The Struggle over the Future of Data Centers in Northern Virginia

A Research Paper submitted to the Department of Engineering and Society

Presented to the Faculty of the School of Engineering and Applied Science
University of Virginia • Charlottesville, Virginia

In Partial Fulfillment of the Requirements for the Degree
Bachelor of Science, School of Engineering

Austin Tran

Spring 2025

On my honor as a University Student, I have neither given nor received unauthorized aid on this assignment as defined by the Honor Guidelines for Thesis-Related Assignments

Advisor

Travis Elliott, Department of Engineering and Society

Introduction

With the rise of AI and Big Data, Northern Virginia has become home to many of the world's data centers due to its cheap land, reliable energy, and low risk from natural disasters. With high internet connectivity and tax incentives, the regions of Loudoun and Prince William County earned the name "Data Center Alley," which boasts routing "much of the world's internet traffic" (LED, 2024). Data centers are physical facilities that provide customers with computing and digital storage equipment. They are essential for modern businesses and a major component of cloud computing, where businesses host their servers and data off-site. However, there are debates over where data centers should be located and their effects on local communities and the environment.

Motives like financial opportunity and technological advancement have led companies, associated trade associations, and other organized social groups to also try to influence policy. In contrast, factors like noise, energy consumption, and environmental and historical conservation have mobilized many advocacy groups to ask state and local governments for limits and greater regulation on the data center industry, with some questioning the necessity of data centers overall. Either way, understanding the actions and agendas of these parties is crucial to analyzing their influence on public policy.

STS Framework

The social construction of technology (SCOT) STS framework helps people study and understand how society affects technology through social, cultural, economic, and political influence. It relies upon key concepts like "relevant social groups," "interpretive flexibility," "closure," and "stabilization" to analyze the support or rejection of a technological change (Bijker, 2001). Relevant social groups are groups of people or organizations that are affected by technological change. Interpretive flexibility is the idea that any technological development can

be viewed differently depending on a given perspective. The closure and stabilization components of SCOT involve the process of resolving issues in a technological change until all groups view the problems as solved (Klein & Kleinman, 2002). This can be done via redefinition of the problem "where unresolved problems are redefined so that they no longer pose problems to social groups" or a rhetorical closure where "a declaration is made that no further problems exist," halting any additional design changes (Klein & Kleinman, 2002).

SCOT can be used to analyze the debate over data center growth in Northern Virginia. Some of the relevant social groups, like technology companies, environmental advocacies, and historical non-profits, can be identified with differing views on the construction of data centers and their necessity overall. However, the supporting and opposing positions on data center construction are nuanced. Many social groups have different reasons for their shared positions, enabling the SCOT framework's interpretive flexibility to assist in this issue's analysis. Additionally, the framework can be used to analyze conflict between groups over the expansion of data centers. Using SCOT, this paper aims to describe and examine the different influences over the debate on the expansion of data centers in Northern Virginia.

Related Published Research

Researchers have studied social phenomena related to opposition to construction before. For example, Ghafoor et al. (2022) found that public opposition to construction and demolition waste facilities in Australia was primarily driven by poor public participation and only marginally by "not-in-my-backyard" (NIMBY) attitudes. Fabra et al. (2024) found that local communities opposed renewable energy investments due to "land conservation, biodiversity, economic" concerns in Spain. Liu, Song, and Shi (2024) have also found that opposition to wastewater treatment plants was linked to factors like perceived benefit, perceived risk, and perceived fairness. Despite the inherent advantages of renewable energy and waste facilities,

local communities still failed to support their construction. This published research suggests that the perception of construction can be attributed to factors beyond the judgment of the structure being built, including other factors like perceived fairness of the process and impact on local communities. However, the impact of organized and semi-organized social groups on both public perception and public policy about construction projects like data centers remained unanswered.

Analysis

Many stakeholders with a vested interest in the expansion of data centers in Northern Virginia have attempted to influence data center policy. Through the construction and operation of data centers, several industries sought to capitalize financially, which can be seen directly through annual reports, press releases, and appeals to policymakers. However, indirect attempts to sway legislation more covertly through groups like trade associations, professional associations, and interest groups can also be linked to companies and their financial interests. On the other hand, a variety of interest groups have pushed back against data center expansion for reasons ranging from environmental conservation to historical preservation. This ongoing struggle between industry players and opposition groups highlights the competitive climate of data center policy, especially around the Northern Virginia region.

Technology Companies

Tech companies like Amazon Web Services, Google, and Microsoft have targeted Northern Virginia to create data centers to support their businesses. As major cloud service providers, they operate “hyperscale data centers” to provide other businesses with data storage, quick content-delivery, and computation-heavy services like data analytics using AI and machine learning (ML) (Susnjara & Smalley, 2024). In 2023 and 2024, these companies invested billions of dollars towards the development of data centers in Northern Virginia with the support of

Virginia Governor Glenn Youngkin (Ashare, 2024; Peters, 2024; Swinhoe, 2023). Brightening their image to the public, their investments have been framed as "economic opportunities" for Virginians and veterans, with the chair of the Fairfax County Board of Supervisors boasting the region as the "perfect location for emerging tech companies" and AI talent (Kelleher, 2024).

In addition to receiving positive economic press, state politicians received large donations from big tech companies during the data center boom. Between 2020 and 2025, Amazon donated over $850,000 to both Democratic and Republican state candidates and organizations, which totaled over four times more than their contributions between 2014 and 2019 (The Virginia Public Access Project, n.d.a). Similarly, prior to 2020, Google donated $6,000 to Virginia state political causes but increased their contributions to greater than $400,000 over the 2020-2025 period (The Virginia Public Access Project, n.d.b). Regardless of which candidate or party wins state elections, Virginia's politics will likely fall within the influence of tech companies that profit from data center-friendly policy.

Data Center Providers

Data center providers enable companies "to scale their digital infrastructure" with speed by designing, constructing, and operating data centers (Stack Infrastructure, 2024a). Stack Infrastructure (STACK), a data center solutions company, can be identified as a key player in this industry. They have a financial interest in the expansion of data centers and have already built several in Northern Virginia (Stack Infrastructure, 2020). In 2024, STACK announced receiving $1.3 billion for global development, with over $700 million allocated to the Northern Virginia region (Stack Infrastructure, 2024b). In addition to STACK, many other data center operations companies leverage local policy to grow in Northern Virginia, like CloudHQ, CyrusOne, and Vantage Data Centers, which each host multiple data centers in the region.

Much like big tech companies, data center providers have also made significant donations to state organizations to tip the political scales. Between 2024 and 2025, STACK, CloudHQ, Vantage Data Centers, and CyrusOne totaled over $500,000 in political contributions (The Virginia Public Access Project, n.d.c). Undoubtedly, data center-friendly policy enables these companies to profit and thrive.

Electric Utility Companies

Electric utility companies that generate and distribute electricity are also key players in the data center scene. They not only provide electric service contracts to data centers but also assist in the construction and engineering of electric power grid infrastructure like power lines, substations, and power generation projects. In 2023, Virginia's largest utility company, Dominion Energy (Dominion), connected 15 data centers, bringing their cumulative total to 94 data centers since 2019 (Swinhoe, 2024). Furthermore, Dominion reported a near doubling of "data center power capacity under contract" from July 2024 to December 2024, with CEO Robert Blue saying they are "taking every step to meet this opportunity" (Skidmore, 2025). Furthermore, Amazon announced a deal with Dominion to begin the development of a small modular reactor (a type of nuclear reactor) with the support of Governor Glenn Youngkin (Olick, 2024). Pushing for data center-friendly policy, Dominion alone in 2024 made over $5 million in political contributions (The Virginia Public Access Project, n.d.d).

Another electric utility company, Northern Virginia Electronic Cooperative or NOVEC has also seen growth due to data center projects. As an electric distribution system, they service electricity to "more than 175,000 homes and businesses" in Northern Virginia (NOVEC, 2024a); however, between 2023-2024 they reported "serving 52 data center buildings on 21 campuses" across four different counties with data center customers representing "65% of NOVEC's energy

sales" (NOVEC, 2024b). Enabled by data center-driven zoning, NOVEC too has contributed to local political campaigns (The Virginia Public Access Project, n.d.e). By providing power distribution, including the expansion of infrastructure like substations and power lines, NOVEC has a financial interest in the growth of the data center industry in Northern Virginia and the future of data center policy.

Trade Associations

Driving the expansion of data centers on behalf of big tech companies and data center providers is the Data Center Coalition, a membership coalition that "represents and advances the interests of the data center community" by advocating for tax and zoning policies that favor the data center community (DCC, 2024). Headquartered in Northern Virginia and claiming to be "the voice of the industry," they partake in "public policy advocacy," where they fight for policies around the construction, workforce, and "regulatory climate" of data centers. Notably, their board of directors comprises executives from big tech, construction, and data center companies. Their members include big tech companies like Amazon Web Services (AWS), Google, Microsoft, and Meta, as well as data center providers like STACK, CyrusOne, CloudHQ, and Vantage Data Centers. The coalition has further attempted to influence the public perception of data centers in Northern Virginia by forming Virginia Connects, a nonprofit organization that has been "fighting back" against data center "misinformation" through fliers and text messages to Virginia residents (Cary, 2024). They argue that data centers play a role in "entertainment, education, healthcare, and business" and create both statewide and local benefits.

The Electric Power Supply Association (EPSA), a trade association that "represents competitive power suppliers," is also a voice in the data center discussion (EPSA, 2024). Made up of over 10 national energy companies, the EPSA shares their "members' good news with

policymakers" at the state and federal levels. Their members stand to benefit financially from the rise of AI and the "rush to build large energy-intensive data centers" (Owen, 2024). Through these coalitions, nonprofits, and trade associations, big tech, construction, and data center companies can indirectly influence data center policy in Northern Virginia.

Environmental Conservation Groups

Concerned about the consumption of land, water pollution, and wildlife impacts, many environmental conservation groups oppose the construction and operation of data centers in Northern Virginia. One example is the Prince William Conservation Alliance, an advocacy group that works to protect natural areas in Northern Virginia. They oppose data center projects citing, their "insatiable demand for power, water and land" and question "if the benefits will truly outweigh the costs in the end" (Studholme & Schlossberg, 2024). They specifically have expressed concern about "intense development" next to state and national parks, labeling them "intrusions" (PWCA, 2021).

Another example is the Northern Virginia Bird Alliance (NVBA), whose mission is to "engage all Northern Virginia communities in enjoying, conserving, and restoring nature for the benefit of birds, other wildlife, and people" (Northern Virginia Bird Alliance, n.d.). The NVBA too opposes the sprawl of data centers in Northern Virginia for environmental reasons. Attempting to influence legislation, they advocated and worked on bills "restricting data centers" together with the Virginia Conservation Network (VCN) during the 2024 eight-week Virginia legislative session (Northern Virginia Bird Alliance, 2024). Environmental advocacies represent just one of the many opposition groups attempting to sway legislators over data center policy.

Historical Conservation Groups

Some advocacies have opposed data center expansion for historical conservation reasons. For example, the American Battlefield Trust (ABT), a 501(c)(3) national non-profit organization, stands for the "preservation" of historical battlegrounds and "education" of the American public about their importance (ABT, 2024a). With the expansion of data centers in Northern Virginia, they have joined a lawsuit to protect the Manassas Battlefields from the construction of an adjacent data center, citing concerns about "historic" and "natural" resources being "irreparably" damaged (ABT, 2024b). Through fundraising, legal action, and petitions, they aim to halt the "aggressive" construction of data centers by "the richest companies on earth" near historical sites (ABT, 2024c). They further characterize data centers as "windowless monstrosities," arguing that the expansion in Northern Virginia could even spread to Gettysburg and other historic sites if left unchecked. Similarly, the Manassas Battlefield Trust, a local partner of the ABT, has echoed concerns about "ill advised" zoning changes and argued the greatest threat to the Manassas National Battlefield Park is the development of data centers (Manassas Battlefield Trust, n.d.). Fighting zoning changes and data center expansion through legal means and public outreach, historical conservation advocacies have also attempted to influence data center policy in Northern Virginia.

Homeowners' Groups

Also fighting against data center expansion are Homeowners Associations (HOA). Uniting HOAs, the HOA Roundtable of Northern Virginia has called upon homeowners and residents in Northern Virginia to take a stand politically against data center projects. Although they have made appeals to environmentalists and conservationists similar to other advocacies, uniquely they have warned homeowners of traffic increases, water quality degradation, noise pollution, and potential property value decreases due to data center construction (HOA Roundtable, n.d.). They have acknowledged that "data centers represent an industry growing

rapidly" and conceded that they provide increased tax revenues and support the world's economy; however, they have stated that the impact of data centers is "unacceptably high," calling for limits on how far data centers can be located from schools and parks while also demanding restrictions on the height of data centers and the noise levels emitted by them (Peters, 2023). Homeowner's Associations are among the broadest of social groups opposing data center construction.

Virginia Data Center Reform Coalition

Leading the charge against data center expansion in Northern Virginia is the Virginia Data Center Reform Coalition, a group made up of over 25 environmental, historical, and climate advocacy groups who have united to support "statewide reform of the data center industry" despite having different reasons for opposing data centers (PEC, 2023). Their concerns about data centers' impact range from "higher utility rates" for residents to "declining air quality," among many other factors. The coalition was formed in response to the Prince William Digital Gateway, a project to construct a 2,100-acre technology corridor for data center use in Northern Virginia. Despite differing reasons for opposing data centers internally, the coalition collectively works to push for statewide reform by supporting state bills like SB960, which "directs the State Corporation Commission (SCC) to examine who is paying for data center energy infrastructure and minimize unreasonable impact to electricity customers that are not data centers," HB1601 that requires "an assessment of the impacts of a proposed high-energy use facility on surrounding resources," and Senate Budget Amendment Item 4-14 #7s which requires data center providers to meet energy efficient standards to be eligible for tax exemptions (Bolthouse, 2025). Centralizing the power of both national and local advocacies, the Virginia Data Center Reform Coalition greatly influences data center policy in Northern Virginia on behalf of its members.

Problems and Conflicts

The interests of the parties involved greatly differ and have led to both legal and political conflict. While many companies and local governments stand to financially benefit from the expansion of data centers within the area, this has conflicted with the interests of citizens who have amplified their voices through their unification under the Virginia Data Center Reform Coalition. Despite the prospects of job creation and tax revenue the data center industry has touted, the potential and already seen effects on local communities through the resource consumption of data centers have created significant pushback. Conflicts surrounding data center expansion arise from multiple social groups, each articulating different objections such as traffic congestion, negative effects on property values, substantial electricity demands, and threats to environmental or historical sites. Despite differing motivations, these groups share a common stance against expansion.

Pushback on data center expansion can be seen through lawsuits, rallies, and other forms of protest. One lawsuit from the American Battlefield Trust and nine residents regarding the Prince William Digital Gateway was filed to "challenge three (3) separate rezoning ordinances" in relation to over 1,700 acres of land "previously zoned as either agricultural or residential" to "industrial and office districts" (Coalition to Protect Prince William County, 2024). Although the Virginia Circuit Court dismissed it, Judge Hudson "acknowledged the county did not comply with its own code," and the plaintiffs plan to appeal Hudson's dismissal (Muzyk, 2024). Another lawsuit around the project is set to be heard on June 5 and 6, 2025, this time filed by the Oak Valley Homeowners Association and 11 other residents (Kraft, 2025b). Rising tensions between data center proponents and residents have also resulted in rallies, demonstrations, and discourse at open forums where concerns about the data center development have been met with counterpoints about tax revenue going to communities (Morris, 2023; Turco, 2024). The

competing values of the social groups stemming from their differing views on data centers and their expansion have led to legal challenges, political contention, and social resistance.

Closure and Stabilization

As of mid-2025, the sociotechnical system over the expansion of data centers within the Northern Virginia region has not reached closure or stabilization. Stabilization occurs when relevant social groups view the given problem as solved or interpret the given technology, data centers, in the same way. The social groups investigated hold fundamentally conflicting views and values. Industry proponents view data centers as a means for financial gain and argue they provide jobs and tax revenue to local governments, while residents acting through groups like the Virginia Data Center Reform Coalition view the expansion of data centers as an intrusive threat to the environment and quality of life. The lack of closure can be seen through the ongoing legal battles, political debates, and social mobilization which all prevent the system from settling.

Several pathways could facilitate closure in the future. One potential development that could lead to closure is the improvement of data center technology and energy efficiency, which would reduce the environmental impact and resource consumption of data centers. Additionally, any shift in public opinion about data centers through improved public relations or the development of an impactful technology directly due to data centers could bring the system closer to closure. The system could also be brought to closure through regulations on data centers in the form of construction/site restrictions, energy efficiency standards, water usage regulations, and noise pollution limits. Though these pathways may not guarantee the complete stabilization of the system, they could change how certain social groups view data centers to bring the system closer to closure.

Discussion

While the debate over data center expansion may seem binary, the involved social groups and their positions are unique. With the technological race to improve and utilize AI, big tech companies have significantly increased their investment in data centers. Meanwhile, data center providers and electric utility companies are also profiting from the data center boom, like shovel sellers during a gold rush. For localities, such concentrated economic investment into a region is sure to boost the surrounding economies and increase tax revenue. Despite this, the way big tech and data center providers have influenced politicians on both sides of the aisle through both direct and indirect means may have contributed to the public backlash against data centers.

Before considering the impacts of data center development, the parties and processes involved in the rezoning and approval of data center projects may have already created negative sentiments. Although town halls have been held, residents still felt that "multi-billion dollar corporations pick the most efficient site for them and the most cost-effective site for them without considering the impacts on the neighborhoods that they're destroying in the process" (Kraft, 2025a). Furthermore, locals were signaled that "[they] don't have a chance in Prince William County courts, because they favor the local government no matter what." This lack of fairness over local zoning decisions, perceived or realized, ultimately contributed to the pushback on data center projects.

The debate over data centers further exemplifies the struggle between large corporations and local communities. In this case, large international corporations wish to develop data centers by using the resources in Northern Virginia while residents bear the consequences without seeing direct benefits to their communities. Within campaign finance and courts, local communities lack the same level of funding and power as big tech companies and data center providers. Despite being able to vote, residents may find that both options on their ballot have received funds from these large corporations. The development of data centers in Northern Virginia could be

compared to the establishment of a quarry or mine, where external investments do technically boost local economies but have detrimental effects on the health and well-being of residents as resources are extracted and exported for profit elsewhere.

An ethical discussion about the impact and tradeoffs of data centers could also be explored. As businesses grow, having access to data storage and business insights could play an important role in the survival and success of modern-day businesses, necessitating data center providers and tech companies. However, the environmental and energy costs of constructing operating data centers are significant, meaning the residents of data center areas must bear some burden via increased energy costs, noise, and potential pollution. Furthermore, the residents may not directly reap the benefits of data centers any more than any other data center customer located away from the construction.

This introduces the consequential question of whether the ends justify the means. What level of inconvenience or injustice (temporary or permanent) to residents is justified for the economic success of corporations and businesses far away? A deontological argument could claim that residents have a duty to protect their environment for both themselves and future residents; even if construction limits and energy efficiency standards were imposed, data centers would still have a lasting environmental impact through water and noise pollution. However, this conflicts with the duty of corporations to increase value for their shareholders. Would it be considered immoral for a corporation not to take advantage of the region's resources when all its competitors are? When government attempts to regulate the industry, is lobbying for their interests considered immoral if it is a corporation's duty to grow and bring value to their respective stakeholders? The debate over data centers and public policy can not only act as a case study in public policy but also as a multifaceted ethical problem.

Main Points

Through the analysis of the different social groups attempting to influence data center policy in Northern Virginia, it is evident that this case represents a greater struggle between corporations and local communities. This competition over how the region's resources are used has connected usual rivals and formed new groups. While engaged citizens have joined both national and local advocacies to make their voices heard, the weight of corporate campaign contributions has proven significant in regional policy decisions. While this case investigates questions about the impact and ethics of data centers, it further ignites a discussion on the seen and unseen influence corporations have over local public policy.

Conclusion

The subject of data center policy in Northern Virginia has garnered the attention of many. With a financial stake in decisions, big tech companies, data center providers, and electric utility companies have all invested time and money into influencing public policy through both direct and indirect means. Meanwhile, concern about data center expansion has united and mobilized grassroots organizations to call upon their representatives to make decisions that protect a myriad of values like environmental and historical conservation. The debate over data center policy has shone a light on the power that corporations have over state and local policy and even introduced an ethical discussion on the morality of large corporations using local resources. While data centers may be an artifact of our time, they can further be used as a case of the influence of corporations over public policy.

References

ABFT. (2024a). *About the American Battlefield Trust*. American Battlefield Trust. https://www.battlefields.org/about

ABFT. (2024b, January 12). American *Battlefield Trust Joins Lawsuit to Protect Manassas Battlefield from Massive Data Center Project*. American Battlefield Trust. https://www.battlefields.org/news/american-battlefield-trust-joins-lawsuit-protect-manassas-battlefield-massive-data-center

ABFT. (2024c). *Protect Virginia Battlefields from Massive Data Centers*. American Battlefield Trust. https://www.battlefields.org/preserve/speak-out/protect-virginia-battlefields-massive-data-centers?ms=navso

Ashare, M. (2024, December 4). *Big tech on track to pour more than $180B into data centers this year*. Construction Dive. https://www.constructiondive.com/news/cloud-data-center-q3-spend-aws-azure-microsoft/734579/

Bijker, W. E. (2001). Technology, Social Construction of. *International Encyclopedia of the Social & Behavioral Sciences*, 15522–15527. https://doi.org/10.1016/b0-08-043076-7/03169-7

Bolthouse, J. (2025, February 13). *Take Action: Show Support for These Data Center Reform Bills – The Piedmont Environmental Council*. Pecva.org. https://www.pecva.org/work/energy-work/take-action-show-support-for-these-data-center-reform-bills/

Cary, P. (2024, October 8). *Data centers use mailers, text messages to counter pushback*. Prince William Times. https://www.princewilliamtimes.com/news/data-centers-use-mailers-text-messages-to-counter-pushback/article_420b47dc-85c7-11ef-90ed-cfe9b41f9e5a.html

EPSA. (2024). *About EPSA - EPSA*. EPSA. https://epsa.org/about-epsa/

Fabra, N., Gutiérrez, E., Lacuesta, A., & Ramos, R. (2024, September). Do renewable energy investments create local jobs? *Journal of Public Economics*, *239*, 105212–105212. Web of Science.

Ghafoor, S., Salman Shooshtarian, Maqsood, T., & Wong, P. (2022, August). Assessment of Public Opposition to Construction and Demolition Waste Facilities: A Case Study in Australia. *Recycling*, *7*(5), 62–62. Web of Science.

Grossmann, M. (2012). Interest group influence on US policy change: An assessment based on policy history. *Interest Groups & Advocacy*, *1*(2), 171–192. Web of Science.

HOA Roundtable. (n.d.). *HOA Roundtable*. HOA Roundtable. Retrieved March 15, 2025, from https://www.hoaroundtable.org/

Kelleher, C. (2024, April 29). *Google Invests $1B in NoVA Data Centers, Starts New AI Course*. Northern Virginia Magazine. https://northernvirginiamag.com/news/2024/04/29/google-invests-1b-in-nova-data-centers-starts-new-ai-course/

Klein, H. K., & Kleinman, D. L. (2002). The Social Construction of Technology: Structural Considerations. *Science, Technology, & Human Values, 27*(1), 28–52. http://www.jstor.org/stable/690274

Kraft, S. (2025a, March 6). *Oak Valley lawsuit challenging Digital Gateway data center project slated for June 5-6 'mini-trial'*. INSIDENOVA.COM. https://www.insidenova.com/headlines/oak-valley-lawsuit-challenging-digital-gateway-data-center-project-slated-for-june-5-6-mini/article_ed8e8e0e-fad2-11ef-966d-d3b5132ac418.html

Kraft, S. (2025b, February 12). *Oak Valley lawsuit against Digital Gateway moving forward to March 6 hearing*. INSIDENOVA.COM. https://www.insidenova.com/headlines/oak-valley-lawsuit-against-digital-gateway-moving-forward-to-march-6-hearing/article_be235fe4-e7e2-11ef-89f7-bb3624b250c8.html

Song, Y., & Shi, S. (2024). Resolving the Dilemma of Wastewater Treatment Plants: An Empirical Study on Public Acceptance for Publicly Accessible WWTPs. *Journal of Cleaner Production, 475*, 143674–143674. Web of Science.

LED. (2024, January 18). *Data Centers - Loudoun County Economic Development, VA*. Loudoun County Economic Development, VA. https://biz.loudoun.gov/key-business-sectors/data-centers/

Northern Virginia Bird Alliance. (n.d.). *Northern Virginia Bird Alliance*. Northern Virginia Bird Alliance. Retrieved March 15, 2025, from https://www.nvbirdalliance.org/

Northern Virginia Bird Alliance. (2024). *FY 2024 Annual Report*. https://static1.squarespace.com/static/5d76d70856d71978757182e7/t/678687f7759b3e38dcba5c17/1736869882570/NVBA_Annual+Report-FY2024_website.pdf

NOVEC. (2024a). *Who We Are*. Novec.com. https://www.novec.com/About_NOVEC/index.cfm

NOVEC. (2024b). 2023-*2024 Annual Report*. https://www.novec.com/About_NOVEC/upload/NOVEC_AR-2024-nobleed-compressed.pdf

Manassas Battlefield Trust. (n.d.). *Manassas Battlefield Trust*. Manassas Battlefield Trust. Retrieved March 15, 2025, from https://www.manassasbattlefield.org/data-centers

Morris, W. (2023, April 25). *'We're not buying it': Virginia community protests building of data center complex*. NBC4 Washington. https://www.nbcwashington.com/news/local/northern-virginia/were-not-buying-it-virginia-community-protests-building-of-data-center-complex/3336194/

Muzyk, C. (2024, October 31). *Judge dismisses lawsuit challenging the PW Digital Gateway data center development*. Prince William Times. https://www.princewilliamtimes.com/news/judge-dismisses-lawsuit-challenging-the-pw-digital-gateway-data-center-development/article_6274d54c-97c9-11ef-a21f-23be607c988c.html

Olick, D. (2024, October 16). *Amazon goes nuclear, to invest more than $500 million to develop small modular reactors*. CNBC. https://www.cnbc.com/2024/10/16/amazon-goes-nuclear-investing-more-than-500-million-to-develop-small-module-reactors.html

Owen, Francis (Executive Producer). (2024, August 8). How Much Power Are We Talking About? (No. 1) [Audio podcast episode]. In *Energy Rush*. EPSA. https://epsa.org/energy-rush-how-much-power-are-we-talking-about/

PEC. (2023, December 4). Data Center Reform Coalition Press Conference [YouTube Video]. In YouTube. https://www.youtube.com/watch?v=iP1tvtTIGuE&ab_channel=PiedmontEnvironmentalCouncil

Peters, B. (2023, September 28). *Anti-PW Digital Gateway group partners with regional advocates to offer data center guidelines*. INSIDENOVA.COM. https://www.insidenova.com/headlines/anti-pw-digital-gateway-group-partners-with-regional-advocates-to-offer-data-center-guidelines/article_edb79ade-5c8a-11ee-969d-2ba032e5ae59.html

Peters, B. (2024, April 26). *Google announces $1B for data center expansion in Loudoun, Prince William counties*. INSIDENOVA.COM. https://www.insidenova.com/headlines/google-announces-1b-for-data-center-expansion-in-loudoun-prince-william-counties/article_9433c720-03ed-11ef-8ddb-5392b0e1e83f.html

Prince William Conservation Alliance. (2021). *Data Centers Don't Belong Beside National Parks.* Pwconserve.org. https://www.pwconserve.org/datacenters/bynationalparks.html

Skidmore, Z. (2025, February 14). *Dominion Energy nearly doubles data center capacity under contract to 40GW*. Data Center Dynamics. https://www.datacenterdynamics.com/en/news/dominion-energy-nearly-doubles-data-center-capacity-under-contract-to-40gw/

Stack Infrastructure. (2020, January 22). *STACK INFRASTRUCTURE and Peterson Companies Announce Development of 125-acre Hyperscale Data Center Campus in Prince William County, VA*. STACK INFRASTRUCTURE. https://www.stackinfra.com/about/news-events/press-releases/stack-infrastructure-and-peterson-companies-announce-development-of-125-acre-hyperscale-data-center-campus-in-prince-william-county-va/

Stack Infrastructure. (2024a). *About STACK Infrastructure: Data Center Developer & Operator*. STACK INFRASTRUCTURE. https://www.stackinfra.com/about/

Stack Infrastructure. (2024b, June 4). *STACK Infrastructure Announces $1.3 Billion in Financing to Further Global Development - STACK INFRASTRUCTURE*. STACK INFRASTRUCTURE. https://www.stackinfra.com/about/news-events/press-releases/stack-infrastructure-announces-1-3-billion-in-financing-to-further-global-development/

Studholme, A., & Schlossberg, E. (2024, April 3). *Call for data center guidelines*. Prince William Conservation Alliance Blog. https://pwconserve.blogspot.com/2024/04/call-for-data-center-guidelines.html#more

Susnjara, S., & Smalley, I. (2024, September 4). *Data centers*. Ibm.com. https://www.ibm.com/think/topics/data-centers

Swinhoe, D. (2023, January 20). *AWS to invest $35 billion expanding Virginia data center footprint*. Data Center Dynamics. https://www.datacenterdynamics.com/en/news/aws-to-invest-35-billion-expanding-virginia-data-center-footprint/

Swinhoe, D. (2024, May 3). *Dominion connected 15 data centers totaling 933MW in Virginia in 2023, 15 more expected in 2024*. Data Center Dynamics. https://www.datacenterdynamics.com/en/news/dominion-connected-15-data-centers-totaling-933mw-in-virginia-in-2023-15-more-expected-in-2024/

Coalition to Protect Prince William County. (2024, January 12). *Cover Sheet for Filing Civil Actions.* Coalition to Protect Prince William County. https://protectpwc.org/wp-content/uploads/2024/01/Coalition-to-Protect-PWC-Digital-Gateway-Lawsuit-2024.01.12-Petition-to-Overturn-Action-by-BOCS.pdf

The Virginia Public Access Project. (n.d.a). *vpap.org*. The Virginia Public Access Project. Retrieved March 15, 2025, from https://www.vpap.org/donors/110961-amazon/?start_year=2020&end_year=2025&recip_type=all&party=all

The Virginia Public Access Project. (n.d.b). *vpap.org*. The Virginia Public Access Project. Retrieved March 15, 2025, from https://www.vpap.org/donors/127224-google-alphabet/?start_year=2022&end_year=2024

The Virginia Public Access Project. (n.d.c). *vpap.org*. The Virginia Public Access Project. Retrieved March 15, 2025, from https://www.vpap.org/money/donors-per-industry/43/?recip_type=all&year=2024

The Virginia Public Access Project. (n.d.d). *vpap.org*. The Virginia Public Access Project. Retrieved March 15, 2025, from https://www.vpap.org/money/top-donors/

The Virginia Public Access Project. (n.d.e). *vpap.org*. The Virginia Public Access Project. Retrieved March 15, 2025, from https://www.vpap.org/donors/137218-nova-electric-cooperative/?start_year=2020&end_year=2024

Turco, R. (2024, June 2). *Dozens rally against Virginia's "unchecked" expansion of data centers*. WJLA. https://wjla.com/news/local/rally-against-data-center-expansion-data-

center-coalition-virgina-nova-va-reston-data-center-fairfax-county-alexandria-save-bren-mar-virginia-sierra-club