

STACK STC Feasibility

Executive Summary

STC should be treated as a gated megasite, not as either a dismissed proposal or a cleared gigawatt campus.



Verdict: 4.8 / 10 — Permitting**Last reviewed:** May 29, 2026**Evidence as of:** May 29, 2026**Project:** STACK Infrastructure — Stafford Technology Campus, Stafford County, Virginia**Recommendation:** Treat STC as a serious Northern Virginia campus opportunity whose land-use and demand case are plausible, but keep the feasibility score below 5 until Dominion service, cost-allocation, water/sewer, and tenant evidence move from announcement/process to proof.

Claim mean 4.8 · controlling claim (grid coexistence and ratepayer cost allocation) 4.0 → cap 5.5 · published overall 4.8.

STC is not a paper site. Stafford County materials identify a 523.94-acre Stafford Technology Campus zoning case for approximately 5.5 million square feet of data and computer services uses, located around Richmond Highway, State Shop Road, and Eskimo Hill Road in the Falmouth Election District. STACK Infrastructure and Peterson Companies have put a specific megasite into the public record, in the world's deepest data-center market, with a stated 1+ GW ambition and claimed local fiscal benefits.

But the hard feasibility question is not whether Stafford County can host data centers. It is whether a 1+ GW flat load can be energized, paid for, cooled, permitted, occupied, and defended politically on the advertised timetable. On the public record available for this analysis, that case is not yet substantiated.

Single biggest risk

The controlling risk is firm power deliverability plus cost allocation. The project claim is that Dominion Energy can serve 1+ GW through six committed 300 MW substations while Stafford's campus coexists with the broader Northern Virginia load surge — including other Stafford-area hyperscale demand — without destabilizing reliability or shifting material costs to ordinary Dominion customers.

That is the claim whose failure collapses the rest of the campus story. A 500-acre rezoned site, a green-financing headline, and strong market demand do not produce a live data-center campus without firm energization. Conversely, a 2027 first-phase live date is not credible unless the public record shows, at minimum, Dominion service documentation, phase-by-phase substation milestones, network-upgrade scope, SCC/PJM treatment of cost allocation, and tenant load ramps tied to the same delivery dates.

The clearest comparable is the recent wave of large-load utility proceedings around data centers. In Northern Virginia, Dominion-zone data-center growth has become a planning issue, not a site-specific footnote. The U.S. Energy Information Administration reported that PJM expects the Dominion zone to have the largest absolute summer-peak increase from 2026

through 2030, largely because of data-center load growth. JLARC's Virginia data-center study concluded that data centers are currently paying their full cost of service, but growing energy demand is likely to increase costs for other customers. The Virginia State Corporation Commission's 2025 Dominion order responded by requiring certain large-scale customers to pay minimum shares of contracted distribution, transmission, and generation demand — a sign that the risk is real enough to regulate, not a theoretical objection.

Where the story diverges

What STACK's story says

The project narrative is powerful: STACK Infrastructure, backed by IPI Partners, is building a flagship 1+ GW campus in Stafford County, organized into multiple sub-campus with 19 planned data centers. Public descriptions cite six 300 MW Dominion Energy substations, first-phase service targeted for 2027, and local fiscal benefits including more than \$80 million in annual tax revenue at full buildout and roughly \$58 million in county water/sewer capital-improvement relief. STACK's broader financing story includes an approximately \$4 billion green-financing package for STC and other expansion markets.

What the public record actually proves

The public record proves less than the headline suggests:

- **Land-use process:** Stafford County public materials confirm a specific STC zoning reclassification record, the 523.94-acre scale, the approximate 5.5 million-square-foot data-center use, the Falmouth-area location, and Tax Map Parcels 38-124 and 38-29A. The engagement record describes rezoning approval in September 2023; the public county materials reviewed here confirm the application and project package but do not, by themselves, provide the full approval order, proffer conditions, or downstream permit record.
- **Power:** The record supports proximity to substantial Dominion transmission infrastructure and the project claim of six 300 MW substations. It does not show executed electric-service agreements, a public Dominion firm-load letter, PJM/Dominion network-upgrade studies, substation-by-substation in-service dates, or customer-specific cost-allocation terms.
- **Schedule:** A 2025 construction start and 2027 first-phase live date are possible targets, not proven milestones. Final site-plan approval, grading/land-disturbance permits, building permits, environmental approvals, water/sewer service commitments, and energization milestones were not located in the public evidence reviewed.
- **Financing:** The approximately \$4 billion green-financing package supports sponsor-level capital access, but it spans STC plus other STACK expansion markets. The Stafford-specific allocation, use of proceeds, contingency, and utility-upgrade budget are not public.

- **Demand:** Northern Virginia demand is real. What is not public is a named STC anchor tenant, contracted MW, lease term, credit support, or absorption schedule.
- **Water and sewer:** Stafford materials refer to a Utility Impact Assessment and the project narrative claims substantial county CIP relief. The public record does not yet disclose peak cooling-water demand, source allocation, sewer capacity, blowdown handling, or an enforceable low-water cooling basis of design.

That evidence profile places STC in the **plausible but unproven** band, not the substantiated band.

Claim scorecard

Legend: The score measures feasibility of the specific claim. Confidence measures maturity of the public evidence. A low score with strong evidence can mean the public record clearly shows a weakness; a mid score with lower evidence can mean a plausible claim remains unproven.

#	CLAIM	SCORE	CONFIDENCE	READ
1	Dominion can deliver 1+ GW via six committed 300 MW substations on the project timeline.	5.5	Meaningful but qualified	Physical-grid proximity and substation narrative support plausibility; firm 2027 deliverability is not public.
2	Construction starts in 2025, first phase goes live in 2027, and the 19-building buildout progresses.	5.0	Meaningful but qualified	Zoning foundation is real; downstream permits and utility milestones are missing.
3	STC's share of the ~\$4B green financing is sufficient and durable to complete the campus.	4.5	Preliminary	Sponsor capital access is credible; Stafford-specific allocation and full-campus capital plan are not disclosed.

#	CLAIM	SCORE	CONFIDENCE	READ
4	Demand is durable for a 1+ GW wholesale campus without a disclosed named anchor tenant.	5.0	Meaningful but qualified	NoVA demand supports plausibility; no STC anchor, contracted MW, or take-or-pay demand proof is public.
5	Cooling water needs can be met without material local impact, and water/sewer CIP relief holds up.	4.0	Meaningful but qualified	Utility-impact materials exist, but water demand, source, sewer, blowdown, and CIP-relief detail are not public.
6	STC coexists with broader NoVA load without reliability harm or ratepayer cost shifting.	4.0	Meaningful but qualified	This is the controlling claim; Virginia's ratepayer and large-load proceedings show unresolved system risk.
7	Community and political support remains durable despite Virginia data-center backlash.	5.5	Meaningful but qualified	Stafford entitlement and fiscal narrative help, but statewide ratepayer, transmission, water, and noise issues are rising.
8	More than \$80M annual tax revenue and ~\$58M CIP relief materialize at full buildout.	4.5	Preliminary	Gross benefit is plausible at full buildout; no public fiscal model or binding CIP schedule validates it.

Claim-by-claim assessment

Claim 1 – Power delivery

Falsifiable proposition: Dominion Energy can serve STC's 1+ GW load through six 300 MW substations on the project timeline, including a first live phase by 2027.

Supporting evidence. STC is in Dominion territory in a strong Northern Virginia / Fredericksburg-area transmission setting. Transmission screening around the Falmouth area shows multiple in-service lines within 10 miles, including 500 kV and 230 kV infrastructure owned principally by Virginia Electric & Power Co. The project's six-substation narrative, if delivered, would imply up to 1.8 GW of substation nameplate capacity against a 1+ GW campus requirement.

Contradicting or limiting evidence. Substation nameplate is not the same as firm service. The public record reviewed here does not show a Dominion service agreement, a firm-load letter, a customer-specific network-upgrade study, substation construction status, energization dates, or PJM/Dominion load-flow treatment. A PJM public queue screen did not identify a matching Stafford County 1,000 MW queue record; that does not defeat a retail-load service path, but it also does not support the 2027 claim.

Northern Virginia precedent matters. In 2022, Dominion's Loudoun-area warning became public precisely because the limiting factor was transmission infrastructure, not abstract availability of electrons. Reference-class material from Northern Virginia Data Centers shows that utility additions are evaluated case by case and cannot simply be assumed ahead of required transmission improvements.

Confidence: Meaningful but qualified.

Score: 5.5 / 10.

Assessment closer: STC has a plausible power platform, but no public proof-tier document demonstrates 1+ GW firm deliverability on the advertised timeline.

Claim 2 – Timeline

Falsifiable proposition: STC starts construction in 2025, delivers a first phase by 2027, and progresses toward the 19-building buildout because zoning is secured.

Supporting evidence. Stafford County project materials identify a real, large development program: approximately 5.5 million square feet of data and computer services uses across 523.94 acres. The project record describes a rezoning approval in September 2023, and county materials show a data-center zoning framework adopted in October 2023.

Contradicting or limiting evidence. A zoning or reclassification foundation is not a live-date proof point. Public evidence reviewed here did not show final major site-plan approval, grading permits, land-disturbance permits, stormwater coverage, floodplain approvals, wetlands or stream permitting status, building permits, air-permitting treatment for emergency generators, water/sewer service commitments, or Dominion energization dates.

A reasonable public-record schedule is slower than the marketing target: first material construction is plausible in the 2026–2027 window if permits are in hand; first live phase is more likely a 2028+ event unless utility delivery and civil approvals are already further advanced than the public record shows.

Confidence: Meaningful but qualified.

Score: 5.0 / 10.

Assessment closer: The schedule is plausible as a target, not proven as a delivery plan.

Claim 3 – Financing durability

Falsifiable proposition: STC’s share of STACK’s approximately \$4 billion green-financing package is sufficient and durable to fund the campus to completion.

Supporting evidence. STACK is a real wholesale data-center operator, backed by IPI Partners, in a market with deep institutional capital appetite. A multi-billion-dollar financing package is not trivial; it supports the view that the sponsor can access capital markets.

Contradicting or limiting evidence. The public financing claim is not STC-specific. The package is described as covering STC plus other STACK expansions, including Portland and Toronto. No public source reviewed here discloses the Stafford allocation, debt/equity mix, covenants, draw schedule, contingency, or whether Dominion network upgrades, six substations, transmission reinforcements, water/sewer upgrades, stormwater/floodplain work, and site-prep costs are included.

Illustratively, if STC received 25% of a \$4 billion package, that would be \$1 billion – roughly \$52.6 million per planned building and about \$909,000 per MW for a 1.1 GW campus. Even at a 50% allocation, the implied \$1.8 million per MW would not obviously cover full hyperscale campus delivery, customer fit-out, power infrastructure, and site civil works without additional capital. These are feasibility-grade comparisons, not appraisals, but they show why the allocation matters.

Confidence: Preliminary.

Score: 4.5 / 10.

Assessment closer: Sponsor capital access is credible; campus-specific sufficiency is not public.

Claim 4 – Anchor / tenant demand

Falsifiable proposition: Demand is durable for a 1+ GW wholesale campus even though no single named anchor tenant is disclosed.

Supporting evidence. Northern Virginia remains the densest data-center market in the world. PJM/Dominion forecasting documents state that Dominion submitted a data-center large-load adjustment for the 2026 PJM load forecast, and JLARC reported Dominion forecasting data-center peak demand reaching 9 GW over 10 years. That supports a strong regional absorption thesis.

Contradicting or limiting evidence. STC-specific demand proof is absent. No named anchor tenant, contracted MW, lease, reservation schedule, credit support, take-or-pay provision, or ramp collateral is public. Reference-class analysis of Xai Colossus Memphis and Microsoft Quincy shows why this matters: proposed data-center load can include speculative or duplicative requests across markets, and commercial-readiness standards can materially reduce apparent queue demand. In Grant County, Washington, data-center service-request policy changes reportedly reduced requests from 3,000 MW to 2,300 MW, a 23% reduction.

A stronger comparator is Meta Richland Parish, where the utility proceeding disclosed customer-backed electric-service terms, upfront payments, minimum monthly payments, early termination fees, and long-term renewal structure. STC has not disclosed equivalent demand-security terms.

Confidence: Meaningful but qualified.

Score: 5.0 / 10.

Assessment closer: Regional demand is real; STC-specific demand remains unproven.

Claim 5 – Water sustainability

Falsifiable proposition: STC's cooling water and sewer needs can be met without material local impact, and the claimed Stafford County water/sewer CIP relief is durable.

Supporting evidence. Stafford County lists utility-impact materials for the project, and the site is inside a locality actively planning water/sewer rehabilitation and regulatory upgrades. A low-water design, liquid-cooling architecture, closed-loop design, or reclaimed/non-potable supply strategy could materially reduce public-system exposure if made binding.

Contradicting or limiting evidence. The decisive data are missing. The public record reviewed here does not show peak-day water demand, annual consumptive use, cooling technology, water-source allocation, sewer capacity, blowdown limits, treatment-plant acceptance, drought-stage operating rules, or an itemized \$58 million CIP-relief calculation. FEMA National Flood Hazard Layer screening around the Falmouth/Eskimo Hill Road area also identifies Special Flood Hazard Area polygons nearby, including AE floodway mapping, so parcel-level floodplain avoidance and stormwater design cannot be assumed.

Reference-class water reviews for data centers show that decision-makers need source, consumption, wastewater, and community-impact evidence before accepting a “no material impact” claim. STC has not yet put that evidence into the public record.

Confidence: Meaningful but qualified.

Score: 4.0 / 10.

Assessment closer: Water is not shown to be impossible; it is shown to be under-substantiated.

Claim 6 – Grid coexistence and ratepayer impact

Falsifiable proposition: STC can coexist with cumulative Northern Virginia load – including adjacent or nearby Stafford hyperscale projects – without destabilizing reliability or shifting material costs to Dominion ratepayers.

Supporting evidence. Virginia regulators are not ignoring the issue. The SCC’s 2025 Dominion order requires certain large-scale customers to pay at least 85% of contracted distribution and transmission demand and 60% of generation demand, a mechanism intended to help insulate ratepayers from infrastructure built for businesses such as data centers. PJM and Dominion also formally account for data-center large-load adjustments in forecasting.

Contradicting or limiting evidence. The existence of a regulatory response is not proof that STC’s costs are ring-fenced. EIA’s Dominion-zone load-growth outlook and JLARC’s ratepayer-cost findings point the other way: cumulative data-center growth can require transmission, capacity, and generation investments that affect customers beyond the individual campus. No STC-specific public filing reviewed here shows cumulative-load treatment for STC plus other Stafford and NoVA demand, nor a cost-causation order assigning all incremental system costs to STACK, its tenants, or the data-center customer class.

The Meta Richland Parish reference class shows the kind of evidence that would change the score: upfront payments for engineering, transmission, and interconnection; minimum monthly payments; early termination fees; and transparent regulatory treatment of large generation and transmission additions. STC’s public record does not yet show comparable protections.

Confidence: Meaningful but qualified.

Score: 4.0 / 10.

Assessment closer: This is the controlling claim because the public record has not proven that STC’s infrastructure burden is deliverable and fairly allocated.

Claim 7 – Community and political durability

Falsifiable proposition: STC can sustain local and state support despite Virginia’s intensifying data-center backlash.

Supporting evidence. Stafford County has put STC into a concrete land-use process, and the project’s tax and CIP-relief story is politically meaningful if substantiated. The Falmouth

District context is specific, not generic: county materials identify the site near Richmond Highway, Sage Lane, State Shop Road, and Eskimo Hill Road. The Falmouth District supervisor is Kecia S. Evans. Stafford County's state representation includes the 27th and 29th Senate Districts and portions of the 23rd, 64th, and 65th House of Delegates Districts; Virginia Senate materials identify Jeremy S. McPike as representing District 29, which includes parts of Stafford County.

Contradicting or limiting evidence. Virginia's data-center politics are moving from local economic development to statewide infrastructure allocation. JLARC's data-center study gives opponents and regulators a credible framework for ratepayer-cost scrutiny. Nearby residents can also organize around construction traffic, generator noise, visual screening, stormwater, wetlands, water/sewer capacity, and transmission infrastructure after a land-use vote has already occurred.

Northern Virginia reference-class material shows that support can erode quickly when data-center growth becomes visible through transmission lines, noise, environmental impacts, and utility bills. STC has a support base; it does not yet have a public, enforceable mitigation package strong enough to call that support durable through buildout.

Confidence: Meaningful but qualified.

Score: 5.5 / 10.

Assessment closer: Local entitlement helps, but the politics remain exposed to the same grid, water, and ratepayer issues driving the statewide backlash.

Claim 8 – Economic benefit realization

Falsifiable proposition: More than \$80 million in annual tax revenue and roughly \$58 million in water/sewer CIP relief materialize as claimed at full buildout.

Supporting evidence. The scale could support a large gross fiscal number if fully built, energized, and occupied. JLARC has stated that data centers can generate substantial local tax revenue for host localities. Loudoun County's experience demonstrates that data-center tax bases can materially reshape local budgets.

Contradicting or limiting evidence. Stafford's public record does not yet show the model. The \$80 million annual claim depends on assessed value, taxable equipment categories, depreciation, business personal property treatment, real-estate valuation, tax rates, exemptions, abatements, buildout timing, and tenant absorption. Virginia's data-center sales-and-use tax exemption can support investment, but Virginia Tax guidance also makes clear that qualifying data-center equipment receives exemption treatment while general building improvements and fixtures are treated differently. The net fiscal case cannot be validated from a headline number.

The \$58 million CIP-relief claim has the same problem. It may be real, but the public record reviewed here does not itemize which projects are removed from the county CIP, who funds

them, when the benefit is realized, whether the obligation is enforceable, and how ratepayers are treated.

Confidence: Preliminary.

Score: 4.5 / 10.

Assessment closer: The fiscal story is plausible at full buildout; the public proof is not yet there.

Cross-cutting risk factors

1. Power schedule and construction schedule are inseparable

A data center can be graded, shelled, and even partially fit out without the campus being economically live. STC's 2027 first-phase claim depends less on generic construction speed than on Dominion energization. Six substations are an impressive concept, but the schedule turns on engineering, procurement, siting, easements, equipment lead times, network studies, cost allocation, and commissioning.

2. Ratepayer politics can reprice the project even after local approval

The SCC's large-load protections are constructive for public policy, but they also raise the bar for the project. A campus of this size must show who pays for network upgrades, minimum demand commitments, exit fees, collateral, and stranded-asset risk. Without that record, the project remains vulnerable to a statewide "data centers are raising bills" narrative.

3. Water and sewer claims need the same proof ladder as power claims

The \$58 million CIP-relief story is a benefit claim, not a capacity proof. The campus needs a public water balance: cooling design, potable versus non-potable share, peak demand, annual consumptive use, sewer acceptance, blowdown treatment, drought operations, and capital responsibility. Without that, water remains a political and environmental risk even if the engineering can ultimately be solved.

4. Merchant demand cuts both ways

A wholesale developer in Northern Virginia benefits from the world's deepest demand pool. The same merchant posture weakens public substantiation when no anchor tenant is disclosed. In the Feasibility Index methodology, market demand can support plausibility, but it cannot move the claim into the 7-8 band without process-or-proof evidence specific to the project.

5. Fiscal benefits are back-end loaded

The headline tax number is a full-buildout claim. Any delay in energization, absorption, building permits, or utility infrastructure pushes the benefit curve out. Illustratively, using the claimed \$80 million annual benefit and a feasibility-grade 8.25% nominal discount rate, a one-year

delay in the full tax stream reduces the present value of that public benefit by roughly \$63 million. That is not an investment appraisal; it is a timing-sensitivity warning.

Reference-class comparison

STC resembles a growing class of gigawatt-scale data-center campuses whose feasibility is determined more by utility contracting than by land control.

- **Northern Virginia Data Centers:** Reference-class records show that large data-center load in the Dominion zone can be delayed by transmission constraints even when demand is real. This is the closest comparator because it involves the same regional grid politics and the same public anxiety over data-center load growth.
- **Meta Richland Parish:** The Louisiana reference class shows what a stronger public power case looks like: a named hyperscale customer, filed utility proceedings, generation and transmission plans, customer payments, minimum monthly payments, and termination protections. STC lacks that public contracting layer today.
- **Xai Colossus Memphis and Microsoft Quincy:** These references illustrate the “phantom load” problem. Proposed data-center load can be duplicated across markets, and commercial-readiness standards can materially reduce apparent demand. That does not mean STC demand is false; it means undisclosed demand should not be scored as contracted demand.
- **California High-Speed Rail utility-risk precedent:** Outside the data-center sector, major infrastructure programs repeatedly show the same pattern: unresolved utility agreements and stakeholder commitments create schedule and cost uncertainty even after route or project concepts advance. The lesson for STC is not that the project fails; it is that utility scope, “who pays,” and “when delivered” must be in contract documents before the schedule deserves a high score.

Reference-class evidence informs context. It does not lift STC’s scores above the public project-specific proof ladder.

Overall feasibility score

The eight claim scores are: 5.5, 5.0, 4.5, 5.0, 4.0, 4.0, 5.5, and 4.5.

- **Claim mean:** $4.8125 \rightarrow 4.8$ rounded to one decimal.
- **Controlling claim:** Claim 6, grid coexistence and ratepayer cost allocation, scored **4.0**.
- **Controlling cap:** $4.0 + 1.5 = 5.5$.
- **Published overall:** $\min(4.8, 5.5) = 4.8$.

The cap does not bind because the mean is already below the controlling cap. The result is a weak-to-mid feasibility score: STC is plausible and serious, but not yet substantiated.

Key data gaps and re-review triggers

The score should move only when public evidence clears specific gates:

1. **Dominion service proof:** Electric service agreements, firm-load letters, or equivalent public confirmation for phase-one and full-campus delivery.
2. **Substation schedule:** Six-substation status by site, voltage, capacity, permits, construction start, energization date, and dependency on upstream network upgrades.
3. **Network-upgrade and cost-allocation record:** (source on file) filings showing required upgrades, responsible payers, minimum demand obligations, CIACs, deposits, exit fees, and ratepayer protections.
4. **Schedule proof:** Final site-plan approvals, grading/land-disturbance permits, stormwater coverage, building permits, and evidence of actual 2025 construction if that milestone is claimed.
5. **Water/sewer package:** Peak and annual water demand, cooling technology, potable/reclaimed split, sewer capacity, blowdown limits, treatment-plant acceptance, drought rules, and enforceable upgrade funding.
6. **Environmental civil record:** Parcel-level wetlands delineation, floodplain plan, stormwater design, ESA/IPaC review, cultural-resource review where applicable, and mitigation commitments.
7. **Financing allocation:** STC-specific share of the \$4 billion package, project budget by phase, contingency, covenants, use of proceeds, and inclusion or exclusion of utility and water/sewer obligations.
8. **Tenant proof:** Named anchor tenant or binding contracted MW, lease term, credit support, take-or-pay economics, and phase-by-phase absorption schedule.
9. **Fiscal model:** Stafford County fiscal-impact model showing tax categories, rates, assessed values, depreciation, exemptions, abatements, timing, and net public costs.
10. **CIP-relief proof:** Itemized \$58 million water/sewer CIP-relief schedule with enforceable commitments and ratepayer treatment.

Recommendation

STC should be treated as a **gated megasite**, not as either a dismissed proposal or a cleared gigawatt campus. The project's strengths are real: large controlled acreage, a specific Stafford land-use record, proximity to Northern Virginia demand, Dominion infrastructure context, and a

fiscal-benefit narrative with local political appeal. Those strengths justify continued tracking and a score near the middle of the index.

The weaknesses are equally real: the public record does not yet prove firm 1+ GW power delivery, cost-causation protection, a 2027 live date, Stafford-specific capital sufficiency, water/sewer sustainability, or tenant absorption. In the Feasibility Index framework, those missing documents keep the project below substantiated status.

Score should remain 4.8 until specific named evidence is public: Dominion phase-by-phase service commitments, SCC/PJM cost-allocation treatment for STC-related upgrades, final site/civil and building permits for phase one, a binding water/sewer capacity and CIP-relief package, STC-specific financing allocation, and tenant commitments showing contracted MW by phase.

Standing disclaimer: This is a feasibility-grade public-record assessment as of the date stated above. It is not investment, legal, engineering, tax, or utility-interconnection advice and does not replace executed agreements, interconnection or service studies, engineering design, public-agency approvals, or counsel review.