



Website and Facebook: stopmarlvirginia.com

Thank you for Coming!

Thank you to Leslie Spenser for hosting the meeting!

Who we are: Private property owners in Loudoun County affected by both projects, multiple routes, all volunteers. We want to preserve our property rights, our homes and businesses, our scenic views and our quality of life as a rural area. We do not want overhead 500kV and 765kV lines across anyone's property. We are advocating for an underground HVDC solution for both lines (or denial).
Presentation By Theresa Ghiorzi, stopmarlvirginia.com

We are working with groups in Virginia, West VA , Maryland and Pennsylvania

The Need for Volunteers

- Printout a No Trespass Notice and overview handout and visit 10 neighbors to tell them about the lines, ask them to enter comments on the FirstEnergy website, fill out and send the no trespassing form to Valley Link and sign the Underground HVDC petition
- When election time comes around, sign up to volunteer at polling places to make people aware of these projects and get signers for the Underground HVDC petition
- Spread the word on social media to generate support
- Communication is key!
 - ✓ Subscribe to: <https://stopmarlvirginia.com/subscribe>
 - ✓ Follow on Facebook: <https://www.facebook.com/groups/828137269647371>
 - ✓ News/Events/Updates Posted here: <https://stopmarlvirginia.com/home>
- Check <https://stopmarlvirginia.com/how-you-can-help-1>
- Questions Check <https://stopmarlvirginia.com/faqs>
- Contact by email: <https://stopmarlvirginia.com/contact-us>

Property Owner Concerns 500kV and 765kV

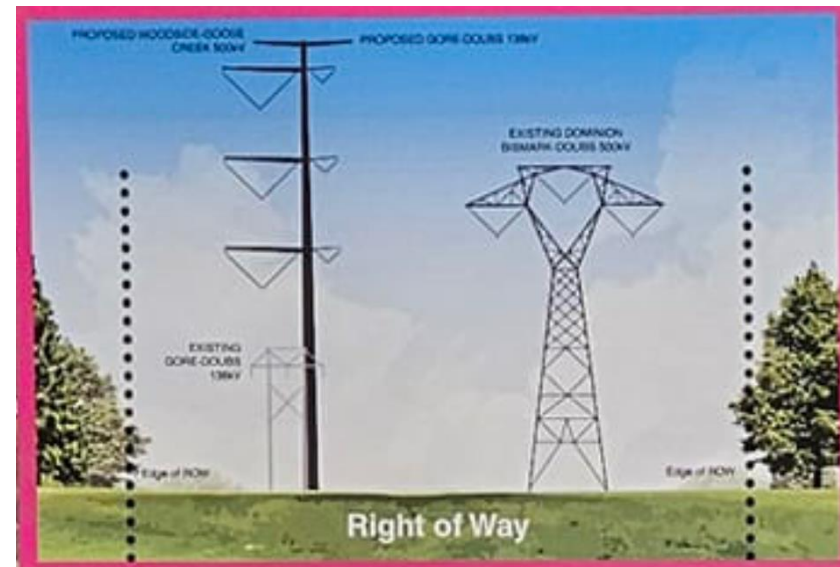
- Use of eminent domain by a private-for-profit corporation
- Loss / restrictions on the use of property taken for an easement
- Loss or devaluation of Private Property
- Generational destruction of the value of rural private property
- Personal sacrifice for corporate gain
- Diminished Quality of Life
- Increased risks from electromagnetic field produced by a 765kV line or worse TWO 500kV plus a 765kV transmission line
- Contamination of groundwater
- Damage to Land/Livestock/Crops
- Environmental consequences due to tree clearing, continued pesticide use, blasting for footers ect..
- Destruction of scenic view sheds
- Increased electric rates
- Additional information on easement impacts at:
<https://stopmarlvirginia.com/transmission-row-info>
- Health affects of Electromagnetic fields.
- Articles and information on EMFs linked here:
<https://stopmarlvirginia.com/electromagnitic-fields>

Transmission Projects Overview

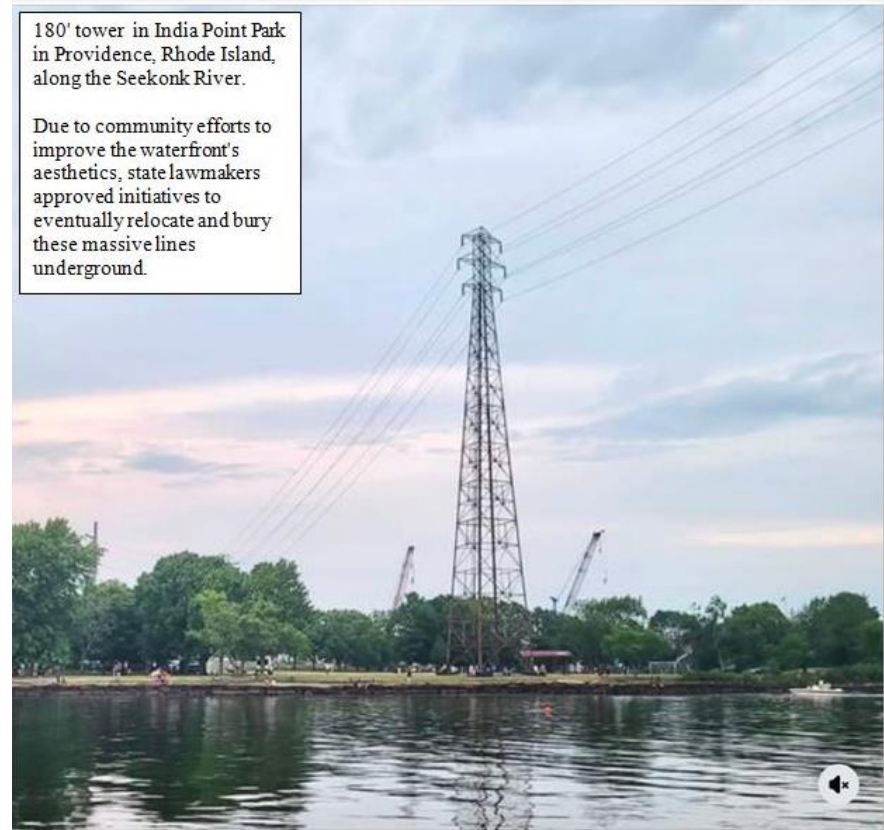
MARL/Gore-Doubs-Goose Creek 500kV

153 mile line from the 502 Junction in PA, thru WV, MD and VA directly into data center alley. Impacts Frederick , Clarke and Loudoun.

- It is part of the PJM Regional Transmission Expansion Plan (RTEP) in 2022 it was selected by PJM 12/11/2023
- New 200' right-of-way from the WV border for 2.4 miles into Gore.
- A new Woodside Substation would be in Clear Brook.
- There would be new easements around substations and where the existing ROW is not already 150'
- The remainder is proposed to be within FirstEnergy's existing 150' easement that currently has a 138kV transmission line on an 60' H-Frame.



- It would be a 185' monopole with the 500kV on top and 138kV under built. The existing 500kV lattice structure is a maximum of 150'
- Dominion does not have any 185' structures in Loudoun County or in Northern Virginia. 185' is the same height as an 17 story building
- This is one transmission line but two VA SCC cases
 - MARL – PUC-2026-00018,
 - Gore-Doubs-GooseCreek: TBD
- The remainder would within FirstEnergy's existing 150' easement that currently has a 138kV transmission line on an 60' H-Frame. It would be a 185' monopole with the 500kV on top and 138kV under built. The existing 500kV lattice structure is a maximum of 150'



Details: <https://stopmarlvirginia.com/marl%2Fgoredoubsgoose-500kv-1>)

Gore-Doubs-GooseCreek:

Status: Application has not been filed

To Do:

- Prepare for the VA SCC Case
- Get your Deeds, Plats and easement documents
- Contact a lawyer for legal advice.
- To file pro se you will need to request a VA SCC eFiling Account(This is a manual process!)
- I do have a lawyer that is willing to represent a set of individual property owners the group would split the bill between themselves. Contact me if you are interested in joint council we will be having a zoom call soon.

See Status: <https://stopmarlvirginia.com/virginia>

VA SCC Gore-Doubs-Goose Creek
Case TBD, No Application filed



Gore-Doubs-Goose Creek

The MARL and Gore-Doubs-Goose Creek applications are two segments of the same transmission line. First Energy has proposed a rebuild of the 138kV transmission line structures to a 185' pole with a new 500kV and the existing 138kV line under built for its portion of the project through Frederick, Clarke and north western Loudoun Counties

- VA SCC Case: TBD
- Status: Application has not been filed
- See FirstEnergy's Gore-Doubs-GooseCreek Project Map

Read More:

- [Preparing for the Virginia SCC Case](#)
- [Virginia SCC Process](#)
- [How to Create a VA SCC Account for eFiling](#)
- [Review Examples of VA SCC Notices of Participation and other filings](#)
- [Annotated Example of Pro Se Notice of Participation](#)
- [Links to Virginia SCC, State Codes, Easement Information](#)

If you are intervening in either VA SCC case (MARL or Gore-Doubs-Goose Creek) be sure to include a request for the VA SCC that if the line is not denied by Virginia, that the approval be contingent on the transmission line components being approved in all other states (Pennsylvania, West Virginia and Maryland)

MARL : PUC-2026-00018 - MARL

The application is for 2.4 miles of new easement and the Woodside Substation

Key VA SCC Dates

1) June 8, 2026 Deadline to Intervene as a Respondent

2) **Wednesday, September 16, 2026, Public Hearing** 6:00 p.m. to 10:00 p.m., at James Wood High School, 161 Apple Pie Ridge Road, Winchester, Virginia 22603 (Intervenors cannot speak at the public hearing.)

2) **September 30, 2026 Deadline to file Testimony**

3) **December 1, 2026** Deadline for Submitting Comments

4) **December 1, 2026** Deadline for Signing up to speak telephonically as a Public Witness at the December 15, 2026 Public Hearing

5) **December 15, 2026** Evidentiary hearing at 10:00am December 15, 2026 at the VA SCC in Richmond

There is a lawsuit challenging the use of the property for the Woodside substation. I believe it will be argued in the Frederick County Circuit Court in January

Frederick County Board Of Supervisors must remove the by right development of substations before NextERA buys another property!!!

Counties in Virginia can deny electric substations!!

Status:<https://stopmarlvirginia.com/virginia>

VA SCC MARL Case PUR-2026-00018

In-Progress



Mid-Atlantic Resiliency Link (MARL)

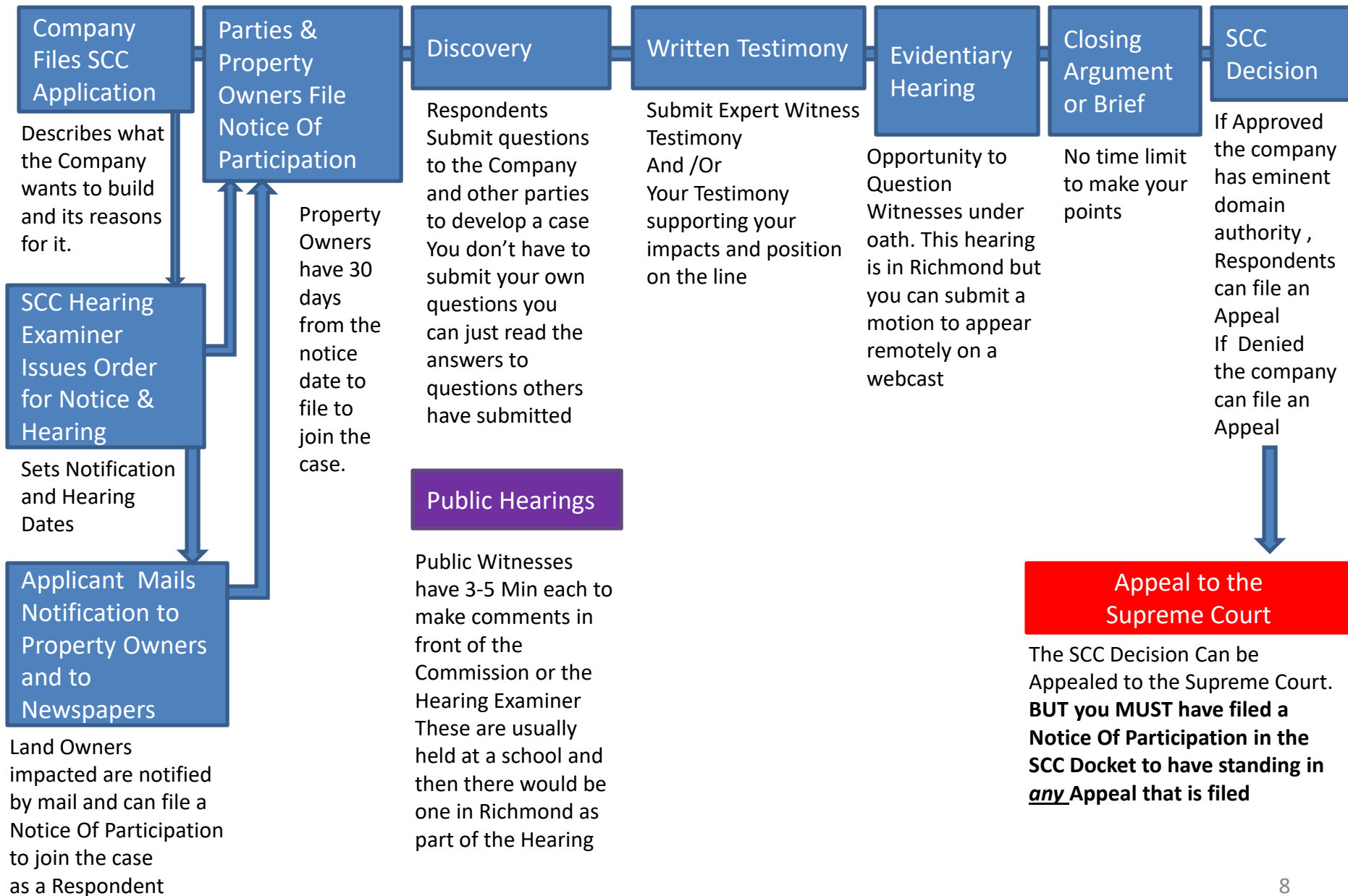
The MARL and Gore-Doubs-Goose Creek applications are two segments of the same transmission line. NextERA is proposing to take a new 200' easement for their portion of the 500kV line through West Virginia to the Gore Substation in Frederick County, VA. NextERA will also be applying to construct a new substation (Woodside Substation) in Clearbrook, VA.

- **VA SCC Case: PUR-2026-00018**
- **Status: Active**
- **See NextERA's MARL Project Map**
- **VA SCC PUR-2026-00018 MARL Comment Form submit comments by December 1, 2026**

Information from the Hearing Order

- Only Property owners within 250 feet of the proposed and alternate routes will be sent notices by NextERA by May 8, 2026. NextERA is requesting a 200-foot to 500-foot siting corridor, your property may still be impacted even if you do not receive a notice from NextERA.
- "The Commission may consider a route not significantly different from the routes described in this notice without additional notice to the public."

Virginia State Corporation Commission Process



Virginia State Corporation Commission Participation

difference between a Respondent and Public Witness

Respondent

- Individuals may intervene “Pro Se” to represent themselves without a lawyer by submitting a Notice Of Participation *
- HOAs and Business Entities must be represented by a lawyer
- May submit Discovery to question the Company and review SCC Commission Discovery *
- Submits Testimony does not submit comments or speak at a public hearing
- Respondents can participate remotely by using efilings and dialing into a webcast for the hearing *
- **Gives you standing to Appeal and/or Participate in an appeal of the SCC decision to the Supreme Court**

Public Witness

- May submit written comments
- May speak before the Commission for 3 – 5min depending on what the Hearing Examiner has ordered for the Public Hearing
- No standing to appeal the SCC Decision to the Supreme Court
- Can appeal Eminent Domain taking to Appeals Court

MARL Public Hearing Wednesday, 9/16, 6 – 10 pm

Information on the hearing is posted here: <https://stopmarlvirginia.com/home>

- **Public speakers will have 5 minutes each to speak - arrive 15 minutes early to sign-up to speak.**
- The Public Evidentiary Hearing is a formal part of the VA SCC Case.
- Speakers are sworn in prior to making their statement and statements are transcribed and will be part of the record in the case.
- Speakers may be questioned by VA SCC Staff, Intervenors or the Company. In general, I have not seen questioning at the public hearings I've attended (for the lines in Ashburn).
- The VA SCC Bailiff runs the proceeding and calls speakers in the order they have signed in and swears them in prior to their speaking. If you have pictures or graphs or any info attached to your comments that you will be referring to, you should bring about 10 copies to hand out, you would give them to the Bailiff before you speak and he will hand them out.
- It may be helpful to bring a copy of your written statement with your name and address to give to the VA SCC Bailiff in case the time runs out before you get to speak or if your comments run a little long.
- **Intervenors cannot speak at the public hearing, they submit written direct testimony.** Pro-se Intervenors can ask questions of the public speakers (again I haven't seen questioning during the hearings)

Silence your phones, Don't bring signs and don't protest, this is not a rally or a town hall. Don't clap, whoop, boo or cheer it will only cut down on the time others will have to speak - give them a big smile and a thumbs up or do 'jazz hands' if you must.

I suggest starting with "I am speaking in opposition to the Mid-Atlantic Resiliency Link Project ..." personalize your statement, how it will affect you , your community, what you action you are asking the VA SCC to take (*deny the line!*)

Points to consider:

- The purpose of the MARL/Gore- DoubsGoose Creek line is to bring remote energy to data centers in Eastern Loudoun (there are 250 already and another 100 in the pipeline) this is not a benefit to the public its to serve private business interests.
- This is not the only transmission line PJM has proposed through these counties. The Valley Link North 765kV line is being silmultaneously planned through Frederick, Clarke and Loudoun.
- The existing 500kV line was energized in 1966 and rebuilt in 2015. In the span of two years PJM has proposed a 500kV and a 765kV line these are not for the public they are for Loudoun County's data center buildout. These are private businesses many of which have not been built.
- MARL/Gore- DoubsGoose Creek is a single transmission line. There are two segments and two Virginia cases for a single line in order to meet the VA SCC's duty to evaluate the impacts the entire line must be evaluated before a decision is made.
- This application is only for 2.4 mile segment into Virginia it connects to nothing and does not delivery energy anywhere. Approval of this piece prior to evaluating the rest of the project which is the Gore-Doubs-GooseCreek segment denies those property owners their due process rights to put forward a case against the line.
- There is a lawsuit in the Frederick County Circuit Court that would prevent the Woodside substation from being built on that property – that case won't be heard till January 2027.
- This is a multi-state transmission project that is not in an National Interest Electric Transmission Corridor, if any other state denies the line it will not be built.
- The West Virginia staff has already recommended a full denial of the project.
- Virginia cannot approve this prior to the other state approvals, using eminent domain to take property for a line that is never built is an injustice.
- First Energy's 138kV line extends clear into West VA, the handoff point in Gore is arbitrary if the Gore-Doubs-GooseCreek segment can be built within the existing easement to the East of the handoff point MARL can be built within the existing easement to the West of the handoff point. They should not be taking the private property of 17 property owners for this line.
- Underground Hige Voltage Direct Current can be used to provide one solution through Virginia for both MARL/Gore-Doubs-GooseCreek and Valley Link. It could be buried either within the existing easements or along the highway easements - just like Dominions new 200 mile all underground HVDC line the [Commonwealth Energy Express](#).
- The MARL transmission line is not even using advanced conductors, the technology is outdated before it is even built!

PJM Regional Transmission Expansion Plan (RTEP) 2024

PJM PLANNED FOR NO. VA. DATA CENTERS



Major Need Drivers Behind 2024 RTEP

Heavy transmission interface flows west to east driven by load increase in Dominion/East. PJM earlier identified need for additional west-east reinforcement is materializing earlier – higher forecasted load in MAAC/Dominion/APS.

- 10 GW and 15 GW of load increase for 2029 and 2032 respectively between the 2022 LF and 2024 LF
- The load growth is attributed primarily to data centers and some electrification/EV loads.

Proposed reinforcements through 2022 RTEP Window 3 and 2023 RTEP Windows 1 and 2 are performing well.

No major transmission upgrades identified east of DOM/APS.

In addition to regional transfer requirements, there are load pockets that need to be addressed in AEP, ATSI, Dominion, PECO, BGE and PPL transmission zones.

Primarily due to shift in generation flow as a result of overall system load increase and +2 GW of generation deactivations.

The eight-year RTEP (2032) scenarios mainly focus on right-sizing solutions.

- Long-lead transmission needs (capture long-lead items).
- Check/confirm impact of “forecast” generation on transmission needs identified in the five-year model.
- PJM will also be considering robustness of the solutions in view of the anticipated 2025 PJM Load Forecast.



2024W1 – Regional Cluster Recommended Solution: 2024-W1-708

Recommended Solution (Cont): 2024-W1-708

- Upgrade the terminal equipment on the Doubt No. 1 500/230 kV Transformer
\$0.43M (b4000.12)

Existing Facility Rating:

Branch	SN/SE/WN/WE (MVA)
John Amos – Welton Spring – Rocky Point	N/A

Preliminary Facility Rating:

Branch	SN/SE/WN/WE (MVA)
John Amos – Welton Spring – Rocky Point	6743/7253/7512/7918

Estimated Cost: \$1,945.05 M

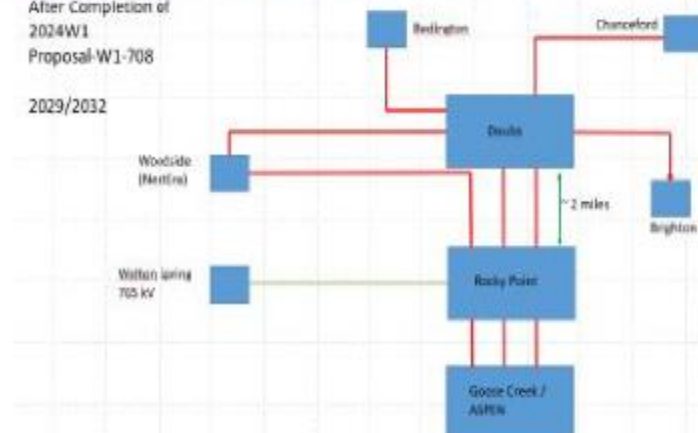
Required IS Date: 6/1/2029

Projected IS Date: 12/1/2029



After Completion of
2024W1
Proposal W1-708

2029/2032



The Valley Link Portfolio



Valley Link 765kV

Amos–Welton Springs–RockyPoint

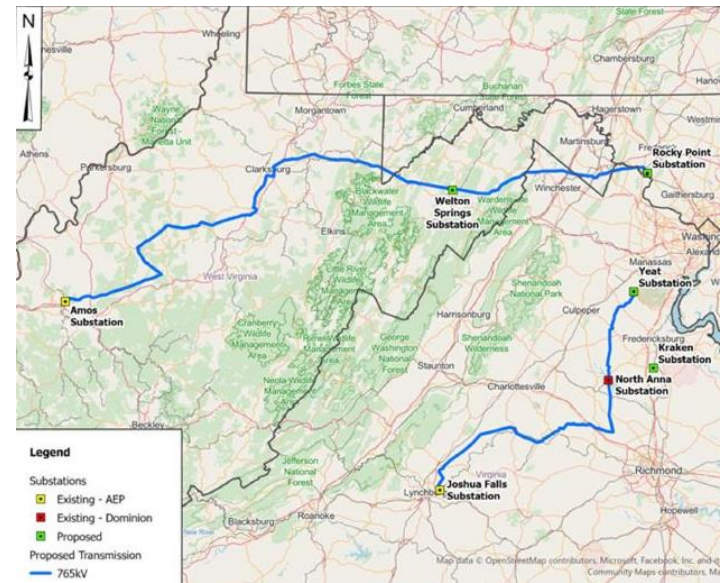
This proposal is a 261-mile, 765kV transmission line (the biggest HVAC structure and line available) from the John Amos power station in WV through 25 counties in 3 states to a new substation south of Doubs in Frederick County, MD. Frederick and Clarke counties in Virginia are also affected. It is Part of PJM RTEP 2024 W1 approved 2/10/2025

The Lovettsville & Neersville portion is expected to be proposed pretty much the same as the defeated PATH line:

- Parallel the existing lines in a new 200' easement and an alternate route to the south.
- Guyed-wire V-struct Construction is worse than PATH, it requires a 40' x 40' area for the wires.
- The closest structures of this type are the Wyoming Substation – Jackson Ferry line in South West VA (Video if the construction available here: <https://stopmarlvirginia.com/valley-link-765kv-1>)

Construction: <https://www.youtube.com/watch?v=49-LagJqyKU>

Noise: <https://www.youtube.com/watch?v=vElauZlZqFA>



Valley Link North Must Do ASAP

The routes that were shown at the Valley Link North open houses were initial routes for routing studies. The routes can and will shift and new alternatives are also likely to appear. **If you own property anywhere in the study area - Frederick , Clarke and North Western Loudoun you should consider your property to be “at risk” please complete the following list of items as soon as possible:**

1) Enter Comments in the Valley Link North on-line Comment form concerning your property impacts were the line to be sited on your property

- ✓ Read about restrictions in transmission line easements (wells, septic fields, barns, cemeteries ...)
- ✓ Create a document identifying everything that would be affected up to and including the loss of your home, the impact on your business, the impact on your finances, health concerns ect, list conservation easements on your property, historical information, does this effect multiple generations of your family ... be as detailed as possible
- ✓ **At the end of your comments please include the statement: "There are no acceptable routes for a 765kV transmission line, the appropriate technology is underground HVDC bury the line, as is being used in the 185 mile all underground Heritage to Mosby transmission line."**
- ✓ Save your impact document, you will be able to use it if/when you intervene in the case at the VA SCC. You can also send it certified mail to Valley Link North.

2) Download and fill out a No Trespassing Notification for your property and send it certified mail to Valley Link North, keep a copy of the letter and the mailing receipt.

3) If your property has any conservation easements, check the deed and notify the entity that holds the easement of the Valley Link North transmission line, the threat to your property and tell them you expect them to defend the conservation easement at the VA SCC.

4) Submit comments on the potential impacts to any parks, schools, churches, cemeteries ect. that you are aware of.

5) Talk to your neighbors, friends and other groups in your county, cross post to conservation and historical groups and ask them to do the same. Anyone can enter impacts, and any property owner can send the no trespassing notice to Valley Link North to prevent them from surveying or accessing their property too!

Valley Link North Prepare for the VA SCC

Participating as a Respondent - Why Intervene?

There will be TWO HVAC transmission lines crossing our area, the 765kV will be even more destructive than the 500kV because it is a new 200' easement for the entire route

⇒ Intervening is the only way to preserve your right as a property owner to appeal the decision to the Supreme Court. Once you have intervened you have standing and the option of hiring a lawyer to represent you for the remainder of the case or in a subsequent appeal. ***(If your property is at risk for eminent domain takings you may want to consult a lawyer)***

⇒ The 185' towers of the 500kV line will seriously degrade property values & there are property owners in Virginia facing eminent domain easement takings for this line. The 765kV will take additional property, what we learn from the 500kV case can help us in the 765kV case.

⇒ If property owners don't participate in the 500kV case it will be approved and make it that much easier to railroad the 765kV line through

⇒ If we participate we can bring up the second line 765kV line and push the VA SCC to at least cost out a proposal for an alternative single solution using underground HVDC for both lines – the PATH case is our precedent.

⇒ We can object to the use of eminent domain takings to provide energy to private for profit businesses

⇒ We have nothing to lose by intervening pro-se and representing our property interest.

Alternative - Underground HVDC

- For the PATH 765kV transmission line a Black & Veatch study that proved HVDC underground was a feasible for our region.
- The title of that study was : Black & Veatch, "PJM Interconnection Potomac-Appalachian Transmission Highline (PATH) Project, HVDC Conceptual Study, B&V Project No.164996, B&V File 42.2004 , FINAL Nov.17, 2009. It was part of the Virginia SCC Case PUE 2009-00043 Application of PATH Allegheny Virginia Transmission Corporation (**Valley Link is the same as PATH**)
- Underground HVDC can be installed along highway or railway easements as well as along existing utility easements
- FirstEnergy is responsible for building both Valley Link North 765kV and MARL/Gore Doubs Goose Creek 500kV. Both lines are proposed through the same communities. *This is a bad solution.*
- The Gore-DoubsGooseCreek line is proposed as a re-build within the 150' 138kV easement, the Valley Link North Line is proposed to expand the opposite side of that ROW.
- There is plenty of existing ROW to bury 2 HVDC lines within the 150' easement. Underground HVDC could be buried along the highway easements or down the Shenandoah and Potomac river. There are multiple alternate routes with underground HVDC that would provide redundant paths to Data Center Alley.

Underground HVDC Petition is on-line at: <https://stopmarlvirginia.com/>

There is a handout with the latest HVDC Underground projects available here:
<https://stopmarlvirginia.com/handouts-and-flyers>

2025 11/04 PJM TEAC - Dominion 185 Mile ALL Underground HVDC Highlights

Dominion Heritage To Mosby HVDC Backbone (aka the Commonwealth Energy Express)



- PJM Approved, Estimated Completion Date June 2032 ([Project Site](#))
- From the Heritage substation in Brunswick County, Virginia to the Mosby substation in Loudoun County, Virginia to serve Data Center Alley.
- 525kV, Total transmission capacity of 6,000 MW, with 3,000 MW to be implemented in Phase 1, and an additional 3,000 MW for Phase 2
- HVDC XLPE Cables
- 185 Miles
- \$4.8 billion **This is a PJM Ratepayer funded project.**

- 185 Miles
- \$4.8 billion **This is a PJM Ratepayer funded project.**
- "The project is expected to primarily follow existing rights-of-way, limiting the need for property acquisitions."
- "The physical footprint of the duct banks is assumed to be 8 feet wide. For typical operations and maintenance practice, 15-ft is added to each side of the duct banks. The total permanent new Right-of-Way necessary for the underground cable system would be 40-ft. For trench-less crossings, 150ft of ROW is needed for Horizontal Directional Drilling and 50ft of ROW is needed for Jack and Bore. At locations where splice vaults are required, the ROW will need to expand to 40-ft to accommodate the larger footprint of the system."
- each of the two required High Voltage Direct Current converter stations (built at the Heritage and Mosby substation ends) is estimated to require a land footprint of approximately **12 acres**

SSO Green HVDC Link



- In Progress - Estimated Completion Date 2031 ([Project Overview](#))
- Mason City, Iowa to Yorkville, Illinois, Connecting MISO in the Midwest, and PJM in the East.
- 2,100 MW, 525KV
- HVDC XLPE Cables
- "The project will use two 5-inch diameters (about the size of a wine bottle), 525KV extruded cross-link polyethylene (XLPE) insulated cables installed in a 3-foot wide by 5-foot deep trench. SSO Green HVDC Link will construct two VSC power converter stations at either end of the 350-mile HVDC line."
- 350 miles
- All underground with transmission line running along existing rail corridors from Iowa to Illinois

This is a privately funded project.

[Read 2.1-GW SSO Green transmission project advances with Iowa agreement](#)

Champlain Hudson Power Express



- November, 2022 - Completed May 13, 2026 ([Project Overview](#))
- Canadian Border to Queens, New York
- 1,250 MW - enough power for more than 1 million homes
- HVDC cable
- 339 miles with 60% in waterways and 40% buried underground
- **"This project is entirely privately funded, and the overall cost is approximately \$6 billion"** ([CHPE Q&A](#))
- "The reason for the unusual approach of a submerged and buried line is that it reduces the local opposition that always accompanies large transmission line construction projects. "

New England Clean Power Link



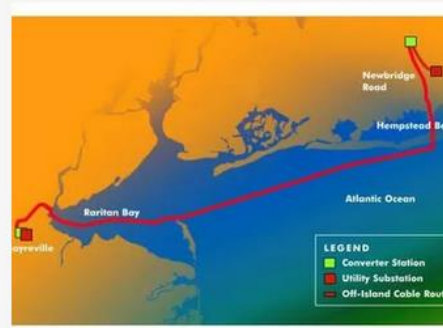
- Construction began in 2021 - Completed January 16, 2026 ([Project Overview](#))
- Canadian border to Vermont
- 1,000 MW
- 300 kV - 320 kV HVDC cable
- 150 miles, all under water or **buried underground in existing rights-of-way**
- **\$1.6 billion merchant line will be privately financed and will not use taxpayer dollars**
- "Ensured the permanent conservation of 50,000 acres of Maine wilderness, creating one of the largest contiguous conservation areas in the region. This land preservation initiative safeguards critical wildlife habitats, protects biodiversity, and ensures sustainable forestry practices."

The Hudson Project



- May 2011 - Completed June 2013 ([Project Overview](#))
- New Jersey , Long Island New York
- 660 MW - enough power for about 600,00 homes
- 345 kV HVDC cable
- 7.5 miles, entirely underground & underwater. It follows existing railroad rights-of-way, through an inactive railroad tunnel to the edge of the Hudson River in Edgewater. It is then buried beneath the Hudson for approximately three-and-a-half miles
- \$850 Million

Neptune Transmission



- June 2005 - Completed June 2007 ([Project Overview](#))
- New Jersey To Long Island, New York
- 660 MW, enough power for about 600,000 homes
- 500 kV HVDC cable
- 65 miles, @15 miles buried underground & @60 miles underwater
- **\$650 Million, This project was privately funded.** ([Neptune Project In Operation](#))

2024: Federation Of American Scientists : [Creating a National HVDC Network](#)

2024: DOE [HVDC Cost Reduction \(CORE\) Initiative](#)

2023: [DOE Connecting the Country with HVDC](#)

2023: [The Operational and Market Benefits of HVDC to System Operators.](#)

2022: [NextGen Highways Feasibility Study for Minnesota Department Of Transportation](#)

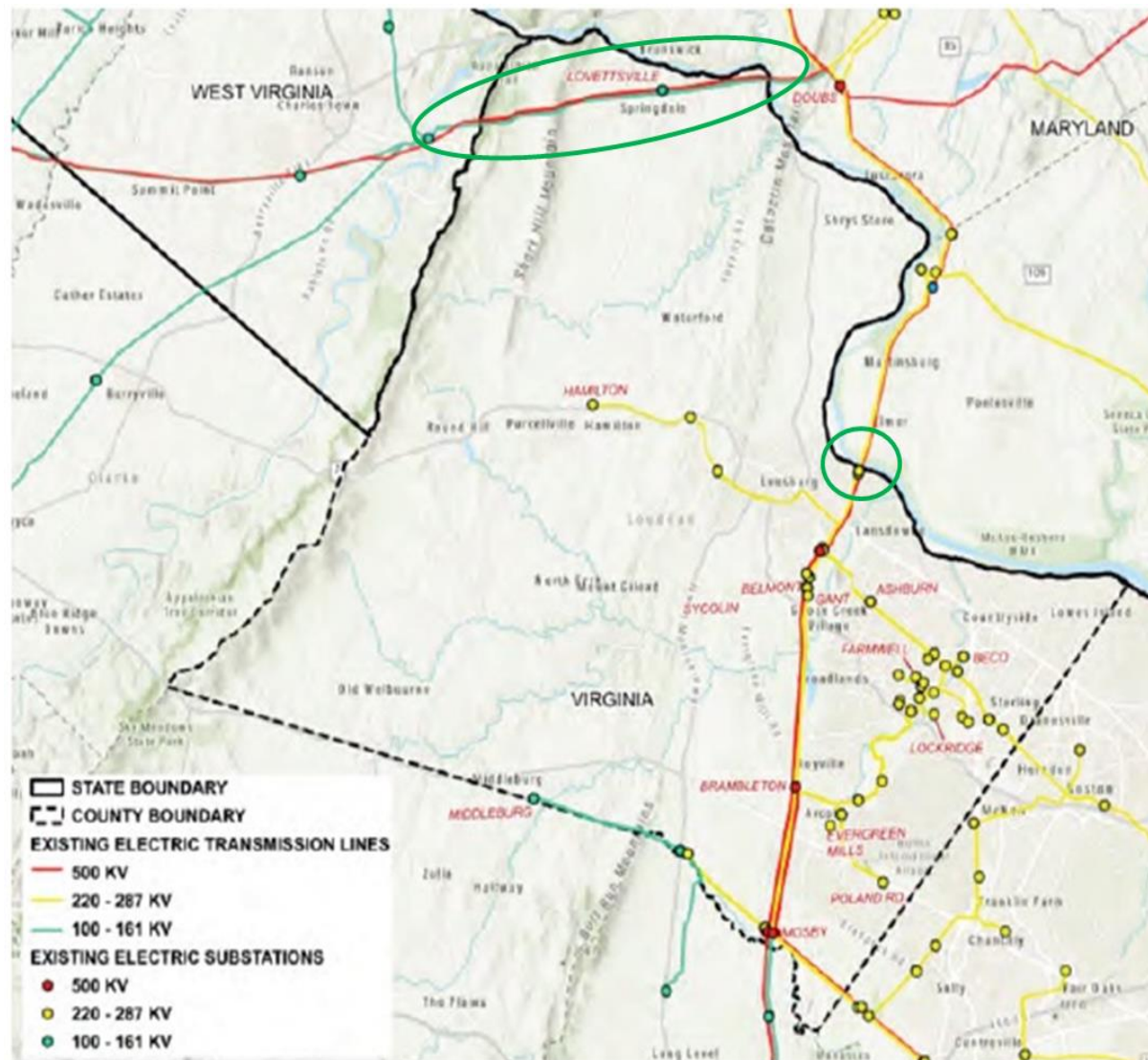
2022: [NextGen Highways Buried HVDC is Cost Competitive](#)

More information available at:
<https://stopmarlvirginia.com/underground-hvdc>

Loudoun County Existing Transmission Lines:

The transmission lines terminate at Goose Creek which is the primary energy source for the "Eastern Loudoun Load Area"

"Eastern Loudoun Load Area" is defined as: From the Fairfax/Loudoun County line to the east, Potomac River to the north, the Dominion's existing 500 kV Brambleton-Goose Creek Line #558 to the west, and State Route 50 to the south, including Data Center Alley (or "DCA") and Washington Dulles International Airport ("Dulles Airport") in Loudoun County, Virginia



PUR-2026-00056

Golden – Mars

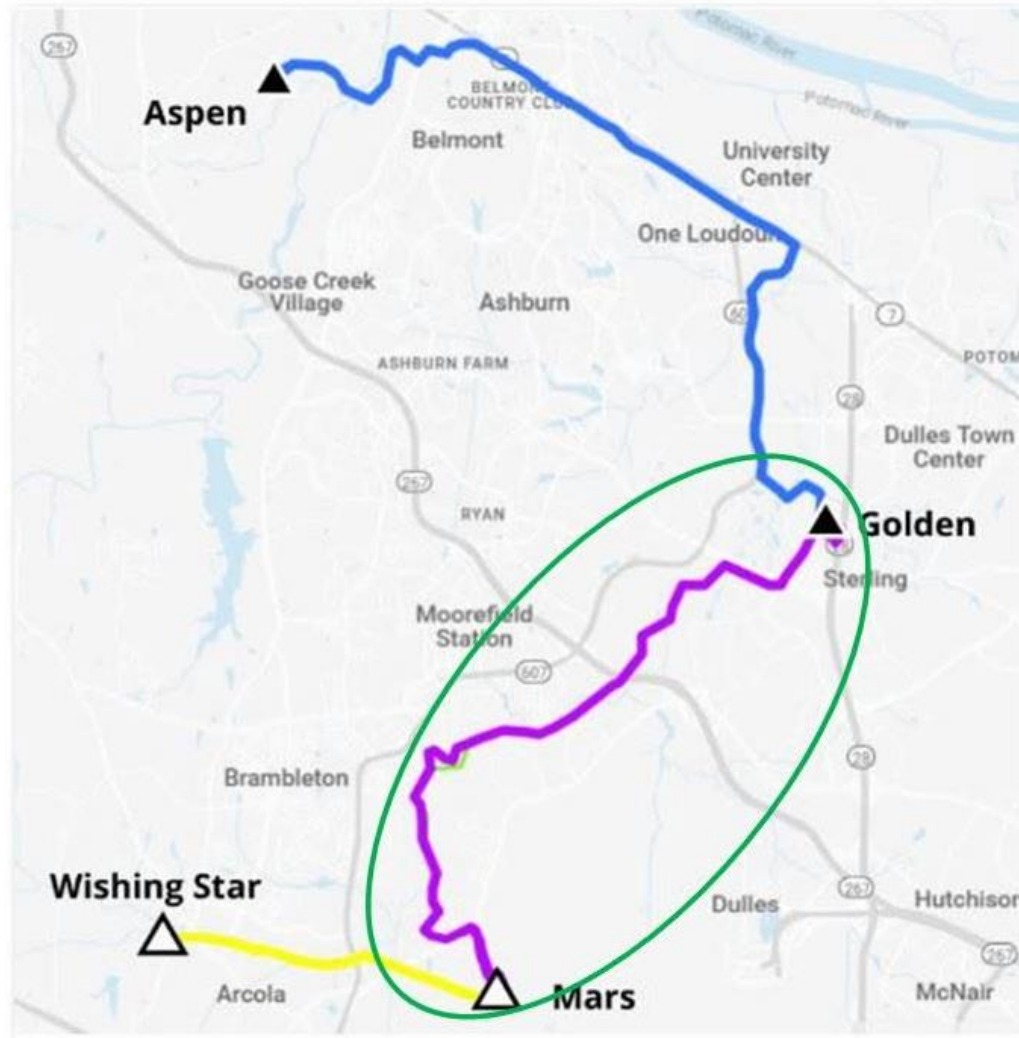
This is the last piece of the data center loop, it will connect the eastern side of data center alley to the western side of data center alley.

The LCSB owns property on both the initial route selected (Route 4) and the final route selected (Route 3A) and is appealing the decision.

The VA SCC Staff determined that Golden-Mars was not needed but for the data centers.

Data Center 500kV Lines

- Aspen - Golden - approved
- Mars - Wishing Star - approved
- Golden - Mars - at the VA SCC - this line will allow the connection of an additional 37 data centers plus a hyperscal data center



PJM 2020 RTEP: Doubs – GooseCreek Rebuild (End of life , no violations of any kind in the Eastern Loudoun Load Area)



Process Stage: Second Review

Criteria: Dominion's FERC 715 Planning Criteria (C.2.9 – End of Life Criteria)

Assumption Reference: FERC 715 Planning Criteria

Model Used for Analysis: 2020 Series 2025 RTEP

Problem Statement:

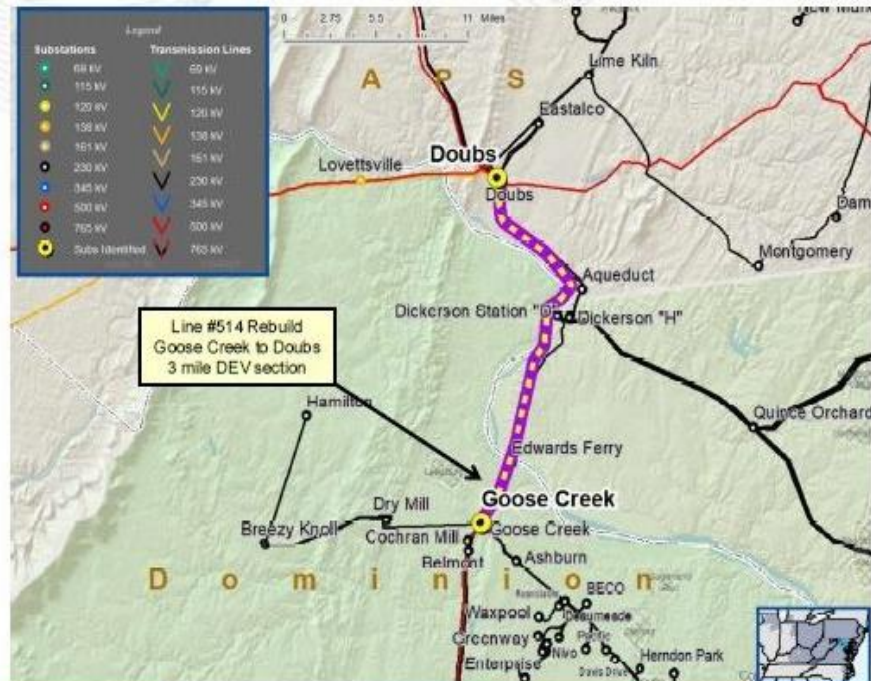
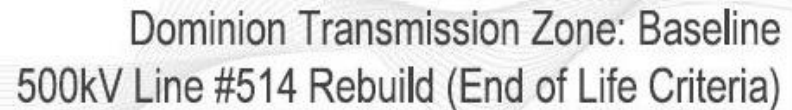
- The Doubs(FE) - Goose Creek(DEV) 500kV transmission Line #514 is an approximately 18-mile long line(3-miles is DEV owned) primarily constructed on weathering (COR-TEN®) steel lattice structures.
- Third party assessment has determined that the towers have corroded to a point where they exhibit pre-mature thinning of structure members and packout at joints. If left unaddressed these issues could result in failure of structures and potentially the collapse for the line. (DOM-O5)

Existing Facility Rating: 2323/2323/2671 MVA

Proposed Facility Rating: 4330/4330/4979 MVA Summer
4980/5023/5928 MVA Winter

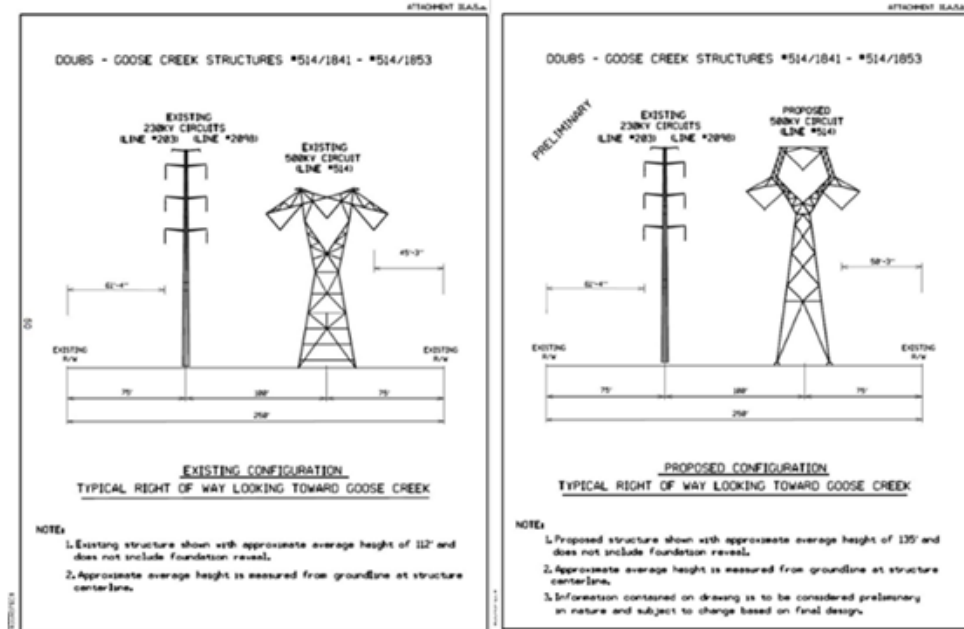
Note: The End of Life issue identified for Line #514 is linked to the M-3 need identified as APS-2020-011

Continued on next slide....



The Green Circle: The one existing 500kV line (#514) Serving Eastern Loudoun since 1966

- Line #514 is the primary line importing energy into Data Center Alley
- In service since 1966, the steel towers are corroding. Dominion application to the VA SCC to re-build and re-conductor Line #514 was approved with an in-service date of June 1, 2024. Completion of the project which included a doubling of its capacity was expected to "support Dominion Energy Virginia's continued reliable electric service to retail and whole sale customers and will support the future overall growth and system generation capacity in the area".
- The application provided 10 years of projected summer and winter peak loads for the Dominion Energy system , the partial rebuild of Line #514 was projected to be sufficient to meet the needs of the area through 2031.



•Dominion never did the upgrade they canceled the re-build project in 2023.

•What happened between 2020 when all that was needed was a re-conductoring of the single 500kV line and PJM RTEP 2022 W3 when multiple 500kV lines were proposed and selected?

•Suddenly the capacity doubling upgrade is not enough - 2 additional 500kV transmission lines (MARL/Gore Doubs Goose Creek and MPRP) are needed?

➔The data center build out: **71 data centers approved between 2021 – 2023**

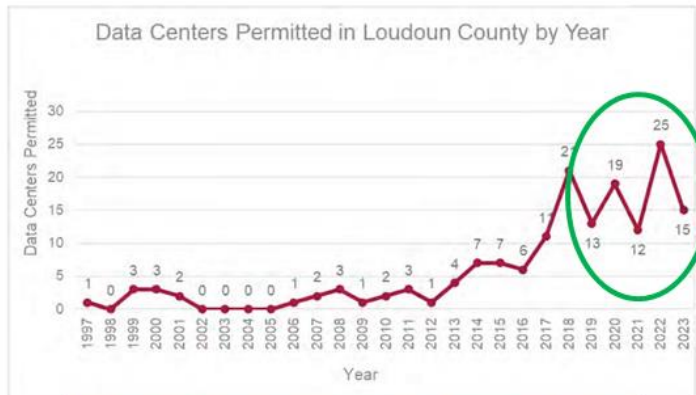
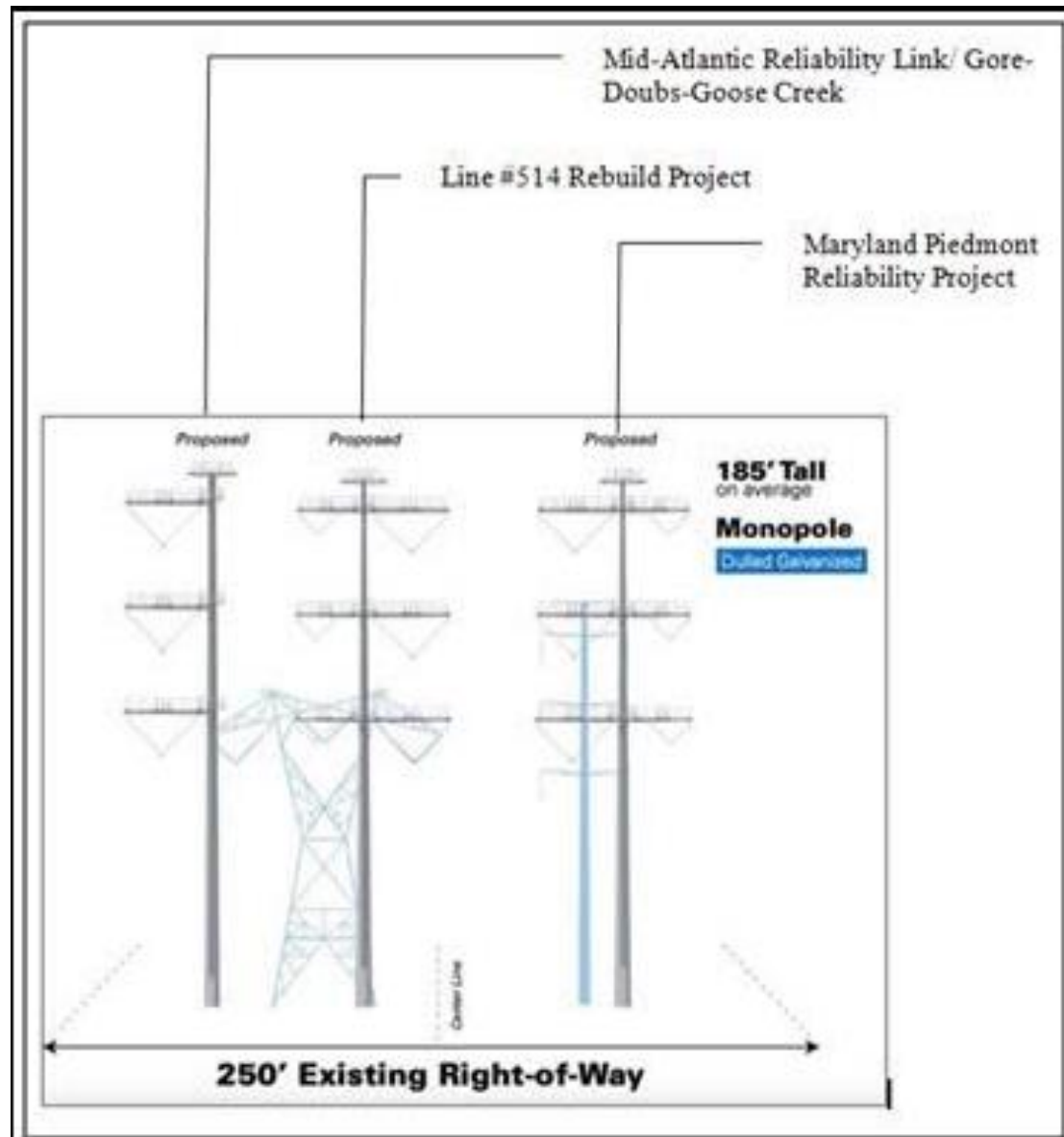


Figure 18: Data Centers Permitted in Loudoun County Per Year (1997-2023)



Data Centers: How Did Loudoun County Get Here

- Data Center Retail Sales and Use Tax Exemption: “The DCRSUT exemption, enacted in 2010, ... Studies show that ninety percent of data center investment in Virginia would not have happened if not for the incentive.” Loudoun VA, Economic Development 2026 Data Center Fact Sheet
- Loudoun County BOS “by right” zoning, re-zoning approvals, refusal to place any restrictions noise, water, energy or even setbacks on data center development – ***to date***. Other counties have restrictions: Examples: York, Fauquier ... JLARC : ***“Local governments possess the necessary zoning authority but sometimes fail to use it.”***
- “Loudoun County, VA, and particularly “Data Center Alley” in eastern Loudoun, has the highest concentration of data centers in the world with approximately 250 data centers built and more than 100 in the development pipeline. There has not been a single day in 16 years when a data center was not under construction in Loudoun County”, Sup. Turner

- Grandfathering: During the March 18, 2025 LC BOS Business Meeting all existing applications were grandfathered, and additional lots were granted “by right” use to develop data centers
 - Motion to Delete all provisions from the grandfathering that pertain to the grandfathering of Administrative applications. There are 22 in Administrative "by right" applications grandfathering basically approves 22 more data centers , adding, 61Million sq of data centers that more than doubles the sq foot of data centers in the county. ***The county had no legal requirement to grandfather ANY of these applications, and they knew it because they discussed it.***
 - Sup. Kershner voted against deleting grandfathering and spoke strongly in favor of grandfathering. All 22 applications were grandfathered.

- Sup. Kershner made a motion to allow Administrative Applications that have not specified a data center use to be able to amend their application to add a data center use to their application. This applies to zoning conversions done 1972 – 1993. If the developer did a conversion and did not say “data center” anywhere in the application, this would allow those developers to add “data center” as a use and they would then be grandfathered and have "By Right" to build a data center without having to get a special exemption. The staff had no idea how many additional lots this would allow data centers by right on at the time the vote was taken. The Motion passed, Loudoun County BOS has not publicly stated how many “by right” data centers or sq footage this added!

- Growth of Permitted data center floor space:¹⁰

○ 2016: 8.8 mil. sq. ft.	
○ 2017: 10.1 mil. sq. ft. (14.7% increase)	
○ 2018: 13.1 mil. sq. ft. (29.7% increase)	
○ 2019: 18.3 mil. sq. ft. (39.7% increase)	
○ 2020: 21.5 mil. sq. ft. (17.5% increase)	
○ 2021: 26.4 mil. sq. ft. (22.8% increase)	
○ 2022: 28.1 mil. sq. ft. (6.4% increase)	
○ 2023: 31.9 mil. sq. ft. (13.5% increase)	
○ 2024: 41.2 mil. sq. ft. (29.2% increase)	
○ 2025: 53.0 mil. sq. ft. (14.0% increase)	

2016-2020 = 144% Increase

2021-2025 = 100% Increase

Exponential Growth in Power Demand:

- Power Consumption in Loudoun County:¹¹

▪ 2018: 1 Gw	(chart interpolation)	
▪ 2019: 1.5 Gw	(chart interpolation)	
▪ 2020: 1.6 Gw	(chart interpolation)	
▪ 2021: 2.0 Gw	(chart interpolation)	
▪ 2022: 2.8 Gw	(chart interpolation)	
▪ 2023: 3.4 Gw	(chart interpolation)	
▪ 2024: 4.14 Gw	(actual)	
▪ 2025: 5.33 Gw	(actual)	

2020-2025 = 233%

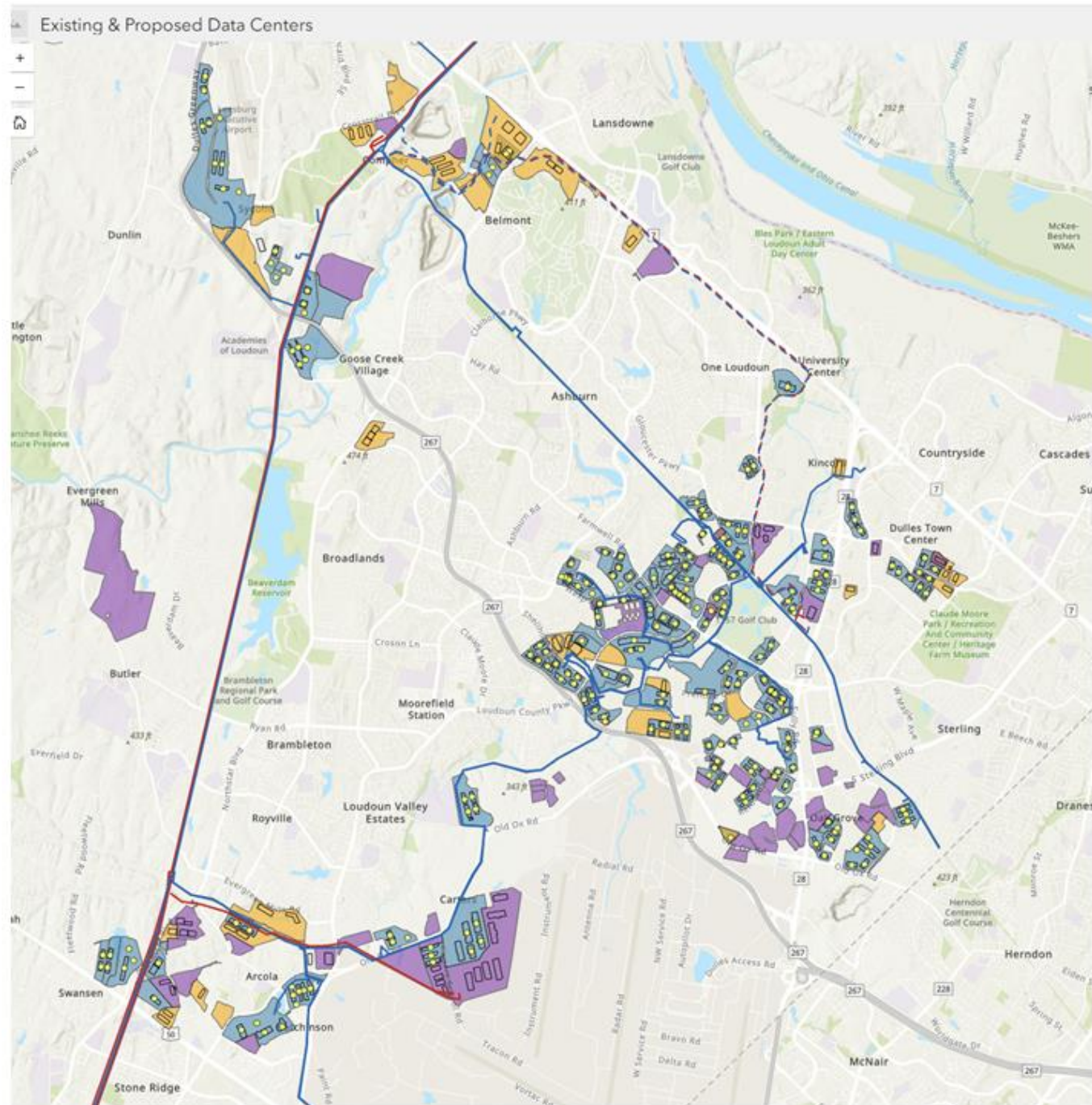
- Same Linear Progression Over the Next 5 Years = 14.2 Gw by 2030
- BUT...Artificial Intelligence (AI) Will Increase Existing Data Rack Power Consumption from 10-14 Kw/rack to 100+ Kw/rack = 20+ Gw by 2030

- Continued approval of new data centers
 - **7/15/2025 Cross Mill Center** : Located off Sycolin Road near Phil Bolen Park. **Developer:** JK Land Holdings, **Location:** A 22-acre site off Sycolin Road and Crosstrail Boulevard, located near the Leesburg Executive Airport and Phil Bolen Park, **Zoning Shift:** Successfully rezoned from its previous status to an industrial park designation, **Capacity:** Approved for up to **556,746 square feet** of data center space (or alternative flex/warehouse industrial facilities).
https://www.loudounnow.com/business/data-center-sale-sets-new-loudoun-price-record/article_d392a250-e672-46c2-b2d2-f0ad3424a100.html JK Land Holding bought it for \$54M and sold it for \$615M
 - **7/15/2025 Arcola Grove Developer:** PowerHouse Data Centers. **Location:** Located off Stone Spring Boulevard and Arcola Boulevard near Dulles International Airport. **Zoning Shift:** Rezoned a piece of the Dulles district from Rural Commercial and Countryside Residential over to Planned Development-Industrial Park. **Capacity:** The site features roughly **800,000 square feet** of data center use and includes a 100-foot-tall indoor electrical utility substation.
- More Data Center applications in the queue for 2026 year:
 - **Dulles Technology Park** (LEGI-2024-0056, Sterling), 3 data centers
 - **Spring Valley Tech Park** (LEGI-2024-0074, Ashburn):
 - **Cochran Tech** (LEGI-2024-0037, Leesburg):
 - **Quantum Park** (LEGI-2023-0097, Broad Run): add more data centers to the Verizon campus on Waxpool Road

“... if you approve a data center, you're approving a substation, and you're approving a power line. ...,” he [Sup. Turner] said. (Loudoun Now, July 8, 2026 , “After delays Supervisors approve 2 substations”)

“Local governments possess the necessary zoning authority but sometimes fail to use it.” (Loudoun Now, July 10, 2026 , “Reid: Data Center Town Hall – A General Assembly View”)

This is an intentional plan not an accident.



Total needed power is 14.2 Gigawatts by 2030

Existing:

Blue = single 230Kv lines countywide

North combination lines:

Red = (1) 500Kv & (2) 230Kv

South combination lines

Red = (2) 500Kv & (2) 230Kv

New:

North Black Lines = (2) 500Kv

South Black Line = (1) 500 Kv

Red Dashed = 500/230Kv combined (3 segments)

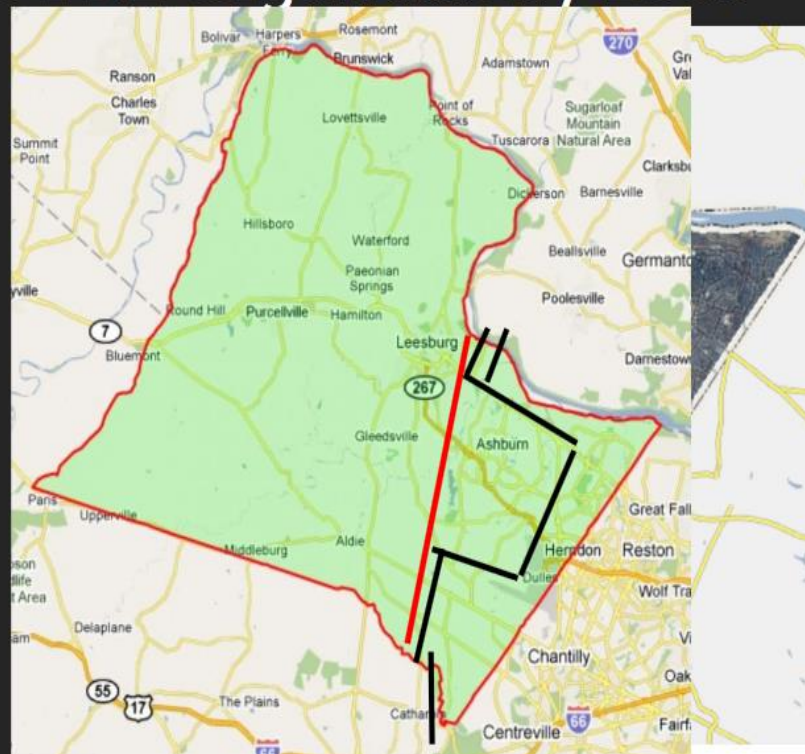
Green = 525 HVDC underground

Orange dot = 770 Mw Gas power plant

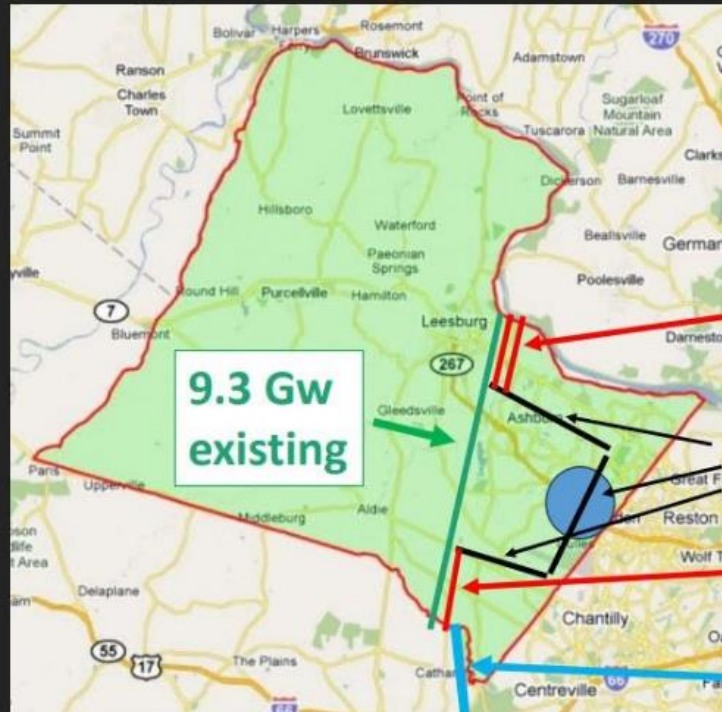
Not included are the new 230Kv lines

Across the northern portion (not pictured)

- Existing: (1) 500 Kv line
- New: (1) 500 Kv & (1) 765 Kv



Based on 5 yr. trend, total needed by 2030 is **4.2 Gw**, but that does not count AI growth.



**8.6 Gw new planned
= 17.9 Gw total
available by 2030**

4.2 Gw new

**2.85 Gw connection
(5.7 new to "DC Alley")**

2.1 Gw new

2.3 Gw HVDC new

Bottom Line: These Won't Be Enough!

Lines already included in this picture:

- 3 500kV lines : MARL/Gore-DoubsGooseCreek, Maryland Piedmont Reliability Project, North Anna - Brister
- 2 765kV lines : Valley Link North, Valley Link South
- 1 Underground HVDC Transmission Line

Links to Referenced Loudoun County Documents

Loudoun County Virginia Data Center Capital of the World: ["A strategy for a changing Paradigm":
https://www.loudoun.gov/ArchiveCenter/ViewFile/Item/13979](https://www.loudoun.gov/ArchiveCenter/ViewFile/Item/13979)

Loudoun County June 15,2026 Data Center Briefing:
<https://www.loudoun.gov/DocumentCenter/View/217605/Loudoun-County-Data-Center-Brief---Turner#:~:text=Vice%20Chair%20and%20Ashburn%20Supervisor%2C,author%20alone%20and%20in%20no>

March 18 , 2025 : Discussion & voting on by-right data center development & grand fathering
Public Recording:https://loudoun.granicus.com/player/clip/7909?view_id=90&redirect=true
4:32:47 Is the Start of the BOS Data Center Discussion