

The Growing Impacts of Data Centers on Our Neighbors and God's Creation

March 5th, 2026



The Growing Impacts of Data Centers on Our Neighbors and God's Creation

RECORDING

The webinar is being recorded and a link to the recording will be sent to everyone who registered within the next 24-48 hours.

Questions

Please submit your questions in the Q/A box.

Chat

Please remember to be respectful and civil in all chat interactions.

The Growing Impacts of Data Centers on Our Neighbors and God's Creation

A Lenten Prayer

Adapted from [Help me to listen to the voice of creation](#)
Prayer used in [2026 US Bishops' Lenten Call for Eco-Conversion](#)

O God,
During this season of Lent,
draw us into the desert, a place of fasting and prayer,
removed from the distractions of the world.
Help us listen to the voice of creation.

Turn our hearts to you.
In our innermost space,
let us listen more carefully
to creation, to others and to you.
Help us listen to the voice of creation.

As we are touched in this listening
by your incarnational presence,
remind us of your love and mercy,
your initiative and activity.
Help us listen to the voice of creation.

Show us your attentiveness
to the cry of the earth and cry of the poor
to the little ones wounded by a throw-away culture,
and to those suffering due to natural disasters.
Help us listen to the voice of creation.

Listening to *the voice of creation*,
help us to join in holy witness
to protect those most vulnerable
and to protect our common home.

Amen.

The Growing Impacts of Data Centers on Our Neighbors and God's Creation



Antiqua et Nova

Note on the Relationship Between
Artificial Intelligence
and Human Intelligence
January 2025

- Explores AI's anthropological and ethical implications
- Encourages tech advancements while prioritizing harm mitigation and the promotion of the common good



AI's Sustainability and Climate Challenges: A Catholic Response to Protect Our Common Home

February 2025
(Includes "Give up Needless A! for Lent")

The Growing Impacts of Data Centers on Our Neighbors and God's Creation



Amanda Garcia

Senior Attorney

Southern Environmental Law Center (SELC)



Ann Bennett

Chair

Sierra Club,

Virginia Chapter's Data Center Campaign



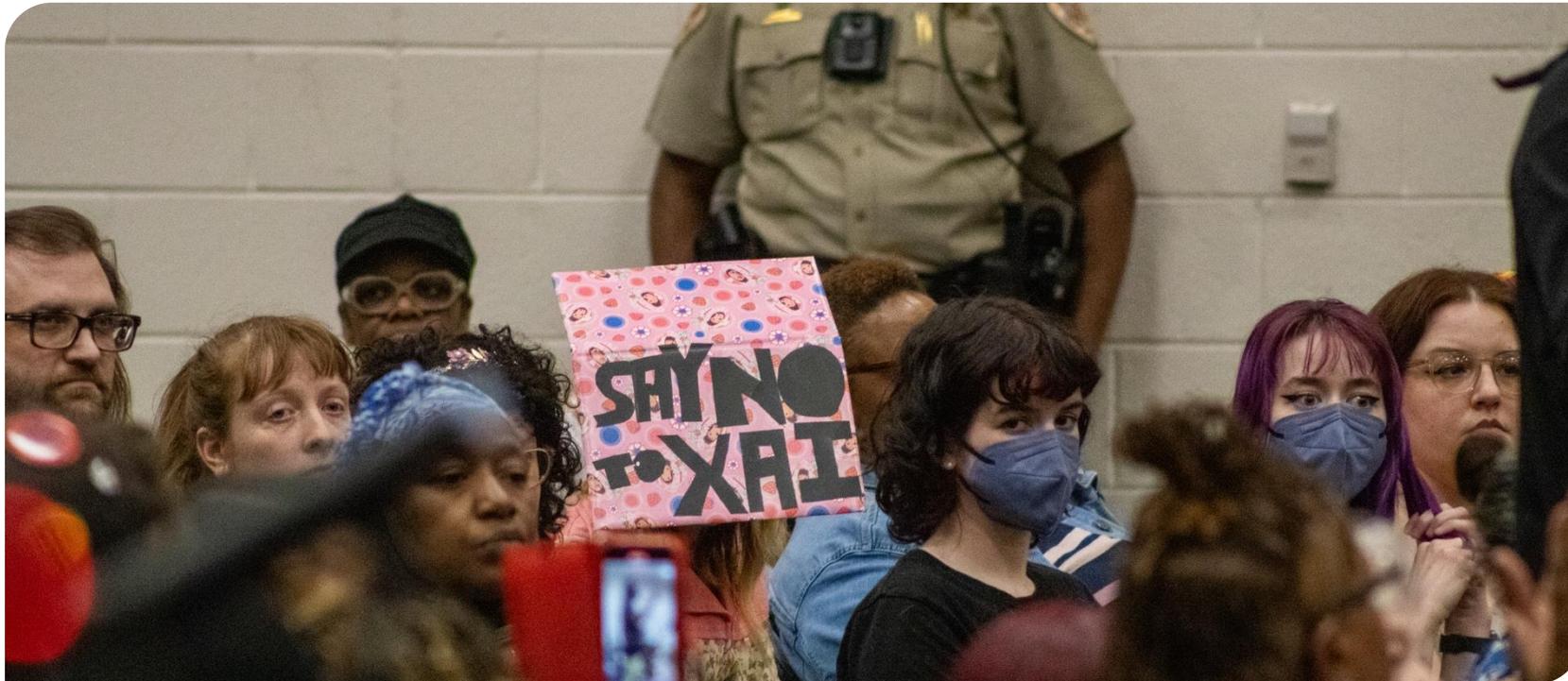
Robin Lewis

Director of Climate Equity
Interfaith Power and Light DMV
(IPL DMV)

Moderator: Paz Artaza-Regan, Catholic Climate Covenant

Data Centers, Environmental Justice and Energy Affordability

Catholic Climate Covenant, March 2026



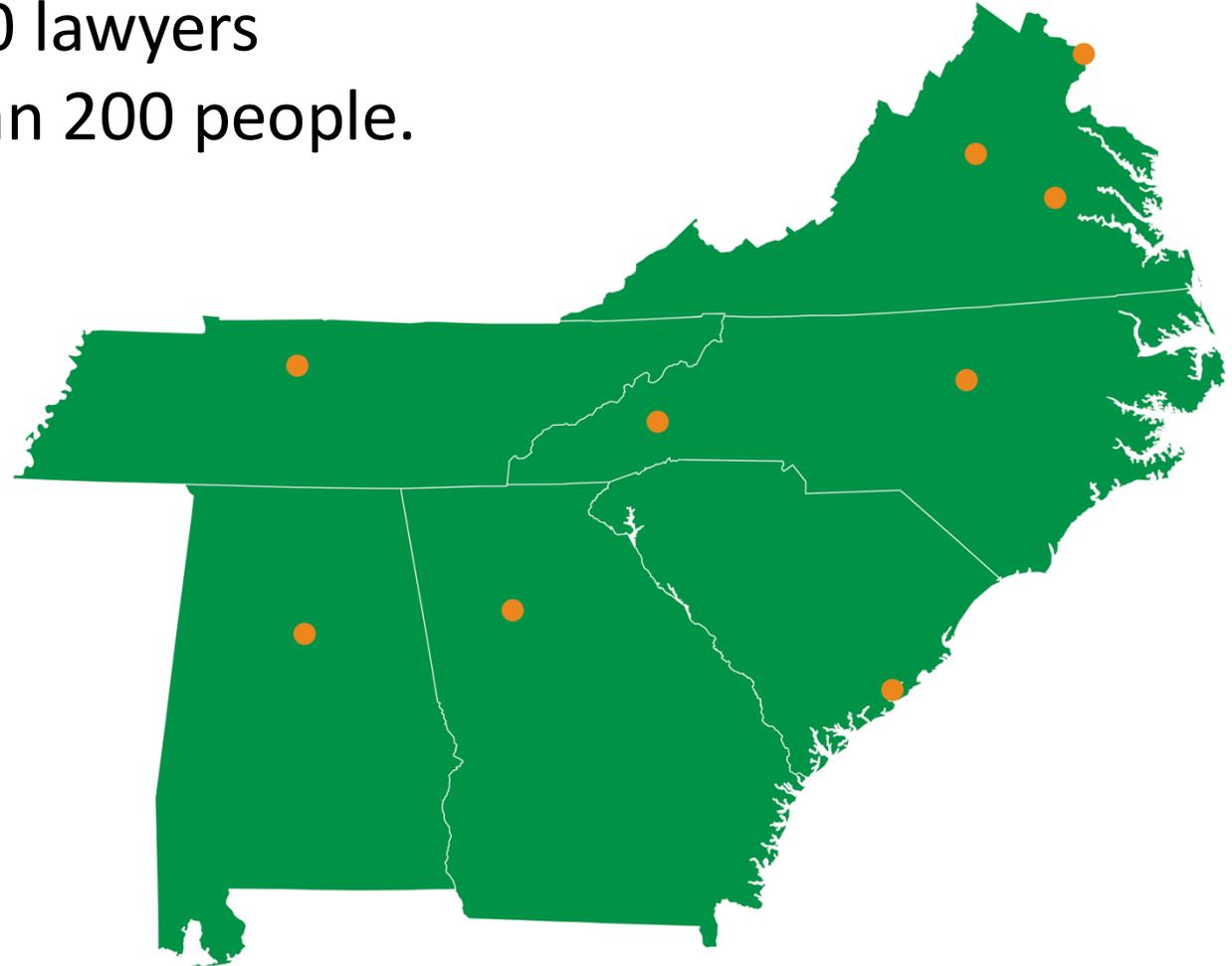
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Amanda Garcia
Senior Attorney

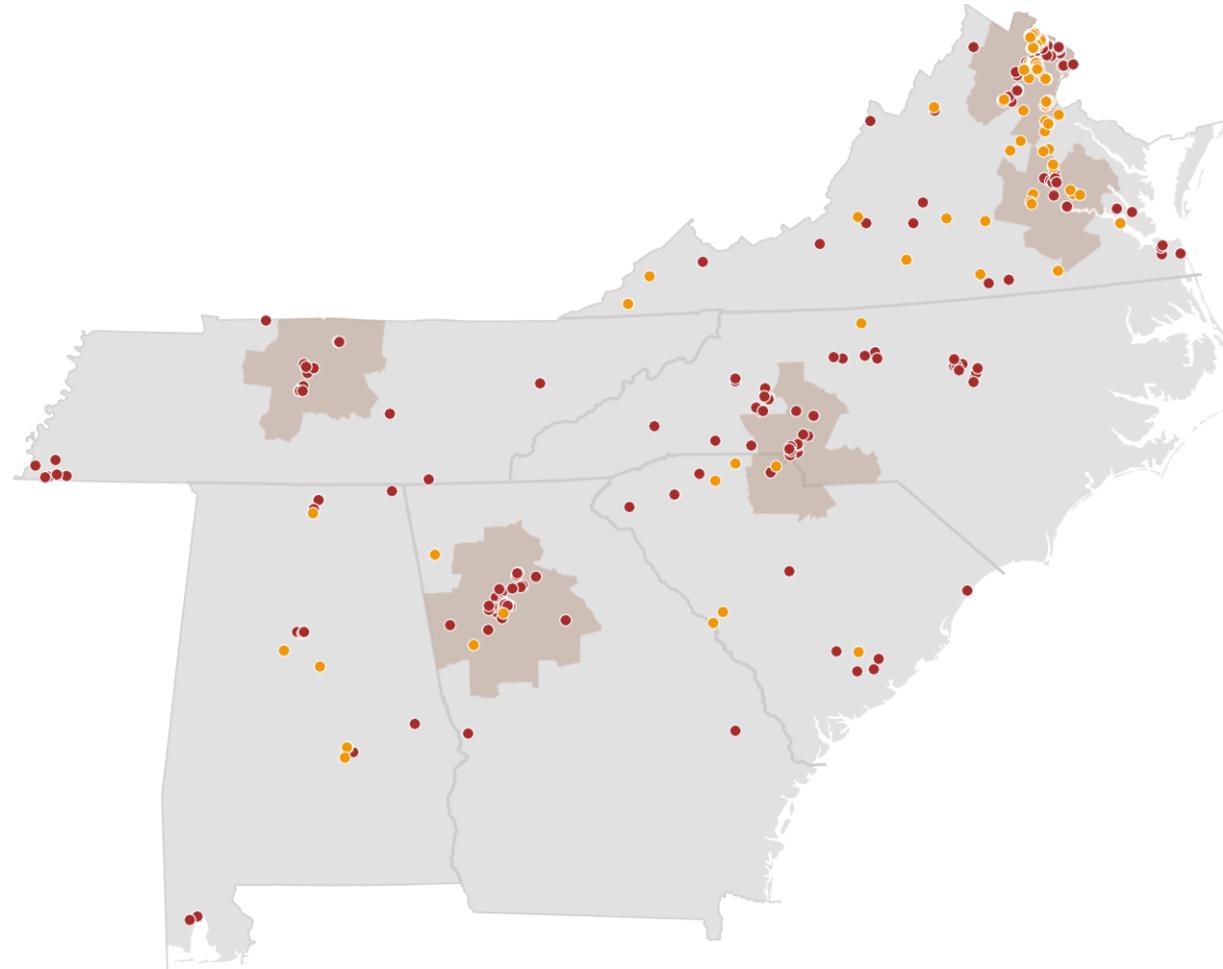
Southern Environmental Law Center

SELC employs more than 100 lawyers
with a total staff of more than 200 people.

- Charlottesville, VA (HQ)
- Chapel Hill, NC
- Asheville, NC
- Atlanta, GA
- Birmingham, AL
- Charleston, SC
- Nashville, TN
- Richmond, VA
- Washington, D.C.



Data center development is booming in the South.



0 25 50 100
Miles

Map created by: Miller Cochran
(mcochran@selcnc.org)
Last updated: August 08, 2025
Sources: Piedmont Environmental Council, Data Center Map, GotColo,
Datacenters.com, US Census Bureau, government and company websites

Legend
● Existing
● Proposed
■ Major Metro Areas



View from the ground of turbines at Colossus 1



©Brandon Dill

View from the air of turbines at xAI Colossus 1



Thermal photograph of xAI facility, Steven Jones and SouthWings
(April 23, 2025)

xAI Footprint in South Memphis and Southaven Airshed

Industrial Sites

- xAI
- TVA Gas Plants

Community Sites

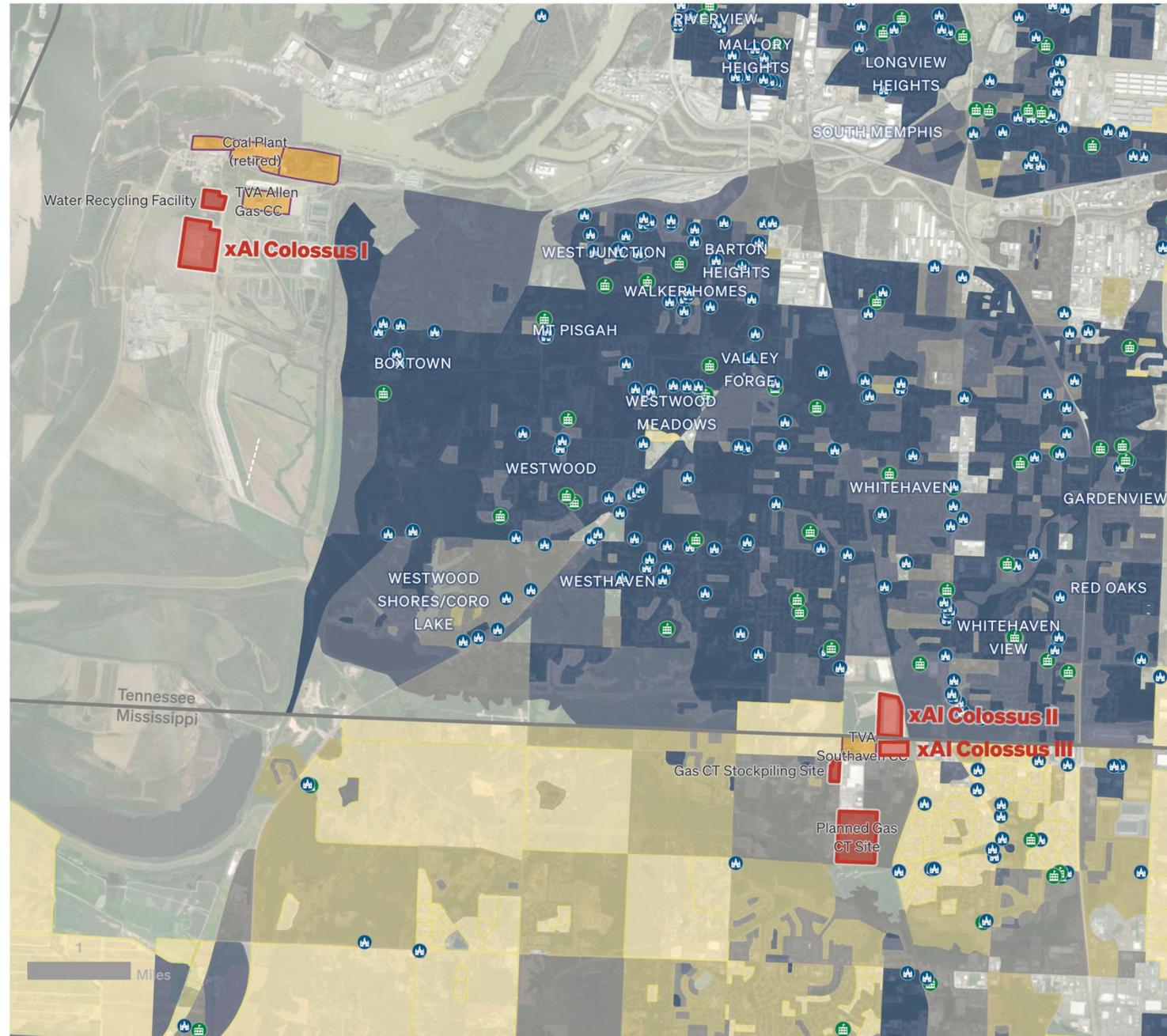
- Ⓜ Church
- Ⓜ Public K-12 School

%POC (Census Block)*

- Less than 50%
- 50% to 75%
- 75% to 90%
- 90% to 99%
- Over 99%

*Areas that are not shaded are unpopulated.

Map by: Jovian Sackett, GISP
 (jsackett@selcnc.org)
 Last updated: 2/16/2026
 Sources: Memphis and Shelby County Division of Planning and Development, National Center for Education Statistics, EPA, USDOT, US Census Bureau, ESRI



Communities fight back

- The 17 Principles of EJ
- The Jemez Principles of Organizing
- The Frontline Framework (NAACP)



Key Environmental Justice Concerns



©Eric Hilt/SELC

- Transparency/information to make informed decisions
- A seat at the table before a data center moves in
- Empty promises/lack of enforceability or accountability
- Energy needs and where the power will come from
- Air pollution
- Water use and consumption and where the water will come from
- Infrastructure needs and bill impacts (water, gas, power, etc.)
- Overbuilding by utilities based on data center demand projections

Resources

[SELC-Regional-DataCenter-Factsheet.pdf](#)

[Getting It Right: Local Approaches to Data Center Development - Southern Environmental Law Center](#)

[Stop Dirty Data Centers | NAACP](#)



**SOUTHERN
ENVIRONMENTAL
LAW
CENTER**

selc.org

Addressing Unconstrained Demand of Data Centers in Virginia



**SIERRA
CLUB**

Presentation by:
Ann Bennett

Data Center Issues Chair
Virginia Chapter Sierra Club

Data Centers

Loudoun County (photos by Hugh Kenny, PEC)



Who Wants More Data Center Growth?



New, 4-story construction in Ashburn, Loudoun County

- **Amazon, Microsoft, Google and Meta**
- Companies like QTS, Compass, Digital Realty, Equinix, Iron Mountain
- Most are not headquartered in Virginia
- Land owners, land speculators
- Local Government
- Utilities and electric cooperatives
- Water Utilities
- Energy Companies
- Renewable Energy providers
- Regional Grid Operator – PJM
- Companies and consumers that rely on data and storage
- Economic Development Authorities
- Construction Companies
- Some labor

Why Virginia?

- Proximity to DC
- Tech sector in Loudoun County
- Cheap Power
 - Virginia has one of the lowest commercial rates in the US, lower than any state in the northeast
 - Commercial rates are lower than residential rates
- Lax State and Local Regulations
- Tax Revenue for Localities
 - Local competition for new projects
- Seabed Fiber Optic Cables
- Lots of dark fiber connections to the national fiber network
- State Policies
- **State Subsidies**



Sully, Fairfax County, AWS right next to county ball fields

Basic Data Late Spring, Fall & Winter 2025-2026

Jurisdictions that currently have or plan to have data centers are the counties of: Albemarle, Appomattox, **Botetourt**, Caroline, Charles City, Chesterfield, Culpeper, Fairfax, Fauquier, Franklin, Frederick, **Goochland**, Halifax, Hanover, Henrico, King George, Loudoun, Louisa, Mecklenburg, Newport News, Orange, Pittsylvania, Powhatan, Prince Edward, Prince William, Roanoke, Rockbridge, Russell, Spotsylvania, Stafford, Surry, Tazewell, York, and Wise; Cities of Fredericksburg, Harrisonburg, Manassas, Manassas Park, Norfolk, Virginia Beach and the Town of Leesburg.

| Acres | Square Footage | # Buildings | Known Power (GW) | 2025-2026 |
|---------|----------------|-------------|------------------|-----------|
| 108,831 | 391,232,108 | 1296 | 60,305.36 | Spring |
| 113,009 | 415,000,000 | 1405 | 68.5 GW | Fall |
| 115,547 | 431,000,000 | 1492 | 68.9 GW | Winter |

Virginia has dug itself into a big hole

****** A staggering **70%** of the world's data passes through
Northern Virginia

****** Northern Virginia is #1 followed by China

****** Virginia is in a **UNIQUE situation**



Stafford Garrett/GWV Data Center 2.1 GW
7,900,000 square feet, 19 data centers, 7 substations



Google in Leesburg, Virginia

Over **431,000,000 square feet** of data center development (= **66 Pentagons!**)

An **energy crisis** where there are not good answers of how to meet energy demand

Inadequate state **energy planning**

Localities that are approving data centers with **little regulation**

Transmission lines and **additional infrastructure** proposed in many locations

Costs that will be borne by the ratepayers

Energy Infrastructure - Substations

Dominion Substation - Ashburn, Loudoun County (147)



Substation W&OD Trail (photo by Hugh Kenny, PEC)



Energy Infrastructure

Clearcutting the W&OD for data center transmission in Vienna, Virginia



Northstar Blvd, Aldie, Loudoun County



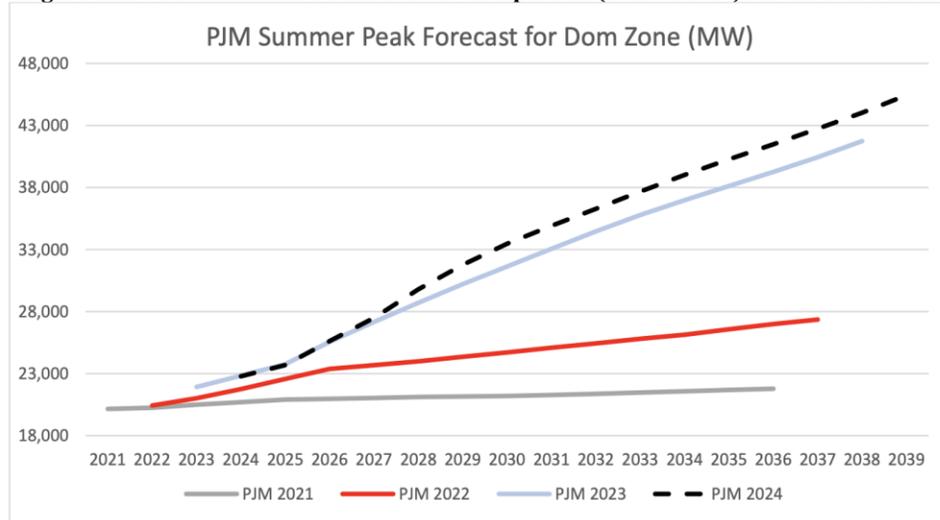
Bill to notify localities of maintenance related impacts HB 492 (Siebold) and SB 89 (Salim)

Growth In Energy Demand for Data Centers

- More than **half of all U.S. data center energy consumption occurs in Virginia.**
- Virginia is the #2 importer of energy
- Dominion has contracts for 70 GW

PJM's 2024 Load Forecast for the DOM Zone increased for the fourth year in a row relative to the prior year's forecast, as can be seen in Figure 2.1.3. Key drivers to the year-over-year change in the PJM DOM Zone Load Forecast include: 1) increases in data center load growth focused in the NOVEC and ODEC service territories, and 2) revisions to the PJM EV load projections.

Figure 2.1.3: PJM Summer Peak Forecast Comparison (2021 to 2024) for the DOM Zone



The DOM Zone's peak demand is growing faster than all other PJM zones



QTS/Blackstone/Panda 774 MW Natural Gas Plant
Leesburg, Virginia

Coal – Going backwards

How much new power is needed for Virginia's Data Center Build Out?

JLARC "Unconstrained Demand" Model is 30,000 MW or 30 GW

Coal

West Virginia Coals Plant Retirements have already been delayed.

Clover Power Station in Halifax County provides 877 megawatts
(powers 285,000 homes)

13 GW = 15 new coal plants

30 GW = 34 new coal plants

60 GW = 68 new coal plants

Nuclear Power

North Anna Plant provides 1.7 GW (powers 450,000 homes)

13 GW = 8 new North Annas

30 GW = 18 new North Annas

= 100 Small Nuclear Reactors (SMRs) at 300 MW each

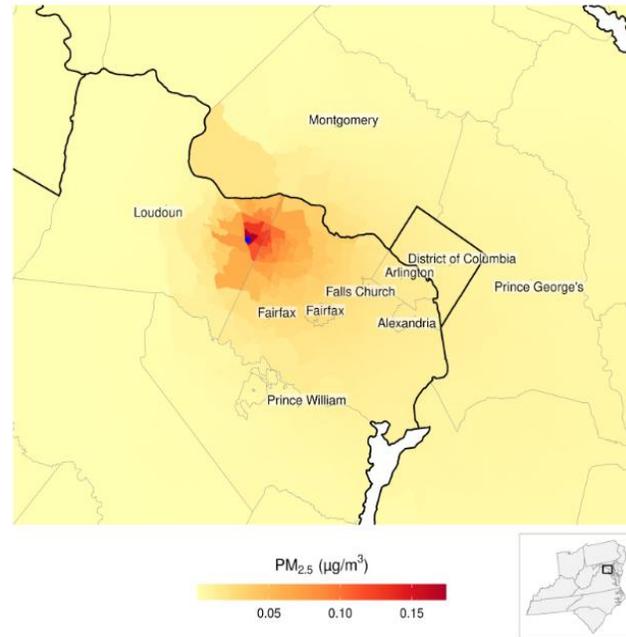


Growth In Energy Demand “Behind the Meter”

New Study evaluates the public-health and economic impacts of fine particulate matter (PM_{2.5}) emissions from Vantage’s permitted on-site power system, which includes eight natural gas turbines and 51 diesel generators.

If Vantage’s annual impacts remain at this level, its **total estimated health damages could total \$265 million – \$495 million over 5 years and \$1.59 billion – \$2.97 billion over 30 years, corresponding to 17–33 premature deaths over 5 years and 102–195 deaths over 30 years.**

The study, conducted by EmPower Analytics Group and commissioned by The Piedmont Environmental Council,



Meta, Louisiana



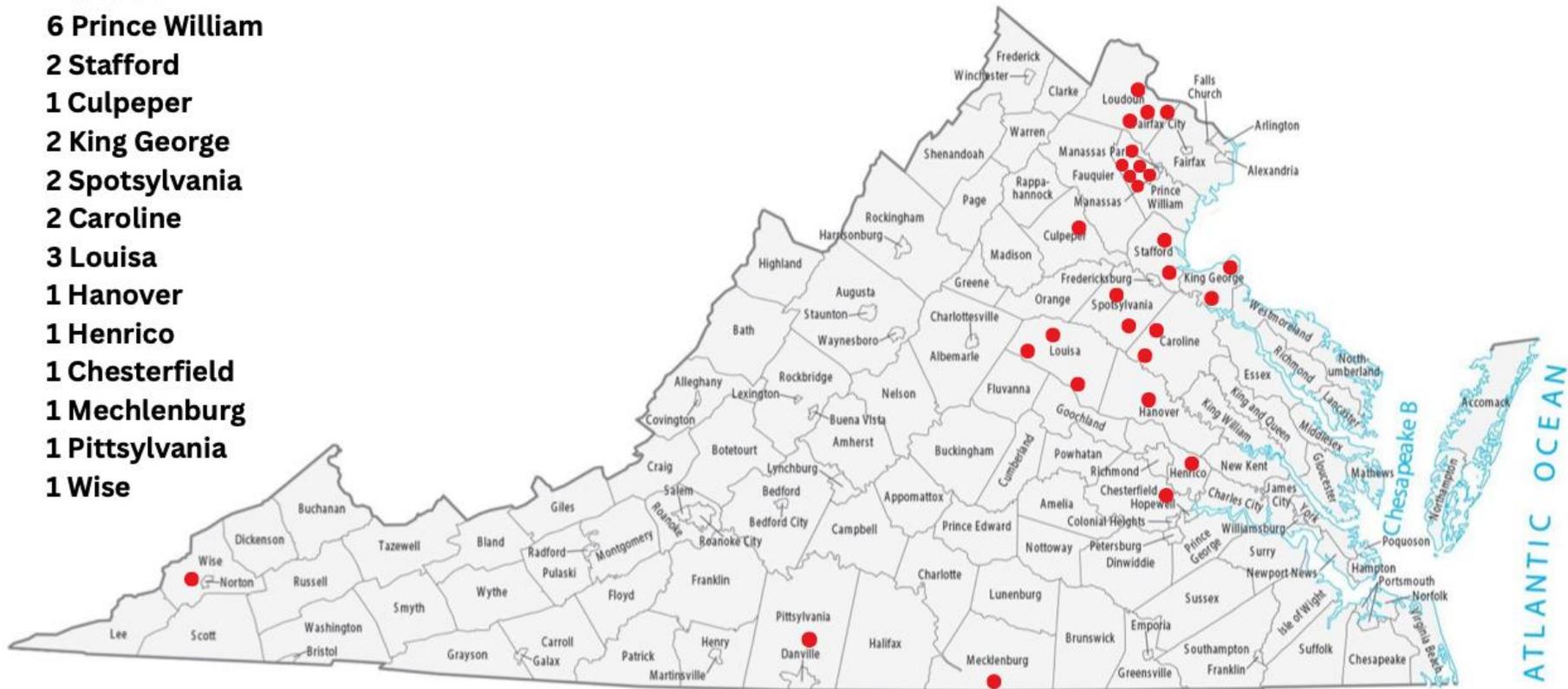
Vantage 2 Sterling, VA

28 Mega Projects Needing 37+ GW of Power

28 Mega Projects

Virginia

- 4 Loudoun
- 6 Prince William
- 2 Stafford
- 1 Culpeper
- 2 King George
- 2 Spotsylvania
- 2 Caroline
- 3 Louisa
- 1 Hanover
- 1 Henrico
- 1 Chesterfield
- 1 Mecklenburg
- 1 Pittsylvania
- 1 Wise



*likely projects based on available public information

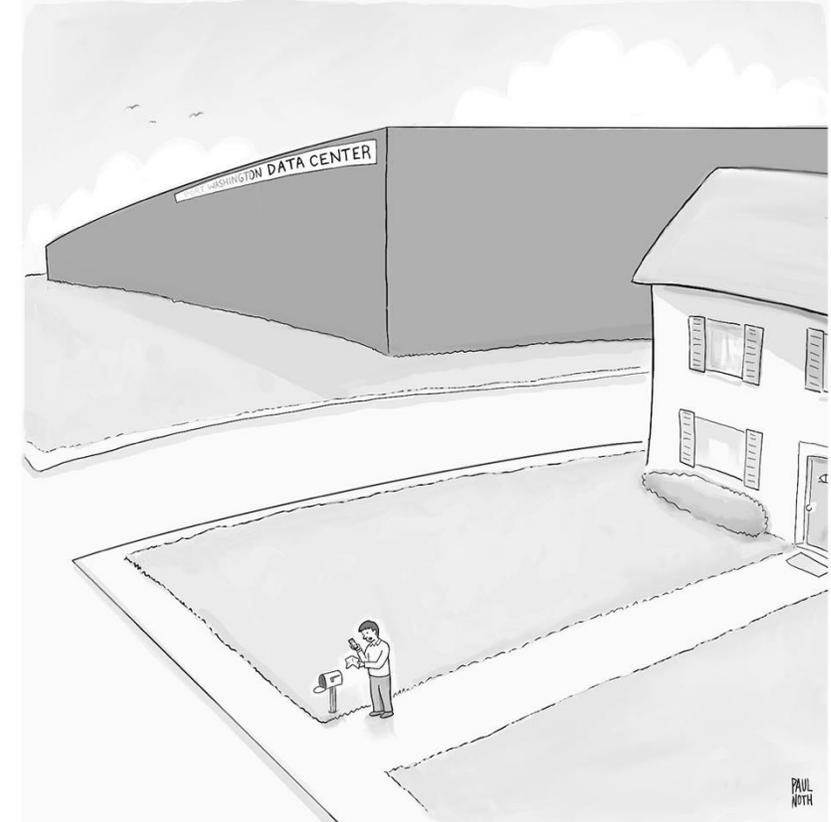
<https://gisgeography.com/virginia-county-map/>

Ratepayer Concerns

REGIONAL PJM AUCTIONS - Summer 2025 – A **22% increase on electricity** due costs due demand from data centers and supply can't keep up. Prices out of the biggest U.S. power auction, held by grid operator **PJM Interconnection**, hit \$329.17 a megawatt-day, roughly 22% higher than last year's record-high levels.

STATE RATE INCREASES APPROVED - Dominion Energy asks the **State Corporation Commission** for an average rate increase of \$21.43 per month on residential customers. (15%) **Dominion** proposed a **base rate increase for infrastructure** for residential customers that will add on an additional \$10.51 a month starting in 2027 and a proposed **fuel rate increase** that will add an average \$10.92 monthly rate for customers.

Costs of the **Federal** “Big Beautiful Bill”
Energy Innovation’s modeling and analysis suggests that the law’s nearly immediate repeal of several clean energy tax credits, they expect wholesale electricity prices to increase by 25 percent by 2030 and 74 percent by 2035, and that's going to increase electricity rates – between nine and 18 percent by 2035. Also, the US is going to lose out on 340 gigawatts of new electricity capacity by 2035.



“ChatGPT, why is my electric bill so high?”

Paul Noth
The New Yorker

Risks to Health and Air Quality : Diesel Fuel

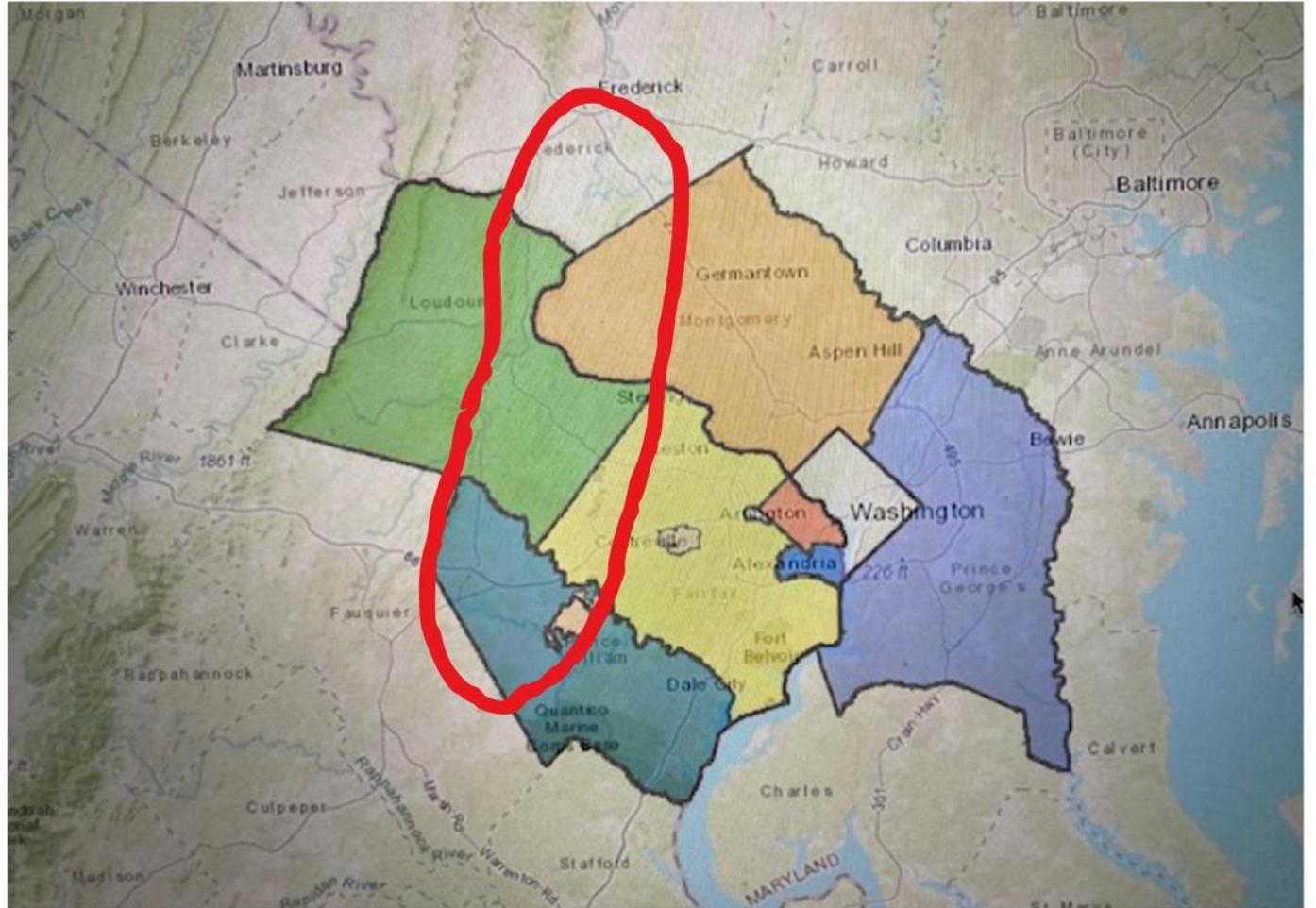
Diesel Generator Pollution Corridor

8,000 diesel generators
today...

20,000 or 30,000
tomorrow??

Threats to Clean Air Act
Non-Attainment Status

Threats to communities north
and east due to prevailing
winds from southwest



<https://www.ncpc.gov/maps/national-capital-region/>

The Look of Diesel Generators



Data Centers Are Running Generators



- Vantage Data Center in Sterling
- Powered by Natural Gas
- This is “behind the meter” power, not captured in the VCEA
- Was on Back up Power During the Storm
- Soot coming from diesel generators
- Very noisy per first hand accounts

Number of ALL Diesel Generators 2025

| Permitted Diesel Generators | | | | | | | |
|-----------------------------|--------------|-------------|----------------|-----------|------------|-------------|-------------|
| County | Amazon | Microsoft | QTS/Blackstone | Meta | Google | Other | Total |
| Loudoun | 2060 | 165 | 172 | 0 | 359 | 2274 | 5030 |
| Prince William | 859 | 46 | 159 | 0 | 0 | 818 | 1882 |
| Mecklenburg | 0 | 812 | 0 | 0 | 0 | 35 | 847 |
| Henrico | 0 | 0 | 555 | 92 | 0 | 11 | 658 |
| Fairfax | 302 | 0 | 0 | 0 | 0 | 76 | 378 |
| Fauquier | 40 | 14 | 0 | 0 | 0 | 9 | 63 |
| Other | 433 | 0 | 12 | 0 | 0 | 104 | 549 |
| Total | 3,694 | 1037 | 898 | 92 | 359 | 3327 | 9407 |

Added 456 Generators - most in Loudoun County

Number of “Non-Emergency” Diesel Generators

| Company | Address | City | County | Non-Emergency Generators | Emergency Generators |
|----------------|------------------------------|----------------|----------------|--------------------------|----------------------|
| AWS | 13860 Redskin Drive | Herndon | Fairfax | 70 | 4 |
| AWS | 22630 Dulles Summit Court | Sterling | Loudoun | 26 | 66 |
| Kareh/Iskandar | 21955 Loudoun County Parkway | Ashburn | Loudoun | 75 | 115 |
| Google | 20491 Goose Landing Lane | Leesburg | Loudoun | 130 | 123 |
| AWS | 45771 Maries Road | Sterling | Loudoun | 22 | 47 |
| Cyrus One | 43290 Old Ox Road | Sterling | Loudoun | 48 | 34 |
| Equinix | 22175 Beaumeade Circle | Ashburn | Loudoun | 26 | 11 |
| Digital Realty | 43695 Efficiency Drive | Sterling | Loudoun | 260 | 13 |
| Darab | 22210 Loudoun County Parkway | Ashburn | Loudoun | 248 | 0 |
| AWS | 43920 Lone Cedar Lane | Chantilly | Loudoun | 104 | 36 |
| Digital Realty | 9905 Godwin Drive | Manassas | Prince William | 262 | 4 |
| AWS | 9720 Dean Drive | Manassas | Prince William | 52 | 29 |
| AWS | 20575 Celtic Park Drive | Leesburg | Loudoun | 166 | 7 |
| AWS | 44254 Import Plaza | Ashburn | Loudoun | 96 | 60 |
| AWS | 22275 Lockridge Road | Sterling | Loudoun | | |
| AWS | 3901 Massaponax Church Road | Fredericksburg | Spotsylvania | 186 | 15 |
| AWS | 230 Haley Drive | Mineral | Louisa | 186 | 14 |
| | | | | 1,937 | 578 |
| | | | | 70% | 30% |

GA 2026 Diesel Generators Bills: **HB 507 (McAuliff)**

Virginia has seen a rapid increase in large data center development, along with a quiet but significant rise in diesel backup generators approved for “non-emergency” use. These generators are increasingly located near homes, schools, and neighborhoods.

Today, nearly 2,000 non-emergency diesel generators have been approved statewide—many clustered in high-density areas. These generators emit carbon dioxide and other harmful pollutants and can operate far more frequently than the public was originally led to believe. HB 507 responds to this growing public health concern by placing clear, reasonable limits on how these generators are used and improving transparency and oversight.

How this bill protects public health:

- **Limits non-emergency generator use.** The bill clarifies that carbon-emitting backup generators at data centers may only be used for emergency purposes and limits their operation to no more than 500 hours per year.
- **Encourages cleaner backup power.** Beginning July 1, 2027, data centers must rely on energy storage—not diesel generators—as their primary backup power source for at least two hours during outages.
- **Improves transparency for nearby residents.** DEQ must notify property owners within ¼ mile when backup generators operate continuously for more than four hours.
- **Requires emissions monitoring and public reporting.** Operators must install monitoring equipment, report emissions monthly, and make the data publicly available.
- **Strengthens air quality oversight.** Air quality monitoring sites must be installed near clusters of diesel generators in jurisdictions with high concentrations of data centers.
- **Protects children and vulnerable communities.** Public notification is required when new or modified generators are located within 3,000 feet of schools or daycare facilities.
- **Ensures long-term health protections.** DEQ and the Department of Health must evaluate cumulative health impacts and take action to reduce harmful emissions.

Carbon Emissions Risks: Who is responsible?

- The data center industry accounts for 2-3.7% of global carbon emissions, soon to surpass the airline industry
- Virginia State Law and local carbon goals at risk:
 - the Virginia Clean Economy Act goal 100% carbon-free energy by 2050
 - some localities have GHG emissions carbon neutrality goals.
 - Some localities have Energy Strategies (Loudoun)
 - Loudoun emissions – Up over 50% according to MWCOG
- Dominion's projections - 2023 plans (IRP), the utility projects to double greenhouse gas emissions to 36,000,000 metric tons by 2048*, due to massive growth in data centers and the requisite need for new energy capacity.

*See Executive Summary p. 4, options B and C most likely: <https://cdn-dominionenergy-prd-001.azureedge.net/-/media/pdfs/global/company/2023-va-integrated-resource-plan.pdf>

Impacts on Community – What to Do??

W&OD Trail with data centers on both sides



Photos by Hugh Kelly, PEC



Land Use Impacts

Impacts to residents and nearby landowners:

- Visual Impacts
- 24/7 Noise
- Inadequate Buffers
- Impervious Surface
- Diesel Fuel Transportation
- Air Pollution from Diesel Generators
- Living near Industrial Infrastructure
- Distribution Lines can be located in Resource Protection Areas



New AWS Data Center right behind Townhomes in Aldie, Loudoun

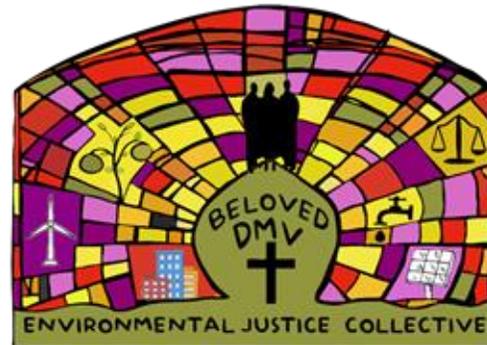
How to Protect Nearby Residents?



Limitations of Fencing



Impacts of by right development



BELOVED
DMV
ENVIRONMENTAL
JUSTICE
COLLECTIVE

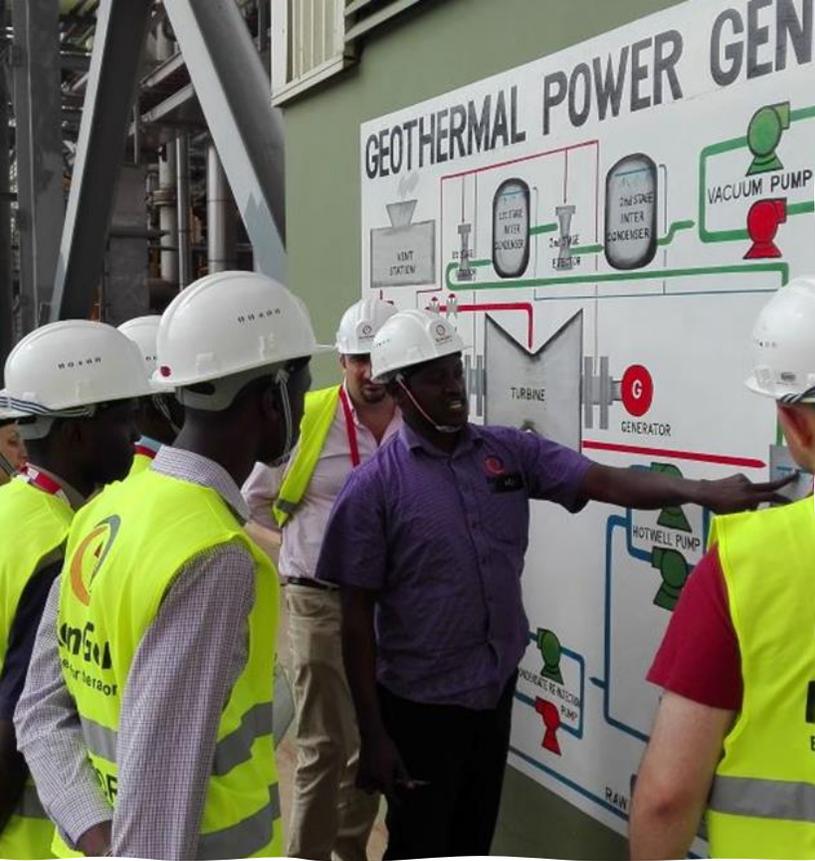
Interfaith Power & Light DMV

Our religious response to climate change.

IPL-DMV works with hundreds of congregations of all faiths across Maryland, DC, and Northern Virginia to save energy, go green, and respond to climate change.

- **Learning**
- **Going Green**
- **Taking Action**





Interfaith Power & Light DMV's Overarching Goals

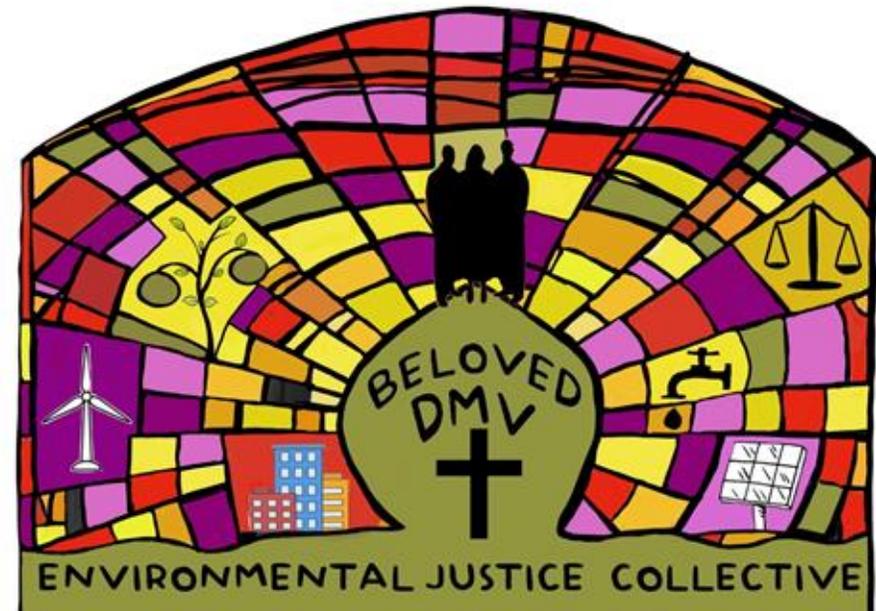
1. Advocating for Turning away from Burning/Electrification
2. Advocating for legislation that includes environmental justice and equity
3. Providing technical support for clean energy projects in congregations



Beloved DMV Environmental Justice Collective

The Beloved DMV Environmental Justice Collective (beloveddmv.org) is a group of Black clergy and green leaders in the DMV that advocates for environmental justice and sustainable practices within our houses of worship and beyond, hosted by Interfaith Power & Light DMV.

*We in the Black Church are **called** to be **shepherds of the Earth** and a **catalyst** for positive change in the communities that we serve.*



Environmental Justice issues result in Social Justice issues!

- Air pollution (Data Centers)
- Industrial Sites (Data Centers)
- Toxic Exposure (Data Centers)
- Water Safety (Data Centers)
- Energy Access (Data Centers)
- Healthy Homes (Data Centers)
- Food, Transit, Green space, Green Jobs
- Climate Resilience



Why should Faith Leaders Get with Data Center Issues?



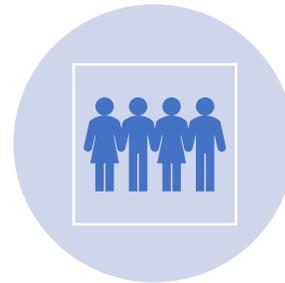
Environmental Justice



Communities'
involvement



Environmental impacts



People over Profits

What are the Environmental Justice Issues with Data Center Development?

- Energy Demands – More energy sources required
 - Energy Burden – Rates are rising due to infrastructure costs
 - Water Use and Discharge – Drinking and Groundwater Contamination
 - Zoning and siting – Overburdened and Underserved Communities
 - Pollution – Air, Water, and Noise Pollution
- 

Why Do
Communities
Difficulty
with
regulation?

County or City – Land Use,
Construction, Permits, Labor

State – Energy infrastructure,
Utility, Air, Water, Noise

Federal Government – Energy
infrastructure, Grid connections,
pipelines, air, water

David vs. Goliath – Why Should Faith Leaders Join the Fight?

- Indianapolis – Black Church Coalitions
- Northern VA – Faith leaders protesting in ‘Data Center Alley.’
- Southern States – BIPOC Coalitions in Louisiana, Mississippi, South Carolina
- Georgia, Illinois, Kentucky, Kansas, Ohio, Tennessee, Missouri, Idaho, Maryland, and Pennsylvania (moratoriums)

Bringing
Community real
wisdom to the
building of data
centers
communities.



What about the Legislative in VA and MD?

- More than 60 data center related Bills this session in VA and several in MD in 2026
 - State oversight of Development and Energy Infrastructure
 - Ratepayer Protection
 - Enhanced transparency
 - Peak Demand response
 - Tax Incentives
 - Environmental Zoning and Moratoria
 - Data Privacy
 - Cumulative Impact (MD CHERISH)



What Communities are speaking out in MD?

Frederick County – Referendum

Baltimore County – Moratorium

Prince George's County –
Moratorium and Task Force

Montgomery County – Legislation,
Task Force, Poss Moratorium

Baltimore City – Legislation



How can Faith Community Get Involved?

- Join in with local grassroots organizations – boots on the ground
- Host webinars, educational forums, etc., at houses of worship, etc.
- Encourage members to join advocacy events
- Lift-up communities in worship service, green teams, etc.
- Use AI with Real Wisdom – deliberately and purposefully

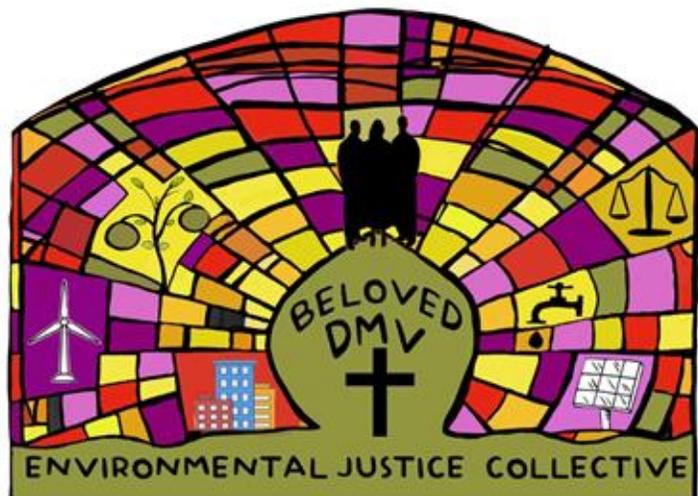


Interfaith Power & Light DMV's Real Wisdom Campaign



“ And let those who are
wise-hearted
build as You have instructed.”

HEBREW BIBLE EXODUS 35:10



Robin Lewis (she/her)

Director for Climate Equity

robin@gwipl.org | 301-775-9757

ipldmv.org

Beloveddmv.org



Thank you!

Sincerely,
Future Generations