

Better Understanding Impacts of Data Centers



Piedmont
Environmental
Council

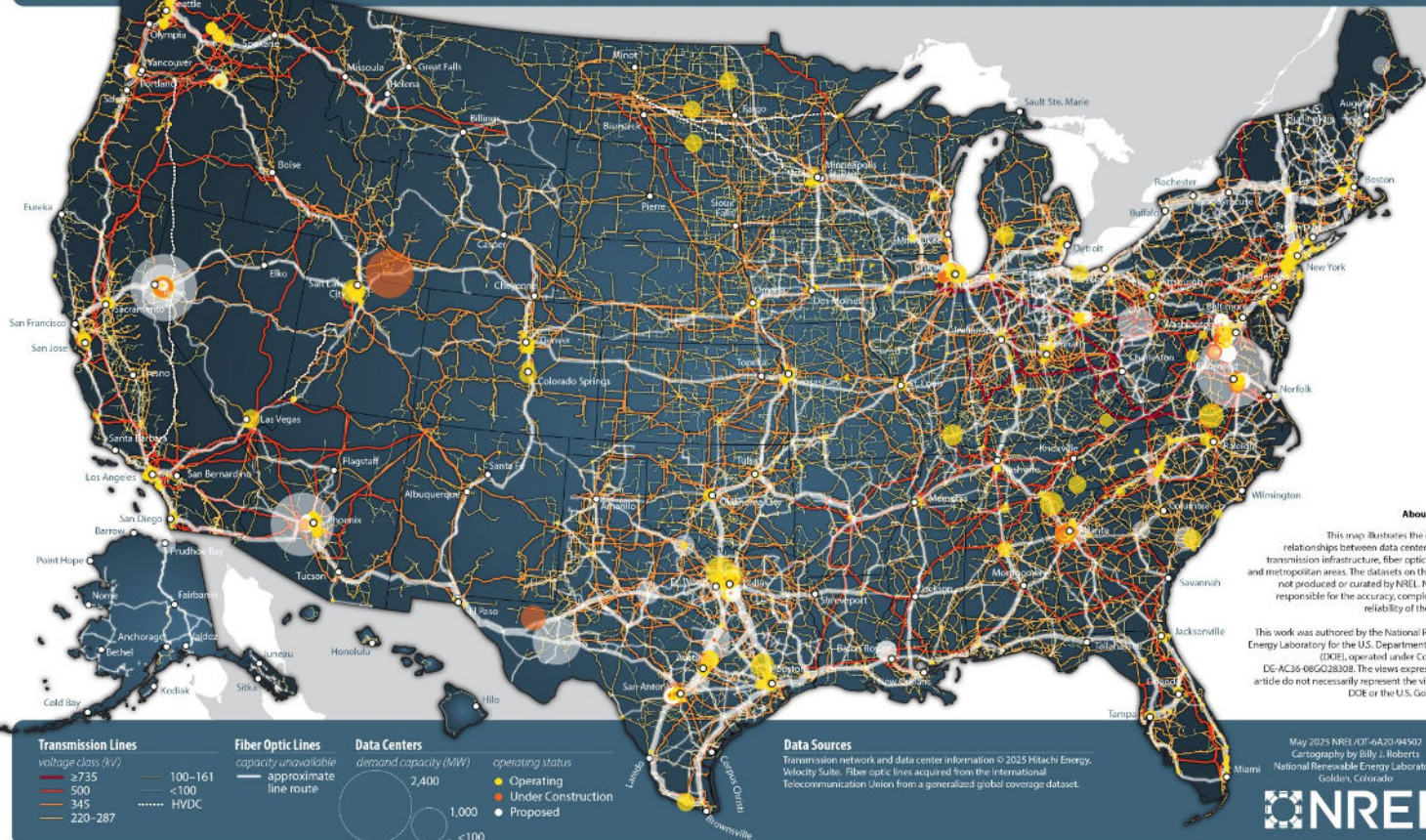
*South Mountain Partnership
Chris Miller, President,
January 30, 2026*

Today's Presentation

- **Current Trends and State of Energy Planning**
- **Impact on Energy System and Ratepayers**
- **Evaluating Local Data Center Proposals**
- **Recommendations for Best Practices**



Data Center Infrastructure in the United States, 2025



About the Map

This map illustrates the geospatial relationships between data center locations, transmission infrastructure, fiber optic networks, and metropolitan areas. The datasets on this map are not produced or curated by NREL. NREL is not responsible for the accuracy, completeness, or reliability of the datasets.

This work was authored by the National Renewable Energy Laboratory for the U.S. Department of Energy (DOE), operated under Contract No. DE-AC35-08GG28308. The views expressed in the article do not necessarily represent the views of the DOE or the U.S. Government.

Transmission Lines

- voltage class (kV)
- ≥735
- 500
- 345
- 220-287

Fiber Optic Lines

- capacity unavailable
- approximate line route
- 100-161
- <100
- HVDC

Data Centers

- demand capacity (MW)
- 2,400
- 1,000
- <100

operating status

- Operating
- Under Construction
- Proposed

Data Sources

Transmission network and data center information © 2025 Hitachi Energy, Velocity Suite. Fiber optic lines acquired from the International Telecommunication Union from a generalized global coverage dataset.

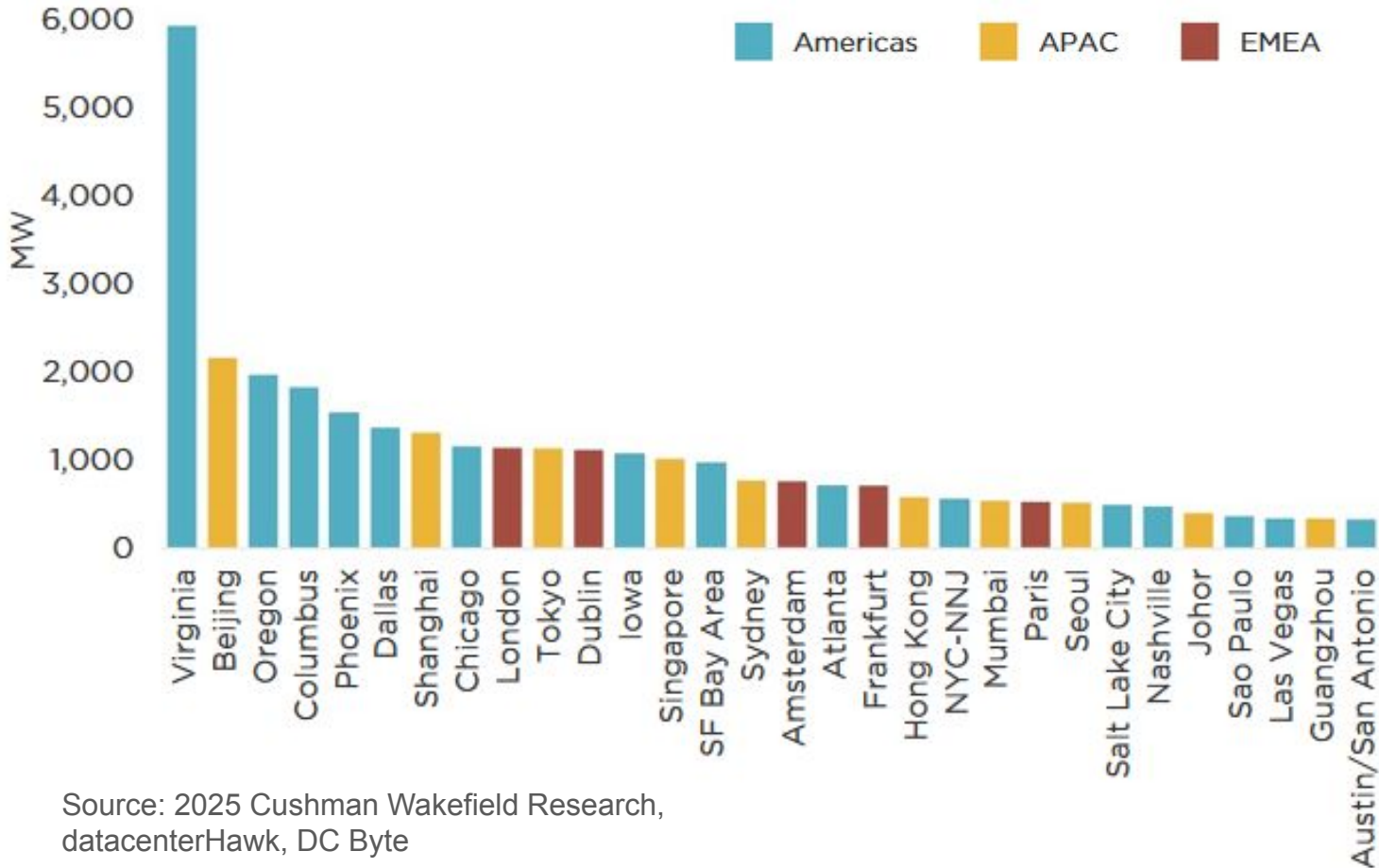
May 2025 NREL AOT-6A20-94502
Cartography by Billy J. Roberts
National Renewable Energy Laboratory
Golden, Colorado



Top Markets by Operational IT Load



CUSHMAN & WAKEFIELD



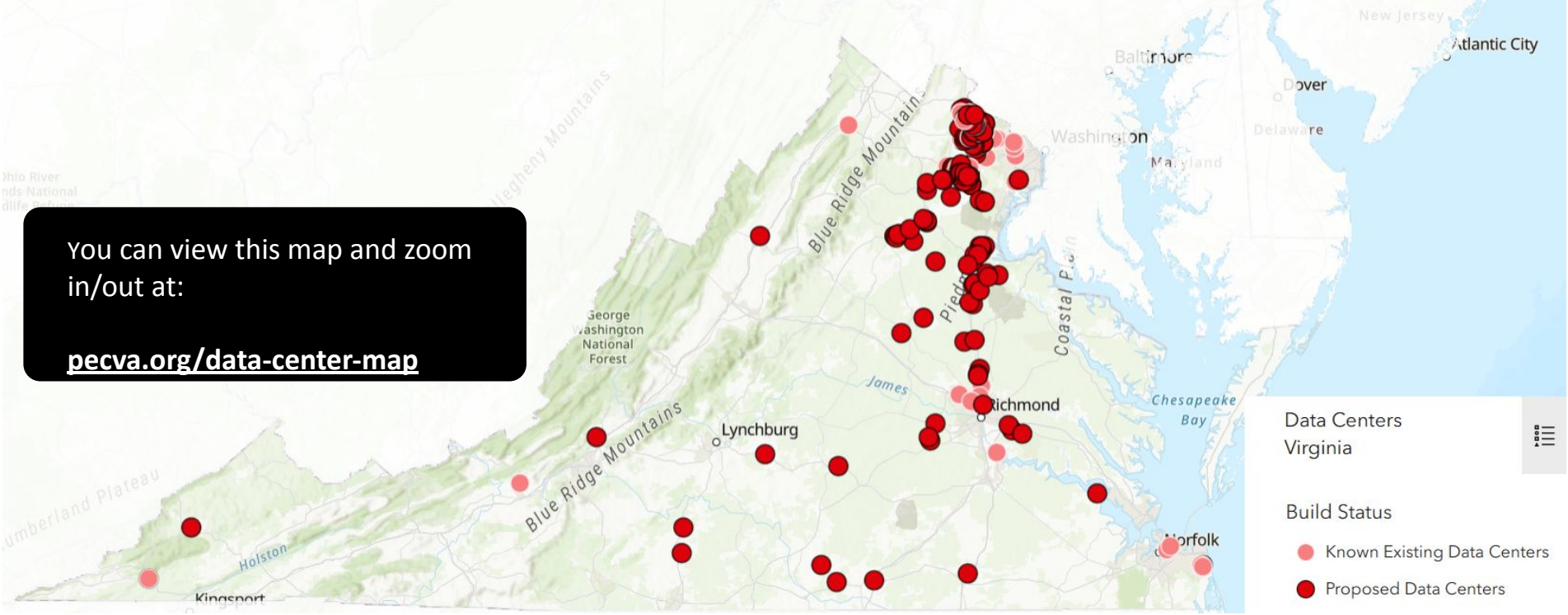
Source: 2025 Cushman Wakefield Research, datacenterHawk, DC Byte

Data Center Projects In Virginia



Existing and Proposed Data Centers - A Web Map

You can view this map and zoom in/out at:
pecva.org/data-center-map



Data Centers Virginia

Build Status

- Known Existing Data Centers
- Proposed Data Centers

**Currently about 60 million square feet existing
or being constructed in the state**

**There's another 350 million square feet
approved or in the pipeline**

Data Centers Consume a Huge Amount of Electricity



Photo Credit: Hugh Kenny, PEC



Photo Credit: Hugh Kenny, PEC

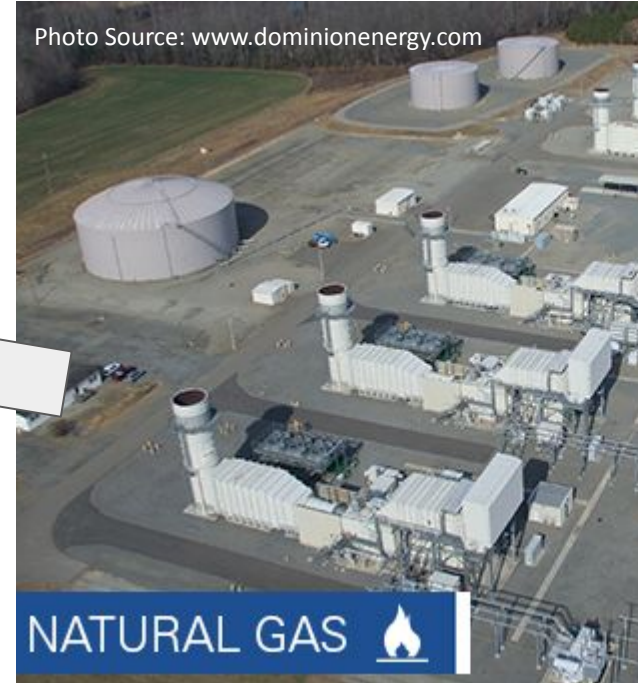
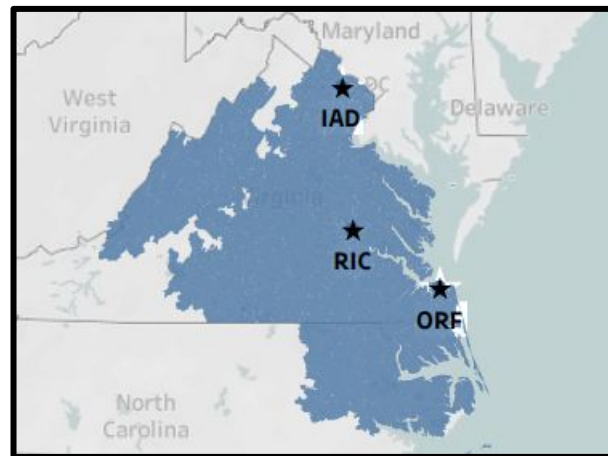
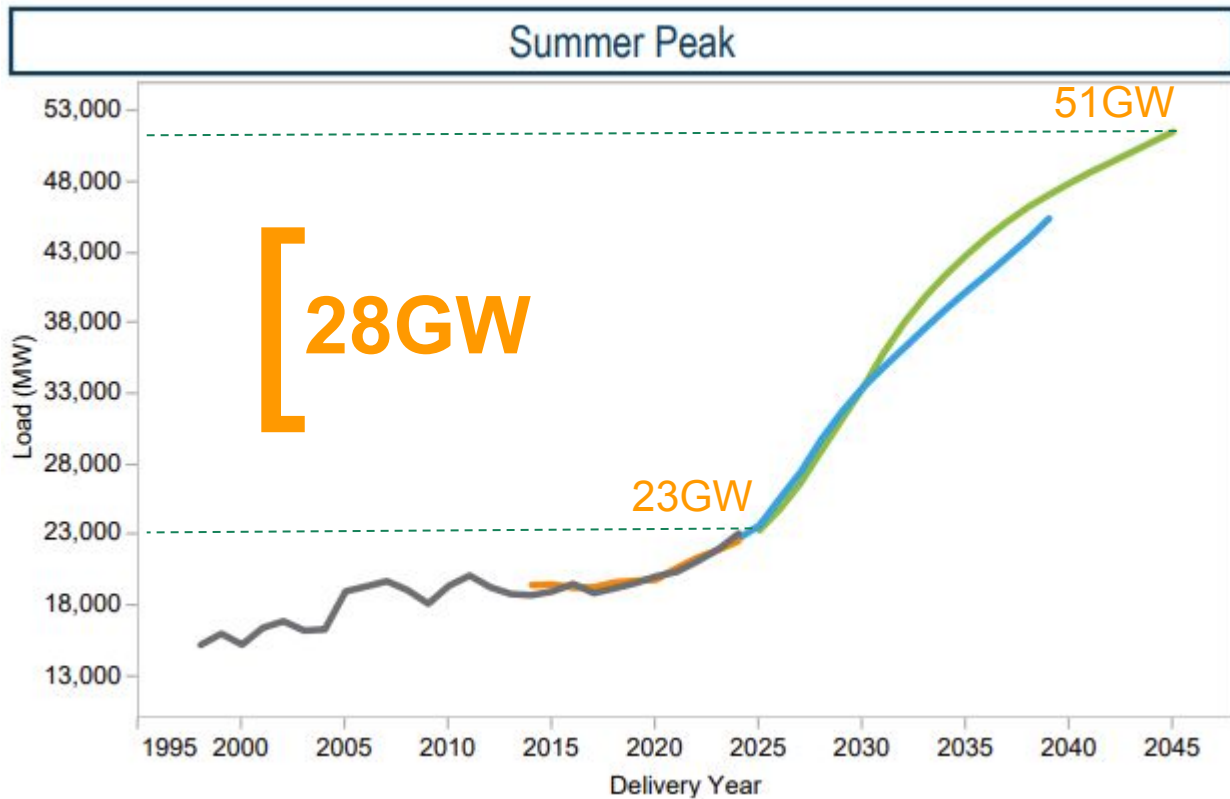


Photo Source: www.dominionenergy.com

NATURAL GAS 

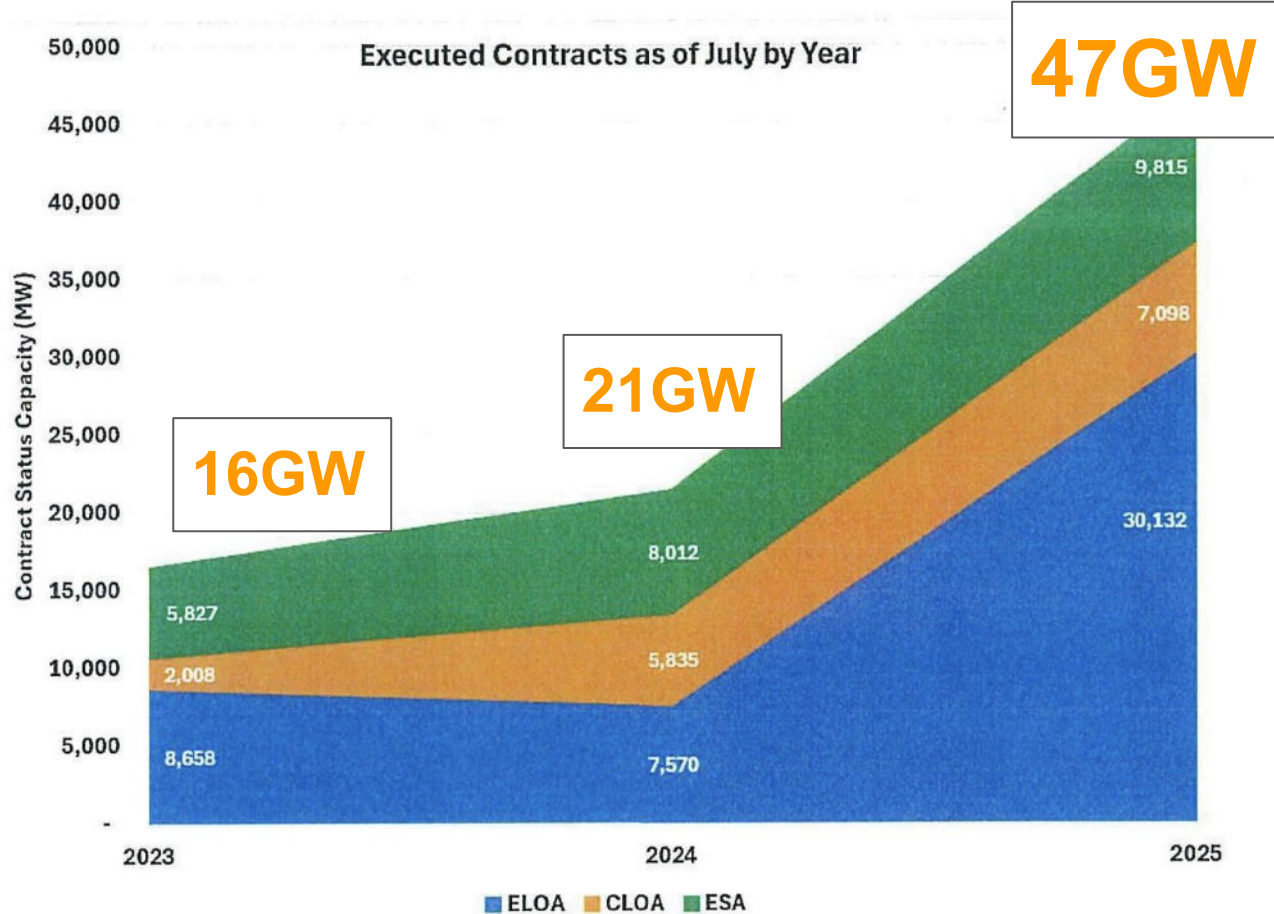
Skyrocketing Load Demand

Dominion Energy's 20 Year Forecast



Green = 2025 projection
Blue = 2024 projection

Dominion's Contracts with Data Center Customers



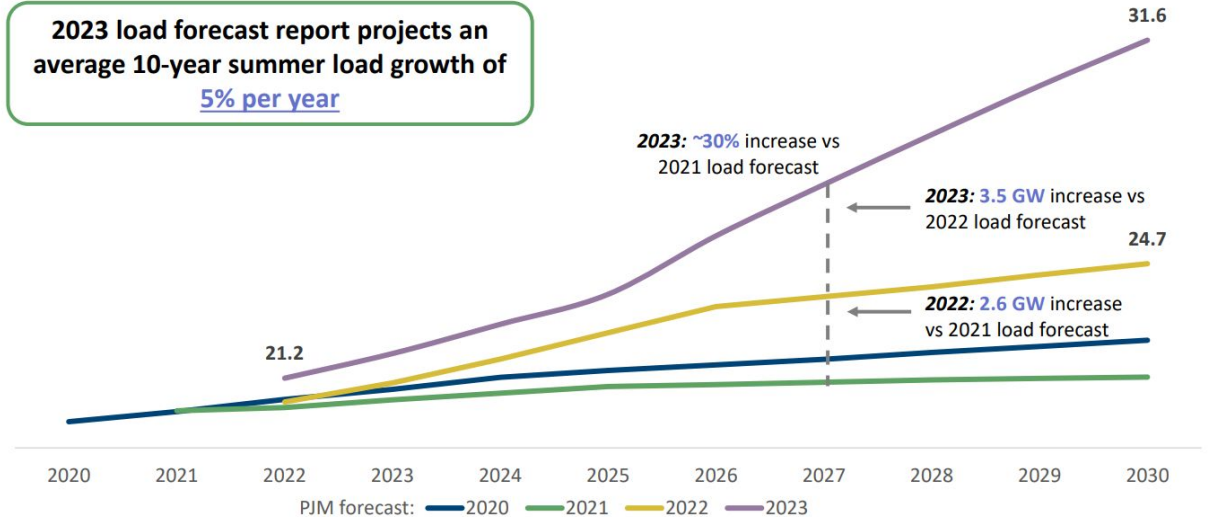
Data and Energy Mutually Beneficial Relationship

Booming data center sector requires mirrored growth in generation and transmission

Dominion Energy Virginia

PJM DOM Zone summer peak load (GW)¹

2023 load forecast report projects an average 10-year summer load growth of 5% per year



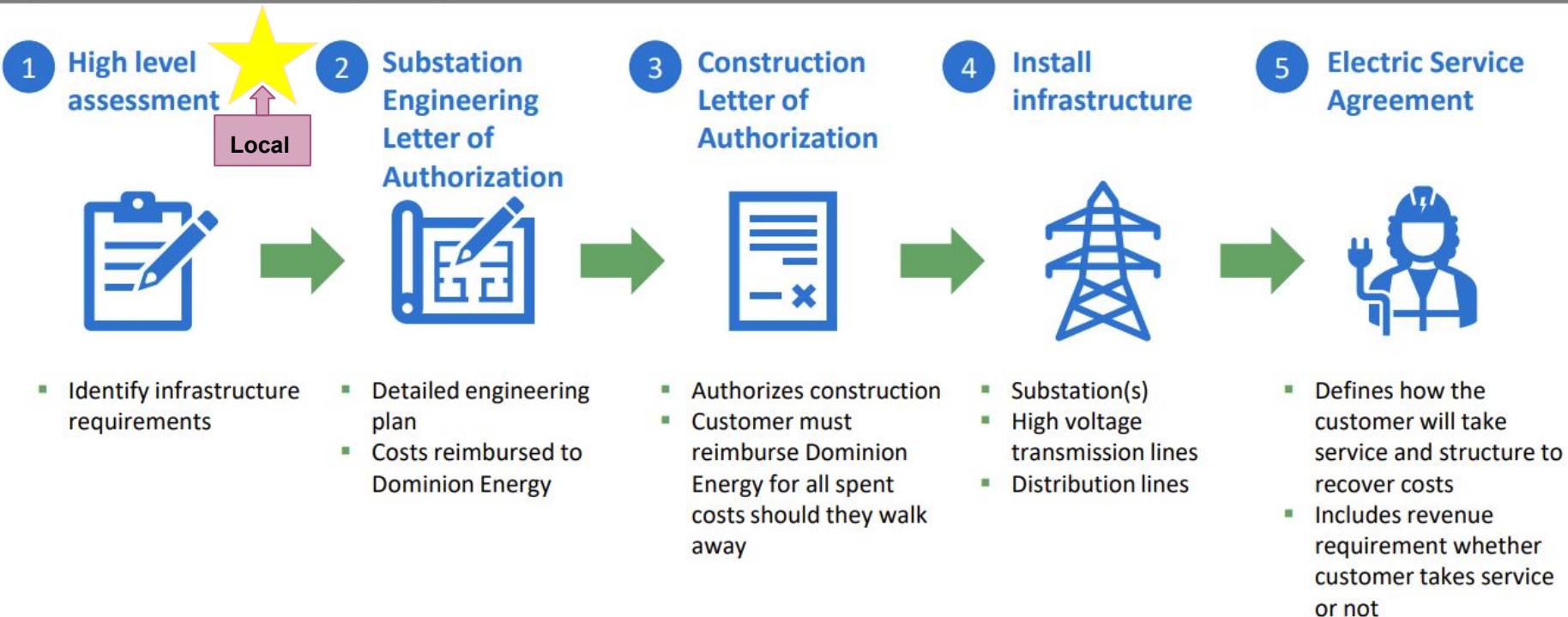
Source: Dominion Q4 2022 earnings presentation



2 Dominion Energy Virginia

Data center request process

Typical data center request process from contact to connection



Development and infrastructure costs are incurred by the customer

Utilities have an obligation to serve all load requests for land uses approved by localities and have authority to request use of eminent domain from the state through a Certificate of Public Convenience and Necessity (CPCN)

Code of Virginia

[Table of Contents](#) » [Title 56. Public Service Companies](#) » [Chapter 10. Heat, Light, Power, Water and Other Utility Companies Generally](#) » [Article 2. Services, Rates, Charges, Etc.](#) » [§ 56-234. Duty to furnish adequate service at reasonable and uniform rates](#)

§ 56-234. Duty to furnish adequate service at reasonable and uniform rates.

A. It shall be the duty of every public utility to furnish reasonably adequate service and facilities at reasonable and just rates to any person, firm or corporation along its lines desiring same. Notwithstanding any other provision of law:

Impact on Energy System and Ratepayers

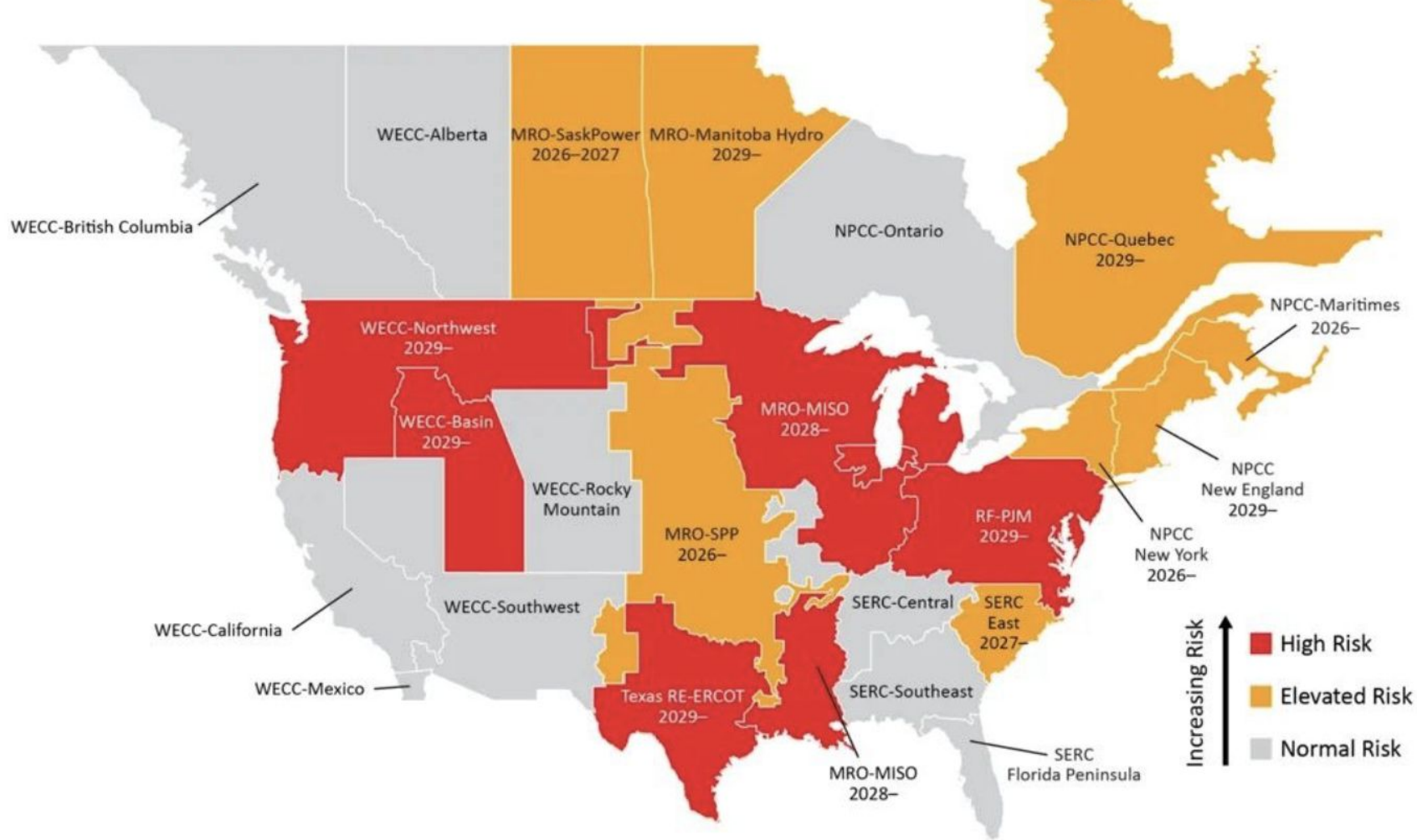
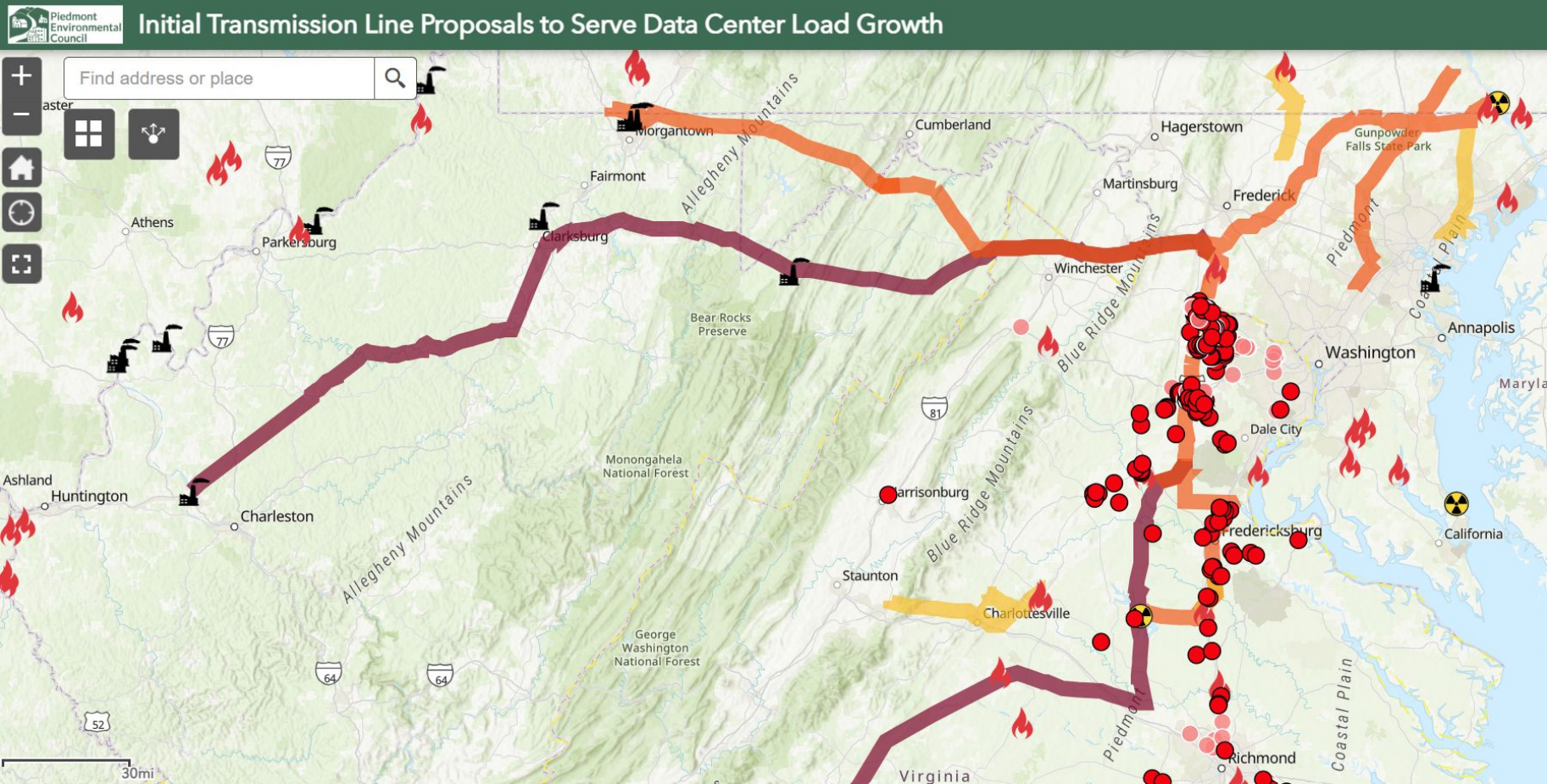


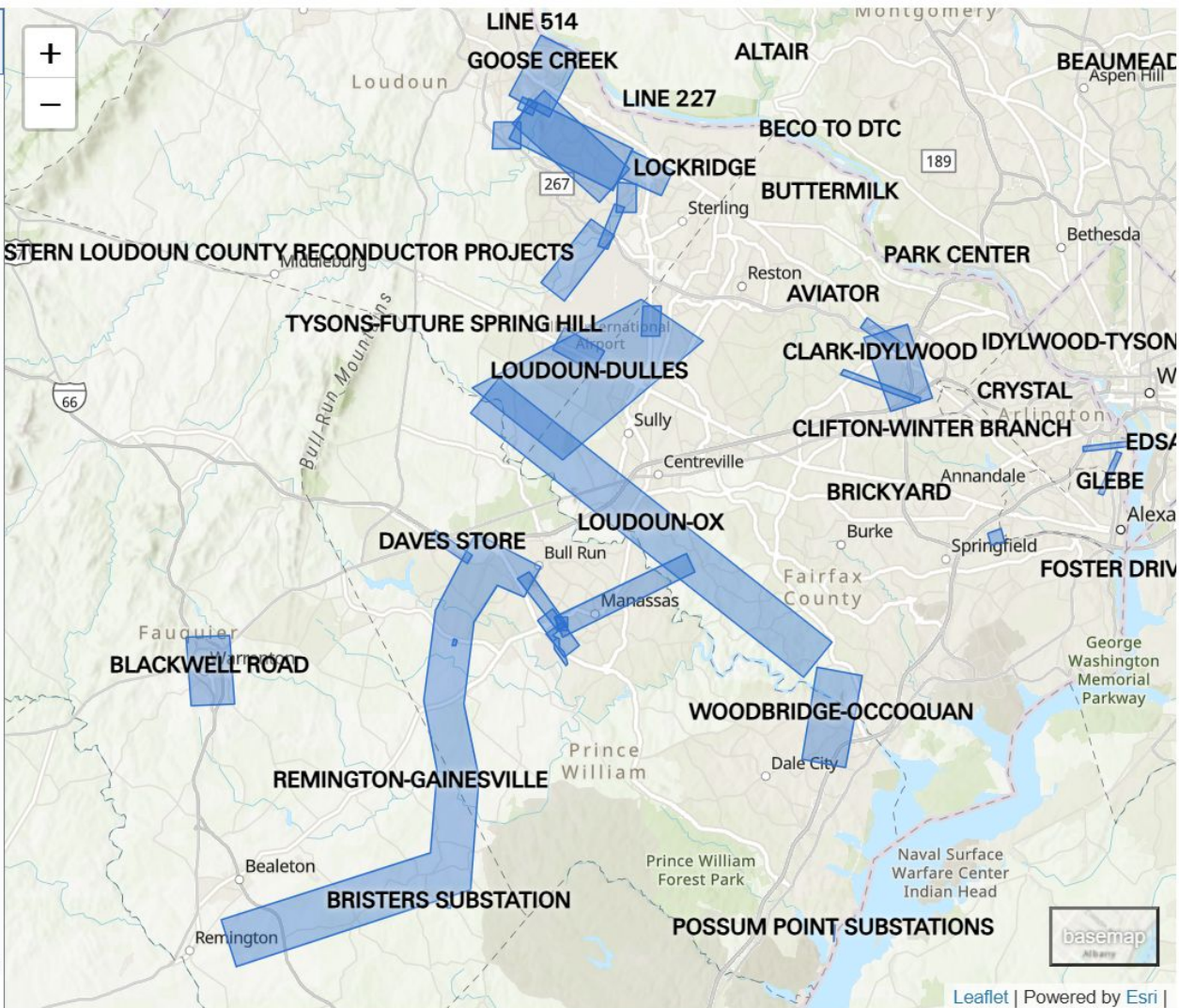
Figure 1: Risk Area Summary 2026–2030

Shows highest risk classification that occurs in the first 5 years and states initial year of occurrence

\$12 Billion in Regional Transmission Lines Being Planned



Northern Virginia	—
Altair	+
Aviator	+
Beaumeade-Pleasant View	+
BECO to DTC	+
Blackwell Road	+
Brickyard	+
Bristers Substation	+
Bristers-Minnieville	+
Buttermilk	+
Cannon Branch-Winters Branch	+
Cirrus-Keyser	+
Clark-Idylwood	+
Clifton-Winter Branch	+



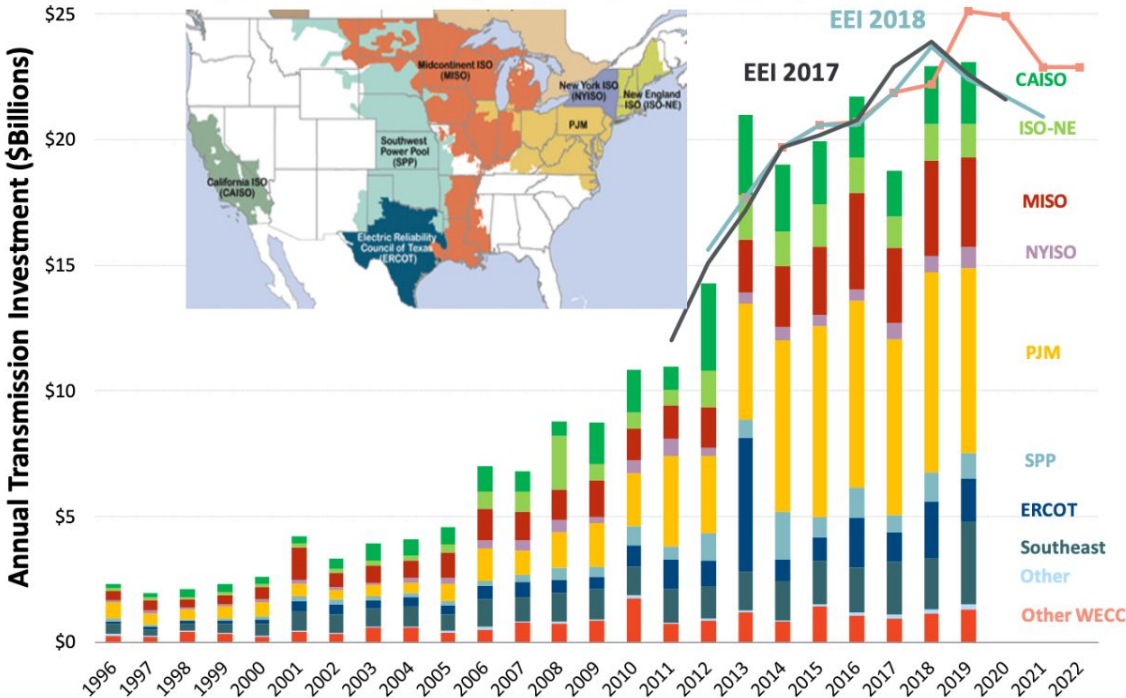
Approved Transmission Line Projects by Need Driver (from Dominion IRP)

- \$2.4 billion driven **solely by data centers** (32% of total)
- \$3.3 billion driven **partially by data centers** (44% of total)
- \$1.8 billion **replacement/other growth** (24% of total)

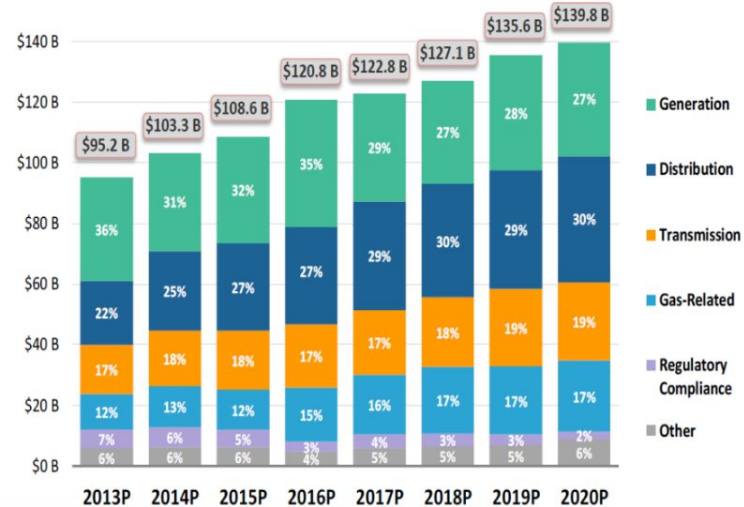
Transmission Investment is at Historically High Levels



Annual Transmission Investment
As reported to FERC by Region (1996 – 2019)



\$20-25 billion in annual U.S. transmission investment: almost 20% of total by regulated utilities



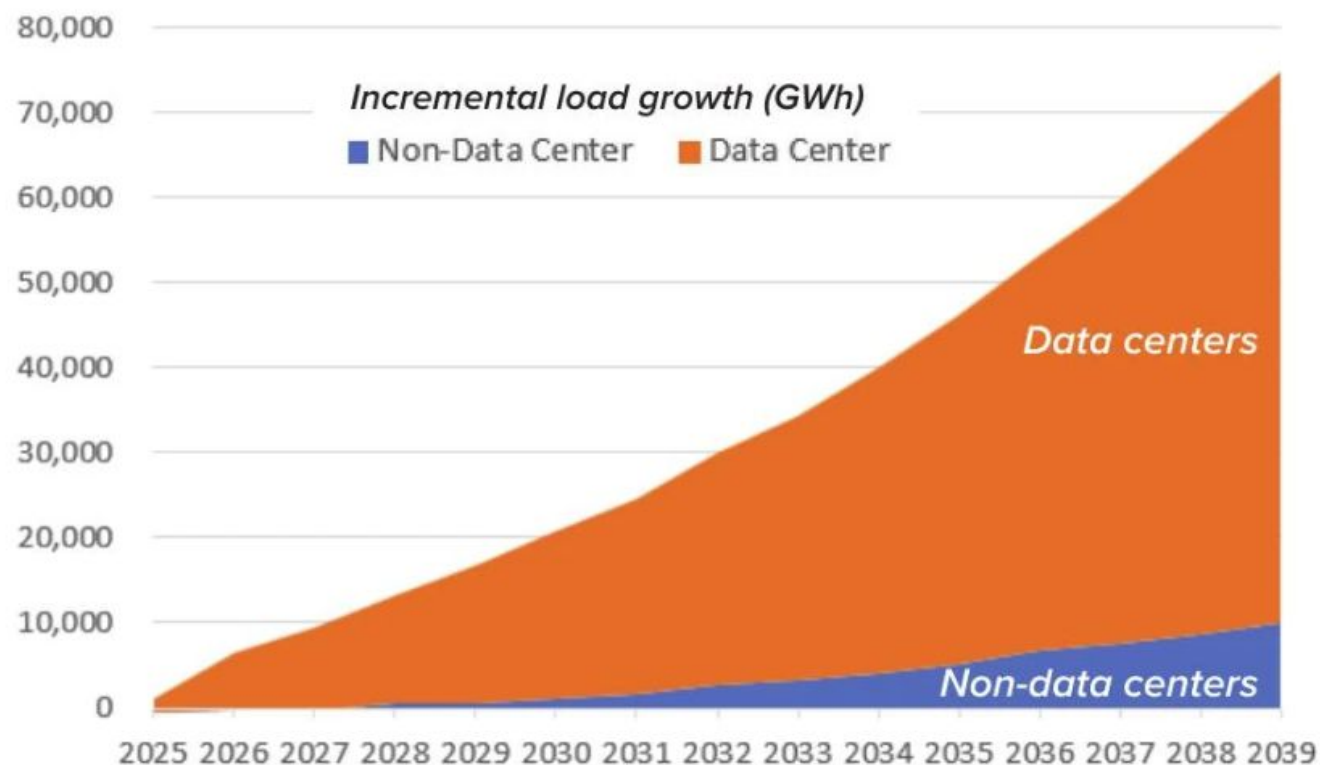
Source: FERC Form 1 Data, EEI "Historical and Projected Transmission Investment" most recent accessed here:

<https://www.eei.org/resourcesandmedia/Documents/Historical%20and%20Projected%20Transmission%20Investment.pdf>

Source: EEI, [Electric Power Industry Outlook](#), Feb 10, 2021

Feeding the beast

PEC analysis of regulatory filings shows how data centers are expected to drive steep growth in Virginia's power demands.



SOURCE: PEC from Dominion Energy data

Who pays?

FASTCOMPANY

PREMIUM DESIGN TECH WORK LIFE NEWS IMPACT PODCASTS VIDEO INNOVA

11-15-2024 | IMPACT

AI data centers could make your electric bill go up by 70%

A new report quantifies just how much artificial intelligence might cost you.



Extracting Profits from the Public: How Utility Ratepayers Are Paying for Big Tech's Power

New paper from the Harvard Electricity Law Initiative uncovers how utilities are forcing ratepayers to fund discounted rates for data centers

March 5, 2025

[Ari Peskoe](#), [Eliza Martin](#)

A new [paper](#) by Legal Fellow [Eliza Martin](#) and [Electricity Law Initiative](#) Director [Ari Peskoe](#) analyzes how the public is paying the enormous bills of some of the largest

THE WALL STREET JOURNAL

World Business U.S. Politics Economy Tech **Markets & Finance** Opinion Arts Lifestyle

BUSINESS | ENERGY & OIL | HEARD ON THE STREET [Follow](#)

AI Is About to Boost Power Bills—Who'll Take Heat for That?

High prices are a windfall for power-plant owners but are starting to raise difficult questions

By [Jinjoo Lee](#) [Follow](#)

Aug. 12, 2024 7:00 am ET

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Utility Ratepayers (You and Me)

Subsidizing Data Center Power Demand

- **Discounted rates**, private negotiations, and stronger leverage and influence as largest customer class
- **Flawed rate structure** that does not match the new paradigm of 24/7 large load consumers driving systemwide increase
- **High demand causing higher capacity costs** and fuel prices that are born by all users
- **Transmission lines** to solely serve a data center are unfairly subsidized by all users
- **Huge risk** borne by the rest of the customers if data centers don't consume as much energy as expected due to market or technology changes



Evaluating Local Data Center Proposals

Prince William Digital Gateway

2,100 acres in rural area next to Manassas National Battlefield Park

37 buildings and 15 substations

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

No allocated right of way for transmission lines connecting the new substations.

Approved December 12th



Green Energy Partners

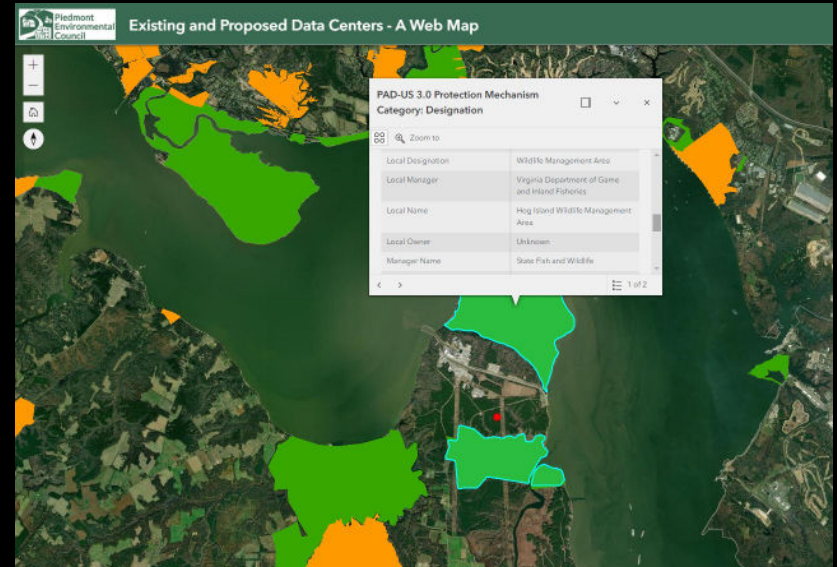
641 acres in rural area next Surry Nuclear Facility and the Hog Island Wildlife Management Area

19 buildings with plans for possibly 6 small modular nuclear reactors some day

1.5 gigawatts (GW) of energy, equivalent to the power used by 375,000 homes

No land or right-of-way reserved for substations or transmission lines

Approved February 8th



Amazon in King George County

869 acres on rural/agricultural zoned land adjacent the Rappahannock River

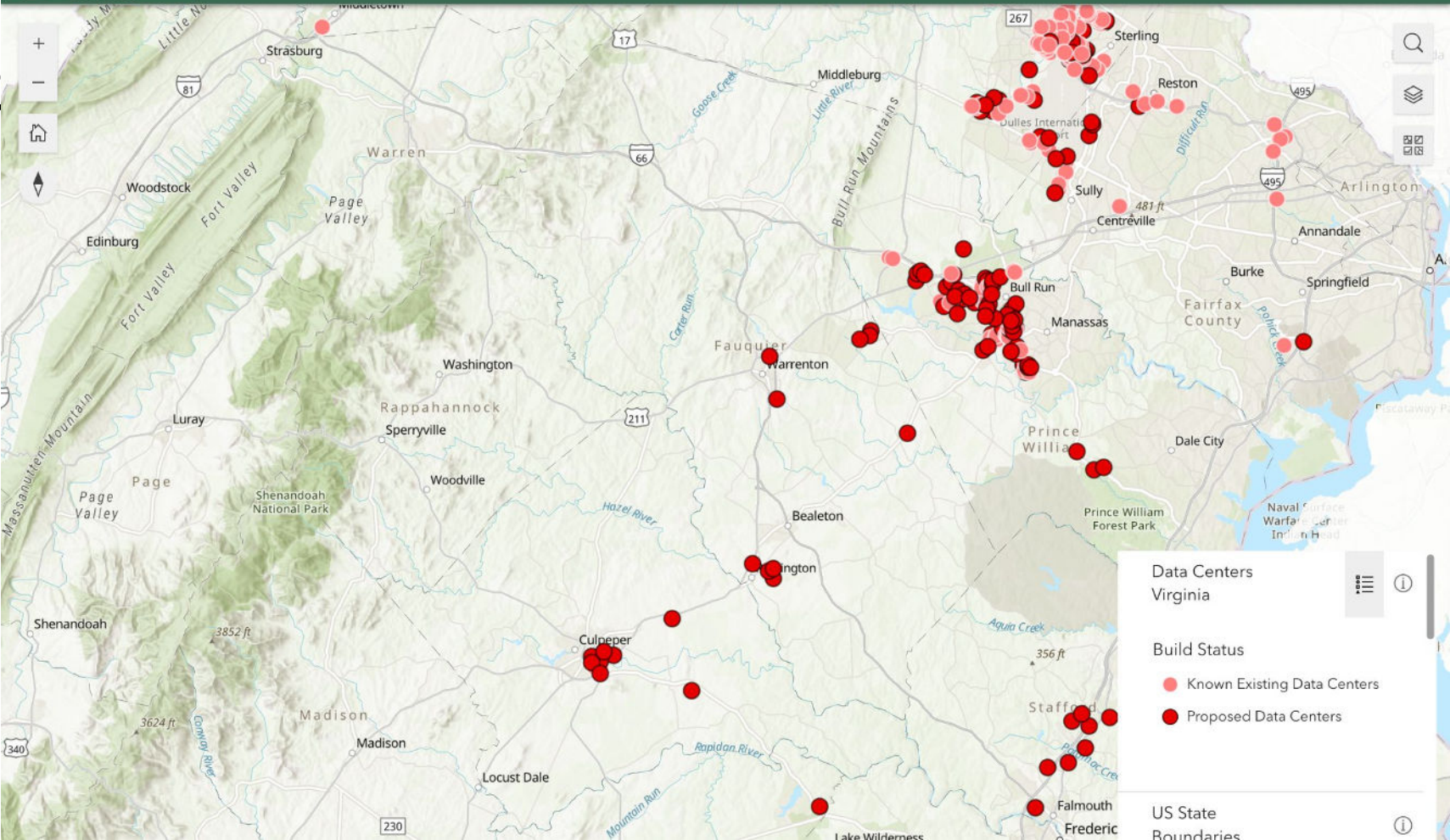
8 buildings and 3 substation initially with plans for 19 building at full build out

1.5 gigawatts (GW) of energy, equivalent to the power used by 375,000 homes

No land or right-of-way reserved for future substations or transmission lines

Approved September of 2023





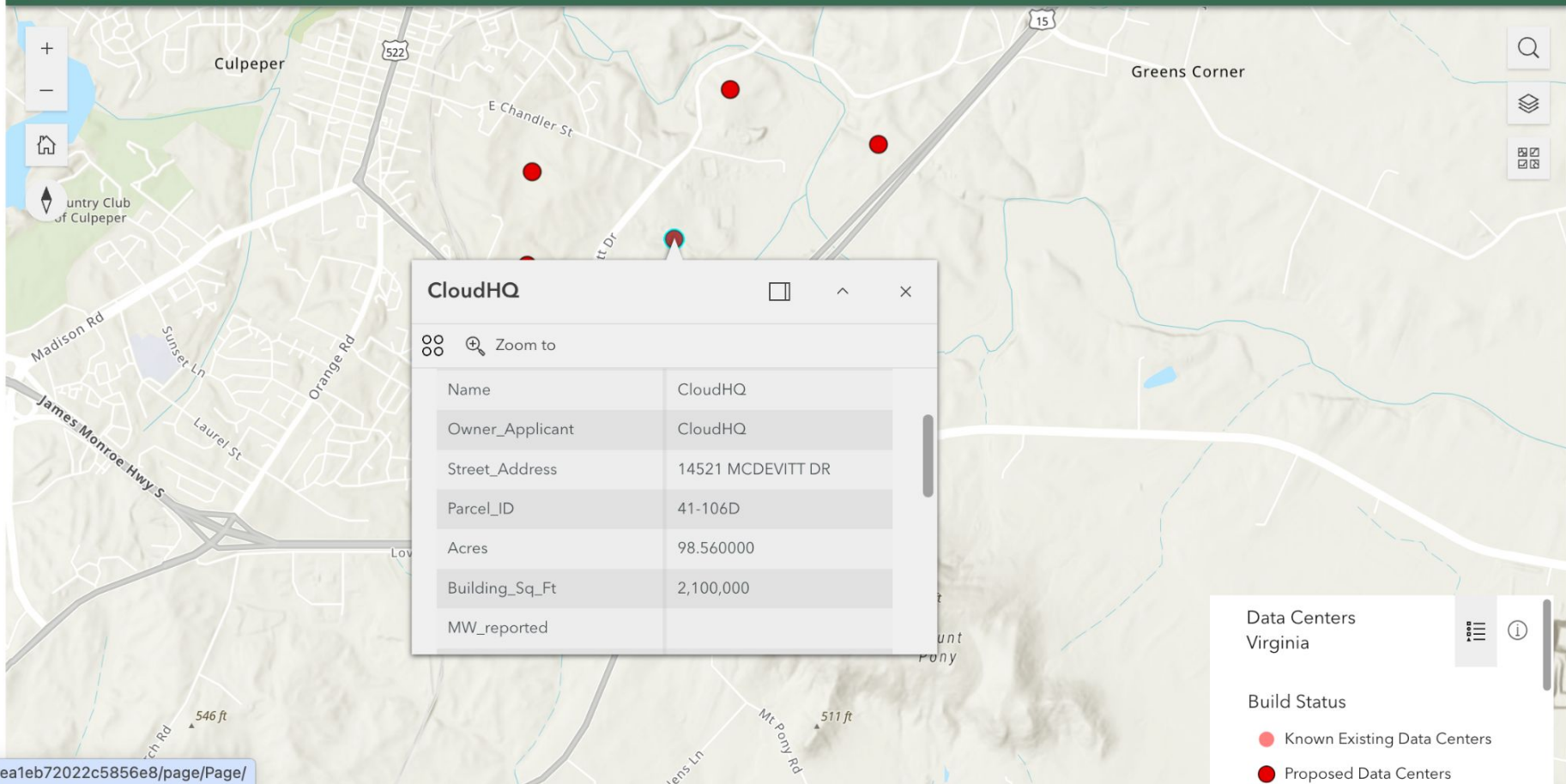
Data Centers Virginia

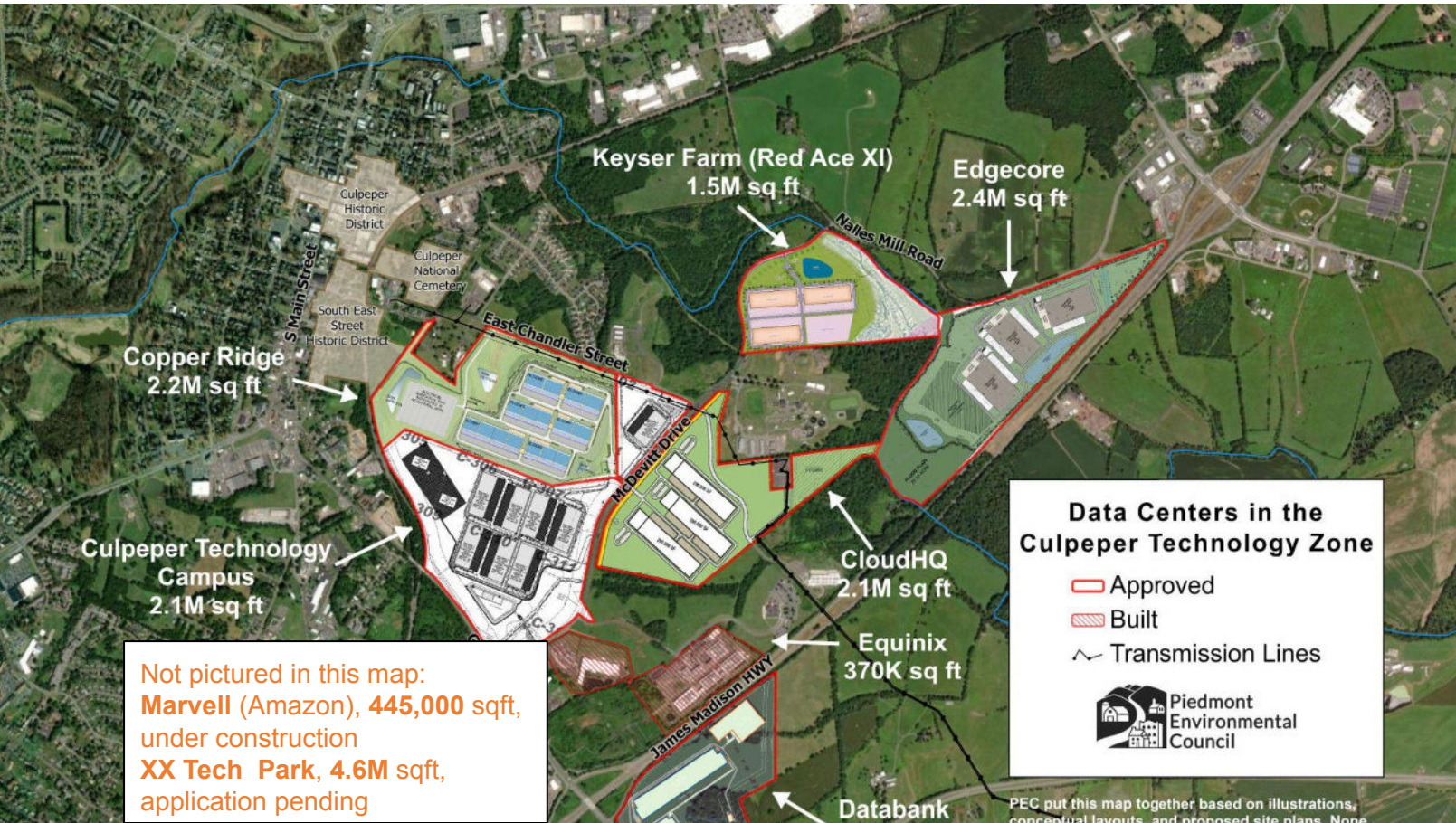
Build Status

- Known Existing Data Centers
- Proposed Data Centers

US State Boundaries

ck






Not pictured in this map:
Marvell (Amazon), 445,000 sqft,
 under construction
XX Tech Park, 4.6M sqft,
 application pending

Data Centers in the Culpeper Technology Zone

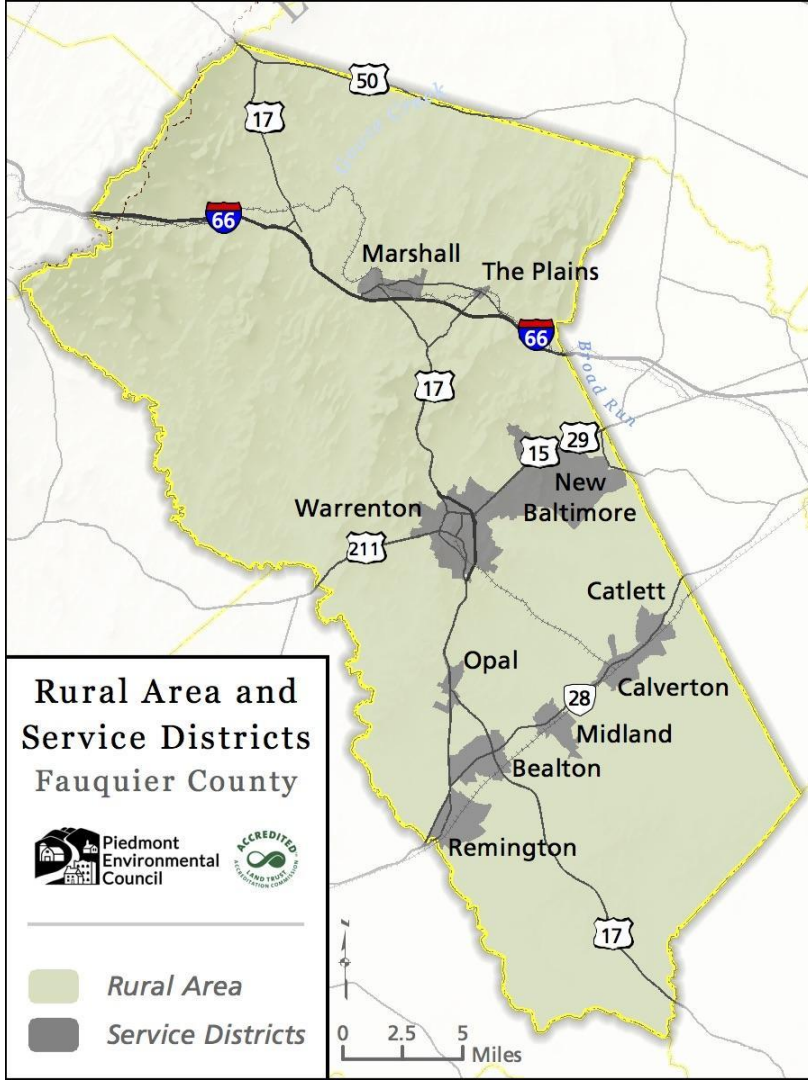
- Approved
- Built
- Transmission Lines

 **Piedmont Environmental Council**

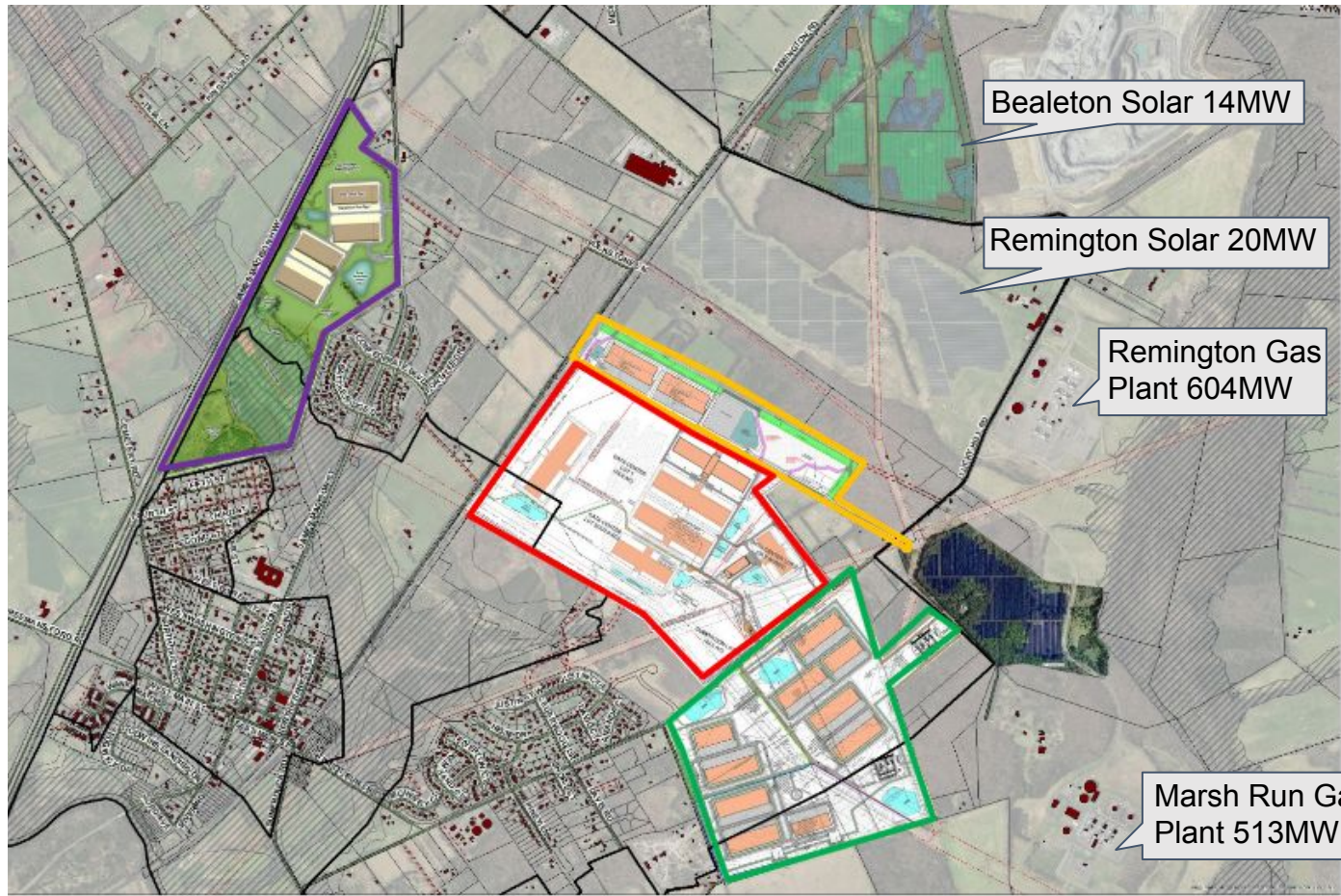
PEC put this map together based on illustrations, conceptual layouts, and proposed site plans. None

A Local Example for Scale: Fauquier Data Center Proposals and Energy Infrastructure

Residential Consumption:
Fauquier \approx 26,000 homes
26,000 homes \approx 60–100 MW



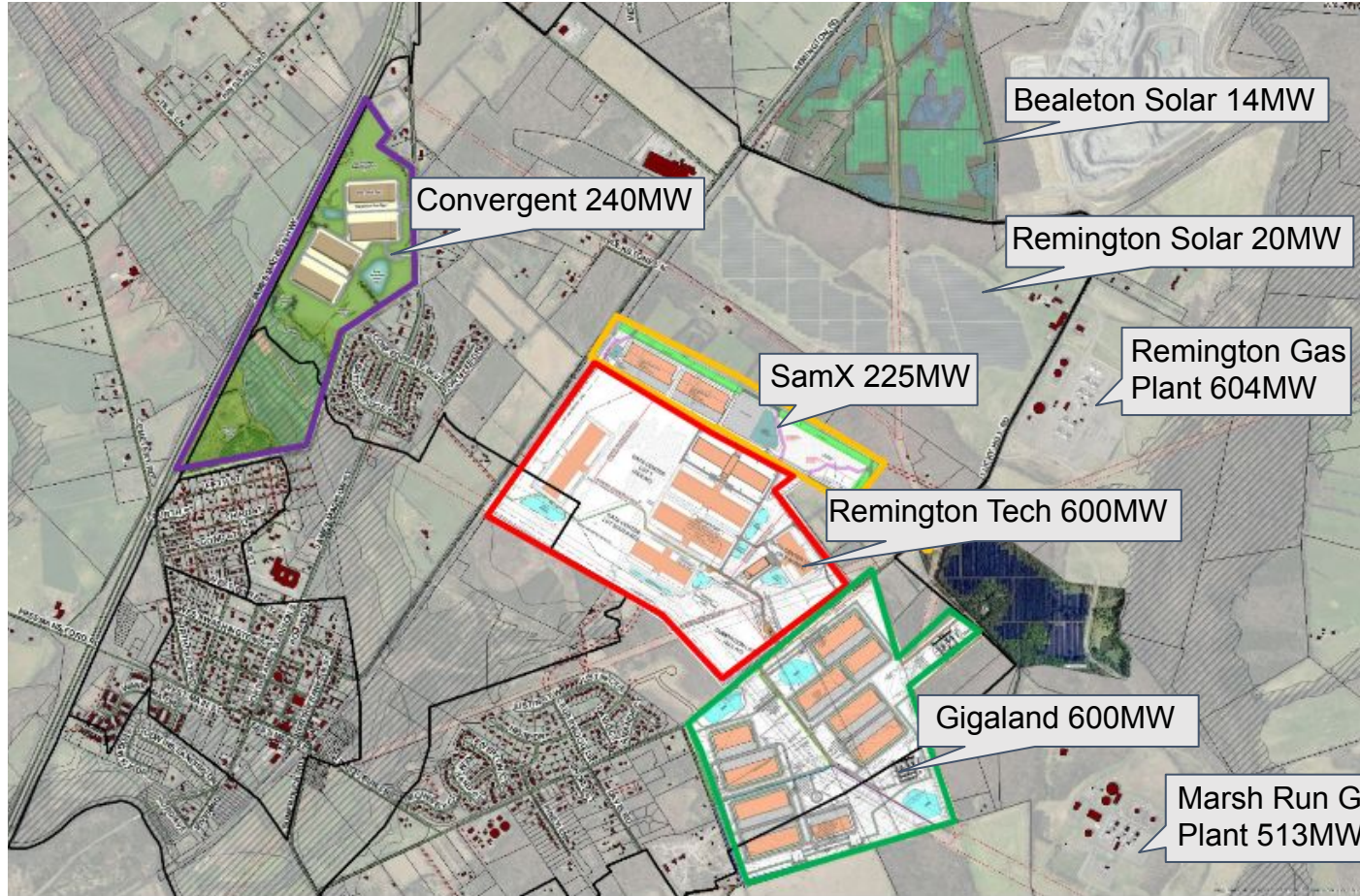
Fauquier Data Center Proposals and Energy Infrastructure



Residential Consumption:
Fauquier \approx 26,000 homes
60-100 MW \approx 26,000 homes

Energy Production:
Solar = 34 MW
Gas = 1,117 MW
Total – 1,151 MW

Fauquier Data Center Proposals and Energy Infrastructure



Residential Consumption:
Fauquier \approx 26,000 homes
60-100 MW \approx 26,000 homes

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Solar = 34 MW
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Total – 1,151 MW

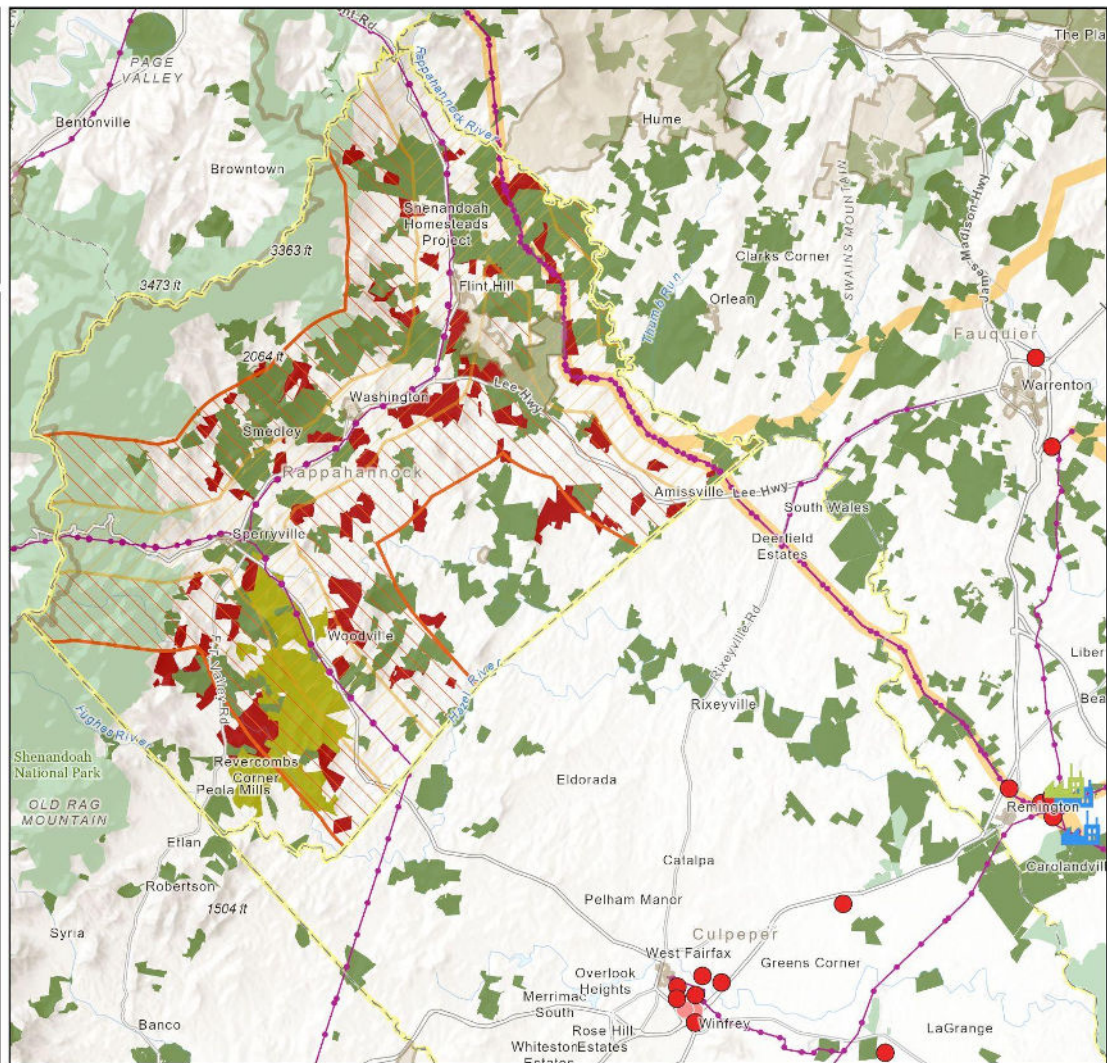
Data Center Consumption:
Approved – 600 MW
Proposed – 1,065 MW
Total – 1,665 MW

Rappahannock County Transmission Lines



- Existing Data Center
- Proposed Data Center
- Natural Gas Powerplant
- Solar Powerplant
- Current Transmission Lines
- Parcels with 100 or More Acres within 3 Miles of a Transmission Line
- 1 Mile Buffer
- 3 Mile Buffer
- Historic Districts
- Eldon Farm
- Conservation Easements
- Publicly Owned Land
- PJM 2022 Window 3: Initial Transmission Proposals (from 9/5/23)

Map created by PEC for presentation purposes only. Although efforts have been made to verify data, accuracy can not be guaranteed. 07/29/2025



What makes data centers different?

- **Explosive growth** and lots of speculation due to the boom in AI
- **Much more energy**; a campus can use as much as a city
- **More generators** are used for onsite backup power requirements than any other use including hospitals and factories
- **Consumptive water use**; much of the water is lost to evaporative cooling
- Facilities **tend to cluster**, leading to cumulative impacts on air and water quality, water consumption, and energy infrastructure.

Why Do Localities Find Data Center Attractive?

- They generally don't usually create a lot of traffic
- They don't require school seats
- They create some jobs (although not as much as many other forms of economic development)
- Opportunity to attract additional economic development

#1 Reason is tax revenue:

- Personal Property Tax
- Real Estate Tax



They come with many impacts though...



Displacement



Noise



Water



Air Quality



Wildlife Habitat



Industrialization



Energy Infrastructure

Local Land Use Impacts of Data Centers Vary...

- Traffic
- Compatibility w/Adjacent Uses
- Lighting
- Building Design
- Energy Usage
- Onsite Power/Air Quality
- Noise
- Water Usage and Wastewater
- Water Vapor Plumes
- Fire Protection and Fuel Storage



Photo Credit: Hugh Kenny,
PEC

I'm going to cover...

- Traffic
- **Compatibility w/Adjacent Uses**
- Lighting
- Building Design
- **Energy Usage**
- **Onsite Power/Air Quality**
- Noise
- **Water Usage and Wastewater**
- Water Vapor Plumes
- Fire Protection and Fuel Storage



Compatibility with Adjacent Uses

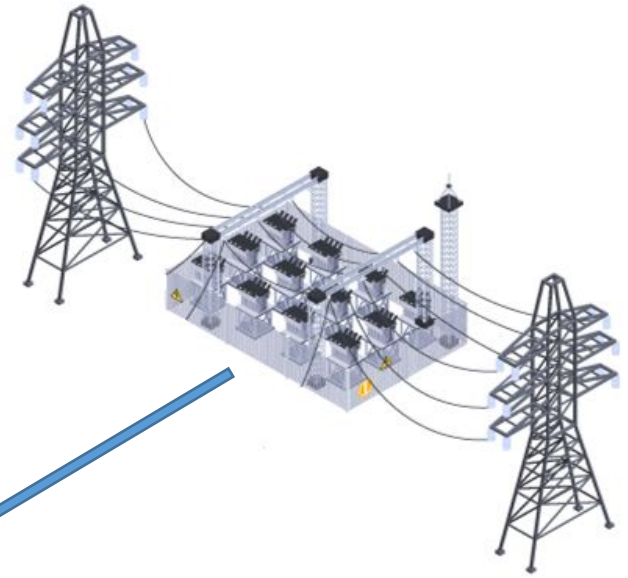
Things to think about:

- **Connectivity** - Size, fencing, and security
- **Electrical infrastructure** - must be able to access site
- **Eminent Domain** - Utilities must route transmission lines
- **Speculation** - New electric infrastructure (and fiber) or by-right zoning can raise land prices, pushing out other uses

- **Complementary uses** - energy generation and industrial
- **Less compatible uses** - residential, mixed use, commercial, office, park and recreation, tourism, and agriculture

Energy Usage by Data Center Building

60-90 MW (approximately 25,000 homes)



Backup Generators – 2 to 3MW each (usually diesel)



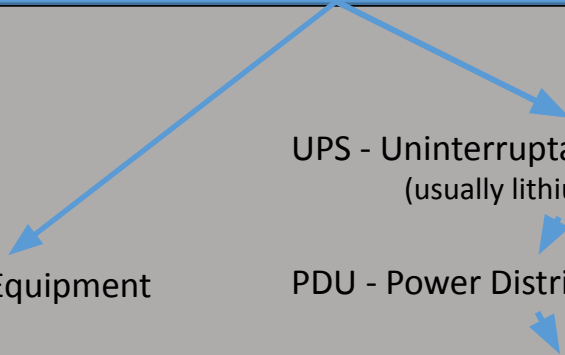
ATS - Automatic Transfer Switch

Cooling Equipment

UPS - Uninterruptable Power Supply
(usually lithium batteries)

PDU - Power Distribution Unit

Equipment (Racks, servers, storage,
switches, and routers)



Energy: Knowing the right questions to ask

Data Centers (Where will buildings be and what square footage? Total power needed for build-out?)

- Require between 60-90MW per building but can be higher with multi-story buildings
- Rule of thumb for estimating power is 150 to 300 watts per square foot if you don't have end user

Substations (What size? Where? How many?)

- Direct-connect load at any substation is limited to 300 MW (due to reliability criteria)
- Local government regulates permitting (siting, zoning, and site plan) of substations.
- If not reserved on-site, utility needs substation offsite triggering further speculation for data centers

Transmission lines (Is there access to a nearby substation or line? What is the remaining capacity of the substation and line? Upgrades needed? Is right-of-way reserved on-site?):

- Most data centers (over 30 MW) will require a transmission line rather than a distribution line.
- Transmission to directly serve data centers is typically 230kV
- A CPCN (certificate of convenience and public necessity) is needed for lines over 138kV. The State Corporation Commission approves routes, including overhead or underground options.

Backup Generators

How many? What type? Will they be for emergency use only? What emissions will be released? How often will they run for maintenance or other uses?

Whole House Generators are from 7.5kW to 26kW



Commercial Generators run from 2000kW to 3500kW



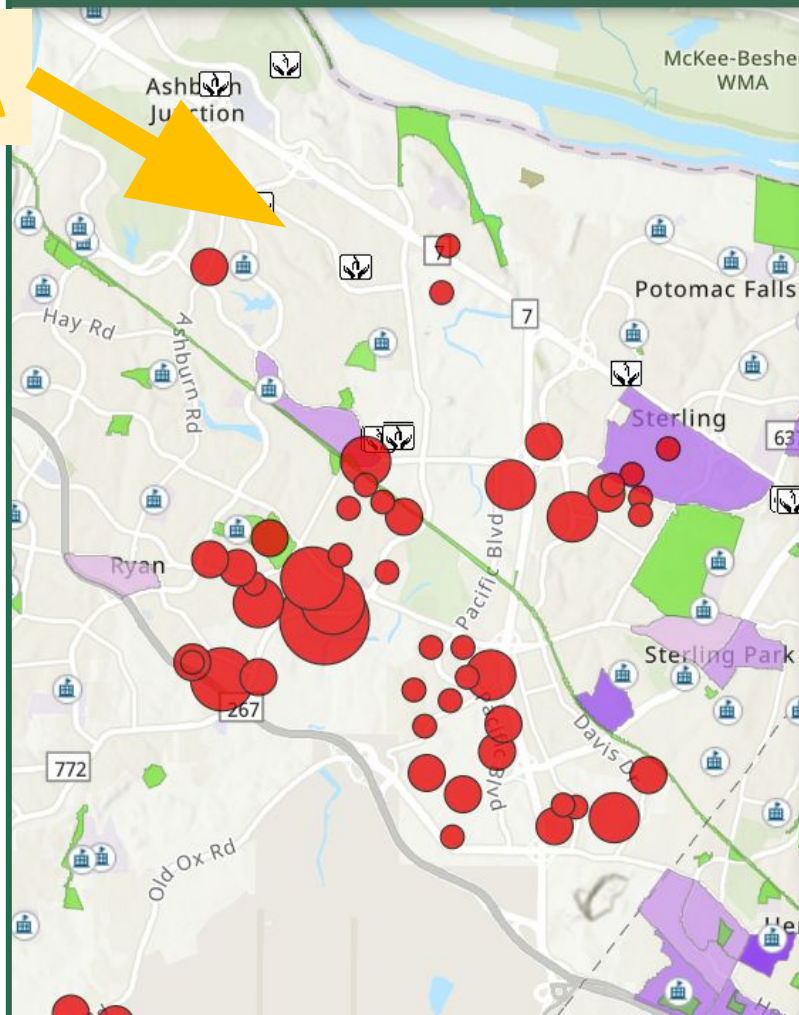
Backup Generators



Data Center Diesel Generators

Ashburn, VA

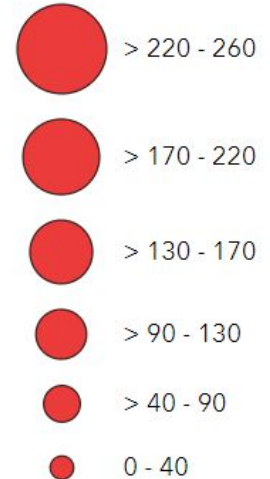
There are over 9000 diesel generators permitted at data centers in Virginia, **over half are in northern Virginia!**



Legend

Data Centers Emissions

Number of Generators



Nursing Homes



Public School Locations



Generator Regulations

Note: DEQ is currently considering changing the guidance on what is “Sudden and Reasonably Unforeseeable Events” to allow usage of emergency generators for Planned Electric Outages. Accepting comments till Dec. 3rd.

Source:
<https://www.deq.virginia.gov/home/showpublisheddocument/27422/638948266872500000> and
<https://townhall.virginia.gov/L/Comments.cfm?GDocForumID=2798>

Table 2: Engine Technology Hierarchy

Type	Classification		Maximum Operating Service	NO _x Emissions
	State	Federal		
DIESEL ENGINES				
Tier II	Emergency	Emergency	Limit all operation to less than major source levels	18.0 lb/MW
Tier II + SCR*	Non-emergency	Emergency	Limit all operation to less than major source levels	1.8 lb/MW
Tier IV	Non-emergency	Non-emergency	Limit all operation to less than major source levels	1.8 lb/MW
NATURAL GAS ENGINES				
EPA Compliant	Emergency	Emergency	Limit all operation to less than major source levels	6.0 lb/MW
EPA Compliant	Non-emergency	Non-emergency	Limit all operation to less than major source levels	3.0 lb/MW
EPA + Controlled	Non-emergency	Non-emergency	Limit all operation to less than major source levels	0.3-1.5 lb/MW
NATURAL GAS SIMPLE CYCLE COMBUSTION TURBINES				
Low-NOx	Non-emergency	Non-emergency	Limit all operation to less than major source levels	0.3-0.5 lb/MW
Low-NOx with SCR	Non-emergency	Non-emergency	Limit all operation to less than major source levels	0.1 lb/MW

**Where SCR = Selective Catalytic Reduction system = an active air pollution control system that reduces NO_x emissions; a Tier II engine equipped with an add-on SCR is sometimes referred to as a “Tier IV equivalent” engine*

AI's deadly air pollution toll

UC Riverside and Caltech study reveals AI's toxic air pollution footprint and toll on people's health



AUTHOR:

DAVID DANELSKI

December 9, 2024

SHARE THIS:



Computer processing demands for artificial intelligence, or AI, are spurring increasing levels of deadly air pollution from power plants and backup diesel generators that continuously supply electricity to the fast-growing number of computer processing centers.

This air pollution is expected to result in as many as 1,300 premature deaths a year by 2030 in the United States, and its public health costs from cancers, asthma, other diseases, and missed work and school days are approaching an estimated \$20 billion a year.

Such are findings of [a study](#) by UC Riverside and Caltech scientists published online this week. Yet, these human and financial costs appear overlooked by the tech industry.

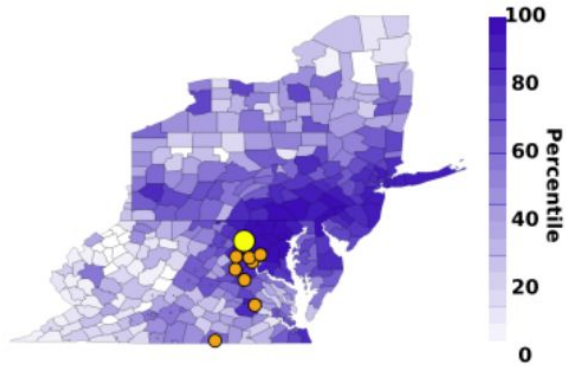


A power plant in New Eagle, Pa.. (Jeff Swensen/Getty Images)

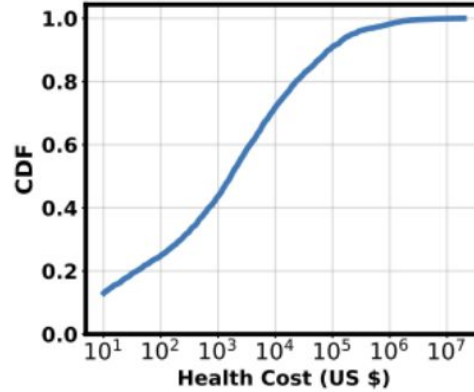
Recommendations:

- **Require Rezoning or CUP/SUP** - Data center campuses are rapidly changing, pose high potential impact to community, and the market interest is too high to allow this use by-right
- **Add definition for data centers** - Define data centers/cryptocurrency (possibly separately) and address specifically what types of onsite power generation are allowed or require additional approvals (such as gas turbines for primary power)
- **Adopt use-specific standards** - require detailed general concept plan, basic information on data center type, cooling system, projected energy use, projected water consumption, plan fire and safety, noise study, etc
- **Understand Energy Requirement** - Elected officials and public should understand that once approved, the utility will need to provide power even if that means using eminent domain to route transmission lines

Air Pollution Modeling Using EPA modeling tool - COBRA



(a) Health cost map



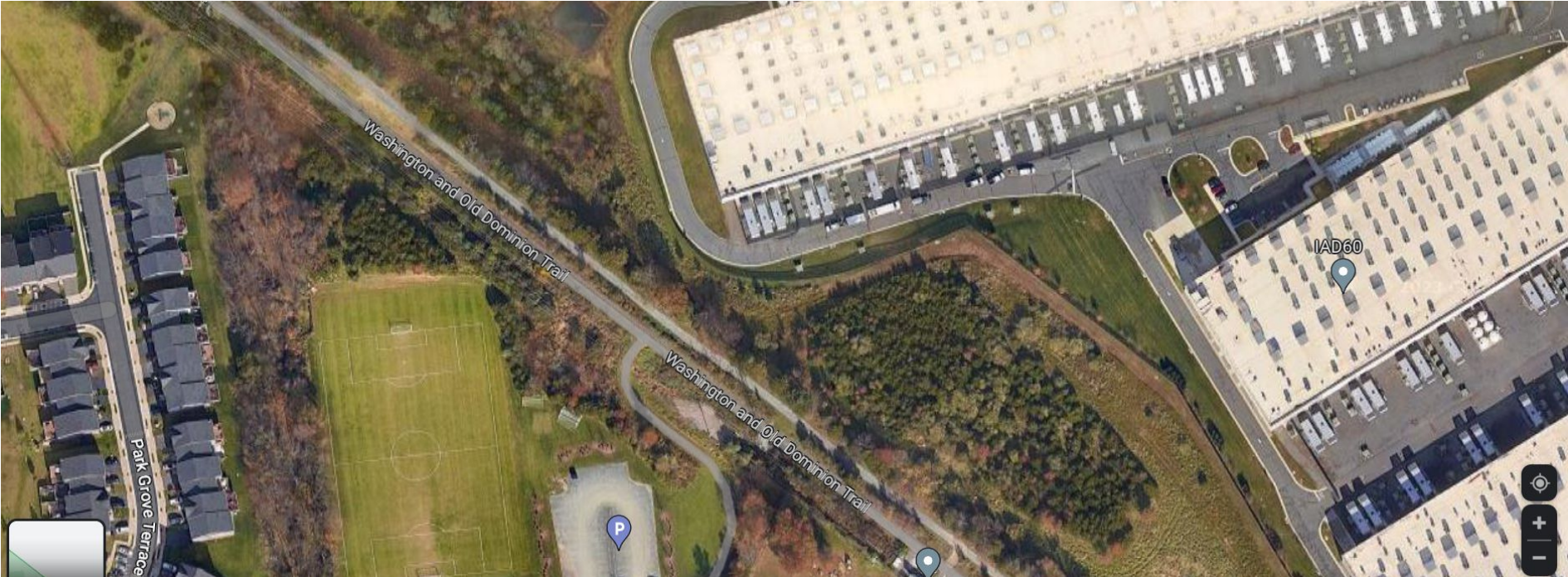
(b) CDF of county-wide health cost

State	County	Health Cost (million \$)
MD	Montgomery	19.9 (17.3, 22.4)
VA	Fairfax	18.9 (16.6, 21.2)
MD	Prince Georges	8.9 (7.5, 10.4)
MD	Baltimore	8.3 (7.0, 9.6)
DC	District of Columbia	7.6 (6.2, 9.0)
MD	Anne Arundel	6.3 (5.5, 7.2)
MD	Baltimore City	6.0 (4.8, 7.1)
VA	Loudoun	5.4 (4.7, 6.1)
VA	Prince William	5.0 (4.4, 5.7)
MD	Frederick	4.6 (3.9, 5.2)

(c) Top-10 counties by health cost

Figure 1: The county-level total scope-1 health cost of data center backup generators operated in Virginia (mostly in Loudoun County, Fairfax County, and Prince William County) [57]. The backup generators are assumed to emit air pollutants at 10% of the permitted levels per year.

Proximity to sensitive receptors such as parks, trails, schools, hospitals, elderly, or low income communities



Google Map Clipped Image 2023

Grid Constraints are Leading to Onsite 24/7 Power Generation

Vantage Data Center in Sterling - 100 MW natural gas turbines



Source: Vantage Data Center in Sterling permitted for over 100 MW natural gas turbines July 28, 2024. CNBC Interview: www.youtube.com/watch?v=MJQIQJYxey4 and <https://www.deg.virginia.gov/home/showpublisheddocument/25986/638633875365530000>

POLITICO

'How come I can't breathe?': Musk's data company draws a backlash in Memphis

The company's turbines — enough to power 280,000 homes — run without emission controls in an area that leads Tennessee in asthma hospitalizations.



An aerial view of the xAI data center. | Steve Jones/Flight by Southwings for SELC

By ARIEL WITTENBERG
05/06/2025 10:32 AM EDT



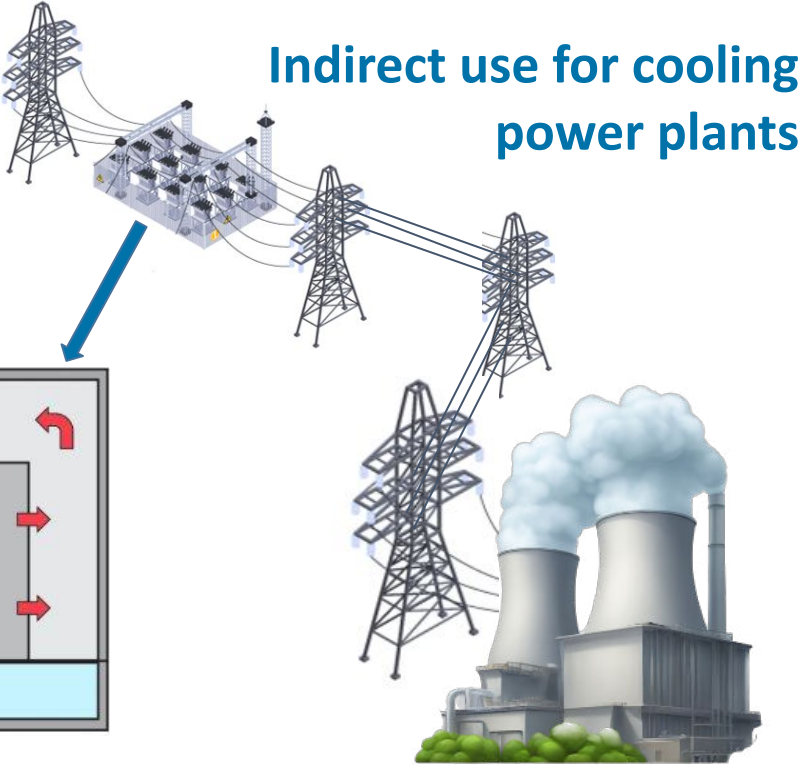
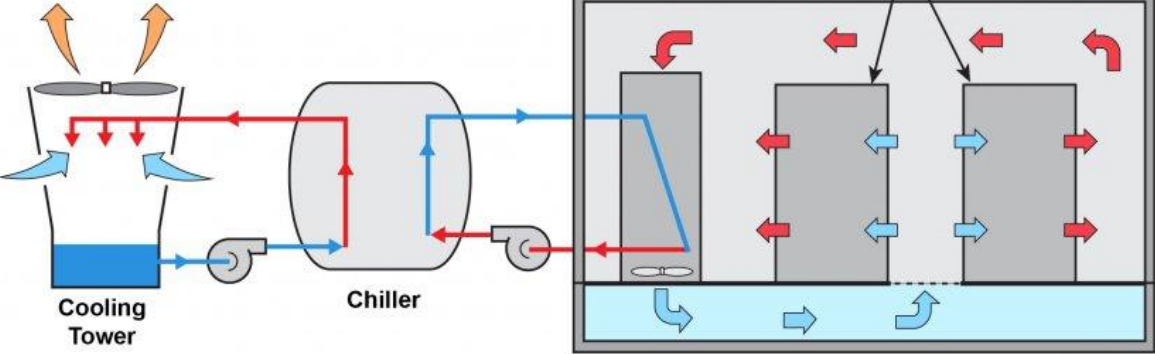
prepares for Winter Storm Fern

Secretary of Energy Chris Wright asked grid operators to be prepared to utilize up to 35 GW of backup generation. A consumer advocate warned the plan is unworkable.



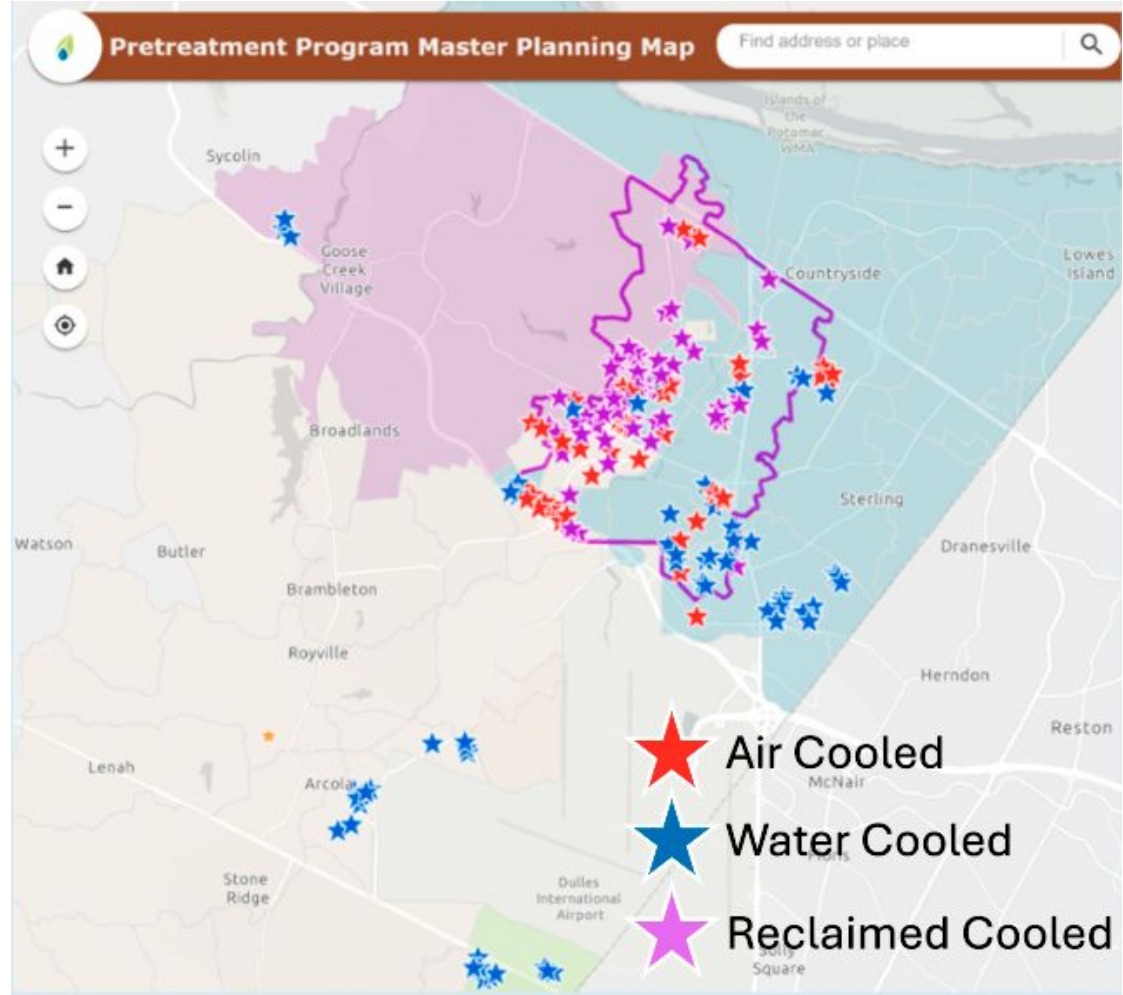
Water Consumption – Cooling and Power

Direct use for cooling IT



2024 Data Center Water Consumption in Loudoun County

- **Reclaimed** – over 45 connections serving 704 million gallons
- **Potable** – 937 million gallons
- **Now 9% of total system capacity**
- **242 million gallons in August**
- **Usage**



Google Environmental Report 2025 - Water

Global operational water use	Unit	2020	2021	2022	2023	2024	
Water withdrawal	Million gallons	5,689	6,297	7,600	8,653	11,011	✓
Water discharge	Million gallons	1,940	1,735	2,035	2,301	2,876	✓
Water consumption	Million gallons	3,749	4,562	5,565	6,352	8,135	✓

		2024					
Water use by data centers and offices	Unit	Water withdrawal		Water discharge		Water consumption	
Data centers	Million gallons	9,866	✓	2,079	✓	7,787	✓
Offices and other facilities	Million gallons	1,145	✓	797	✓	348	✓
Total	Million gallons	11,011	✓	2,876	✓	8,135	✓

Freshwater withdrawal from sources at risk of water depletion or scarcity ¹⁶³	Unit	2024
Low risk of water depletion or scarcity	%	72
Medium risk of water depletion or scarcity	%	14
High risk of water depletion or scarcity	%	14

Freshwater replenishment	Unit	2022	2023	2024
Freshwater consumption	Million gallons	4,770	5,601	7,210
Water replenished	Million gallons	271	1,036	4,590
Water replenished	%	6	18	64
Contracted water replenishment capacity	Million gallons	1,317	2,815	8,268

Source: <https://sustainability.google/reports/google-2025-environmental-report/>

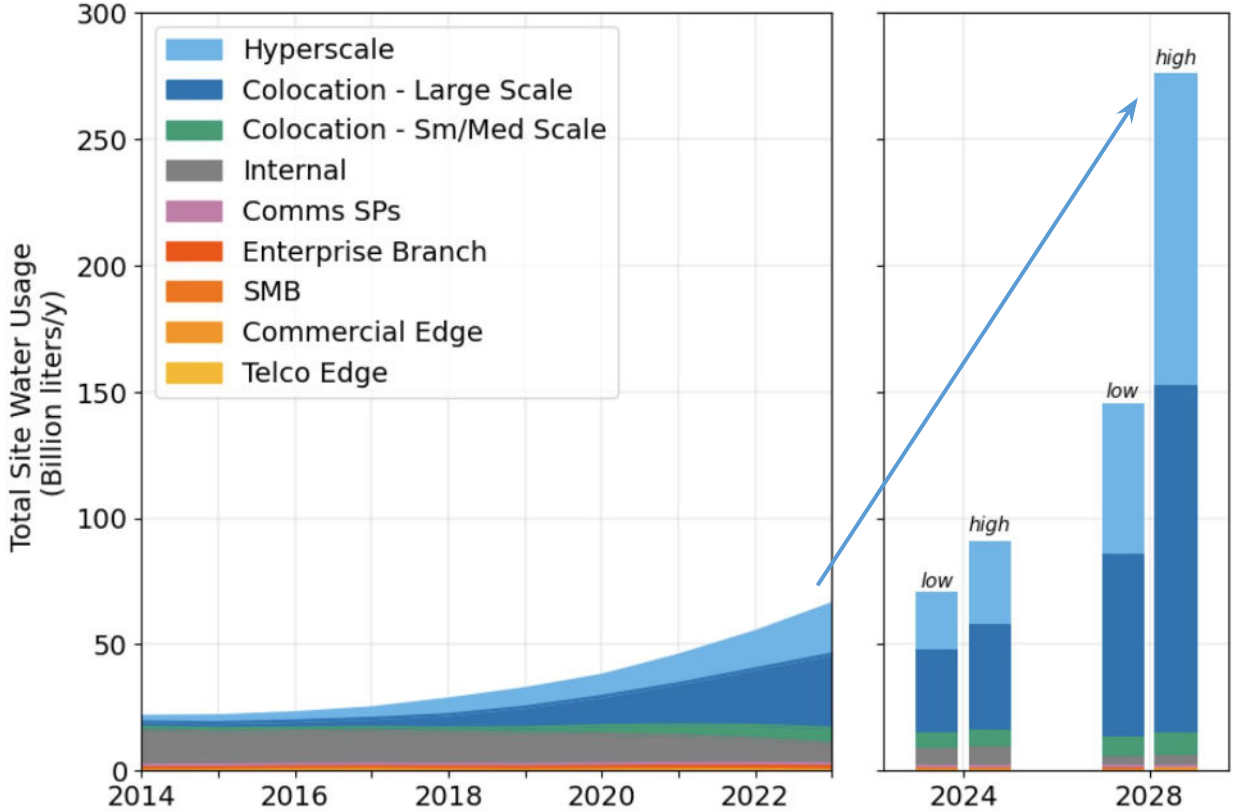
Figure 7. Global water stewardship project map as of the end of 2024



Source: <https://sustainability.google/reports/google-2025-environmental-report/>

Water use by data center location		2024					
Location	Unit	Withdrawal ¹⁶⁴		Discharge		Consumption	
Ashburn, VA	Million gallons	59.5	✓	3.5	✓	56.0	✓
Berkeley County, SC	Million gallons	853.8	✓	77.3	✓	776.5	✓
Bristow, VA	Million gallons	105.7	✓	21.3	✓	84.4	✓
Council Bluffs, IA	Million gallons	1,410.3	✓	400.1	✓	1,010.2	✓
The Dalles, OR	Million gallons	461.1	✓	99.7	✓	361.4	✓
Douglas County, GA	Million gallons	444.1	✓	77.2	✓	366.9	✓
Potable water		7.4					
Reclaimed wastewater		436.7					
Dublin, Ireland ¹⁶⁶	Million gallons	0.9	✓	0.8	✓	0.1	✓
Eemshaven, Netherlands	Million gallons	416.9	✓	86.9	✓	330.0	✓
Potable water		2.9					
Non-potable water ¹⁶⁷		414.0					
Frankfurt, Germany	Million gallons	2.3	✓	1.8	✓	0.5	✓
Fredericia, Denmark	Million gallons	48.4	✓	10.6	✓	37.8	✓
Hamina, Finland	Million gallons	3.0	✓	2.7	✓	0.3	✓
Hanau, Germany	Million gallons	1.2	✓	0.6	✓	0.6	✓
Henderson, NV	Million gallons	359.9	✓	152.5	✓	207.4	✓
Inzai, Japan	Million gallons	26.0	✓	7.8	✓	18.2	✓
Jackson County, AL	Million gallons	201.6	✓	18.8	✓	182.8	✓
Lancaster, OH	Million gallons	207.4	✓	106.3	✓	101.1	✓
Leesburg, VA	Million gallons	246.7	✓	55.1	✓	191.6	✓
Lenoir, NC	Million gallons	351.7	✓	23.9	✓	327.8	✓

Higher Water Consumption Projections with AI



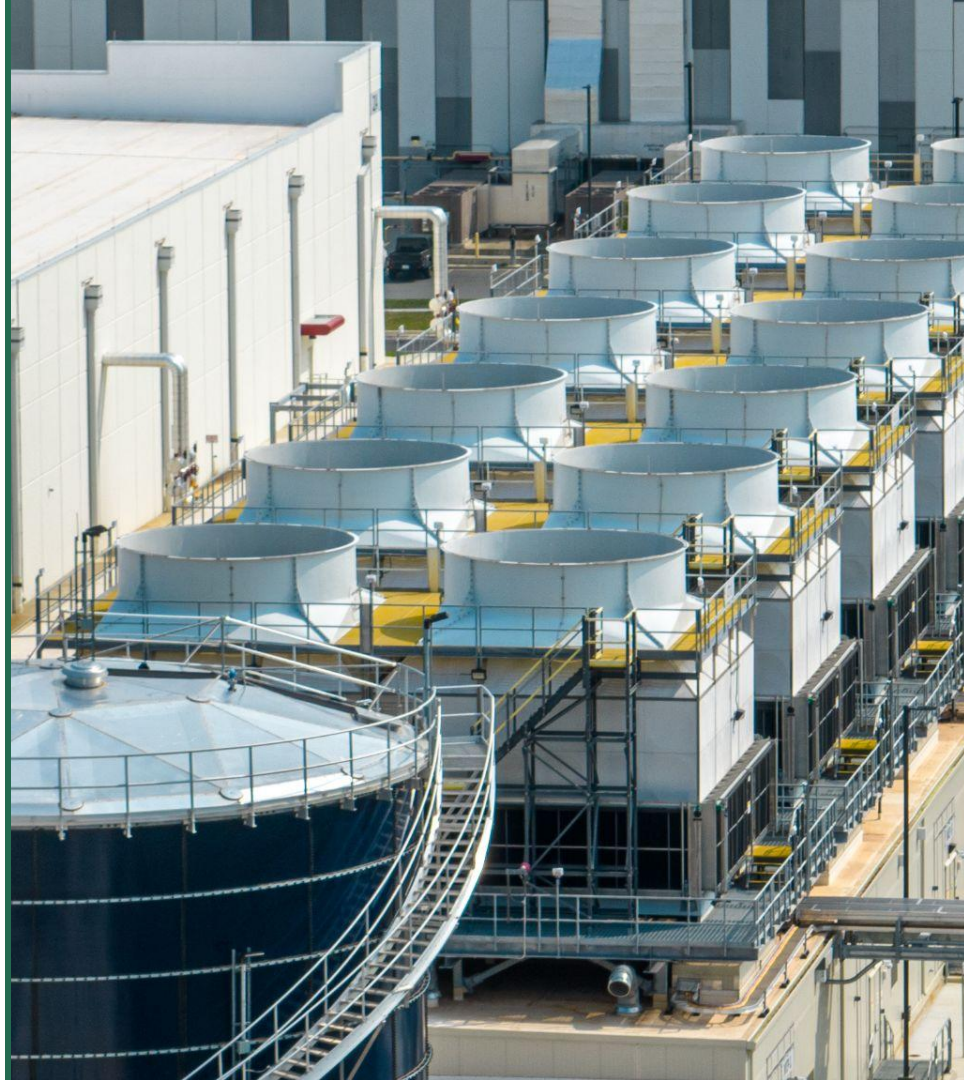
The U.S. data center water consumption in 2028, driven by AI, is expected to exceed **2 – 4x** the 2023 level

Source: 2024 United States Data Center Energy Usage Report and graph from Making AI Less "Thirsty": Uncovering and Addressing the Secret Water Footprint of AI Models <https://arxiv.org/abs/2304.03271>

Waste Water -

Evaporation through cooling towers concentrates minerals which are discharged from the facility in form of **blowdown** that can contain:

- **Higher salinity levels** and Total Dissolved Solids
- **Corrosion inhibitors** such as phosphates and molybdates
- **Biocides** such as chlorine, glutaraldehyde, and isothiazolin
- **Heavy metals** such as zinc, copper, and chromium



Addressing Cooling and Water Consumption

Regulate impact rather than the technology:

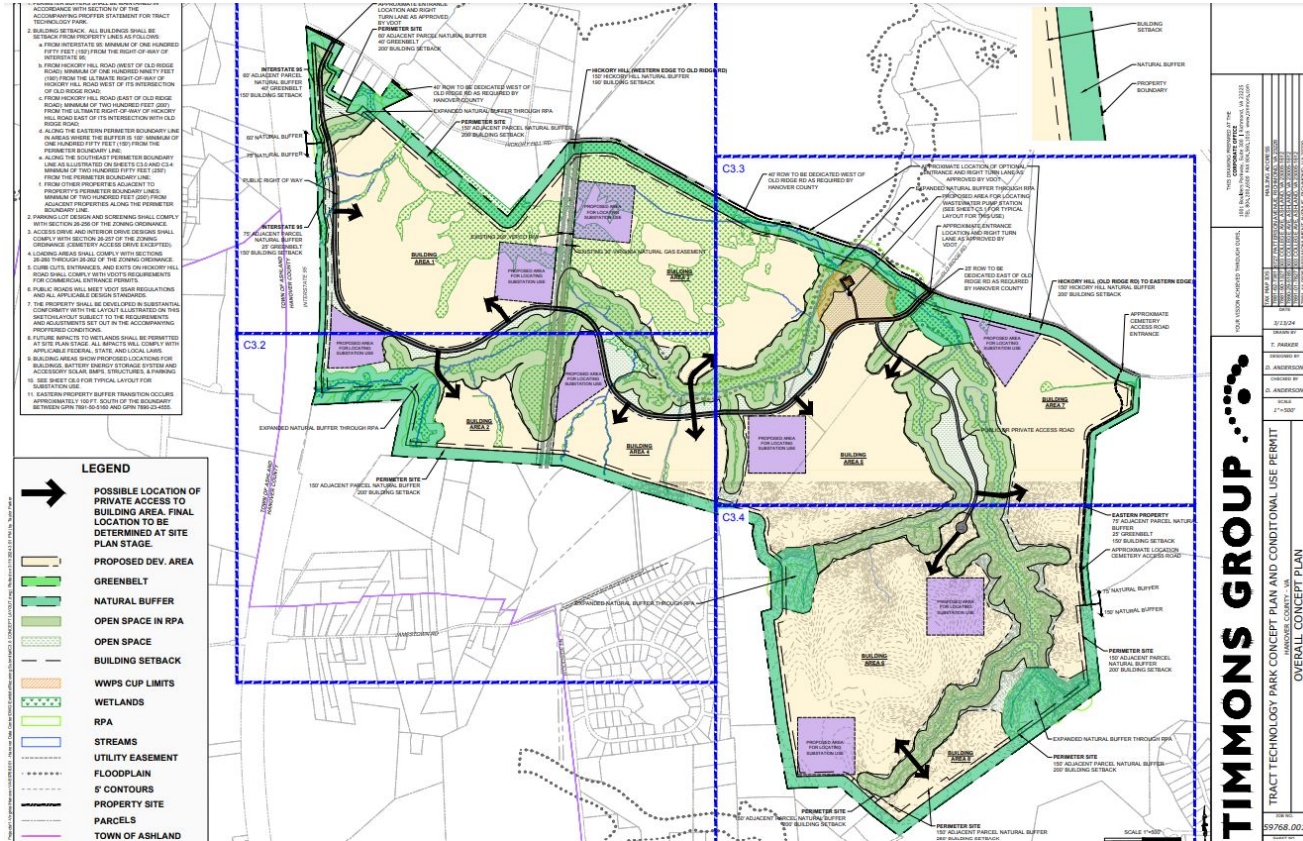
- Prohibit use of potable water or cap water consumption permitted
- Prohibit flushing and large quantity refills during summer and early fall.
- If allowing consumption of water require use of reclaimed water

Other things to keep in mind:

- Energy Usage – Air cooling without cooling towers uses more energy (which can also use water)
- Noise – Use and location of HVAC equipment (fans, condensers, compressors, and cooling towers) can cause noise problems
- Blowdown – The capacity of wastewater treatment facility to handle amount and concentration of projected blowdown should be discussed
- Water Vapor Plumes – Cooling tower plumes are harmless but can be unsightly

Recommendations for Best Practices

To adequately protect public health safety and welfare you need information. **Blob plans** are not enough to assess impacts



Source: <https://www.hanovercounty.gov/DocumentCenter/View/10607/Conceptual-Plan-3-13-2024>

Ordinances to look at:

No model ordinance yet but places with interesting ordinances include:

- Loudoun County, VA
- Fauquier County, VA
- Prince George County, VA
- Town of Leesburg, VA
- Henrico, VA
- Frederick County, MD
- Niagara Falls, NY (High Energy Usage Overlay District)
- Chandler, AZ

Final Thoughts on Local Policies

- **Don't sign NDA's** and review FOIA regulations (a robust general concept plan, anticipated power usage, type of generators, water usage, etc is not proprietary information and should be a part of any application)
- **Meet with your utilities** to discuss electrical and water/sewer infrastructure required during review not after approval! This requires full information on anticipated power demand and water usage as well as a general concept plan
- **Protect the public health, safety and welfare** by limiting use of potable water, limiting use of power onsite, and regulating the use of generators by type, number, and/or location near sensitive uses such as schools, parks, trails, elderly living facilities, hospitals, etc.



Questions?

pecva.org/datacenters