Speakers you're going to hear from tonight:

Julie Bolthouse  
Director of Land Use  
PEC

Kevin Kask  
Land Use Field Representative for  
Fauquier PEC

Sarah Parmelee  
Land Use Field Representative for  
Culpeper PEC

Lori Keenan McGuinness  
Citizens for Fauquier County / Goose Creek Association
PEC’s mission:

Protect and restore the lands and waters of the Virginia Piedmont, while building stronger, more sustainable communities.
Today’s Discussion

- PEC’s Video - Hidden Cost of the Cloud: Data Centers in VA
- Local Data Center and Transmission Line Projects
- The Bigger Picture
- What can you do?
You can view this map and zoom in/out at:

pecva.org/transmissionmap
You can view this map and zoom in/out at:

pecva.org/transmissionmap
Transmission Line Expansion

- Wreck of 36.5-mile transmission lines (500kV and 230kV lattice)
- Replace with taller double-circuit monopoles
- Additional ROW unknown

Dominion’s Expedited Timeline:

- Virtual Meeting - April 30
- Fauquier Meeting - May 14
- Prince William Meeting - May 16
- Loudoun Meeting - May 21
- Virtual Meeting 2 - June 4
- File Application with SCC - Summer of 2024
provide feedback. The schedule of meetings is as follows:

- **Virtual Community Meeting #1**
  - Date: Tuesday, April 30, 2024
  - Time: Noon–1 p.m. EST
  - Join the virtual meeting via WebEx
  - Join by phone: 1-415-655-0002
  - Webinar password/Access code: 2344 396 8898
  - Password: Morrisville (66774784)

- **Fauquier County In-person Community Meeting**
  - Date: Tuesday, May 14, 2024
  - Time: 5:30 p.m.–7:30 p.m. EST
  - Location: Mary Walter Elementary School
  - 4529 Morrisville Road
  - Bealeton, VA 22712

- **Prince William County In-person Community Meeting**
  - Date: Thursday, May 16, 2024
  - Time: 6 p.m.–8 p.m. EST
  - Location: Piney Branch Elementary School
  - 8301 Linton Hall Road
  - Bristow, VA 20136

- **Loudoun County In-person Community Meeting**
  - Date: Tuesday, May 21, 2024
  - Time: 5:30 p.m.–7:30 p.m. EST
  - Location: John Champe High School
  - 41535 Sacred Mountain Street
  - Aldie, VA 20105

- **Virtual Community Meeting #2**
  - Date: Tuesday, June 4, 2024
  - Time: Noon–1 p.m. EST
  - Join the virtual meeting via WebEx
  - Join by phone: 1-415-655-0002
  - Webinar password/Access code: 2340 252 8806
  - Password: Morrisville (66774784)

For more information:
https://www.dominionenergy.com/morrisvillewishingstar
Yadkin - Fentress 500 kV Electric Transmission Rebuild Project

STRUCTURE TYPE

**EXISTING**
Lattice Structure

- Weathering steel lattice structures
- Average structure height: 115 feet
- Right of Way: 150 feet

**PROPOSED**
Monopole Structure

- Single Circuit Monopoles
- Proposed average structure height: 180 feet
- Average Height Increase: 65 feet
Transmission Line to Serve Amazon Site in Warrenton:

- Underground distribution line
- Off-site substation in the County
- Overhead transmission tie-in to existing transmission line
- Along either side of Route 29
- Exact Route and ROW to be determined
- More info to be revealed in community outreach
Fauquier County Data Centers

Built:
- Warrenton Training Center (square footage confidential)
- OVH (80,000 sf)

Approved:
- Remington Technology Park (1,286,000 sf in Remington)
  - Rezoning Granted in 2018, but unbuilt
- Amazon Warrenton (220,000 square feet)
  - In active litigation

Proposed:
- Convergent (1,064,000 sf in Remington)
- Gigaland (2,808,681 sf in Remington)
- SAMX (1,021,000 sf in Remington)
- Catlett Project (1,021,000 sf in Catlett)
- Cyrus One (874,516 sf by-right in Vint Hill)
- OVH expansion (110,000 sf max by-right in Vint Hill)
- Vint Hill Corners (360,000 sf by-right in Vint Hill)

Other Parcels marketed for data center development
Remington Area Data Center Projects:

- Total Area: 631.11 ac
- Total Development: 6,179,681 sf

1. Convergent Technology Park
2. Remington Technology Park (approved but unbuilt)
3. SAMX Data Centers
4. Gigaland Data Centers

Remington Area Solar Projects:

- Total Area: 232.27 ac
- Total Development: 126 ac

5. Remington Solar
6. Bealeton Solar Center

Potential Remington Buildout Map

Credit to: Fauquier County Dept. of Community Development
Subject Property:

- RTP Property – 233.84 Acres
- Land Use: Light Industrial/Employment Center
- Zoning: BP w/Proffers
  - Approved March ‘18

Proposed Development:

- Data Center Campus – 1,286,000 sf
  - 6 one-story buildings (137,000 sf - @ 240,000 sf)
  - Site Plan Approval for Phase 1 – Feb. ‘20

Next Steps:

- Plan of Development Application

Potential & Pending Data Center and Utility Scale Solar Applications

Credit to: Fauquier County Dept. of Community Development
Subject Property:

- Barb Property - 139.48 Acres
- Land Use: LDR 1 -3 Du/Ac; Open Space/ Park/Floodplain; Open Space Park/Floodplain
- Zoning: R-2 w/Proffers

Proposed Development:

- Data Center Campus – 1,064,000 sf
  - 4 two-story buildings (266,000 sf each) – 65’

Next Steps:

- Formal Application: July 1st
  - Pre-Application in April or May
Subject Property:

• Superfood Farms Property – 55.25 Acres
• Land Use: Light Industrial/Employment Center
• Zoning: RA

Proposed Development:

• Data Center Campus – 1,021,000 sf
  • 2 three-story buildings (510,986 sf each) – 45’
  • Substation

Next Steps:

• 2nd Sub – Rezoning Application
Gigaland Data Centers

Subject Property:
- Lucky Hill LLC Property – 202.54 Acres
- Land Use: LDR 1 -3 Du/Ac; Rural
- Zoning: R-1

Proposed Development:
- Data Center Campus – 2,808,681 sf
  - 10 two-story buildings – 65’
  - 2 Substations

Next Steps:
- Formal Application: July 1st
  - Pre-Application Meeting – 04/23/24

Conceptual Development Plan
The Catlett Project

Subject Property:
- Catlett Station Property – 67.36 Acres
- Land Use: Commercial/Industrial
- Zoning: I-1

Proposed Development:
- Data Center Campus – 1,021,000 sf
  - 3-5 two-story buildings - 45’ – 65’
  - Substation

Next Steps:
- 2nd Sub – Rezoning Application
Vint Hill Data Center Projects:

Total Development: 1,354,516 sf

1. CyrusOne
2. OVH Expansion
3. Vint Hill Corners

Regional Aerial Map

Potential & Pending Data Center and Utility Scale Solar Applications
Credit to: Fauquier County Dept. of Community Development
Between 1-2 GW of energy demand is proposed in Fauquier.
Fauquier County in the Crosshairs — Warrenton, Catlett, Remington and Beyond

April 29, 2024
Liberty High School
Lori Keenan
Citizens for Fauquier County (CFFC)
Who We Are

Oldest non-profit conservation organization in Fauquier County; Since 1968, entirely focused on Fauquier County and preserving our rural way of life.

Our Mission
Preserve the natural, historic and agricultural resources of Fauquier County, and protect the County’s unique quality of life through public engagement, advocacy, education and leadership.

- Thousands of members and supporters throughout Fauquier
- 20-person volunteer board

Recent efforts include data centers, utility-scale solar, Town of Warrenton Comprehensive Plan, litigation.

Work hand-in-hand with conservation partners: Piedmont Environmental Council, Protect Catlett, Protect Fauquier
CFFC’s Position on Data Centers

CFFC is working everyday with our conservation partners to stop data center sprawl in Fauquier County

Limit Data Centers to Locations Currently Zoned for Data Centers
Comprehensive Plan created Service Districts and designated a Business Park in Remington and PCID/Vint Hill for data centers. CFFC opposes data centers that are not permitted under current zoning, such as the proposed data centers for Catlett and Remington.

Current County Zoning
• Limits data centers to Service Districts and then further limits them to “Business Parks” and “Planned Industrial Development Districts” or “PCIDs”; currently just one PCID exists (in Vint Hill) and one BP in Remington
• Data centers must be served by underground power lines; ratepayers pay for above ground lines
• Data centers must use recycled water
• Noise ordinance is flawed and unenforceable

Revenues: We don’t need additional data centers beyond built/approved centers
• Fauquier County has 4 operating data centers that generate about $6.5 million/year in revenue for the County
• Additional sites that are approved and can be built under current zoning are estimated to add an additional $65 - $100+ Million/year in county revenues
Fauquier’s Noise Ordinance is Flawed

- Not intended for 24/7 noise that will include generators
- Doesn’t include background noise, e.g., highway
- Doesn’t include noise from other DC operators, e.g., multiple nearby data centers
- Doesn’t include lower decibel constant humming
- Amazon Tanner Way still doesn’t meet PWC’s noise ordinance after a year of mitigation effort
- Unenforceable: fines minimal
CFFC’s Ongoing Data Center Work

- Closely monitoring all proposed data centers under review by the Town and County

- Working with our conservation partners to propose a new Data Center Ordinance for our County (there’s a new policy, but not a new ordinance for data centers)

- Educating the public about data centers and the proposed transmission lines (cart before the horse leads to bad results)

- Meeting with public officials (good planning leads to good results)

- Continued Opposition to Amazon’s Warrenton data center
Revisiting Amazon’s Data Center in Warrenton …

Wrong Use, Wrong Place, Wrong Way

The town disregarded its comprehensive plan, and the overwhelming opposition of residents when the town approved Amazon’s permit.

- CFFC has spent thousands of hours along with our conservation partners opposing Amazon’s proposal
- Town and Amazon worked behind the scenes to amend the town’s zoning code to allow data centers in Warrenton
- Town and Amazon continue to keep information from the public: half of the site development plan was redacted.
- Amazon has gotten a pass on critical requirements: noise & electricity
CFFC in Court Against the Town of Warrenton and Amazon

To Overtorn the Special Use Permit

About
CFFC (and ten residents of Warrenton living near the proposed Amazon DC) sued the town to reverse the illegal zoning amendment and stop the Blackwell Road data center.

Summary
CFFC is contesting the validity of the zoning amendment and the town’s subsequent approval of Amazon’s application for a permit and site development plan.

Next Steps
December ruling was favorable to plaintiffs and allows case to move forward. To be continued…..

To Appeal the VFOIA Decision

About
CFFC is litigating the town’s refusal to provide CFFC with information about the data center and zoning amendment as required by the Virginia Freedom of Information Act. This case is critical to maintaining public access to local and state government information.

Summary
• The Town has withheld emails about the zoning amendment and the data center
• This case is supported by 24 organizations including the Reporters Committee for Freedom of the Press and the Virginia Coalition for Open Government
• This case is on appeal
Data Centers and Utility-Scale Solar Projects - Brandy Station & Environs
Data Centers and Utility-Scale Solar Projects - Brandy Station & Environs
$54.3 million is the estimated cost to ratepayers for the Dominion's Preferred Route of the new transmission line and substation for Marvell Data Center from SCC case number PUR-2023-0026.
<table>
<thead>
<tr>
<th>Project Name</th>
<th>Status</th>
<th>Acres</th>
<th>Square Feet</th>
<th>Load in MW</th>
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<tbody>
<tr>
<td>AttoTek</td>
<td>Pending</td>
<td>426</td>
<td>4,638,704</td>
<td>unknown</td>
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<tr>
<td>Keyser Road (Red Ace)</td>
<td>Pending</td>
<td>69</td>
<td>1,506,582</td>
<td>unknown</td>
</tr>
<tr>
<td>Germanna Corner (Red Ace)</td>
<td>Pending</td>
<td>18</td>
<td>unknown</td>
<td>unknown</td>
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<tr>
<td>Cielo</td>
<td>Approved</td>
<td>122</td>
<td>2,400,000</td>
<td>300</td>
</tr>
<tr>
<td>Copper Ridge</td>
<td>Approved</td>
<td>117</td>
<td>2,200,000</td>
<td>600</td>
</tr>
<tr>
<td>Culpeper Technology Campus</td>
<td>Approved</td>
<td>155</td>
<td>2,100,000</td>
<td>600</td>
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<tr>
<td>Marvell</td>
<td>Under Construction</td>
<td>223</td>
<td>445,000</td>
<td>135</td>
</tr>
<tr>
<td>Databank (Red Ace)</td>
<td>Approved</td>
<td>85</td>
<td>1,400,000</td>
<td>300</td>
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<tr>
<td>CloudHQ</td>
<td>Approved</td>
<td>99</td>
<td>2,100,000</td>
<td>275</td>
</tr>
<tr>
<td>Equinix</td>
<td>Built</td>
<td>64</td>
<td>370,000</td>
<td>unknown</td>
</tr>
<tr>
<td>Swift</td>
<td>Built</td>
<td>30</td>
<td>90,000</td>
<td>unknown</td>
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<td><strong>Total</strong></td>
<td></td>
<td><strong>1408</strong></td>
<td><strong>17,250,286</strong></td>
<td><strong>2,210</strong></td>
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</table>
CULPEPER CONSERVATION LECTURE SERIES

Join local environmental nonprofits The Piedmont Environmental Council (PEC) and Friends of the Rappahannock (FOR) from 7-8 p.m. on the second Thursday of each month for a free lecture at Culpeper County Library (Meeting Room, 271 Southgate Shopping Center, Culpeper, VA 22701).

LECTURE DATES + TOPICS

MAY 9: DATA CENTERS IN VIRGINIA W/ PEC
JUN 13: EXPANDING RIVER ACCESS W/ FOR
JUL 11: SOLAR FOR YOUR HOME W/ PEC
AUG 8: BRINGING BACK GRASSLAND BIRDS W/ PEC
SEP 12: CONSERVING FORESTS FOR CLIMATE W/ FOR
OCT 10: TREE PLANTING PROGRAMS W/ FOR

RESERVE YOUR SPOT!
pecva.org/librarylectures
Data Center Proposals in Virginia

You can view this map and zoom in/out at:

pecva.org/data-center-map
<table>
<thead>
<tr>
<th>County</th>
<th>Sq ft</th>
<th>Estimated MW</th>
</tr>
</thead>
<tbody>
<tr>
<td>Caroline</td>
<td>7,316,000</td>
<td>2195</td>
</tr>
<tr>
<td>Culpeper</td>
<td>9,145,000</td>
<td>2744</td>
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<tr>
<td>Fairfax</td>
<td>5,703,707</td>
<td>1711</td>
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<tr>
<td>Fauquier</td>
<td>7,041,000</td>
<td>2112</td>
</tr>
<tr>
<td>Hanover</td>
<td>11,000,000</td>
<td>3300</td>
</tr>
<tr>
<td>Henrico</td>
<td>675,000</td>
<td>203</td>
</tr>
<tr>
<td>King George</td>
<td>7,250,000</td>
<td>2175</td>
</tr>
<tr>
<td>Loudoun</td>
<td>42,266,143</td>
<td>12680</td>
</tr>
<tr>
<td>Louisa</td>
<td>10,400,000</td>
<td>3120</td>
</tr>
<tr>
<td>Orange</td>
<td>5,000,000</td>
<td>1500</td>
</tr>
<tr>
<td>Prince Edward</td>
<td>1,300,000</td>
<td>390</td>
</tr>
<tr>
<td>Prince William</td>
<td>55,874,562</td>
<td>16762</td>
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<tr>
<td>Spotsylvania</td>
<td>11,000,000</td>
<td>3300</td>
</tr>
<tr>
<td>Stafford</td>
<td>6,010,000</td>
<td>1803</td>
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<tr>
<td>Virginia Beach</td>
<td>140,000</td>
<td>42</td>
</tr>
<tr>
<td>Wise</td>
<td>200,000</td>
<td>60</td>
</tr>
</tbody>
</table>
That’s potentially a huge increase in energy!

Total Current Load From Data Centers in VA

= 3,200 MW

Proposed Data Centers in the State

as high as 54,105 MW!

Source: PEC analysis of applications in Virginia
Let’s put that energy use in context: **1MW = 250 homes**

- **Total Current Load From Data Centers in VA**
  - = 3,200 MW

- **Proposed Data Centers in the State**
  - as high as 54,105 MW!

- 800,000 homes

- 13.5 million homes!
Amid explosive demand, America is running out of power

AI and the boom in clean-tech manufacturing are pushing America’s power grid to the brink. Utilities can’t keep up.

By Evan Halber

March 7, 2004 at 6:05 a.m. EST
Why do they keep coming to Virginia though?
- Robust Fiber Network (MAE-East brought one of the earliest internet exchange points to the eastern seaboard, later Equinix)
- Proximity to largest data center market in the world
- Proximity to Skilled Personnel and Services
- Safe Location
- Available Land
- Available Water
- Materials/Resources
- Supportive Government Policies
- Tax Incentives (often at both the state and local level)
- **Access to Power!**
How the power grid works...

250 homes = 1 megawatt (MW)

*1000 MW = 1 gigawatt
Our structure **perpetuates more** and more growth...

1. Utility has an obligation to serve any customer requesting power, no matter where or how much.

2. Transmission lines, many of the substations, and power generation are paid for by all ratepayers.

3. Localities often approve data center development along transmission lines because these areas are considered already impacted.
What’s using all the power?
And they’re getting bigger and bigger too…

- In 2018 large data centers were around 50,000 to 100,000 sqft
- In 2023 large data centers are around 200,000 to 300,000 sqft
- 2018 -> 10-15 MW per building
- In 2023 -> 30-90 MW per building
- Multi building campuses are common using 600MW+
Prince William Digital Gateway

At least 3 gigawatts (GW) of energy, equivalent to the power used by 750,000 homes

37 buildings and 15 substations

Approved December 12th, 2023
Back up power is diesel generators...
They create a host of community-level impacts.

- Parks and Trails
- Noise
- Water
- Air Quality
- Wildlife Habitat
- Design
- Transmission and Substations
Dominion Territory Explosive Growth Trends

**Summer Peak**

- Green = 2024 projection
- Blue = 2023 projection
Dominion Territory Explosive Growth Trends

Graph showing the projection of load (MW) for different years, with "23GW" indicating the 2023 projection and "45GW" indicating the 2024 projection. The graph includes a map of the region with markers labeled "IAD," "RIC," and "ORF." The graph notes that "Green = 2024 projection" and "Blue = 2023 projection."
Forecasted Dominion Energy annual electricity sales

Data center electric sales will increase by 152% in the next decade, while others sectors remain mostly the same.

The overall increase in electricity sales is forecasted to be 32% over 10 years. That accounts for increased energy efficiency among other sectors. The forecast does not include projected electricity demand from electric vehicles.

Chart: Emily Richardson/VCU Capital News Service • Source: The Energy Transition Initiative at the Weldon Cooper Center for Public Service. • Created with Datawrapper
That’s a doubling of Virginia’s peak load, solely due to data center development, within 15 years!
What's Dominion's Plan?

Dominion projects new gas plants, advanced nuclear will be needed to meet soaring demand
Latest long-range plan shows data centers and electrification are driving rising power needs

BY: CHARLIE PAULLIN - MAY 3, 2023  12:02 AM
Dominion’s plan…
How much does Dominion’s plan cost?
<table>
<thead>
<tr>
<th>Plan</th>
<th>Plan A (B)</th>
<th>Plan B (B)</th>
<th>Plan C (B)</th>
<th>Plan D (B)</th>
<th>Plan E (B)</th>
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</thead>
<tbody>
<tr>
<td><strong>NPV Total ($B)</strong></td>
<td>$109.70</td>
<td>$127.70</td>
<td>$127.20</td>
<td>$140.90</td>
<td>$138.00</td>
</tr>
<tr>
<td><strong>Approximate CO₂ Emissions from Company in 2048 (Metric Tons)</strong></td>
<td>43.8 M</td>
<td>35.9 M</td>
<td>36 M</td>
<td>0 M</td>
<td>0 M</td>
</tr>
<tr>
<td><strong>Solar (MW)</strong></td>
<td>10,800 15 yr.</td>
<td>10,875 15 yr.</td>
<td>10,800 15 yr.</td>
<td>10,875 15 yr.</td>
<td>11,094 15 yr.</td>
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<tr>
<td></td>
<td>19,800 25 yr.</td>
<td>19,875 25 yr.</td>
<td>19,800 25 yr.</td>
<td>23,955 25 yr.</td>
<td>24,294 25 yr.</td>
</tr>
<tr>
<td><strong>Wind (MW)</strong></td>
<td>3,040 15 yr.</td>
<td>3,040 15 yr.</td>
<td>3,040 15 yr.</td>
<td>3,040 15 yr.</td>
<td>3,040 15 yr.</td>
</tr>
<tr>
<td><strong>Storage (MW)</strong></td>
<td>1,050 15 yr.</td>
<td>2,370 15 yr.</td>
<td>2,220 15 yr.</td>
<td>2,370 15 yr.</td>
<td>2,910 15 yr.</td>
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<tr>
<td></td>
<td>3,960 25 yr.</td>
<td>5,190 25 yr.</td>
<td>5,220 25 yr.</td>
<td>9,780 25 yr.</td>
<td>10,350 25 yr.</td>
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<tr>
<td><strong>Nuclear (MW)</strong></td>
<td>— 15 yr.</td>
<td>804 15 yr.</td>
<td>804 15 yr.</td>
<td>1,608 15 yr.</td>
<td>1,072 15 yr.</td>
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<tr>
<td></td>
<td>— 25 yr.</td>
<td>1,608 25 yr.</td>
<td>1,608 25 yr.</td>
<td>4,824 25 yr.</td>
<td>4,288 25 yr.</td>
</tr>
<tr>
<td><strong>Natural Gas-Fired (MW)</strong></td>
<td>5,905 15 yr.</td>
<td>2,910 15 yr.</td>
<td>2,910 15 yr.</td>
<td>970 15 yr.</td>
<td>970 15 yr.</td>
</tr>
</tbody>
</table>
This cost will be **passed on to ratepayers**
“For Alternative Plan B… the Company projects the monthly bill of a Virginia residential customer using 1,000 kilowatt hours ("kWh") per month to be $243.20 by 2035, an increase of $127.02 over the May 1, 2020 level…”

- Dominion legal notice Oct. 25, 2023
“For Alternative Plan B… the Company projects the monthly bill of a Virginia residential customer using 1,000 kilowatt hours ("kWh") per month to be $243.20 by 2035, an increase of $127.02 over the May 1, 2020 level…”

- Dominion legal notice Oct. 25, 2023

That’s a 100% increase by 2035!
What’s happening in Virginia is unprecedented.

We don’t have all the answers, but we know that what’s happening now will impact Virginia and ratepayers for years to come.
Who is in charge?

- Local governments?
- FERC?
- Virginia State Corporation Commission?
- Dominion?
- General Assembly?
- DEQ?
Who is in charge?

Local governments?
We need the revenue! Regional impacts are the state’s problem!

Electric Utility?
We have an obligation to serve any customer that requests power.

General Assembly?
Approving land uses is the purview of localities, not the state.

DEQ?
We evaluate permits individually and have no framework for evaluating cumulative impacts.

FERC?
This is Virginia's issue, we just regulate interstate transmission.

Virginia State Corporation Commission?
We regulate the utilities within the guidance set forth in the Virginia Code.

PJM?
We just operate a competitive market and ensure reliability!
Virginia cannot continue down this path.
In summary:

- Explosive growth of data centers requires massive amounts of energy and energy infrastructure.
- Burden of air, water, grid, and community impacts is falling on communities.
- Threatening Virginia’s clean energy future, the environment and our communities.
- Costs of infrastructure are borne unfairly by existing ratepayers.
What needs to happen?

- Better planning and monitoring
- Greater transparency
- Full impacts understood
- Improved standards and innovation
- Industry paying their fair share
- Mitigation
What needs to happen?

- **Better planning and monitoring**
  regional/state plan that guides development and monitors impacts

- **Greater transparency**
  clear information made available about energy demands, water use, cost of infrastructure on a project and cumulative basis, etc.

- **Full impacts understood**
  policies that require local government to consider the regional impacts of proposed data centers

- **Improved standards and innovation**
  better standards for sustainable construction, sustainable power, innovative solutions in the energy and data center sectors, and onsite energy efficiency

- **Industry paying their fair share**
  data center industry pays for the energy infrastructure they need, relieving the rate payers of this financial obligation

- **Mitigation**
  more robust mitigation paid for by developers to offset impacts to communities and environment
So what are we doing?
Working at **local, state, and even national** level…

---

**Wednesday's historic data center denial in Loudoun**

*Posted on March 15, 2024 by Gem Bingol*

The following text was sent out via email on Mar. 15, 2024. Sign up for PEC email alerts →

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Residents gathered outside the hearing to show their support for a new approach to data center approvals in Loudoun. Credit: Gem Bingol/PEC
Spreading the word and pushing for reform...
Lobbying...
Advocating for state legislative changes...

MITIGATING DATA CENTER DEVELOPMENT'S IMPACTS
LAND USE REFORM

EXECUTIVE SUMMARY
Virginia is home to the largest concentration of data centers in the world, widely cited as hosting 70% of global internet traffic. This massive industry is growing very fast, requiring huge amounts of energy, land, and water to operate. As a result, widespread community impacts exist. The Commonwealth does not currently have any regulatory oversight of data center development and localities continue to approve more facilities without considering the cumulative impacts.

The explosive growth of data center threats to local state efforts to meet climate goals, improve air and water quality, advance land conservation, and protect natural and state parks.

CHALLENGE
Data center development in Virginia has been accelerating for years with the hub in northern Virginia known as the largest in the world. Recently, demand has exploded throughout the state, with building requests larger than in Big Box stores and as tall as 50 stories with multiple buildings within the same footprint. Many of these developments are new projects in environmentally sensitive areas near our national, state, and local parks, and in close proximity to our rivers and streams, and in rural areas requiring costly new electrical infrastructure. Others are adjacent to residential neighborhoods, schools, medical facilities, and nursing homes.

THE GIGANTIC FOOTPRINT OF THE DATA CENTER INDUSTRY THREATENS REGIONAL POWER, LAND, CONSERVATION, AND AIR & WATER QUALITY

The footprint of this industry is gigantic and threatens regional power supply, water quality, land conservation, and air quality beyond individual localities reviewing the application. A single data center building now uses between 50-90MW of power at peak demand which is more than 15,000 households.* Data centers now make up 2% of Dominion Energy Virginia’s power load.* See SURGING ENERGY DEMAND FROM DATA CENTERS, pg 105. A data center can also consume 5-6 million gallons of water a day for cooling—the equivalent of a small city’s overall annual consumption. Data centers consume massive amounts of land for buildings and data storage. A large data center, for example, could cover the equivalent of a football field.

The growing data center footprint is an increasing amount of capital infrastructure, which is also driving increased costs for energy, water, and other resources.

SOLUTION
Despite Virginia’s high concentrations of new data centers, the state lacks critical information about their impacts on our environment and energy grid. Currently, data center approval processes are made unilaterally by localities, which have a strong financial incentive to approve proposals without considering the broader statewide impacts. A comprehensive study of the impacts of data center development on the Commonwealth’s electrical grid, environment, and natural resources, environmental justice concerns, and ability to meet climate goals is critically needed to protect our communities especially those residents most vulnerable to utility rate hikes, air pollution, and climate impacts.

The Commonwealth must also establish a regulatory framework that ensures transparency and accountability in the approval process for new data centers. This framework should include a comprehensive review of the potential impacts on the Commonwealth’s electrical grid, environment, and natural resources, environmental justice concerns, and ability to meet climate goals. A comprehensive study of the impacts of data center development on the Commonwealth’s electrical grid, environment, and natural resources, environmental justice concerns, and ability to meet climate goals is critically needed to protect our communities especially those residents most vulnerable to utility rate hikes, air pollution, and climate impacts.

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Tell Congress: Support the Artificial Intelligence Environmental Impacts Act

Posted on April 18, 2022 by PEC

Despite the growing importance and presence of data centers in American life, Congress has yet to pass any comprehensive federal legislation to address how data centers, the backbone of the cloud, impact our physical world.

Data centers have a staggering impact on our communities and the environment. These buildings consume massive amounts of energy 24/7, and that demand is already threatening the reliability of our electric grid infrastructure in many parts of the country. Meeting this growing demand also makes averting the worst of climate change more difficult by spurring new fossil fuel generation. In addition to energy, these buildings can require large quantities of fresh water for cooling to keep servers up and running.

Take Action
What can you do?

- **Ask County and Town officials** to assess what’s already approved and the cumulative impacts of additional sites.
- **Reach out to state elected officials** and ask them to support data center reform legislation at state level.
- **Tell Congress** to support the Artificial Intelligence Environmental Impacts Act.
- **Attend Dominion meetings** on the Morrisville-Vint Hill-Wishing Star line.
What can you do?

- **Stay informed** on other local and state/federal opportunities to act

- **Share information** with friends, family, contacts and neighbors.
  - Share the video
  - Forward our follow-up
  - There is lots of great info at pecva.org/datacenters

- **Financially support** the local efforts and the broader campaign needed!
Questions?
“Never doubt that a small group of thoughtful, committed citizens can change the world. Indeed, it is the only thing that ever has”  -Margaret Mead