



**The Coalition to Protect PWC
Haymarket, VA
ProtectPWC.org**

August 18, 2023

TO: Alex Vanegas – PW Planning Office
David McGettigan – PW Acting Director of Planning
Wade Hugh – PW Deputy County Executive for Community Planning
Chris Shorter – PW County Executive
Christina Winn – PW Executive Director Dept. of Economic Development
Michele Robl – PW County Attorney
Ann Wheeler – Chair, Board of Supervisors
Margaret Franklin – Supervisor, Woodbridge district
Andrea Bailey – Supervisor, Potomac district
Victor Angry – Supervisor, Neabsco district
Kenny Boddye – Supervisor, Occoquan district
Jeanine Lawson – Supervisor, Brentsville district
Yesli Vega – Supervisor, Coles district
Bob Weir – Supervisor, Gainesville district

RE: CPA2021-00004, PW Digital Gateway – Gainesville Magisterial District
Response/Comments from the Coalition to Protect Prince William County

There are many environmental, historical, economic, resource, and quality of life issues with the Digital Gateway application. Many other entities have provided responses on those other issues. The Coalition to Protect Prince William County is responding on the Digital Gateway issue we are most intimately familiar with: POWER.

The Coalition to Protect Prince William County was formed in December 2014, as a reaction to a proposed 230kV transmission line needed for the sole purpose of a single block load customer, Amazon Web Services. What the Coalition discovered, as a respondent in the Haymarket Transmission line case before the Virginia SCC (State Corporation Commission), is that single block load customers, already given a discount by Dominion Energy, were driving massive infrastructure projects in our region which include 230kV transmission lines and substations.

The Coalition's intent in submitting this response to the Digital Gateway application -- voicing the interests of thousands of County residents -- is to have the record clearly reflect not only that this Board of County Supervisors has been warned that there will be billions of dollars of infrastructure required for the Digital Gateway, but that this infrastructure will have regional and statewide impacts. Associated

documentation is included with this response to make future access to the needed supporting information less cumbersome.

Dominion Energy representatives have reinforced that it is residents, those same Prince William County residents whom you represent, who are responsible for covering the costs of these new transmission lines and substations for the Digital Gateway.

The position taken by the Coalition to Protect Prince William County at the SCC Hearing in 2016 for the Haymarket (AWS) Transmission line was crystal clear: the line should be buried through residential, small business, and environmentally sensitive areas, and the "line extension" policy, albeit a novel approach, should be applied to ensure fair cost allocation with the block load customer that needed the power - because but for the magnitude of power that was being requested by ONE customer, this was simply an "extension cord."

In an unusual turn, the SCC legal staff agreeing with our position, saying this in their post-hearing legal brief:

the issuance of the CPCN in other ways, to ameliorate the impact on the general public of such projects that are necessitated only by an individual customer's new or additional *projected* loads.

The record developed herein reveals that the Company has already constructed at least two transmission projects to extend service to new data center loads, similar to that requested by the Customer in this application, which have not developed as expected or at all.³⁰ **Thus, in viewing these "line extensions" to large contingent loads, the Commission may wish to require the customer requiring such project to put some of its own skin into the game. Otherwise, the general public, already burdened by the environmental and aesthetic impacts of otherwise unneeded transmission projects, is not also burdened with 100% of the otherwise unnecessary costs.**

The Haymarket Amazon Transmission line case is an exact microcosm for a project the size of the Digital Gateway. (Complete records accessed here: [Dominion Haymarket Transmission Line and Substation Project – The Coalition to Protect Prince William County \(protectpwc.org\)](#))

This Board is writing checks that WE, the citizens, will be required to cash, both literally and figuratively. Chair Ann Wheeler has expressed zero interest or curiosity in the most basic criteria for this kind of project – electric power.

The Coalition to Protect PWC has not only commented publicly at multiple meetings before the Board of Supervisors and Planning Commission, but we have also consistently shared Dominion Energy planning information through our emails.

In the Coalition's public comments on December 13, 2022 we shared information from the Dominion Energy IRP, [2021 Dominion Energy Integrated Resource Plan](#). The Coalition not only identified that power infrastructure was lacking, but if localities continue to approve tens of millions of sq ft of data centers with no attention paid to power grid impacts, that data center proliferation was going to require falling back on fossil fuel sources until nuclear energy is available.

It is irrefutable that one industry is driving us over the sustainability cliff in our efforts to move away from fossil fuel. This Board cannot ignore the culpability of the data center industry in this backward movement away from addressing the real-time impacts of climate change.

From the Dominion Energy: [2021 Update to the 2020 Integrated Resource Plan](#), dated September 21, 2021:

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“Forecast timing. PJM issues its load forecast report once a year in late December or early January.2 By the time the forecast is utilized in the Company’s modeling, the assumptions, which are mostly locked in by September of the prior year, are about nine months old. Significant developments have occurred in the past which makes the forecast obsolete. For example, **between the fall of 2020 and the summer of 2021, data center growth occurred faster than projected**; and the pandemic impacts on overall loads significantly declined from the initial pandemic periods. Therefore, lack of a full forecast update close to the time of its use renders the forecast outdated and forces its use when the underlying assumptions are no longer valid.”

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“Forecast translation from DOM Zone to DOM LSE”

(DOM Zone=major parts of Virginia, part of NC; DOM LSE=Dominion Energy Load Serving Entity)

“...the Company believes that the 2021 PJM Load Forecast presents an understated view of future load growth....”

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“• Data center sales, energy, and peak demand are now being forecasted by the Company as a standalone category and are being applied to the Company’s sales, peak, and energy forecasts as an exogenous adjustment. This action is consistent with a recommendation provided by Itron Inc., in its review of the Company’s load forecasting methodology, as discussed in the 2020 Plan.”

This Board has repeatedly been informed that new transmission lines would be required for the data centers being considered. Warnings not only from the Coalition to Protect PWC, but warnings reinforced by direct communication from Dominion Energy representatives on multiple occasions. In fact, as recently as July 28, 2023 the Coalition sent an email: [PWC Data Centers require multiple NEW transmission lines and substations – The Coalition to Protect Prince William County \(protectpwc.org\)](#).

On August 2, 2022, both Bob Weir and Elena Schlossberg provided in-person testimony to the Board with supporting documentation from both PJM and Dominion Energy. See beginning at time stamp 1:32:51 in this video of BOCS Public Comment Time:

https://pwcgov.granicus.com/player/clip/3114?view_id=23&redirect=true&h=4271f8cd20d9344fe706ebf8dbc7d8d9

The goal of these presentations was to remove any partisan ideology; to go to the source of the threat, the N-1-1 impending violations, and to educate Board members on what those violations actually mean. Chair Ann Wheeler's response was to roll her eyes and smirk, once again ignoring the plain facts in front of her.

The July 2022 PJM reference and link here was the first warning to this Board: [Dominion-Energy-Northern-Virginia-Area-Immediate-Need-071222.pdf \(protectpwc.org\)](#)

Fast forward to the adoption of the Digital Gateway CPA. At time stamp 53:15, staff presented the Dominion Energy analysis, in the statement by Alex Vanegas, he says Dominion Energy has identified there will need to be new transmission "but we do not know what route." There is a flawed assumption that the Digital Gateway will require only a singular route. In fact, if the Digital Gateway is approved, it will require regional solutions with multiple transmission lines. It is worth noting that current Chair Ann Wheeler served on the NOVEC Board for several years and only asked superficial questions to Dominion Energy during the Digital Gateway application review.

Given the tens of millions of sq ft of data center development proposed, where is the load letter? In every data center development, during a rezoning, there has been a prediction of load demand. Where is that prediction for the Digital Gateway?

From the perspective of the Coalition to Protect PWC, not requiring a more definitive answer on HOW and WHERE the power will be provided is an abdication of responsibility by the Chair. There was an opportunity to have both Dominion Energy AND PJM come to a work session. Chair Wheeler chose to cancel the scheduling.

The policy position by VCN (Virginia Conservation Network) is critical to understand why allowing the question of power to feed the Digital Gateway to remain unanswered is unfathomable.

VCN: [Our Common Agenda - Virginia Conservation Network \(vcnva.org\)](#) – see Climate & Energy (download .pdf)

SURGING ENERGY DEMAND FROM DATA CENTERS

DIRTY ENERGY INFRASTRUCTURE

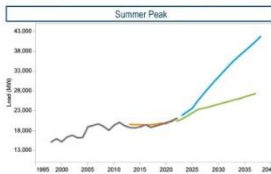
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EXECUTIVE SUMMARY

Data centers are large industrial buildings filled with computers that store, process, and distribute large amounts of digital information. Northern Virginia leads the world in data center development, housing nearly 50% of all US facilities.¹ While data centers generate significant tax revenue for the localities in which they reside, they are also the primary driver behind a massive spike in peak electricity demand in Virginia, which through some estimates is projected to more than double by 2038. Virginia needs to chart a responsible path forward, balancing the growth of our digital world with the need to power that growth with affordable carbon-free energy.

CHALLENGE

Data storage needs have grown exponentially with the rise of the internet and new trends like Artificial Intelligence (AI), cryptocurrency, and the expansion of rural broadband have dramatically accelerated this pace. For a variety of reasons, including industry tax breaks, low costs, and an existing fiber network, Northern Virginia is



The January 2023 PJM Load Forecast projects that the data center industry's planned growth in the region will more than double the state's peak electricity demand through 2038 (blue line).

expected to continue to serve as a favorable location for new data centers. As a result, the industry's planned growth in the region is projected to more than double the state's peak electricity demand through 2038, according to PJM and Dominion Energy, the state's largest electricity provider (see graph below). This increase is by no means certain; Dominion Energy has a long track record of predicting far more growth than actually occurs, and uncertainty is even greater about data centers since the projections involve only one industry. While we should not accept these forecasts as guaranteed, we should take seriously the problems that such growth could cause and plan accordingly.

DATA CENTER DEVELOPMENT IS PROJECTED TO MORE THAN DOUBLE THE STATE'S PEAK ELECTRICITY DEMAND THROUGH 2038

In their latest long-term Integrated Resource Plan (IRP) filed in April, Dominion Energy has suggested meeting demand growth by building a substantial amount of renewable energy and storage. But this plan also proposes preserving existing coal and natural gas generation as well as building new fossil fuel generation and costly Small Modular Nuclear Reactors (SMNRs). This plan ignores Virginia's clean energy requirements and places a significant burden on families and other businesses to subsidize the construction and operation of the significant infrastructure necessary to meet the increase in electricity demand.

In addition to a massive increase in needed electric generation, data center growth will also require significant new transmission infrastructure. Just this past General Assembly session, legislation was passed recognizing a \$627 million emergency transmission project in response to the Northern Virginia data center cluster. Strain on the grid has also brought an

the backup power source for data centers, raising concerns about local air quality.

Currently, data centers are approved at the town/city/county level. The local process does not address cumulative state and regional level impacts on Virginia's energy grid, natural resources and land use (see MITIGATING DATA CENTER DEVELOPMENT, pg. 57). Without significant state oversight and planning, Virginia could face unsustainable energy demand, potentially leading our utilities to pursue unnecessary generation projects, including fossil fuel generation in direct opposition to clean energy policies.

SOLUTION

This level of data center expansion is a new and global trend of which Virginia is at the forefront. If Virginia is to continue recruiting this industry, numerous questions must be answered to determine a sustainable path forward.

While data centers are an important part of Virginia's economic development plan, that plan must align with our ability to protect the environment and provide for a clean, affordable energy transition for all. Virginia is facing an unprecedented energy challenge with explosive growth in this sector. Proper planning can offset some of the anticipated impacts, and we can take steps now to provide appropriate cost allocation, ensuring responsible parties are paying for the necessary upgrades to our electric system. But in order to develop a holistic and sustainable solution, we need to establish a proper accounting of the externalities of the industry.

A comprehensive study is necessary to illustrate the opportunities and challenges related to different scenarios for buildout of the data industry in Virginia. This study should address energy demand and gauge our ability to meet our goal of a clean energy transition while avoiding unnecessary impacts on communities and natural resources.

POLICY RECOMMENDATIONS

An Independent Study: Contract with an independent body like the National Academy of Sciences to study all costs and benefits of the data center industry. Specifically related to energy demand it should evaluate impacts to the grid and our ability to reliably meet demand with carbon-free energy resources. It should integrate efforts of the industry to improve efficiency and procure clean energy so as to avoid duplication of efforts by our utilities and highlight impacts to ratepayers.

Permitting, Planning, and Education: Implement a state review process for new proposals. A review of individual projects that fails to account for the aggregate impacts of all projects invariably means that no one fully appreciates the total picture. The Department of Energy, in coordination with the Department of Environmental Quality, should provide assistance to local governments, including siting criteria information related to the necessary energy infrastructure to power the project.

Protect from Cost Shift: The rules governing approval and allocation of costs for new transmission and generation approval should be examined and – if necessary – changed to ensure that parties causing investments bear the costs of those investments, preventing residential energy customers from shouldering this burden.

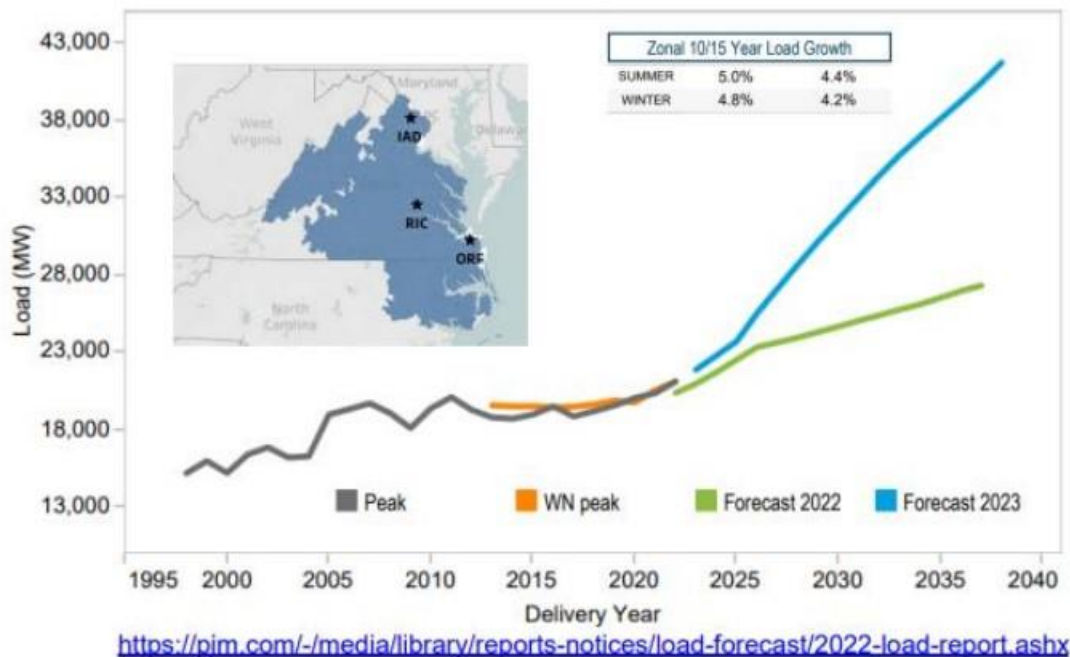
The data center industry demand for power has become the primary issue facing multiple jurisdictions throughout the country, and indeed, the globe.

PJM identifies the power needs in the Dominion zone as “Dominion Data Center Alley.”

From the PJM [Regional Transmission Expansion Planning Update \(pjm.com\)](https://www.pjm.com) presentation dated March 27, 2023, Page 4:

In July 2022, PJM directed an Immediate Need transmission project to enable the integration of the forecasted load within the **Dominion Data Center Alley up to and including year 2025*

**Since then, Data Center Loads within Northern Virginia has been increasing at an unprecedented rate (2022 Summer Peak recorded 21,156 MW – Forecast 20,424 MW)*



From the PJM 2022 annual RTEP (Regional Transmission Expansion Plan) report dated March 14, 2023 ([2022-rtep-report.ashx \(pjm.com\)](https://pjm.com/-/media/library/reports-notice/load-forecast/2022-load-report.ashx)):

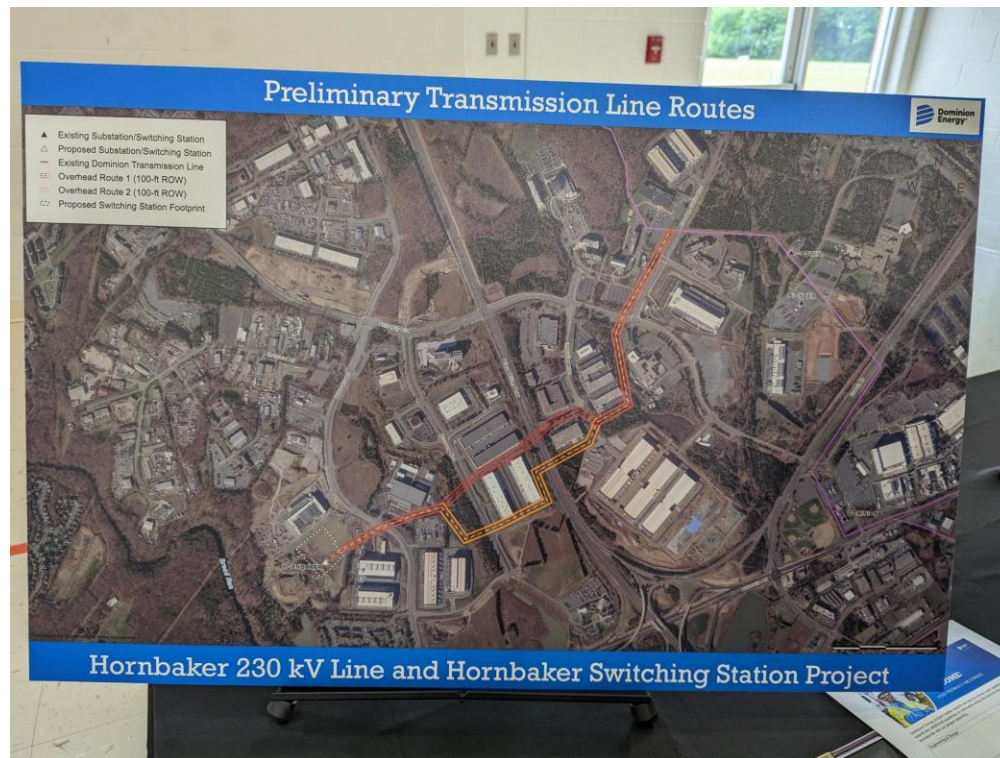
Page 44: (emphasis added)

*"In the PJM [2022 Load Forecast Report](#), Dominion requested that PJM consider a forecast adjustment to account for the growth of data centers in northern Virginia. This adjustment has been in place in some form since the 2014 Load Forecast Report. **The rationale for making an adjustment for data centers is that these centers have a load impact that is disproportionate with their economic impact. Data centers generally require minimum staffing and thus would not have a significant impact on economic variables, but do have a considerable impact on energy demand.** Dominion has provided PJM with energy and peak information historical data for such facilities as well as expectations for new facilities through 2026. For years beyond 2026, PJM used a linear trend constructed on data through 2021."*

Dominion has made it clear that not only is the data center industry creating a drain on the infrastructure that "moves" power throughout the grid, but we are now forced to buy power from our partners within the regional grid, for example Ohio, Delaware, New Jersey, and Maryland.

It is inexcusable that volunteer citizens, receiving no payment, simply driven to protect their community, their county, and the state, are wholly responsible for understanding the serious impacts of this one industry – impacts on their lives, their liberty, and their pursuit of happiness.

The supplemental projects we are looking at now (such as Hornbaker below) are only the "end" of the line to provide power to the data centers campuses. The required and lacking beginning point is what this Board is missing -- and it is purposeful on their part.



There are multiple other transmission line and substation projects, in ADDITION to the “extension cord”/supplemental projects - such as the other Daves Store route (transmission lines for the projects Ann Wheeler as Chair has pushed at Catharpin/55 in the Gainesville district) - which are also ADDITIONAL to the regional 230kV, 500kV, and 765kV transmission lines and substations needed to support the data centers that have already been approved.

[PJM - Redacted Public Proposals for Current and Closed Windows – 2022 Window 3 Redacted Proposals](#)

The PJM link above has 72 proposed transmission projects, many of which will be chosen - several in PWC. Some in PWC are as far East as Possum Point, and others are in the Gainesville and Brentsville districts in the West. It is folly to believe that this kind of load growth will not touch citizens in multiple ways: either because of the industrial blight itself, impacts on natural resources, or the transmission lines that will be needed to bring in power from outside the state. The estimated cost of just the transmission expansion proposals coming into Prince William County total \$16.7 BILLION. Even if only a major portion of these projects are approved by the PJM Board, the cost burden on all transmission rate payers in Prince William County and other jurisdictions for these data center power projects will be paralyzing and unfair.

[‘PJM’s Data Center Planning Initiative’ – ‘NoVa Dominion Data Center Alley’](#)

In a meeting with Dominion Energy on August 11, 2023, Dominion’s representatives confirmed that none of these proposals address an application as large as the Digital Gateway. With these proposals, Dominion and PJM are simply playing catch up to the power needs of data centers which have already been approved.

Local Boards, like Prince William’s, are selling not only their own constituents down the river but dragging the rest of Virginia rate payers down with them.

We are reaching critical mass. Someone in a leadership role must step forward and acknowledge that none of this is “sustainable” -- Not sustainable for our power grid, not sustainable for our environment, not sustainable for our communities.

The energy industry has acknowledged that renewable energy like solar and wind are simply not capable of generating the gigawatts required to support the data center load growth. An average data center building will conservatively have a load demand of 65 megawatts. One megawatt requires 10 acres of space for a solar facility. Thus, ONE building would require 650 acres for solar generation. Do the calculations: the amount of greenspace that would be required to meet the data center load demand would be environmentally catastrophic.

[The True Land Footprint of Solar Energy - Great Plains Institute \(betterenergy.org\)](https://www.betterenergy.org/)

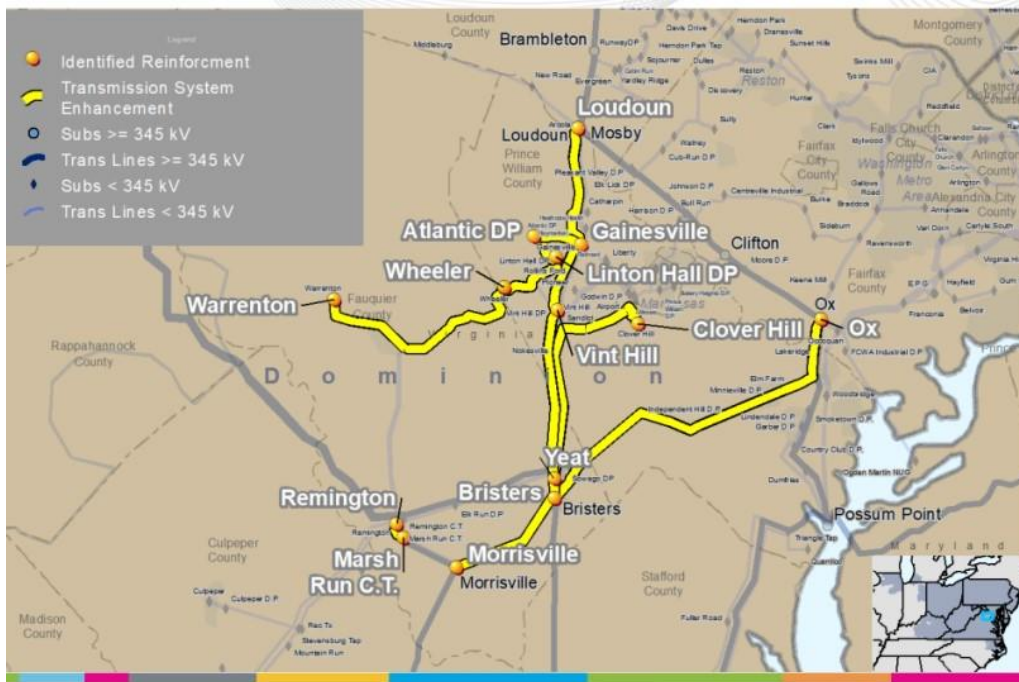
There is a reason this information has now been translated very clearly to this Board, staff, and County executive office. There is no ability to claim, “I did not know.” There is a fiduciary responsibility by this Board to act in the best interests of the citizens you represent. Understanding the consequences of these kinds of land use decisions, with so many outstanding questions on issues of great importance and impact, require answers. The Coalition recommends you look at the charts for how much people will experience their power bills increasing, their communities being dissected by transmission lines, and their quality-of-life evaporating.

If you are in a leadership role, and you are under the misguided belief that if YOUR district does not suffer from the actual footprint of data centers that your constituents will not be impacted – THINK AGAIN.

The Coalition to Protect PWC is officially informing you that there will be transmission line infrastructure that will impact the east end of Prince William County as well. Because of the data centers that you have already approved, these new transmission corridors will be the highways cutting through the Eastern districts (Potomac, Occoquan, Woodbridge and Neabsco) to bring power to the Gainesville district in the Western end of the county.

Note the PWC Independent Hill-Minnieville Road area impacted in the top map below, and Potomac district’s Possum Point impacted in the map beneath it. If you adopt the Digital Gateway application, there will be even more transmission lines cutting through all our districts which are not yet even depicted.

[20230711-item-09---reliability-analysis-update.ashx \(pjm.com\)](https://www.pjm.com/)



To add salt to the wound, the variance proposed in February of 2023 by Virginia's DEQ to "allow" Prince William, Fairfax, and Loudoun counties to run on their diesel generators felt like we were entering the twilight zone of ways to accelerate climate change.

To be clear, this variance was intended to protect the reliability of power delivery as it faces N-1-1 violations throughout the grid. Local and regional non-profit conservation groups, along with dozens of citizens throughout northern Virginia testified before the DEQ in Woodbridge, concerned that allowing thousands of diesel generators to kick on during peak load times, would worsen the air quality alerts that endanger the health of residents. The addition of diesel generators to provide backup power has not been appropriately explored or understood in the context of the Digital Gateway.

The data center industry rejected this variance, not because they were concerned about the impacts, but because it was not cost effective to them. While Dominion and PJM work towards building the infrastructure throughout Virginia to meet the demand of currently approved data centers, this variance will be back to protect the grid. The fix to the data center industry concern regarding cost will be ameliorated with the passage of a Demand Response Program.

Currently the Digital Gateway application's projected sq footage is fluid, depending on whatever negative press comes out. At .3 FAR, which predicts 27 million sq ft, that is the current total buildout of Loudoun's Data Center Alley - with more coming. The current level of infrastructure and data center load growth in Loudoun has required new 230KV and 500KV transmission. It has been made very clear to you by Dominion and by this Coalition, that the Digital Gateway area, with its current 500kv and 230kv power infrastructure, is NOT sufficient to power any new data centers.

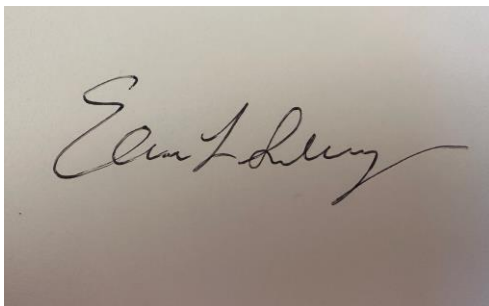
If the Digital Gateway is approved with its massive power requirements, PJM and Dominion in the same timeframe will also be having to contend with the power demands from the introduction of AI, which is predicted to increase load demand by as much as 8 times the power needs of current data centers.

There has been no discussion of the impacts on the grid or climate change. But what we do know, is that diesel generators are the current strategy to protect the power grid. The fact that there is no accounting for this "micro power grid" is unconscionable and dangerous.

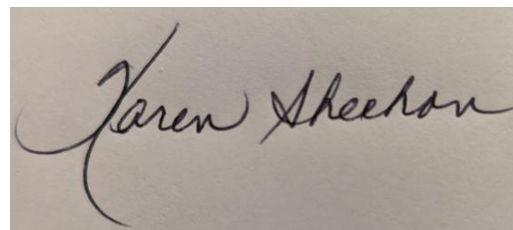
[Take Action: The Air We Breathe Is at Risk - The Piedmont Environmental Council \(pecva.org\)](https://www.pecva.org/)

[Virginia Regulatory Town Hall View General Notice](#)

It is irrelevant if this Board does not take the time to read this submission. This submission is now on the record and the powerful FOIA tool can be used in the future to bring it to the forefront again.



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Coalition to Protect Prince William County



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