, SB 553 reporting will generate monthly utility-side volumes for air-permitted data centers; the October fieldwork should establish the baseline the statute will be measured against.

4. The BZA case file for 26AP2089. The complete packet including both exhibit letters, the staff report, the hearing recording or minutes (scheduled for approval July 1, 2026), the vote tally with members present, and any circuit court petition filed after the snapshot date. The file documents the county's first defense of

ZOMod's edge and the first public hearing record the eastern corridor's data center buildout has ever produced. The WestDulles file (appeal letter dated December 31, 2025) should be requested at the same time.

5. The CERC docket documents. From the SCC docket: the full evidentiary record cites in the November 25, 2025 Final Order, the February 12, 2026 Order on Reconsideration, and Dominion's January 16, 2026 response on the § 56-596.2 question. From the courts: the Supreme Court of Virginia record number and any action on the May 27 petition; the Richmond Circuit Court case number, schedule, and DEQ's administrative record in the air permit appeal. The EJ analysis pathway through both forums is the distributional justice framework's primary 2026 evidence.

6. Conditional use applications under ZOMod. As of June 12, 2026, no data center CUP application has been filed under the new ordinance, through press coverage and county agendas; a filing unreported by press cannot be ruled out and should be checked directly against the planning case database.[105] The zero is a datum: five months into the new regime, the conditional use pathway the county built has no users, while the vested-rights pathway has two litigants. The first CUP filing, whenever it comes, will test the standards in Sec. 19.2-32 against an actual project.

7. Chirisa DCRSUT compliance status. Whether the June 30, 2026 statutory deadline (\$150 million invested, 50 jobs) was met, extended, or restructured, via VEDP or Department of Taxation records to the extent disclosable, and what the CoreWeave lease did to the compliance posture.

8. The grant-back appropriations line. Once any Google site reaches certificate of occupancy and the agreement term begins, the annual EDA grant payments should appear in the county budget if the Board ever raises the rate. Establish where in the budget the line would sit and whether the appropriation mechanics have been documented in advance. This is the instrument that makes the lock real; its administrative plumbing has never been publicly described.

9. Commissioner of the Revenue data center assessment data. The data center contribution to BTPP revenue is tracked internally under the \$0.24 classification but published only in aggregate. Request Tax Year 2024 and 2025 assessment and levy totals for the classification, which would allow the first independent test of the county's \$4.2 million per-billion revenue estimate and of this study's gap analysis. [54]

Secondary-Source Claims Requiring Primary Verification

Claims marked with an asterisk in the endnotes rest on press coverage or other secondary sources. The highest-value verifications: the June 3, 2026 BZA vote tally and members present (currently "unanimous" per BizSense; minutes due July 1); the \$462,000 and \$958,000 acquisition prices in the Old Bermuda Hundred assemblage (deed records); the Peanut Hall #1 permit values and contractor identities (county permit records, currently via the BizSense permits column); the Hanover rate-vote mechanics and the April 8, 2026 budget action (county minutes); the Compass redirection claim (Senate Finance committee recording and presentation materials); the Project Skye and Loch fixed-rate agreement mechanics (the agreements themselves, item 1 above); and the 2020 Bermuda Hundred fixed-rate agreement's approval date, which no public source states precisely. The census, SCC, DEQ, USACE, and legislative citations in this study are primary and need no further verification, though the ACS estimates should be refreshed when the 2021–2025 five-year series publishes.

Research Priorities by Framework

Utility finance: Obtain the full performance agreement terms (item 1). Model the 30-year revenue stream under alternative rate scenarios (\$0.40, \$1.00, \$2.60, \$3.00) with and without the grant-back. Assess the GS-5 interaction with the CFS PPA for Google's Chesterfield load once the rate class takes effect January 1, 2027. Verify the \$4.2 million estimate against actual classification-level data (item 9).

Energy, labor, and infrastructure: Track the Duval-Midlothian and Meadowville projects through their SCC dockets and the 2026 Transmission Rider proceeding's cost reassignment. Assess the Proctors Creek funding allocation between recovery charges and ratepayer fees. Obtain substation-level load data for the Bermuda Hundred and western corridors. Document the construction labor pipeline named in the June 2026 permits.

Distributional justice: Conduct the eastern corridor interviews this study could not; the 97 BZA opposition emails establish that the silence in the record was structural, not actual. Pursue the water disclosure vacuum (item 3). Follow both CERC appeals. Pair the Bermuda Hundred historic record with the siting record for a recognition justice analysis no regulatory forum ever performed.

Energy geography: Map the full conversion footprint against the 2017, 2021, and 2025 orthoimagery vintages. Analyze the Swift Creek Preserve as green mitigation and the Loch wetlands record as its absence. Calculate acreage-per-dollar-of-annual-revenue across the portfolio's jurisdictions.

Institutional behavior: Obtain the EDA minutes (item 2). Process-trace the reform sequence against the entitlement sequence using the timeline appendix. Compare the three counties' 2026 institutional tests as a natural experiment in reform timing. Investigate whether COVID-era procedural delegations contributed to the by-right governance gap.

APPENDIX: TIMELINE OF TURNING POINTS, 2019-2026

The timeline is split into three eras: the rate and the land assembly (2019-2024), the entitlement and the lock (2025), and the tests (2026).

2019-2024: The Rate and the Land Assembly

Date	Event
Mar. 27, 2019	Public hearing on FY2020 budget and tax ordinance
Apr. 10, 2019	Board adopts \$0.24 data center equipment rate (Resolution 19-175), undercutting Henrico's \$0.40; effective July 1, 2019
Mar. 25, 2020	Board authorizes Fixed Tax Rate and Water/Wastewater Agreement with Peanut LLC (Item 7.A.4)
Mar. 27, 2020	Same-day closings: EDA buys 353 acres from Lowe family (\$21.1M), sells 307 acres to Peanut LLC (\$18.1M); zero-day holding period under NDA
Jun. 2020	EDA's Lowe purchase publicized; simultaneous sale not disclosed
Dec. 18, 2020	EDA buys 2,057-acre Upper Magnolia Green tract from Cangiano for \$13M, nullifying residential entitlements
Feb. 2, 2021	BizSense reports the same-day 2020 sale; disclosure controversy begins
2021-2022	EDA rezones Upper Magnolia Green to industrial (Cases 21SN0675/0676); "Technology Village" marketing; Intel finalist
Jun. 2022	Chirisa announces \$2 billion Meadowville investment
Dec. 12, 2023	Washington Single Family Fund3 buys 89 acres at 1931 Old Bermuda Hundred Rd. for \$462,000
Apr. 15, 2024	Washington files major site plan 24PR1100 for a data center campus; never approved
Jul. 2024	Dominion files Meadowville 230 kV project (PUR-2024-00179)
Dec. 9, 2024	JLARC publishes statewide data center study
Dec. 17, 2024	CFS announces ARC fusion plant at Battery Brooke Parkway

2025: The Entitlement and the Lock

Date	Event
Mar. 3, 2025	Dominion files CERC application (PUR-2025-00037)
Apr. 8, 2025	Henrico raises its data center rate from \$0.40 to \$2.60
Apr. 24, 2025	Dominion files Western Chesterfield 230 kV project (PUR-2025-00073)
May 28, 2025	Board unanimously approves western rezonings: Project Skye (25SN1038) and Project Loch (25SN1040)
Jun. 2025	Planning Commission recommends denial of Tract's Branders Bridge project
Jun. 25, 2025	Board unanimously approves 30-year fixed-rate agreements for Skyward Holdings and Aeris Investments
Jun. 30, 2025	Google signs 200 MW PPA with CFS
Jul. 2, 2025	Tract withdraws; Google entities close on ~1,330 western acres for ~\$60M
Aug. 27, 2025	Google unmasked as Project Peanut; \$9 billion Virginia commitment announced
Sep. 17, 2025	Board adopts ZOMod 5-0 (effective Jan. 1, 2026) and approves the CFS conditional use permit, same meeting
Sep. 22, 2025	Eni signs PPA worth more than \$1 billion with CFS
Oct. 2025	Tract files Notice of Appeal
Nov. 25, 2025	SCC approves CERC and Rider CERC (PUR-2025-00037); companion biennial review order (PUR-2025-00058) creates GS-5 rate class
Dec. 15-16, 2025	SELC petitions for reconsideration; SCC suspends the CERC order
Dec. 17, 2025	Board rezones Woods Edge substation parcel with data-center proffers, 14 days before ZOMod takes effect
Dec. 19, 2025	DEQ issues CERC air permit
Dec. 22, 2025	Washington requests vested-rights determination, 9 days before the effective date
Dec. 31, 2025	WestDulles appeals the CUP requirement for its 430+-acre James River Industrial Center project

2026: The Tests

Date	Event
Jan. 1, 2026	ZOMod effective; data centers become conditional uses countywide
Jan. 5, 2026	Chirisa/CoreWeave plans reported for 1600 Digital Drive: two 100 MW buildings, by-right
Jan. 17, 2026	Governor Spanberger takes office
Feb. 12, 2026	Planning director denies Washington's vested-rights claim; same day, SCC denies CERC reconsideration and reinstates approval
Feb. 13, 2026	Air permit appeal filed in Richmond Circuit Court
Feb. 17, 2026	CERC notice of appeal filed with the SCC clerk
Feb. 24, 2026	Proctors Creek flow equalization basin groundbreaking (\$168.2M)
Feb. 26, 2026	Henrico BZA unanimously denies Centra vested-rights appeal
Mar. 14, 2026	General Assembly adjourns sine die without a budget; exemption the central dispute
Apr. 8, 2026	Three same-day actions: Chesterfield adopts FY2027 budget (data center rate untouched); HB 507 (Tier 4 generators) signed; Hanover strips its \$0.45 rate from the FY27 budget to reconsider it
Apr. 9, 2026	DEQ issues air permit to Chirisa Richmond LLC
Apr. 13, 2026	SB 553 (water reporting) and SB 94/HB 153 (HEUF sound assessments) signed
Apr. 21, 2026	Prince William raises its computer equipment rate to \$4.50
Apr. 23, 2026	Budget special session convenes and recesses the same day without a deal
Apr. 28, 2026	CFS announces first-ever fusion application to PJM; site named Fall Line Fusion Power Station
May 14, 2026	SB 253/HB 1393 cost-shift package signed after amendments rejected
May 19, 2026	Finance Secretary testifies Compass Datacenters redirecting investment out of Virginia; Project Loch USACE wetlands application reported
May 27, 2026	CERC petition filed at the Supreme Court of Virginia; same day, Hanover rejects Mountain Road

Jun. 3, 2026	Chesterfield BZA unanimously denies the Old Bermuda Hundred vested-rights appeal (26AP2089)
Jun. 4, 2026	Five Project Peanut Hall #1 permits filed, ~\$214.7M; Holder Construction named as shell builder
Jun. 11, 2026	USACE comment period closes on Project Loch (NAO-2026-00182)
Jun. 12, 2026	Evidence snapshot. Pending: Hanover rate vote (Jun. 24), state budget (Jul. 1), WestDulles appeal, both CERC appeals

ENDNOTES

[1] The Alfred P. Sloan Foundation study, "Energy Implications of Data Center Growth in Georgia, Virginia, and Tennessee," is led by a three-member principal investigator team with two project consultants, whose combined expertise spans anthropology and institutional analysis, environmental and distributional justice, geography and sustainability, utility finance, and energy and labor studies. The project launches in October 2026. Researcher-level attributions are maintained separately in project files.

[2] Tommy N. Turner, What Virginia Is Spending, What Virginia Is Getting: A Fiscal Analysis of the Commonwealth's Data Center Tax Exemptions, v4.0, March 2026.

[3] Tommy N. Turner, Case Study: The Google-CFS Power Purchase Agreement: When the Operator Builds the Plant, v1.7, March 2026.

[4] Google, \$9 billion Virginia investment announcement, August 27, 2025. Statewide commitment including new Chesterfield campus and expansions of existing Loudoun and Prince William facilities. Chesterfield-specific allocation not disclosed. Sources: VEDP press release; Richmond BizSense, Jack Jacobs, August 27, 2025; Bloomberg, August 27, 2025. Chirisa Technology Parks, \$2 billion Meadowville investment announced June 2022. Commonwealth Fusion Systems, ARC plant announcement, December 2024.

[5] Chesterfield County, Zoning Ordinance Modernization Project (ZOMod), Ordinance No. 2025-18, adopted September 17, 2025, effective January 1, 2026. Data centers conditional use in all zoning districts. New classifications: Employment Center (EC) and Employment General (EG). Board vote: 5-0 (Ingle, Schneider, Hylton, Carroll, Miller).

[6] Chesterfield County Circuit Court deed records, March 27, 2020. EDA purchased approximately 353 acres from Riley and Helen Lowe for \$21.1 million; sold 307 acres to Peanut LLC for \$18.1 million same day (simultaneous closing). EDA retained approximately 46 acres for Meadowville expansion. Peanut LLC also acquired 5 acres from Philip Morris at 2920 Bermuda Hundred Road for approximately \$308,000 same day. Board of Supervisors authorized transaction March 25, 2020 (Item 7.A.4). Richmond BizSense, February 2, 2021: EDA Director Garrett Hart acknowledged simultaneous sale was not disclosed; cited NDA requirements.

[7] Chesterfield County site plan filings, 2700 Bermuda Hundred Road. Three buildings totaling 855,846 sq ft (~285,282 sq ft each), 345 parking spaces. Design: AECOM (architectural), Bohler Engineering (civil). I-2 (Heavy Industrial) zoning; by-right use. No rezoning, proffers, or public hearing required.

[8] The Richmonder, Juliana Vandermark, August 27, 2025. Google publicly identified as Project Peanut developer. Chesterfield On Point (official county news), August 28, 2025: "In Google, Chesterfield landed the 'Rolls-Royce of data center operators.'"

[9] Town of Bermuda Hundred Historic District. DHR File 020-0064. NRHP listed November 8, 2006; VLR listed September 6, 2006. Period of significance: 1613–1940. Approximately 16.2 acres, 10 contributing resources, 3 non-contributing. Key structures: Bishop-Johnson House (c. 1830), Bermuda Hundred Methodist Church (c. 1850). Eligible under NRHP Criteria A (history), C (architecture), D (archaeology). Multiple Property Documentation: 020-5370 (Prehistoric and Historic Resources of Bermuda Hundred). Related: Dale's Pale Archaeological District (020-5371). Data center site (2700 Bermuda Hundred Road) is west of historic district; separated by Brown and Williamson Conservation Area (2800 Bermuda Hundred Road, 265 acres).

[10] Chesterfield Board of Supervisors, May 28, 2025. Cases 25SN1038 (Project Skye/Upper Magnolia Green West) and 25SN1040 (Project Loch/Watkins Centre South) approved unanimously.

[11] Case 25SN1038 staff report, Chesterfield County Planning Department. 979.23 acres. Prior entitlement: 1,336 residential units plus 311 single-family lots for Cold Creek subdivision (1991 approval). Prior developer: Salvatore Cangiano. Proffers: 750-foot setback from existing homes on Moseley Road, 200-foot perimeter buffer, 75/65 dB day/night noise limits. Tract A (870 acres) restricted to data centers; Tract B (~100 acres) limited to industrial.

[12] Chesterfield County press release, December 23, 2020. EDA purchased 2,057 acres from Cangiano for \$13 million (~\$6,320/acre). Funded from one-time FY2020 budget savings. Haley: "better manage growth." Harris: "further strengthen the county's financial position for decades to come." Board of Supervisors minutes, December 2020. January 2022 State of the County presentation: county "throttled back" residential development to avoid infrastructure burden.

[13] Richmond BizSense, Jack Jacobs, July 2, 2025: "Sites slated for mystery data center projects in Chesterfield sell for nearly \$60M." Skyward Holdings purchased 979 acres for approximately \$31 million. Residential entitlements nullified via Cases 21SN0675 and 21SN0676 (2021–2022). Case 21SN0676 rezoned 1,728 acres to General Industrial (I-2); staff report described "Technology Village."

[14] Chesterfield County Comprehensive Plan, 2019 (updated 2022). Prior designation: Phased Suburban Residential (max 2 du/acre) and Rural Residential/Agricultural. 2022 "Technology Village" amendment shifted designation

to industrial. GIS: Land_Use_Plan_layer, Chesterfield Open Data Portal. Matoaca Special Area Plan. Prior land use: forested timber; no active agriculture in the decade preceding EDA purchase.

[15] Case 25SN1039 (Upper Magnolia Green East Amendment), Chesterfield Board of Supervisors packet, May 28, 2025. Swift Creek Preserve: 350 acres permanent conservation. Proffer 7: land must be "dedicated to the Swift Creek Preserve... conserved and left in a natural state." Located between Westerleigh Parkway and Duval Road. Protects Swift Creek Reservoir headwaters and tributaries. Proffered conditions run with the land under Virginia law. Detailed proffer language: Page 1314 of the May 28, 2025 board packet.

[16] Case 25SN1040, Chesterfield County Planning Department. 349.97 acres. Prior zoning: mix of Agricultural (A) and General Industrial (I-2); "zoning limbo" since 2006 office case. Comprehensive Plan: Corporate Office/Research and Development/Light Industrial (CORDLI). Former Watkins family nursery holdings; fallow/wooded by mid-2000s. Aeris Investments LLC (Google). Proffers: 110-foot height limit, 75/65 dB noise, 100-200 ft buffers with evergreen screening, Route 288/Watkins Centre Parkway improvements, fiber-optic upgrades, cash-in-lieu for fire/EMS.

[17] Chirisa Technology Parks announcement, June 2022. \$2 billion investment in Meadowville Technology Park. Campus: ~342 acres, 242,042 sq ft operational (former Capital One facility), 380,000 sq ft planned (two new buildings at ~100 MW each). Current power: 18 MW; target: 200+ MW. I-2 by-right.

[18] Chirisa Digital Drive: 100 acres at 1600 Digital Drive, \$16.5 million, 2024, court-ordered sale (Cartograf liens). Meadowville Technology Park total real estate assessment January 1, 2025: \$356.9 million across 1,300 acres. Chesterfield County real estate assessments.

[19] Richmond BizSense, Jack Jacobs, June 20, 2025: Planning Commission unanimous denial recommendation despite staff recommendation for approval. Commissioner Gib Sloan cited substandard road, limited connectivity, vague development model. Richmond BizSense, Jack Jacobs, July 2, 2025: Tract withdrawal.

[20] Tract filed Notice of Appeal, October 2025, regarding denial of 700-acre Branders Bridge project. Source: Chesterfield County Planning Department; Richmond BizSense. Tract argued shift in policy during application was "arbitrary and capricious."

[21] Tract Notice of Appeal (October 2025) status: no ruling, hearing date, or disposition located in court records, county records, or press coverage through June 12, 2026. (*) Status unverified; listed in Part Thirteen.

[22] Combined approved footprint: Bermuda Hundred (307 acres, endnote 6), Upper Magnolia Green West (979 acres, endnote 10), Watkins Centre South (350 acres, endnote 15), Chirisa/Meadowville (~342 acres, endnote 16). Total: approximately 1,978 acres, rounded to ~2,000 acres throughout document. Google sites: three shell entities (Peanut LLC, Skyward Holdings LLC, Aeris Investments LLC). Chirisa campus encompasses multiple parcels including 1600 Digital Drive (100 acres, endnote 17).

[23] Chesterfield County building permit records, filed June 4, 2026, 2700 Bermuda Hundred Road, "Peanut Data Center Hall #1": electrical \$115,351,385 (Miller Electric Co.); new construction/cold shell \$55,368,271, "first bldg on site" (Holder Construction Group); temporary electrical \$23,000,000 (Miller Electric); mechanical \$18,900,000 (The Poole and Kent Corp.); plumbing \$2,100,000 (Poole and Kent). Reported in Richmond BizSense, "Breaking Ground: Local building permits for 6.10.26," June 10, 2026. (*) Secondary compilation reproducing county permit records; verify against Chesterfield permit database.

[24] Richmond BizSense, Jack Jacobs, January 5, 2026: "Two new data centers to rise on formerly stalled Cartograf site in Chesterfield." Two buildings ~190,000 sq ft each, ~100 MW each, leased to CoreWeave; developers Chirisa, American Real Estate Partners, Blue Owl Capital; DPR Construction (GC), Gensler (architect), Bohler (civil); target operation late 2027 and mid-2028. By-right; predates the conditional use requirement. (*) Secondary; verify against site plan filings.

[25] Sale of 1600 Digital Drive site for \$46 million, December 2025, to an LLC tied to the Chirisa/AREP/Blue Owl joint venture. Richmond BizSense, January 5, 2026. (*) Secondary; verify against Circuit Court deed records.

[26] Virginia DEQ, "Issued Air Permits for Data Centers" (deq.virginia.gov, accessed June 12, 2026): Chirisa Richmond LLC, Chesterfield County, Article 6 minor new source review permit issued April 9, 2026 (registration no. 52432). No Google/Peanut LLC entry for Chesterfield appears on the issued list as of the access date.

[27] U.S. Army Corps of Engineers, Norfolk District, Public Notice NAO-2026-00182 (VMRC "Project Loch," Chesterfield County), May 2026: three-building data center campus with substations near Route 288 and Watkins Centre Parkway; estimated impacts 4.8 acres of wetlands and 2,800+ linear feet of streams; design revised to avoid ~74 percent of on-site wetlands; Dry Bridge Cemetery within the site with

possible unmarked graves, 25-foot buffer recommended; comment period closed June 11, 2026. See also Axios Richmond, May 19, 2026.

[28] Chesterfield County Board of Supervisors, Resolution 19-175 and Ordinance Section 3(h), adopted April 10, 2019. FY2020 Budget. Data center equipment rate established at \$0.24/100 under Virginia Code § 58.1-3506. Board: Chair Leslie A. T. Haley, Vice Chair Stephen A. Elswick, Dorothy A. Jaeckle, Christopher M. Winslow, James M. Holland. Unanimous. Public hearing March 27, 2019. Chesterfield Business News, April 12, 2019: "Chesterfield County Cuts Data Center Tax Rate to Lowest In Virginia." Rate described as "lowest in Virginia" during board discussion. County Administrator Dr. Joseph Casey and EDA Director Garrett Hart described strategy as "target market" approach to fix 80/20 residential/commercial tax base imbalance.

[29] Prior effective rate: \$1.80/100 (50% assessment ratio applied to \$3.60 nominal rate). 86.6% reduction. Pre-2019 assessment schedule: Year 1: 50%, Year 2: 40%, Year 3: 30%, Year 4: 20%, Year 5+: 10%. The April 2019 change accelerated Years 3–5 (Year 3 dropped from 30% to 20%, Year 4 from 20% to 10%, Year 5 from 10% to 5%, Year 6+ added at 1%). Sources: Commissioner of the Revenue, 2018 Business Tangible Personal Property Return Instructions (Form 10-141); Virginia Department of Taxation, 2018 Local Tax Rates Report; Board of Supervisors minutes, April 10, 2019 (depreciation acceleration discussion).

[30] Greater Richmond Partnership, July 10, 2019: "Reduced tax rates may lead to surge in data centers." Direct comparison of Chesterfield \$0.24 to Henrico \$0.40. Henrico reduced from \$3.50 to \$0.40 in 2017; secured Meta \$750 million investment. Turner, Case Study: Henrico County, v2.1, March 2026, Part One.

[31] Henrico County Board of Supervisors: rate raised from \$0.40 to \$2.60 with the FY2025-26 budget, adopted April 8, 2025; installed operator base retained. Sources: Henrico FY2026 budget; henrico.gov Revenue Division schedules. Northern Virginia rates as of June 2026: Loudoun \$4.15 (general personal property rate); Prince William \$4.50 (tax year 2026). See [33][34][32][35].

[32] Henrico County: data center equipment rate raised from \$0.40 to \$2.60 per \$100 with the FY2025-26 budget adoption, April 8, 2025, unanimous; current rate confirmed at henrico.gov Revenue Division schedules. See Turner, Case Study: Henrico County, v3.6, Part Five.

[33] Prince William County, FY2027 budget adoption, April 21, 2026: computer equipment and peripherals rate increased from \$4.15 to \$4.50 per \$100 (pwcva.gov). Prior action: FY2026 adoption, April 22, 2025, increased the rate from \$3.70 to \$4.15.

[34] Loudoun County: data center equipment taxed at the general personal property rate of \$4.15 per \$100; no separate data center classification; rate unchanged for tax years 2026 and 2027 (loudoun.gov, Data Centers FAQ and 2026 Property Tax Rates).

[35] Author's reconciliation. The \$4.15 figure cited for "Loudoun/PWC" in v2.1 was correct from late April 2025 (PWC's adoption of \$4.15 for tax year 2025; Loudoun's standing general rate) until April 21, 2026 (PWC's move to \$4.50). The two counties' rates coincided at \$4.15 for approximately one year. Primary sources: pwcva.gov FY2026 and FY2027 budget adoption releases; loudoun.gov rate schedules.

[36] Hanover County: board removed the \$0.45 data center rate from the FY27 budget April 8, 2026 "to reevaluate it"; public hearing and vote scheduled June 24, 2026; advertised maximum \$3.00 per \$100. Richmond BizSense, April 27, 2026; The Center Square, May 2026. (*) Secondary; verify against Hanover board minutes and hearing advertisement. See Turner, Case Study: Hanover County, v2.0, Part Seven.

[37] Hanover Board of Supervisors rejected Tract's 430-acre Mountain Road Technology Park rezoning, May 27, 2026. Richmond BizSense, May 28, 2026; VPM News, June 1, 2026. (*) Secondary; full treatment in Turner, Case Study: Hanover County, v2.0.

[38] Supervisor Jessica Schneider (Bermuda District), June 25, 2025 board meeting: floated raising the data center rate as a deterrent to further recruitment ("There's no reason to bring another data center here") while voting to approve the Google agreements. Richmond BizSense, June 27, 2025. (*) Secondary; verify against meeting video/minutes.

[39] Chesterfield County FY2027 budget, adopted April 8, 2026: general personal property rate reduced from \$3.35 to \$3.25; real estate rate held at \$0.89; data center equipment classification unchanged at \$0.24. Chesterfield County news release, April 2026 (chesterfield.gov).

[40] AI accelerator (GPU/TPU) replacement cycles of 18–36 months; general-purpose server lifecycle of 3–5 years (extended to 6–10 years in some enterprise environments). Sources: Gemini Research, "Strategic Analysis of Data Center Equipment Replacement Cycles: A Comprehensive Evaluation of Infrastructure Longevity," 2026; IDC Technology Rotation studies; Service Express server failure rate analyses.

[41] Alphabet Inc. 2023 10-K. Server useful life extension to six years reduced depreciation expense by \$988 million in one quarter. Google TPU generations: v4 (2020), v5/Trillium (2023), v6/Ironwood (2024–2025). Source: Alphabet product announcements and SEC filings.

[42] Amazon.com Inc. 2024 10-K. February 2025: shortened server useful life from 6 to 5 years for AI-workload subset, citing accelerated development pace. Q4 2024: \$920 million accelerated depreciation for equipment retired ahead of schedule.

[43] Virginia BTPP assessment methodology. Commissioner of Revenue requires annual itemized filing: original cost, description, year of purchase. Replacement equipment treated as new addition at current-year original cost. Virginia Code § 58.1-3506.

[44] Author's calculations. No-refresh model: \$1B, Chesterfield depreciation, \$0.24 rate, 20 years = ~\$3.4 million cumulative (Y1 \$1.2M + Y2 \$960K + Y3 \$480K + Y4 \$240K + Y5 \$120K + Y6-20 \$24K × 15 = \$360K). Refresh model: 4-year cycle, \$2.88M per cycle × 5 cycles = ~\$14.4 million. Ratio: 4.3×. Assumes static replacement cost.

[45] Author's calculation. \$7.7 billion upper-bound equipment base derived from 70/30 split on \$11 billion announced investment. The 70/30 ratio is documented in the VEDP Biennial Data Center RSUT Exemption Report (methodology section) and independently confirmed by JLARC Report 598, "Data Centers in Virginia," December 9, 2024. Operator-reported data: FY2024 67.7% equipment (\$21.7B of \$32.0B); FY2025 68.3% (\$33.2B of \$48.6B). Revenue gap uses Year 1 at 50% assessment. If part of Google's \$9B supports non-Chesterfield operations, the actual base is lower.

[46] Author's calculations. Formula: (equipment value × assessment ratio / 100) × tax rate, on the \$7.7 billion upper-bound base at the 50 percent Year 1 ratio: \$9.24 million at \$0.24; \$100.1 million at \$2.60; \$159.78 million at \$4.15; \$173.25 million at \$4.50. Gaps: ~\$91 million (Henrico), ~\$151 million (Loudoun), ~\$164 million (Prince William). Assumptions and limitations as stated in endnote 28.

[47] Virginia Code § 15.2-4905. EDA Performance Agreement for Google. 30-year effective rate of \$0.24 via grant-back mechanism. Applies to Peanut LLC, Skyward Holdings LLC, Aeris Investments LLC. Richmond BizSense, Jack Jacobs, June 27, 2025: "Chesterfield supervisors approve incentive agreements for data center projects."

[48] EDA Performance Agreements. 30-year term structured in three 10-year increments, commencing upon first certificate of occupancy. Public records: 36-month acquisition deadline, operational benchmarks, compliance requirements on proffered western sites. Specific investment thresholds under NDA/proprietary exemptions.

[49] The Bermuda Hundred (Peanut LLC) fixed-rate agreement was approved in 2020 and takes effect once the facility is operational. Richmond BizSense, August

28, 2025. (*) Secondary; the precise 2020 approval date is not stated in any public source. See endnote 61 for the March 25, 2020 board authorization.

[50] Fixed-rate agreement mechanics: 30-year term as one 10-year period with two automatic 10-year renewals tied to construction progress; annual grants equal to any rate increase above \$0.24; grants routable to county utilities infrastructure; agreements contingent on land purchase from the EDA within 36 months. Richmond BizSense, Jack Jacobs, June 27, 2025, reporting the June 25, 2025 approvals. (*) Secondary; the agreements themselves are not public. Verification is FOIA target 1 in Part Thirteen.

[51] The "subject-to-appropriation" clause is a constitutional requirement: the Board of Supervisors cannot legally bind future boards to specific expenditures. All grant payments must be appropriated annually. See Virginia Code § 15.2-4905; JLARC, "Custom Incentive Grants," June 2024, discussion of performance agreement enforceability and "subject-to-appropriation" reliability in practice.

[52] No 30-year fixed-rate agreement disclosed for Chirisa. Board approved 30-year agreements only for Project Skye (Skyward Holdings) and Aeris Investments (June 2025). Chirisa operates under standard county rate without contractual protection against future increases. Chirisa participates in state DCRSUT Exemption: minimum \$150M investment and 50 jobs required; clawback if targets not met by June 30, 2026. Sources: Board of Supervisors minutes, June 25, 2025; EDA quitclaim deeds and easements for Chirisa Richmond LLC, April 2025 (listed entity but no supplemental performance agreements for tax locks).

[53] Jake Elder, Deputy Director of Economic Development, Board of Supervisors presentation, June 26, 2024 (Item 13.A, "Approval of Incentive Agreements") and June 2025 updates. Methodology: \$1B = \$300M real estate (\$0.89 rate = \$2.67M) + \$700M equipment (\$0.24 rate = \$1.68M) = ~\$4.35M (rounded to \$4.2M). Year 1 estimate at 100% initial value. Under actual depreciation schedule (50% Year 1 assessment), equipment component drops to \$840K, bringing Year 1 revenue to ~\$3.5M. Not independently verified by JLARC, VEDP, or external body. Richmond BizSense, June 27, 2025.

[54] FY2020 BTPP revenue: ~\$24.5 million (Chesterfield County Popular Annual Financial Report, p. 6). FY2026 Adopted Budget: ~\$40 million projected. Commissioner of Revenue does not publicly break out data center equipment as BTPP subcategory. Budget presentations, February 2026: commercial/industrial assets = 29% of 2026 land book growth. FY2026 Adopted Budget Line-Item Detail: BTPP grouped under "Personal Property - Business."

[55] Chesterfield County land book, 2025–2026. Commercial/industrial real estate increased \$1.3 billion (9.5%). Sector growth: office/warehouse 17.4%, industrial flex 15.8%, industrial manufacturing 14.8%.

[56] Chesterfield Board of Supervisors. 5% residential real estate tax credit (2023 and 2025). 2025 allocation: ~\$15 million from prior-year operating surplus. For \$450,000 home: ~\$100 first-half tax bill savings.

[57] Chesterfield County FY2022–FY2026 Adopted Budgets. Real estate rate reduced from \$0.95 (FY2022) to \$0.89 (FY2026). County states ~\$106 million forgone revenue; each cent $\approx$ \$6.8 million.

[58] Google AI for Education Accelerator. Part of \$1 billion national education commitment. Virginia cohort: UVA, ODU, Brightpoint Community College, Northern Virginia Community College.

[59] ODU MonarchSphere AI incubator. University reports 12–16 $\times$ improvement in time-to-science for certain genomic research workflows. Source: ODU announcement; Google program materials. Developer-sourced performance claim; not independently verified.

[60] Google. \$150 million national grants over three years for AI education and digital wellbeing. Virginia-specific allocation not disclosed. Google community grants: Council Bluffs, Iowa, >\$1M annually; Douglas County, Georgia, ~\$200K per cycle. Google reports 300,000 Virginia residents trained in digital skills. Source: Google Data Center Community Benefits reports.

[61] Construction employment: up to 1,500 workers per 250,000 sq ft facility at peak. Source: NVTC 2026 Virginia data center economic impact report; industry benchmarks.

[62] Salary ranges: Technician \$60K–\$90K; Engineer \$93K–\$155K; Operations Manager \$117K–\$198K. Source: industry surveys, Google East Coast job listings. Not confirmed Chesterfield-specific.

[63] JLARC Report 598, "Data Centers in Virginia," December 9, 2024, p. i. JLARC found that "a typical 250,000-square-foot data center may employ approximately 50 full-time workers," about half of them contractors.

[64] Commonwealth Fusion Systems. ARC fusion plant: 94 acres at 1201 Battery Brooke Parkway, Chesterfield. Estimated cost \$2.5 billion. CFS total capital raised >\$3 billion (Series B \$1.8 billion, November 2021; Series B2 \$863 million, August 2025; investors include Google and Nvidia). CFS capital = nearly one-third of all private fusion investment globally (Fusion Industry Association, 2025). Google 200 MW PPA signed June 30, 2025. ARC target: early 2030s, contingent on SPARC

demonstration (Massachusetts, 2026–2027). Chesterfield Planning Commission CUP approved unanimously.

[65] SPARC status: facility "about 75% done" (CFS blog, April 9, 2026); vacuum vessel second half delivered, "When SPARC operations begin in 2027..." (CFS blog, May 14, 2026). Earlier public targets had placed first plasma in 2026. ARC "early 2030s... on track" per the April 28, 2026 release. Company-sourced; the schedule is a developer claim.

[66] CFS Vice President Kristen Cullen stated the plant expects approximately 150 full-time operational workers. CFS press release, December 17, 2024.

[67] CFS conditional use permit approved unanimously by the Board of Supervisors September 17, 2025, the same meeting that adopted ZOMod; plant cost ">\$2.5 billion" per county economic development; CFS's Ben Byboth told supervisors ARC would require approximately 400,000 gallons of water per day. Virginia Business, September 19, 2025; Richmond BizSense, August 21, 2025 (Planning Commission recommendation). (*) Secondary; verify against board minutes and the CUP case file.

[68] CFS and Eni, September 22, 2025: power purchase agreement "worth more than \$1 billion" for output from the Chesterfield plant; megawatt quantity not disclosed. CFS press release.

[69] CFS, August 28, 2025: \$863 million Series B2; total capital raised approaching \$3 billion; new investors include NVentures (NVIDIA), Counterpoint Global (Morgan Stanley), and a 12-company Japanese consortium led by Mitsui and Mitsubishi. CFS press release.

[70] Commonwealth Fusion Systems, press release and companion blog post, April 28, 2026: first fusion power plant developer to apply for interconnection with a major grid operator; generation interconnection request submitted to PJM "last week" ($\approx$ April 20–24, 2026; exact filing date undisclosed); $\sim$ 400 MW; site named Fall Line Fusion Power Station; Dominion advised under the joint development agreement; 4-to-6-year study-to-energization timeline cited. Queue position not disclosed.

[71] Bermuda Hundred water demand: no public disclosure identified. By-right approval; no proffers. County leadership stated concerns "discussed and addressed." Site plans address grading and building footprints, not utility demand.

[72] Proffers for Cases 25SN1038 and 25SN1040. Water consumption limit: 2,000 gallons per day per acre. Closed-loop cooling required. Mandatory daily usage reporting. Priority use of reclaimed/non-potable water.

[73] Chesterfield County Department of Public Utilities. Bermuda Hundred served exclusively by county water; no private utility or JRWA service. Bulk supplier: ARWA (Lake Chesdin). Meadowville Technology Park: 16-inch water line (2 MGD capacity), on-site storage tower. Total system capacity: 110.54 MGD. 2024 average: 40.70 MGD. Peak-day: 73.5 MGD. Reserve capacity: 37 MGD. Utilization ratio: 36.8%. 2024 Richmond water crisis: county isolated system, maintained normal levels. Hanover system capacity: 25 MGD (for comparison). Source: Chesterfield County water system data, FY2024.

[74] Chesterfield County 10-Year Capital Improvement Plan. Appomattox River Water Treatment Plant: \$426 million, Phase I capacity 40 MGD, operational 2033. Design: Black and Veatch. Located on tidal Appomattox River (drought-tolerant). County purchased 122 acres for facility including 33-acre intake site.

[75] SB 553 (2026), Chapter 896, patron Sen. Kannan Srinivasan; identical companion HB 496. Monthly reporting by registered water utilities of potable and reclaimed water volumes provided to data centers holding a DEQ air permit; effective January 1, 2027. Signed April 13, 2026. Virginia LIS, 2026 Session.

[76] Author's estimate. Bermuda Hundred: 100–150 MW based on 855,846 sq ft and industry power-density benchmarks. Western sites: 420–630 MW estimated from combined 1,330 acres. Chirisa: 18 MW current, 200+ MW target (company disclosure). Combined estimate exceeds 1,000 MW at full buildout. Order-of-magnitude figure; actual load depends on building configurations, cooling technologies, and phased buildout schedules not publicly disclosed.

[77] Dominion Energy Virginia, 2024 Integrated Resource Plan, filed with the Virginia State Corporation Commission, October 15, 2024 (Case PUR-2024-00184). Data center metered load projection: 13,353 MW by 2038. Annual peak demand growth: 5.5% through 2039. Richmond/Chesterfield identified as secondary growth hub.

[78] Dominion 2024 IRP, "Plan 1-B" (no data center scenario): peak demand grows only 0.47% annually (15% cumulative by 2040). With data centers: demand doubles within 10 years (183% cumulative). Filed at SCC's request to isolate data-center-driven infrastructure costs.

[79] SCC Case PUR-2024-00179 (Meadowville 230 kV Project), filed July 2024. Orchard Switching Station: new 230 kV facility for Meadowville Technology Park, ~\$45 million, directly assigned to anchor data center customer. Oxwood Substation: 230 kV–34.5 kV for data center power conversion. Existing 230 kV lines rebuilt/extended for Meadowville "loop."

[80] SCC Case PUR-2025-00073 (Western Chesterfield Project), filed April 24, 2025. Duval Substation: new 230 kV–34.5 kV facility. 7.1 miles new double-circuit 230 kV Duval–Midlothian transmission lines (four circuits total, 160-foot weathering steel monopoles), ~\$185 million. Classified "Regional Reliability"; socialized via Rider T. Winterpock Substation: third distribution transformer for contingency capacity. Dominion application: required for "known and projected large-load growth."

[81] Devi Glick, Synapse Energy Economics, direct testimony on behalf of Sierra Club and NRDC, Case PUR-2024-00184, filed February 28, 2025. Data center load growth responsible for approximately \$22.4 billion in incremental transmission costs through 2038. Added data center load increases portfolio NPVRR by \$22.1 billion. Western Chesterfield 230 kV and Meadowville projects deferrable >10 years under no-data-center scenarios. Without 8 GW data center load, revenue requirement would be ~\$310 million lower. Synapse alternative scenario: higher efficiency and renewables could reduce ratepayer costs by ~\$1 billion over 15 years.

[82] Virginia State Corporation Commission, Final Order, November 25, 2025 (Case PUR-2025-00037). CERC: 944 MW simple-cycle natural gas, retired coal plant site, Chesterfield. Estimated capital cost: \$1.47 billion. Grid reliability shortfalls projected by 2029. Dominion used "Reliability Exception" under VCEA. Dominion acknowledged data center load triggered the exception. Provides voltage support and firming for Meadowville/Bermuda Hundred cluster.

[83] Rider CERC: \$0.60/month residential increase at 1,000 kWh, effective March 1, 2026, rising to \$1.14/month in the 2027 rate year. Final Order, Case No. PUR-2025-00037, Nov. 25, 2025; application in Case No. PUR-2026-00022, Schedule 3.

[84] SCC Final Order, 2025 biennial review, November 25, 2025 (Case PUR-2025-00058), and SCC news release of the same date. Effective January 1, 2027. Threshold: 25+ MW demand, 75%+ load factor. 14-year Energy Service Agreements; minimum demand commitments 85% T&D, 60% generation; upfront collateral; exit fees. Authorized revenue increase: \$775.6 million (Dominion requested \$1.2 billion).

[85] Piedmont Environmental Council, analysis of SCC Case No. PUR-2024-00121, published January 7, 2026. Advocacy analysis. Estimated ~61% of grid infrastructure costs shift to residential ratepayers after 14-year GS-5 contract period. PEC advocated 20-year minimum to align with transmission asset useful life.

[86] PJM Interconnection, Base Residual Auction Results, July 2024. Dominion zone (DOM Zone) clearing price: \$444.26/MW-day; prior-year DOM clearing: \$28.92/MW-day (Monitoring Analytics, 2025 State of the Market Report for PJM, Table 5-21); 1,436% increase. The 833% figure is the Rest-of-RTO increase (\$28.92 to \$269.92),

not the Dominion zone's. Monitoring Analytics, PJM State of the Market Report, 2024: data center load attributed \$9.3 billion (63%) of total capacity market cost increase for 2025-2026 delivery year.

[87] Dominion Energy Virginia, 2026 rate case filing with the Virginia SCC. Residential bill increase: \$11.24/month effective 2026; additional \$2.36/month in 2027. Combined with Rider CERC (\$1.14/month in the 2027 rate year): total data-center-driven residential increase approaches \$15/month by 2027.

[88] Senate Bill 253 (Substitute Version), 2026 Session, Patron: Senator Louise Lucas. Authorizes SCC to shift capacity and distribution costs to GS-5 class. SCC Staff Fiscal Impact Analysis: 3.4% residential rate reduction (~\$5.52/month savings), 15.8% data center rate increase.

[89] SB 253 (Lucas) / HB 1393 (LeVere Bolling), 2026: weatherization and bill-assistance extensions; SCC-approved shifting of PJM capacity-auction costs and data-center-serving distribution financing costs onto the GS-5 class. Gubernatorial amendments characterized as weakening the cost-shift by lawmakers and Dominion (Virginia Mercury, April 16, 2026); most rejected at the April 22 reconvened session (Cardinal News, April 22, 2026); signed May 14, 2026 (Virginia Mercury, May 15, 2026). (*) Chapter numbers not retrieved; verify at LIS.

[90] Proctors Creek Wastewater Treatment Plant. Current permitted capacity: 27 MGD; master plan target: 54 MGD (100% increase; 90-year service life). 12-million-gallon flow equalization basin: \$168.2 million contract to MEB General Contractors (Chesapeake, VA). Design: Hazen (contracted 2017, finalized 2024). Groundbreaking February 24, 2026; expected completion 2031. Includes enhanced screening and grit removal sized for 54 MGD. Utilities Director Matt Rembold: project will "support economic development across the whole region." Sources: Chesterfield On Point, February 25, 2026; Richmond BizSense, February 25, 2026.

[91] Chesterfield County utility recovery charges, FY2026 Budget, Ordinance 18-22. Water recovery charge for 12-inch turbine meter: \$1,676,390 (one-time). Wastewater recovery charge for 12-inch turbine meter: \$1,502,550 (one-time). Combined: >\$3.1 million per large industrial connection.

[92] Water reuse initiative: engineering feasibility study underway (early 2026). Current industrial reuse: Dominion Dutch Gap Power Station uses 0.5-1.5 MGD Proctors Creek effluent. Proctors Creek and ARWTP (\$426M) are "bookend" projects serving the same growth corridor. Both prioritized in FY2026-2036 CIP. Source: Chesterfield Utilities CIP; Comprehensive Plan Chapter 12: Water & Wastewater.

[93] Virginia SCC, Final Order, Case No. PUR-2025-00037, November 25, 2025: CPCN for the ~944 MW Chesterfield Energy Reliability Center (four GE Vernova 7F

combustion turbines, sited within the footprint of retired coal Unit 6) and approval of Rider CERC under Va. Code § 56-585.1 A 6; projected cost \$1.47 billion; projected commercial operation June 1, 2029. Application filed March 3, 2025. Quotation from the order's findings.

[94] Virginia SCC, Final Order and news release, Case No. PUR-2025-00058 (2025 biennial review), November 25, 2025: GS-5 rate class created for customers demanding 25 MW or more, effective January 1, 2027; minimum demand charges of 85 percent of contracted distribution and transmission demand and 60 percent of generation demand; base-rate increases of \$565.7 million (2026) and \$209.9 million (2027) against Dominion's \$822 million and \$345 million request; 9.8 percent ROE. The GS-5 class was created in this docket, not in the CERC docket; earlier versions of this study conflated the two same-day orders.

[95] Community Intervenors' Petition for Reconsideration, Case No. PUR-2025-00037, filed December 15, 2025, by the Southern Environmental Law Center on behalf of Appalachian Voices, the NAACP (Chesterfield County branch), and Mothers Out Front. Quotations from the petition.

[96] Virginia SCC, Order Granting Reconsideration, December 16, 2025: reconsideration granted "for the limited purpose of continuing jurisdiction"; November 25 Final Order suspended pending consideration. Further order December 29, 2025 directing a limited Dominion response; response filed January 16, 2026.

[97] Virginia SCC, Order on Reconsideration, February 12, 2026: petition denied, Final Order clarified and reinstated, case dismissed. Quotations from the order.

[98] Dominion Energy Virginia, "Environmental Justice Desktop Review for the Chesterfield Energy Reliability Center Project," revised September 23, 2024, Appendix H of the CERC Air Permit Application, Virginia DEQ. Project site: Census Tract 1004.03, Block Group 3. Demographics (ACS 2018-2022): 84% population of color, 73% low-income, 41% Hispanic/Latino, 26% limited English-speaking households. 22 of 24 census block groups within 3-mile buffer contain potential EJ communities under Virginia Environmental Justice Act (Va. Code § 2.2-234). Adjacent communities: Bellwood and Bensley. Full document hosted on VA DEQ "Topics of Interest" page for CERC project.

[99] Notice of Appeal filed with the SCC clerk February 17, 2026 (Rule 5:21(a)(3)); Petition for Appeal filed in the Supreme Court of Virginia May 27, 2026, NAACP – Chesterfield County Branch, Appalachian Voices, and Mothers Out Front v. State Corporation Commission, raising eight assignments of error; record number unassigned in public sources as of June 12, 2026. SELC counsel: Holmes, James,

Clancy, Putfark. See also SELC press release, May 27, 2026; Virginia Mercury, May 27, 2026.

[100] DEQ air permit for the CERC issued December 19, 2025, treating the project as a modification of the existing Chesterfield Power Station. Petition for appeal filed February 13, 2026, Circuit Court for the City of Richmond, by SELC for the Chesterfield NAACP, CASA Inc., Appalachian Voices, and Mothers Out Front, alleging violations of the Virginia Air Pollution Control Law, the Administrative Process Act, the Virginia Environmental Justice Act, and the federal Clean Air Act. Rachel James quotation from the SELC release. Sources: SELC and Appalachian Voices releases, February 13-14, 2026; Virginia Business, February 16, 2026. (*) Filing details secondary; case number and schedule not in the public record. Verification is FOIA target 5 in Part Thirteen.

[101] Construction posture: Dominion stated intent to begin construction in 2026 for the June 1, 2029 in-service date; Global Energy Monitor tracker classified all four CERC units as pre-construction as of March 16, 2026. (*) Secondary; no groundbreaking or procurement announcement located through June 12, 2026.

[102] ZOMod: Ordinance No. 2025-18, repealing Chapter 19.1, enacting Chapter 19.2. Board vote: 5-0 (Ingle, Schneider, Hylton, Carroll, Miller), September 17, 2025. Planning Commission: unanimous recommendation for approval, July 15, 2025. Planning Director Andy Gillies, Project Manager Rachel Chieppa. ~22 speakers at final hearing. Industry opposition from Tract legal counsel. Richmond BizSense, September 18, 2025. Richmond Times-Dispatch, September 18, 2025.

[103] Appeal letter of Washington Single Family Fund3, LLC (Exhibit A to the June 3, 2026 BZA packet): December 2023 property purchase; major site plan application 24PR1100 filed April 15, 2024 "for the specific purpose of developing data centers"; Woods Edge, LLC acquisition of 13508 Woods Edge Road for \$958,000; December 17, 2025 substation rezoning; \$32,999 in surveying and engineering and \$8,000 for wetlands delineation after the rezoning. (*) The \$462,000 purchase price for the 89-acre parcel is from Richmond BizSense, June 4, 2026; verify both prices against deed records.

[104] Chesterfield County Board of Zoning Appeals, June 3, 2026 agenda and case packet, Case 26AP2089 (CivicClerk portal): appeal description, property identification (89.3 acres, 1931 Old Bermuda Hundred Road, Tax ID 804-647-4181, Employment Center district), staff report and recommendation, vote standard under Va. Code § 15.2-2312. Quotations from the staff report.

[105] Author's review of Chesterfield planning agendas, county news releases, and Richmond-area press through June 12, 2026: no data center conditional use permit

application filed under the post-January 1, 2026 ordinance appears in any public record. A filing unreported by press cannot be excluded; direct verification against the planning case database is FOIA target 6 in Part Thirteen.

[106] Written determination of Planning Director Andrew G. Gillies, February 12, 2026, issued to Legacy Engineering on behalf of Washington Single Family Fund3, LLC (Exhibit B to the June 3, 2026 BZA packet). Quotation from the letter. The letter states the property was zoned General Industrial (I-2) before January 1, 2026; the appellant's letter describes it as Light Industrial (I-1). The county's formal record controls in this study.

[107] BZA decision and hearing record: Richmond BizSense, Jack Jacobs, June 4, 2026 ("Zoning appeals board rejects challenge to permit requirement for data center project in Chester"): unanimous vote; Leming and Fulwider quotations; ownership tied to Jacob Manevich. WTVR CBS 6, June 3, 2026: Fulwider site-plan quotation; Daniels quotation; "97 emails in opposition." WWBT NBC12, June 3, 2026 (syndicated by WVIR NBC29): Leming authority quotation; about a dozen opposition speakers. (*) All secondary; the vote tally and members present await the BZA minutes, scheduled for approval July 1, 2026. Verification is FOIA target 4 in Part Thirteen.

[108] Chain of title documentation, 2700 Bermuda Hundred Road. Board of Supervisors authorization March 25, 2020 (Item 7.A.4): "Fixed Tax Rate and Water and Wastewater Capacity and Service Agreement with Peanut LLC." EDA purchased from Lowe (\$21.1M); sold to Peanut LLC (\$18.1M); same day March 27, 2020. Zero-day holding period. EDA as site assembler and facilitator under NDA. Richmond BizSense, February 2, 2021: Hart cited NDA; acknowledged simultaneous sale not disclosed at time of EDA's June 2020 public announcement of Lowe purchase. PlanRVA Environmental Review (Project Peanut/American Tobacco), September 26, 2019.

[109] Board member statements. Miller (rate lock): Richmond BizSense, Jack Jacobs, June 27, 2025, reporting on June 25, 2025 meeting. Carroll (diversification): same source. Elder (revenue): same source. All quotes from public meetings.

[110] Miller on NDA constraints: VPM News, Billy Shields, December 2025 year-end review. NDA as "standard requirement" creating "difficult tension with the public's right to know."

[111] Garrett Hart on competitive positioning: Chesterfield On Point, August 28, 2025; VPM News, December 2025.

[112] Resident testimony from Moseley/Dogwood Creek areas, May 28 and June 25, 2025 Board meetings. Sources: Board of Supervisors meeting minutes; Richmond Times-Dispatch, Thad Green, June 6, 2025.

[113] ZOMod data center use standards, Sec. 19.2-32. Noise: 60 dBA at property line; pre- and post-construction acoustical studies; generator testing 7 AM–5 PM M-F only. Setbacks: 200-ft minimum from residential/agricultural; Type D buffer (6-ft berm + staggered evergreens). Height: 110 ft max. Architecture: massing breaks on facades >100 ft; full equipment screening; chain-link/barbed-wire prohibited where visible. Water: closed-loop cooling; 2,000 GPD/acre target. Substations: same setback/screening as primary buildings. Classification: conditional use in EC and EG only; prohibited in all other districts including former I-2 and C-5.

[114] Retroactivity discussion: Board work sessions, August–September 2025. County Attorney advised vested rights under Virginia Code § 15.2-2307 protect existing approvals. Retroactive conditional use requirement would trigger "takings" litigation. Requirement not made retroactive.

[115] Henrico County BZA unanimously denied Centra Logistics' vested-rights appeal for the Darbytown Road site, February 26, 2026. Henrico Citizen, February 26, 2026; Richmond BizSense, February 27, 2026. Full treatment in Turner, Case Study: Henrico County, v3.6, Part Six.

[116] Va. Code § 15.2-2314: petition for writ of certiorari to the circuit court within 30 days of a BZA decision. The June 3, 2026 decision window runs to approximately July 3, 2026. No filing located as of June 12, 2026.

[117] Richmond BizSense, Jack Jacobs, March 9, 2026: "Developer appealing permit requirement for data center project in Chesterfield." WestDulles Properties appeal letter dated December 31, 2025; 170-acre grading area including 1500 Battery Brooke Parkway plus ~260 acres future phase; counsel Brendan O'Toole, Williams Mullen; quotations from the appeal letter as reported. Pending status confirmed in Richmond BizSense, June 4, 2026 ("A similar appeal is also pending a BZA decision"). The May 6, 2026 BZA meeting was cancelled for lack of cases (county public notice). (*) Secondary except the cancellation notice.

[118] Chesterfield BZA July 1, 2026 agenda, Case 26AP2134: appeal of a conditional use determination for a self-storage project under the new ordinance (CivicClerk portal).

[119] VEDP, Biennial Report on the Retail Sales and Use Tax Exemption for Data Centers (RD40), January 2, 2026. FY2025 exemption value: ~\$1.94 billion (operator self-reporting). Virginia ACFR for FY2025, Virginia Department of Accounts: lower figure of ~\$1.6 billion (state audit data).

[120] Senate position: SB 30 budget (Senate Finance and Appropriations Chair L. Louise Lucas) eliminates the data center sales and use tax exemption effective 2027, eight years before the statutory 2035 sunset. House position: exemption retained through 2035 conditioned, from July 2027, on no co-location with carbon-emitting generation, renewable energy certificate purchases, non-carbon-emitting backup generators, and an energy-efficiency pledge, drawing on HB 897/SB 465 concepts. Virginia Mercury, April 29, 2026. (*) Secondary; specific budget item numbers not reported in press coverage.

[121] Gov. Abigail Spanberger: "I'm not going to break a contract the state has signed" (Cardinal News, May 28, 2026). Former Del. David Ramadan and former commerce secretary Curry Roberts framing, VPM News, June 10, 2026 (republished WHRO, June 12, 2026). Spanberger took office January 17, 2026. (*) Secondary.

[122] General Assembly adjourned sine die March 14, 2026 without a budget; special session convened April 23, 2026 and recessed the same day; industry offer of up to \$1 billion over the biennium rejected. Cardinal News, March 14 and April 23, 2026; Virginia Mercury, April 23, 2026. (*) Secondary.

[123] Governor's directive for a revised revenue forecast through FY2031, May 18, 2026 (governor.virginia.gov news release); forecast improved by \$1.5 billion through FY2028 (Virginia Mercury, June 2, 2026).

[124] June 5, 2026 meeting of Lucas, Torian, and the governor; Lucas X posts (primary, June 2026), including the "Data Center Diva and Amazon Don" post; Sen. Scott Surovell continuing-resolution proposal (X, primary); House returns June 18, Senate June 22; first-ever partial shutdown threshold July 1. WTOP, June 9, 2026. (*) Meeting account secondary; the posts are primary.

[125] Senate Finance and Appropriations Committee, May 19, 2026: Secretary of Finance Mark Sickles reported that Compass Datacenters cited "the current legislative and political environment" in redirecting "all further investment outside of Virginia" and abandoning a two-site search in Greensville County/Emporia, and that Stack Infrastructure's ~\$100 billion Berry Hill project (Pittsylvania) "said they're not going to go forward without this tax abatement." VPM News, June 10, 2026; Cardinal News, May 22, 2026. (*) Secondary account of testimony; no direct Compass statement exists in the public record; Compass did not respond to press inquiries. Verify against the committee recording.

[126] Bloomberg, May 8, 2026: Compass abandoned a project near the Prince William Digital Gateway after a zoning clerical error. (*) Distinct from the tax-environment redirection reported in endnote N41; the two episodes should not be conflated.

[127] MultiState, March 30, 2026: 61 data center bills considered in the 2026 session; 15 reached the governor; 46 carry over to 2027. (*) Secondary tally.

[128] HB 507 (2026), Chapter 397, patron Del. John McAuliff: no DEQ air permit for data center applications submitted on or after July 1, 2026 unless each engine-generator's permitted emission limit is at or below a Tier 4-equivalent standard. House 61-34 (Feb. 17); Senate 25-15 (Mar. 10); signed April 8, 2026. Virginia LIS, 2026 Session.

[129] SB 94 (Sen. Danica Roem), Chapter 568, and HB 153 (Del. Joshua Thomas), Chapter 567 (2026), identical: mandatory pre-approval site assessment of a proposed high energy use facility's (≥ 100 MW) sound profile on homes and schools within 500 feet, with discretionary water, agricultural, park, historic, and forestland assessments; conference reports adopted March 14; signed April 13, 2026. Roem: "the bare minimum." Virginia LIS; Virginia Mercury, March 17, 2026.

[130] Chesterfield County Museum and Historical Archives, "An untold story: For many years, Bermuda Hundred played major role in transatlantic slave trade," published February 2024 (Black History Month). Research: Reverend Herbert Townes. Bermuda Hundred served as preeminent transatlantic slave market for Upper James region, 1690-1775. ~100,000 enslaved Africans purchased in Virginia during this period. Deep-water port received transatlantic vessels that could not navigate falls of the James at Richmond. Enslaved individuals marched from wharves to central marketplace for auction. URL: <https://www.chesterfield.gov/CivicAlerts.asp?AID=4489>

[131] Census Tract 1007.01, Chesterfield County. ACS 2020-2024 5-year estimates. Population: 5,509. MHI: \$34,609. Poverty: 13.6%. Racial: 43% Hispanic/Latino, 35% Black/African American, 18% White (Non-Hispanic). Homeownership (B25003): 48.2%. Renter-occupied: 51.8%. Median home value (B25077): \$214,800. Data access: data.census.gov, FIPS 51041.

[132] Census Tract 1009.02. ACS 2020-2024 5-year estimates. Population: 3,905. MHI: \$136,370. Poverty: 4.0%. Racial: 84% White, 10% Black, 1% Hispanic/Latino. Homeownership: 86.4%. Median home value: \$439,600. Census Tract 1009.20: Population 1,475; MHI \$70,685; Homeownership 72.8%; Home value \$293,200. County: MHI \$101,931; Homeownership 76.7%; Home value \$366,000.

[133] Educational attainment and employment by industry. ACS 2020-2024, Tables S1501, DP03. Tract 1007.01: 57% HS diploma or less; 15.8% bachelor's+; 6.1% Professional/Scientific/Technical employment; 34.2% Manufacturing/Transport/Warehousing/Retail. Tract 1009.20: 15.5% HS diploma or less; 48.7% bachelor's+. Tract 1009.02: 62.5% bachelor's+; 24%

Professional/Technical; <12% manual labor sectors. County (DP03): Manufacturing 6.4%; Retail Trade 10.2%; Transportation/Warehousing/Utilities 6.8%; combined 23.4%. Professional/Scientific/Technical 14.2%. URL: <https://data.census.gov/table/ACSDP5Y2024.DP03?g=050XX00US51041>

[134] Henrico Housing Affordability Trust Fund: \$60 million one-time appropriation from unbudgeted data center revenue (primarily Meta and QTS), established 2024. Administered by Partnership for Housing Affordability. By early 2026, 30 home purchases closed at average \$80,000 assistance per buyer. 10-year affordability clause. Zamone Perez, "Turning Data Center Revenue into Affordable Housing," Time, March 11, 2026. See also Turner, Case Study: Henrico County, v2.1, Part Six.

[135] Eastern project regulatory conditions: standard I-2 requirements. Setbacks: 50–100 ft. Noise: county ordinance Sec. 14-25 (65/55 dBA). No site-specific proffers, water caps, or community benefits for by-right projects. Sources: Chesterfield County I-2 zoning standards; Meadowville Technology Park covenants and restrictions.

[136] Western project proffers: Cases 25SN1038 and 25SN1040 staff reports and proffer documents. Site-specific noise: 50–55 dBA (below code standard). Buffers: 200–750 ft with berms and evergreen screening. Conservation: 350-acre Swift Creek Preserve (Case 25SN1039, Proffer 7). Water: closed-loop cooling mandatory; 2,000 GPD/acre cap; daily reporting. Community benefits: road improvements, fiber, cash-in-lieu, park/trail dedication.

[137] U.S. EPA, EJScreen Community Report (2024–2025), Census Tract 100403, Chesterfield County, VA. PM2.5: 85th–90th percentile (Virginia). Hazardous waste proximity: 92nd. Air toxics cancer risk: 80th. Wastewater discharge: 89th. Demographic index: 88th. Low income: 78th. People of color: 84th. URL: <https://ejscreen.epa.gov/mapper/>

[138] Virginia Department of Health, 2023 Chesterfield-Colonial Heights Community Health Assessment. Tract 1004.03 adult asthma: ~10.2% (county average: 8.6%). ZIP 23237 COPD/asthma ED visits: top quintile (highest 20%) statewide. County age-adjusted cancer incidence: 452.4 per 100,000. Bellwood area: higher Social Vulnerability Index correlating with later-stage diagnoses. URL: <https://www.vdh.virginia.gov/chesterfield/>

[139] VA DEQ air monitoring and emissions. Chesterfield Power Station coal units retired: 3&4 (2019), 5&6 (May 2023). Final-year permitted emissions: >118,000 tons SO₂, >4,400 tons NO_x. CERC projected to reduce SO₂ but increase localized NO_x by ~61 tons/year due to frequent peaking startups. No active DEQ air monitor within 3-mile radius of CERC site. Nearest monitors: MathScience Innovation

Center, Richmond (~8 mi); Hopewell City (~10 mi). Source: Southern Environmental Law Center assessment of air monitoring capacity, 2024.

[140] Turner, Case Study: Henrico County, v3.6 (June 2026), Parts Six and Eight (Centra vested-rights denial; grandfathered QTS pipeline); Turner, Case Study: Hanover County, v2.0 (June 2026) (Mountain Road denial; the leverage analysis). The two-poles frame this part extends originates in the Hanover study's Part Nine.

[141] Author's FOIA requests to Chesterfield EDA for Google performance agreement and Chirisa agreement terms received estimated cost-of-production responses exceeding project resources.

[142] Chesterfield County FOIA policy: 50% deposit for estimates >\$200 (Virginia Code § 2.2-3704(H)). Piedmont Environmental Council has noted excessive cost estimates function as "pocket veto" for individual researchers and smaller newsrooms. Botetourt County precedent: Roanoke Circuit Court (late 2025) ordered release of unredacted data center performance agreements (Helio Capital/Google). Virginia Court of Appeals declined to stay ruling. Disclosed: \$3 billion investment commitment, 150-employee hiring requirement.

SOURCES

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Chesterfield County Circuit Court. Deed records: EDA-Lowe-Peanut LLC (March 27, 2020). Skyward Holdings purchases (June 2025).

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