Data Centers & Virginia's Clean Energy Future

Piedmont Environmental Council

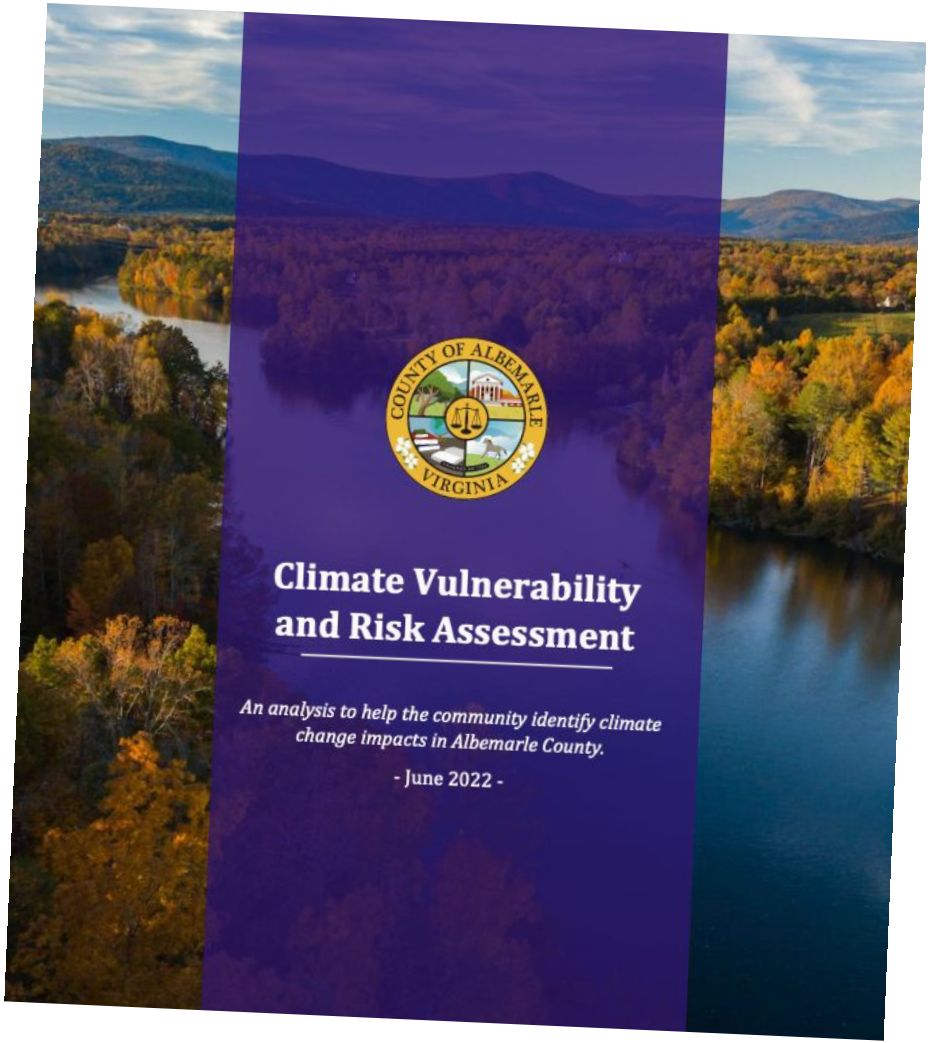
PEC Annual Meeting - June 1, 2024
Julie Bolthouse, Director of Land Use

Today's Presentation

- Climate Change Action and Policies
- Exploding Data Center Energy Demand
- Impact on Communities and the Environment
- How can you make a difference?

PEC's Actions on Climate

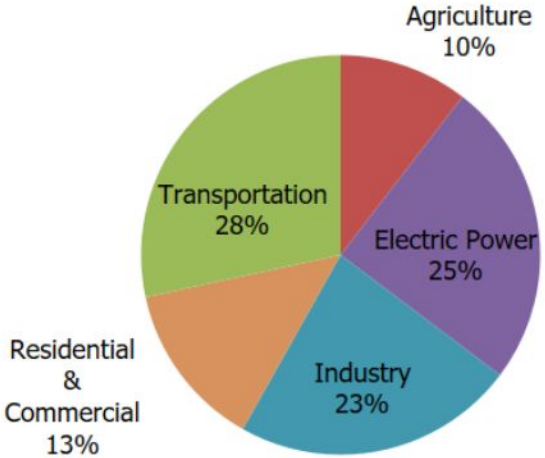
- Avoid - Better land use and transportation planning that provides alternatives to sprawl and additional vehicle trips
- Reduce - Energy efficiency policies, renewable energy adoption, and smart grid technology
- Mitigate - Planning for resilience, conserving land, and encouraging sustainable land management



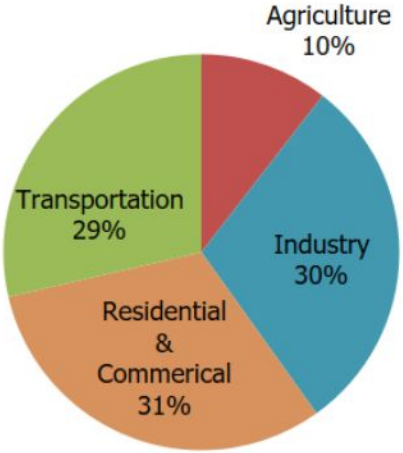
Climate Change Threat - Changing Temperatures and Precipitation Patterns

- Hotter summers and the associated health impacts
- Seasonal cycles are shifting and impacting important plants and animals, like crops and pollinators
- More flooding and more drought as rain events become concentrated into fewer, bigger storms between dry periods, and groundwater and reservoirs can't replenish as quickly as in the past

Total U.S. Greenhouse Gas Emissions by Economic Sector in 2022



Total U.S. Greenhouse Gas Emissions by Economic Sector

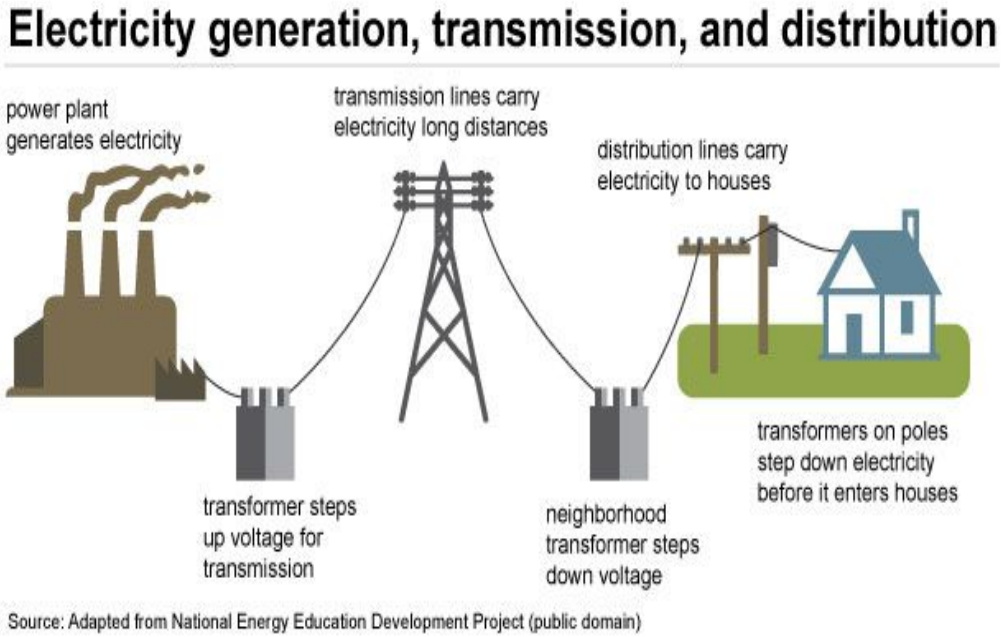


Total U.S. Greenhouse Gas Emissions by Economic Sector Including Electricity End-Use Indirect Emissions

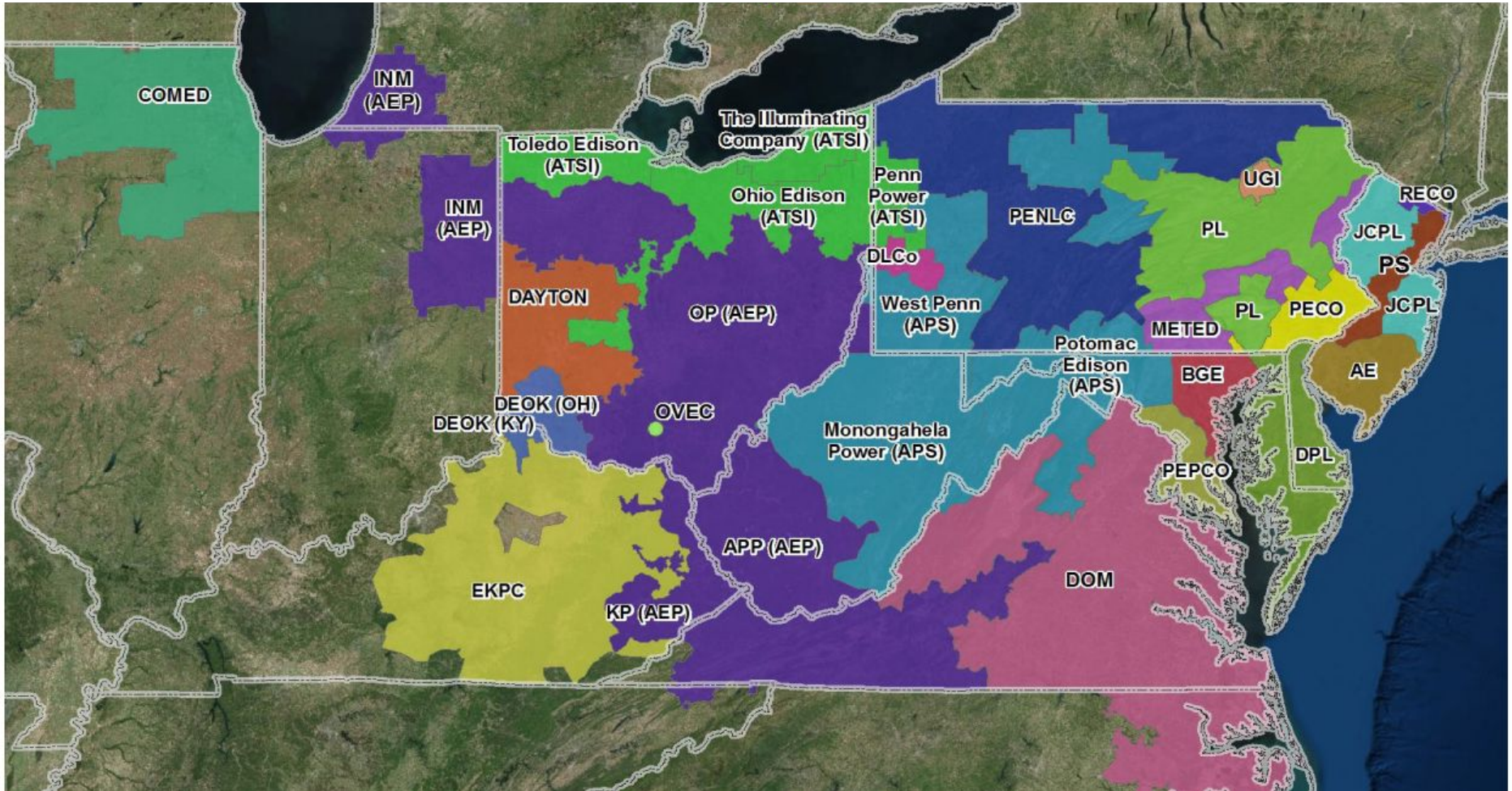
Energy Talk

- **Definitions**
  - 1,000 KW=1 MW
  - 1,000 MW = 1 GW
  - kWh= electricity produced
  - Transmission/Distribution/ Substation

- **PJM**
  - A regional transmission operator that operates the grid essentially from IL to VA and NJ to NC

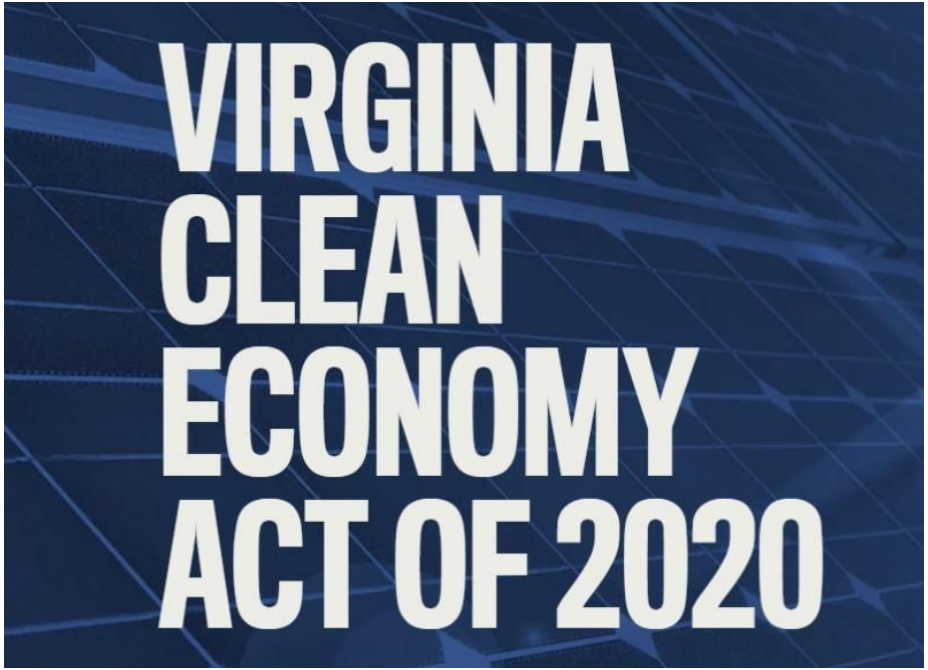


PJM Regional Transmission Organization



Virginia Clean Economy Act

- **Mandatory Renewable Portfolio Standard**
  - Dominion: 100% renewable by 2045
  - Appalachian Power: 100% by 2050
- **Establishes an Energy Efficiency Resource Standard**
- **25% of renewable generation can come from out of state**
- **Distributed Generation Cap → 6%**



Progress toward VCEA Targets:

Dominion Energy:

3,030.7 MW of new renewable capacity

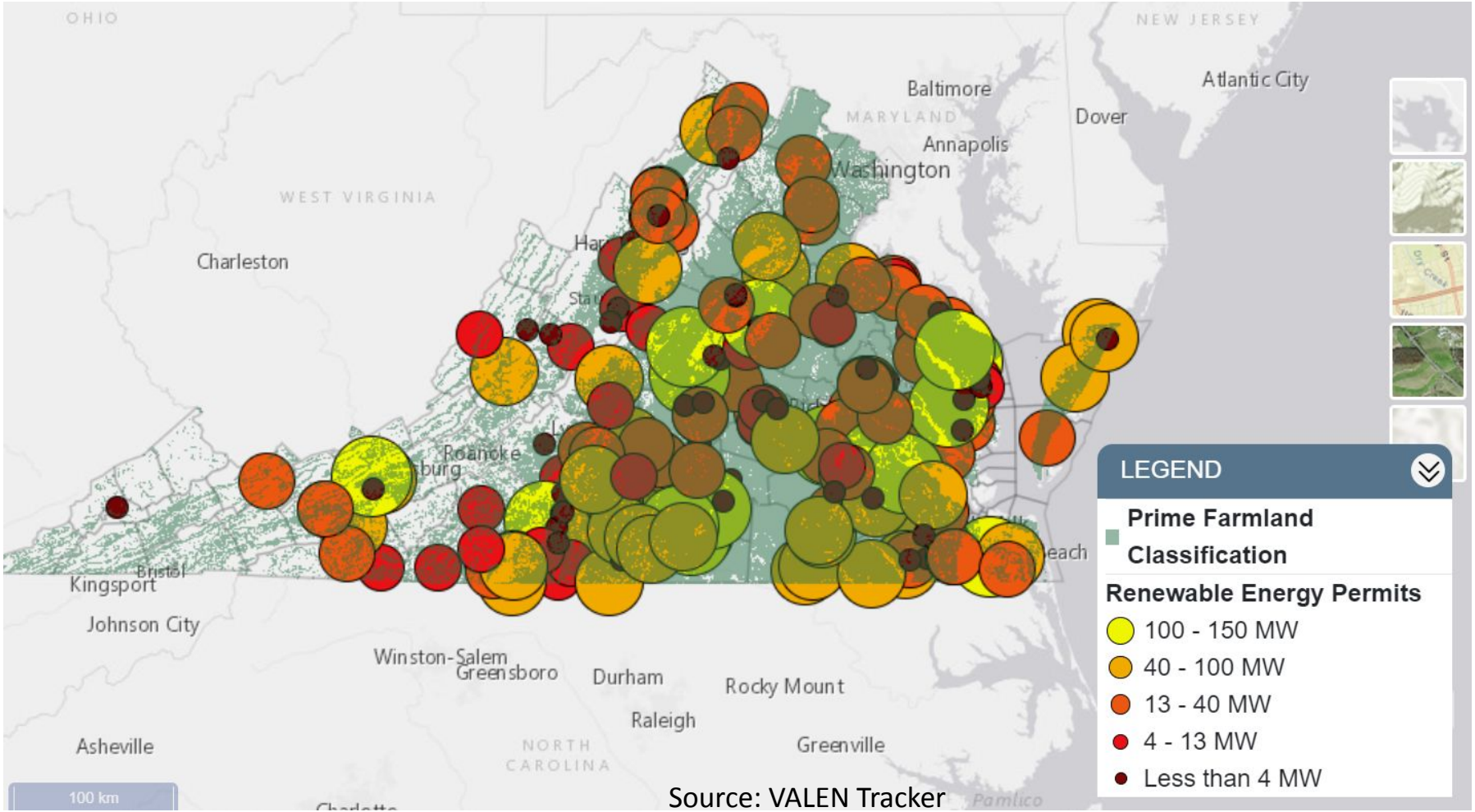
- **Company-owned solar: 1,546 MW**
- **PPA solar: 1,317 MW**
- **Company-owned storage: 85.7 MW**
- **PPA storage: 82 MW**

Appalachian Power:

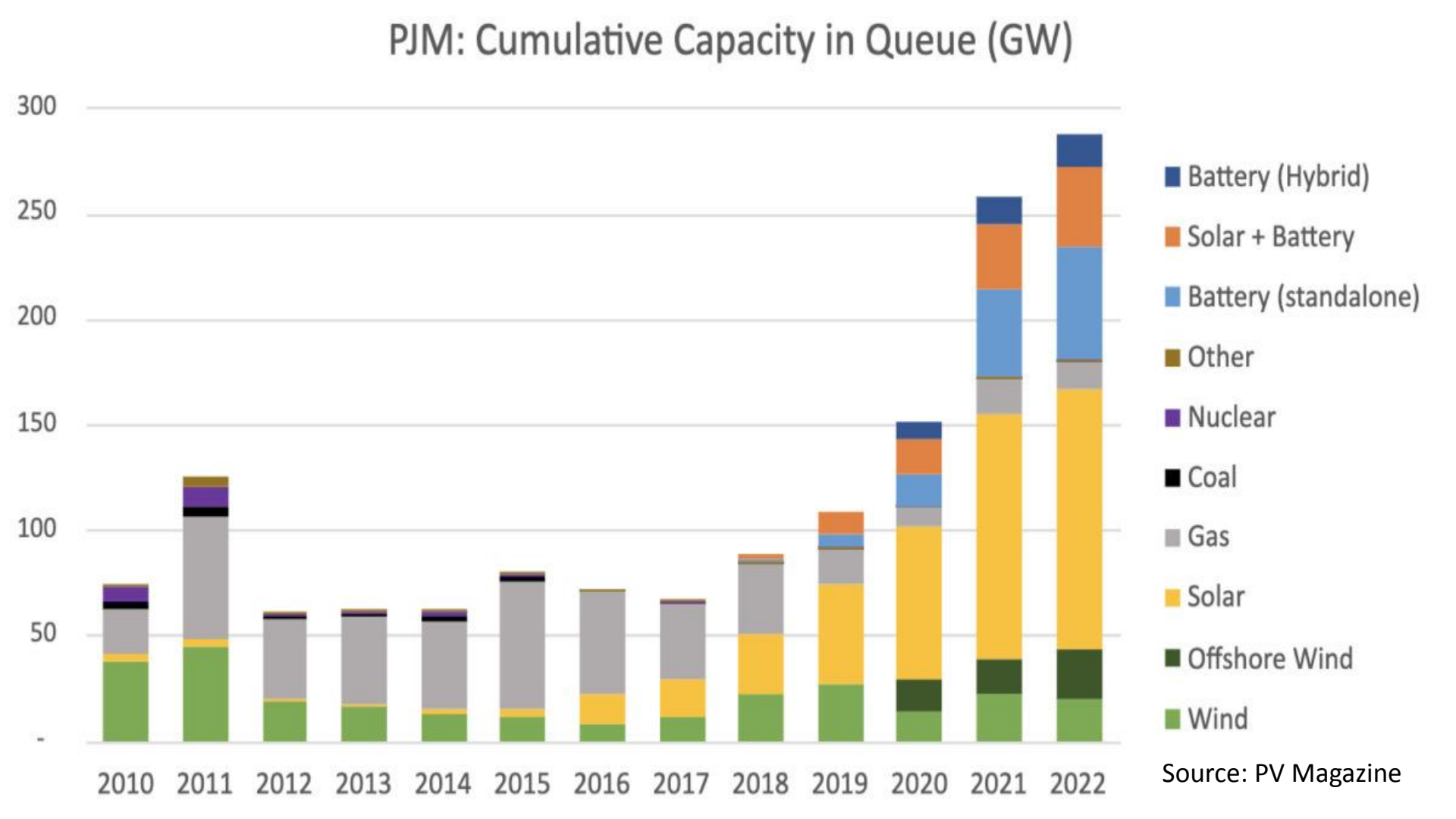
843 MW of new renewable capacity

- **Company-owned solar: 199.9 MW**
- **PPA solar: 292.9 MW**
- **Company-owned wind: 350.2 MW**

Source: Southern Environmental Law Center's Virginia Clean Economy Act ("VCEA") Status Update (April 15, 2024)



Source: VALEN Tracker



Source: PV Magazine

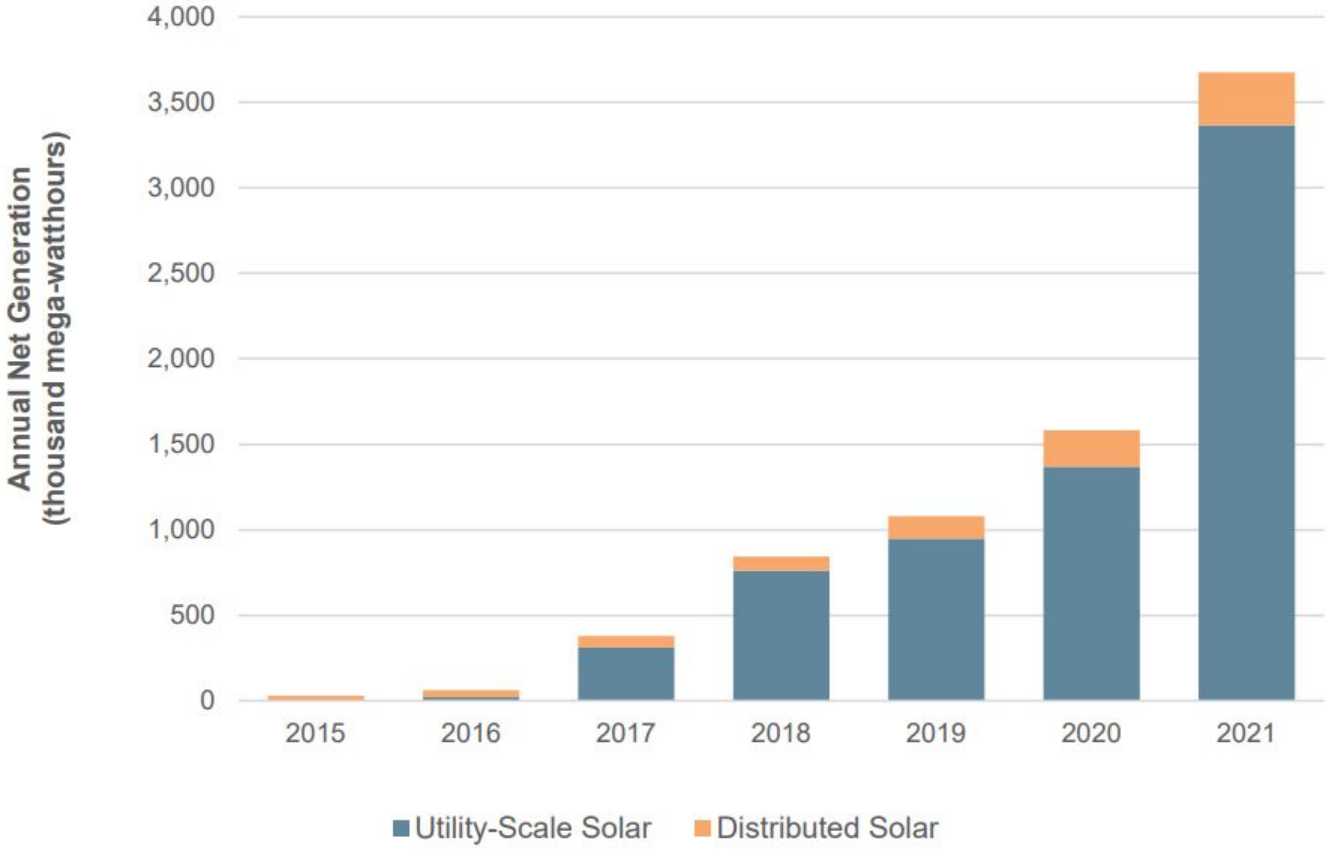
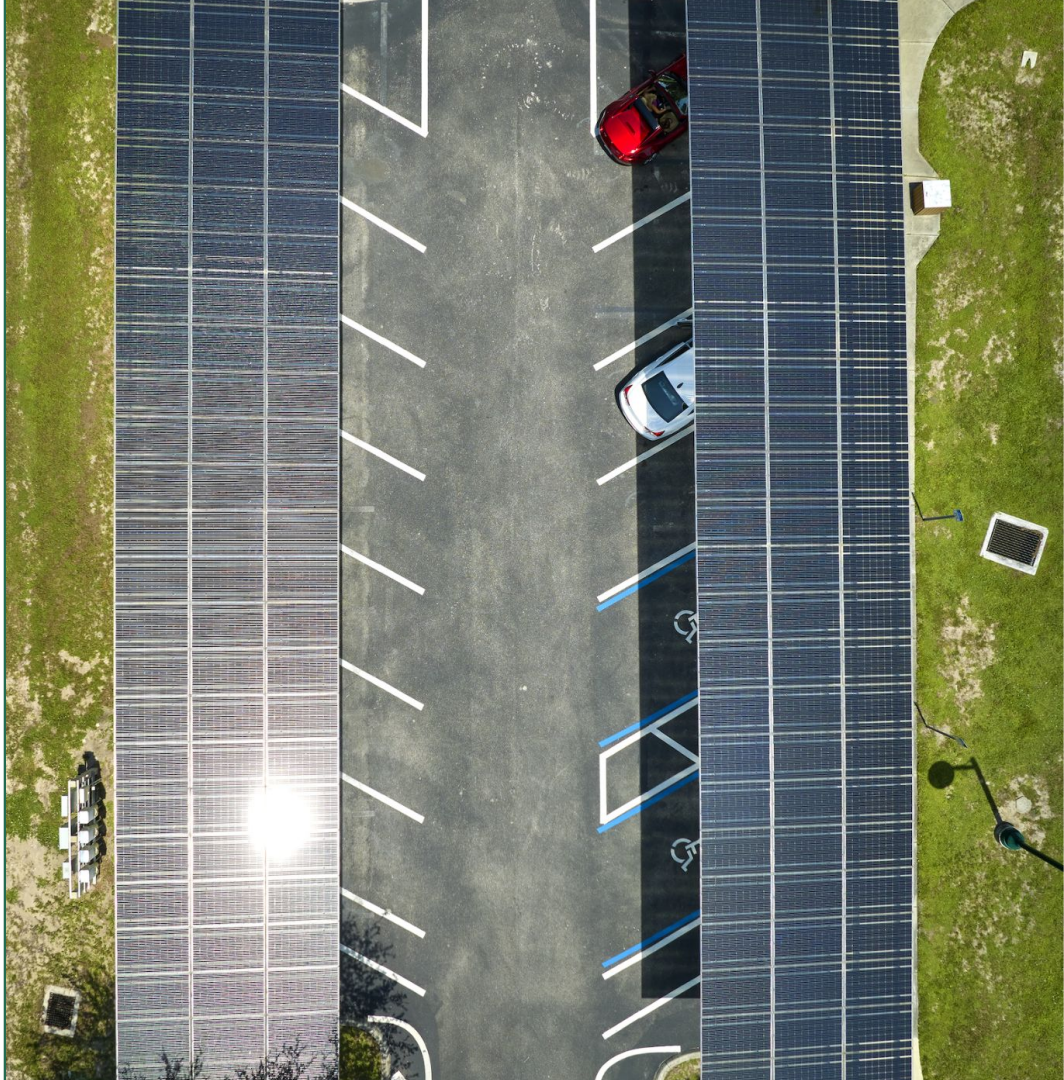


Figure 4. Annual Net Generation from Solar in Virginia
Source: U.S. EIA

Distributed Generation

- Rooftop
- Community
- Brownfields
- Commercial
- Parking Lot
- Small Agrivoltaic Sites



Benefits of Distributed Generation

- Faster interconnection
- More equitable (public gains the benefits vs. investor owned utilities)
- Less transmission infrastructure needed
- Less lost to inefficiency
- More resilient
    - Load shifting
    - Battery Back-Up

Challenges of Distributed Generation

- Changing policy environment
- Costly grid connection requirements for midsized projects
- Often has a lengthy ROI
- Limited incentives available
- Labor challenges
- Arbitrary cap of 6% set

The Washington Post
Democracy Dies in Darkness

Va. went all in on solar. Then its powerful utility changed the rules.

After Dominion Energy required expensive upgrades, many solar projects were put on hold.

By Jim Morrison
May 27, 2024 at 6:00 a.m. EDT

Solar proponents note that Dominion Energy's requirements have halted dozens of projects throughout Virginia. (Dado Ruvic/Reuters)

But there's a lot of potential!

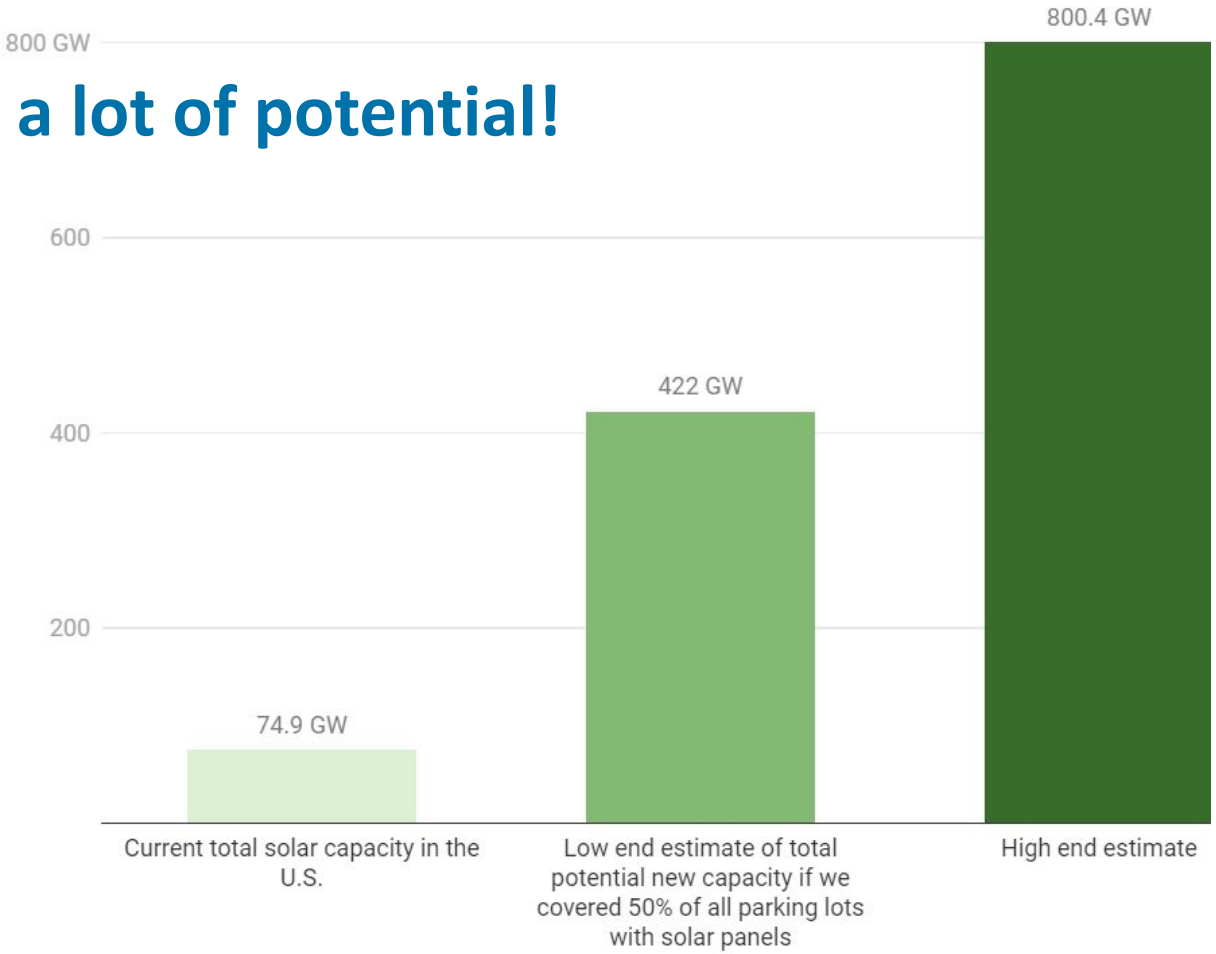


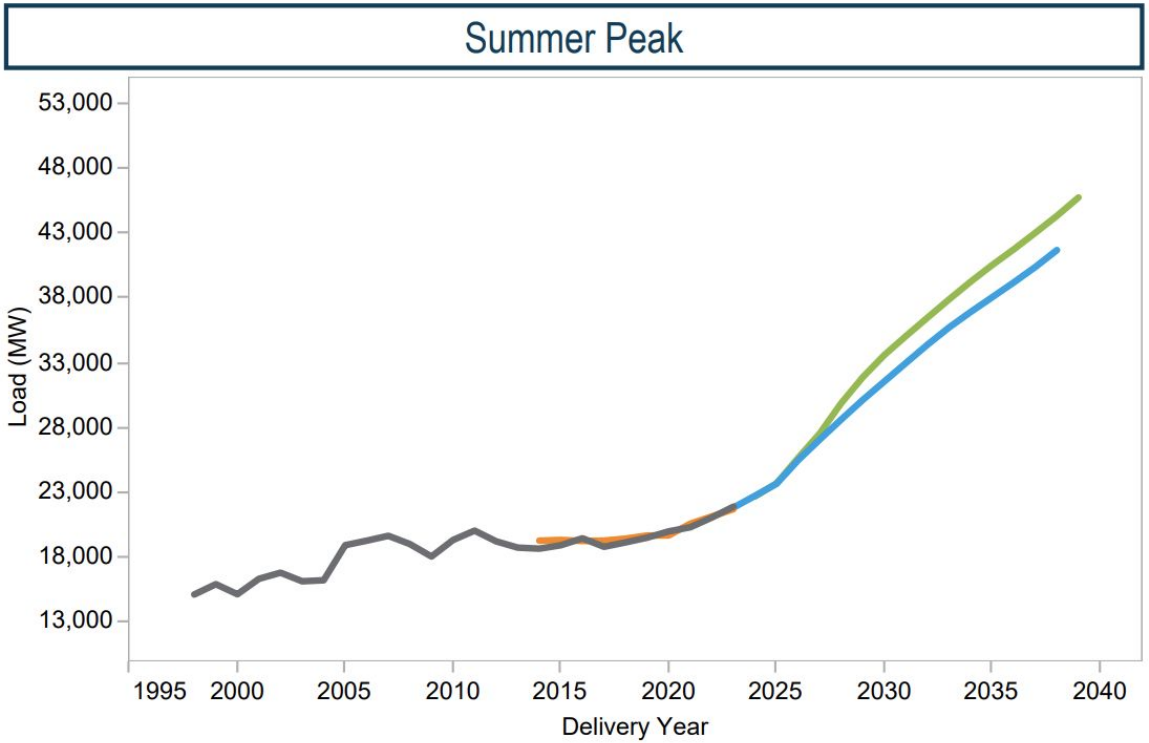
Chart: Elijah Wolfson for TIME • Source: U.S. EIA; U.S. Geological Survey; Mikhail Chester, et. al., 2010 *Environ. Res. Lett.* 5 034001

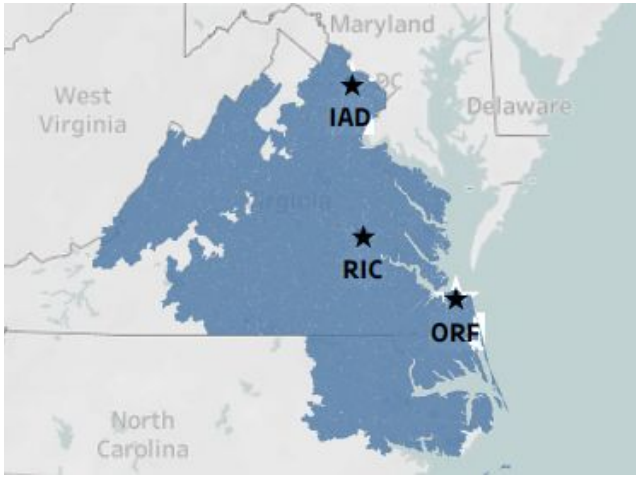
But we have a big problem…

…exploding data center energy demand

Skyrocketing Load Demand

Dominion Energy



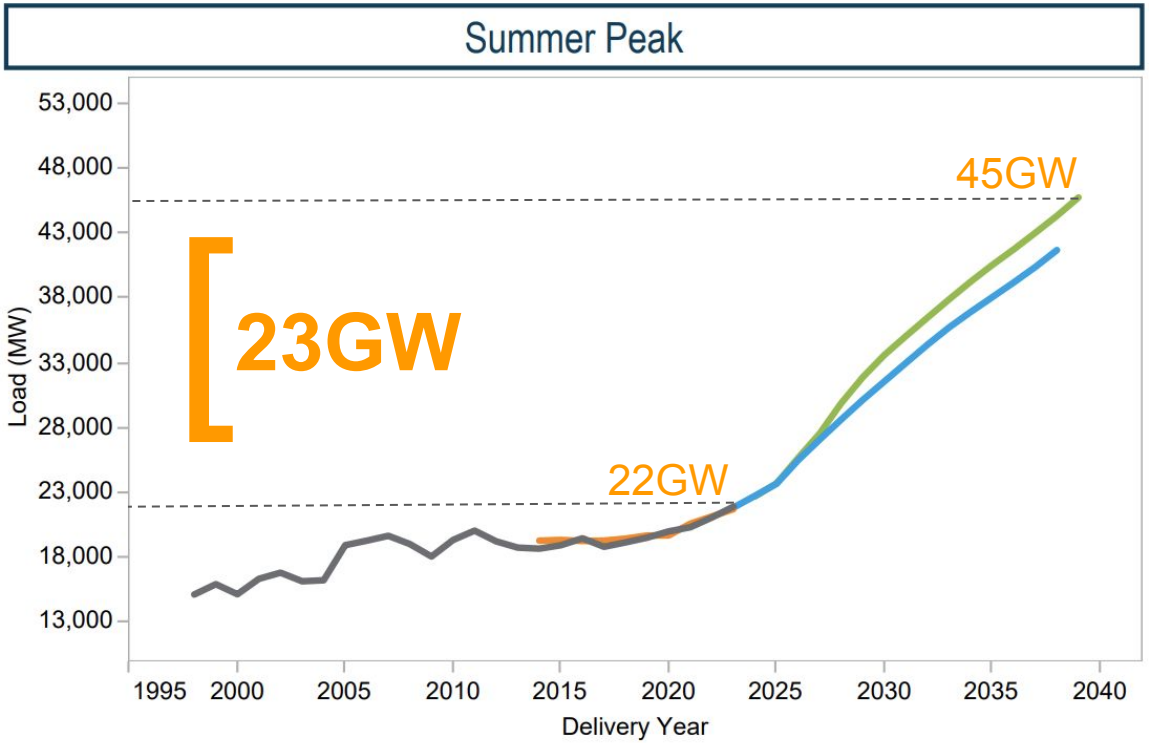


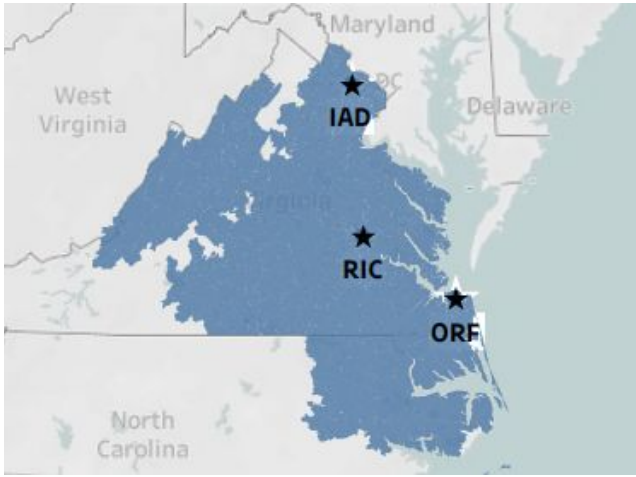
Green

Blue

Skyrocketing Load Demand

Dominion Energy





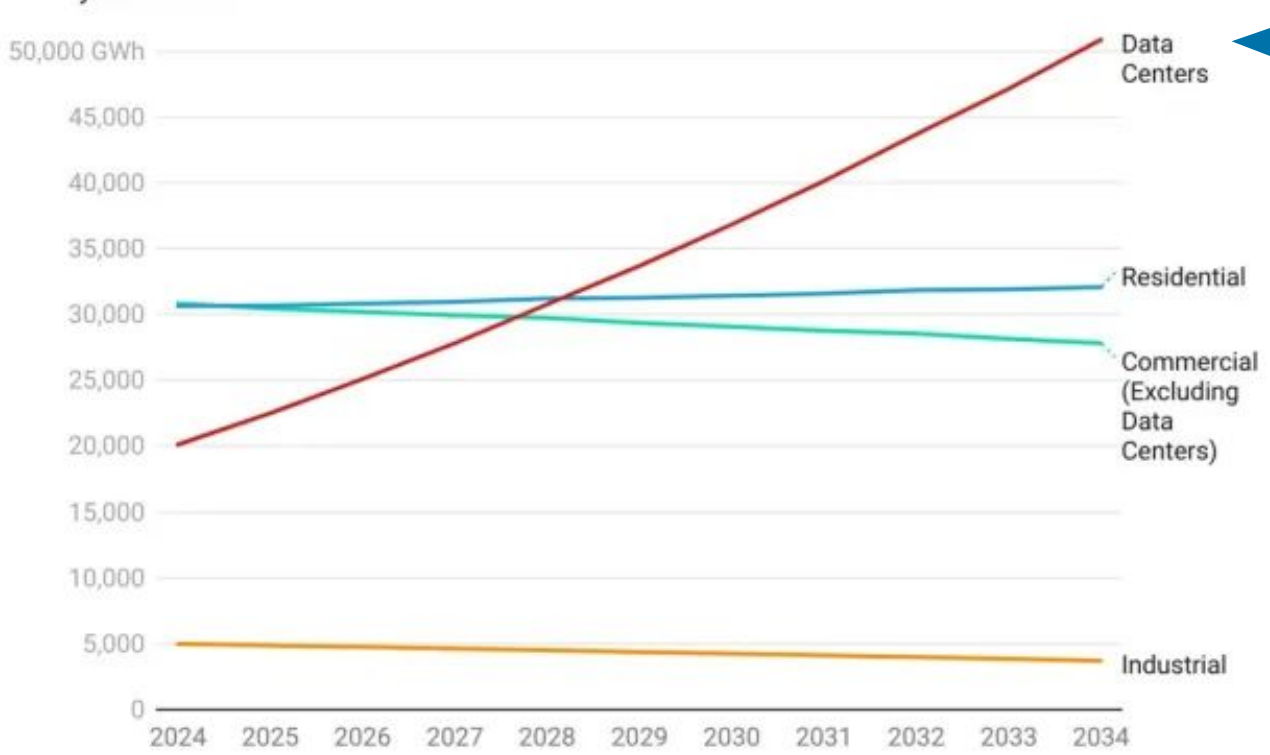
Green

Blue

That's a doubling of Virginia's peak load, solely due to data center development, within 15 years!

Forecasted Dominion Energy annual electricity sales

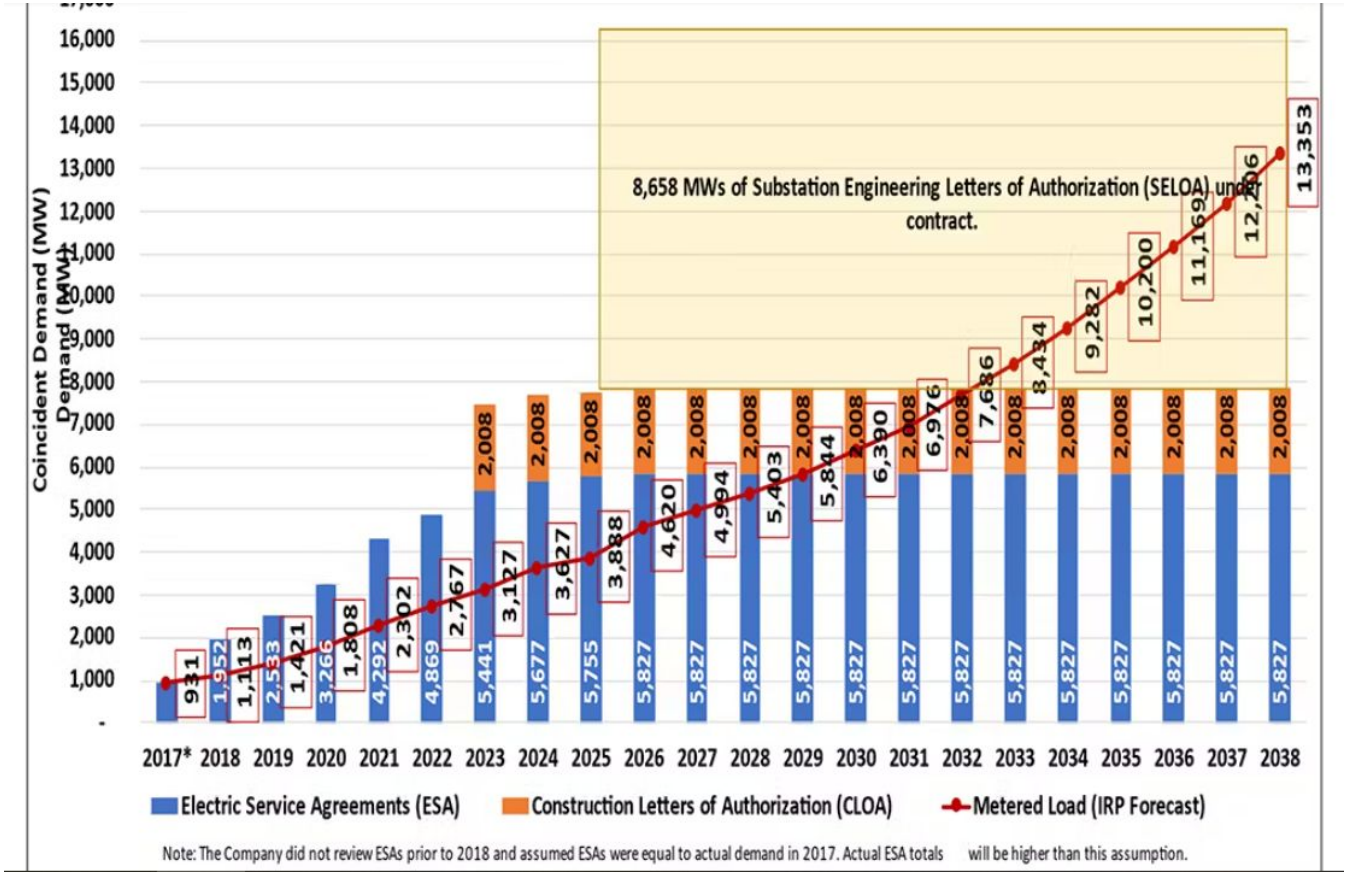
Data center electric sales will increase by 152% in the next decade, while others sectors remain mostly the same.



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

Dominion Energy and data center companies are making major power agreements without any oversight or planning…



Dominion Energy

Selected business updates

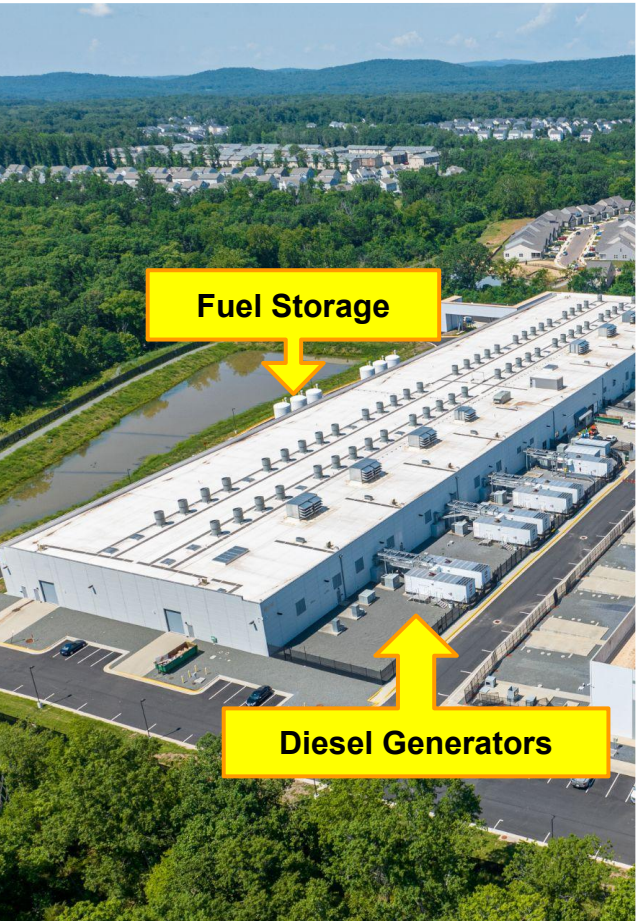
DEV: Demand growth

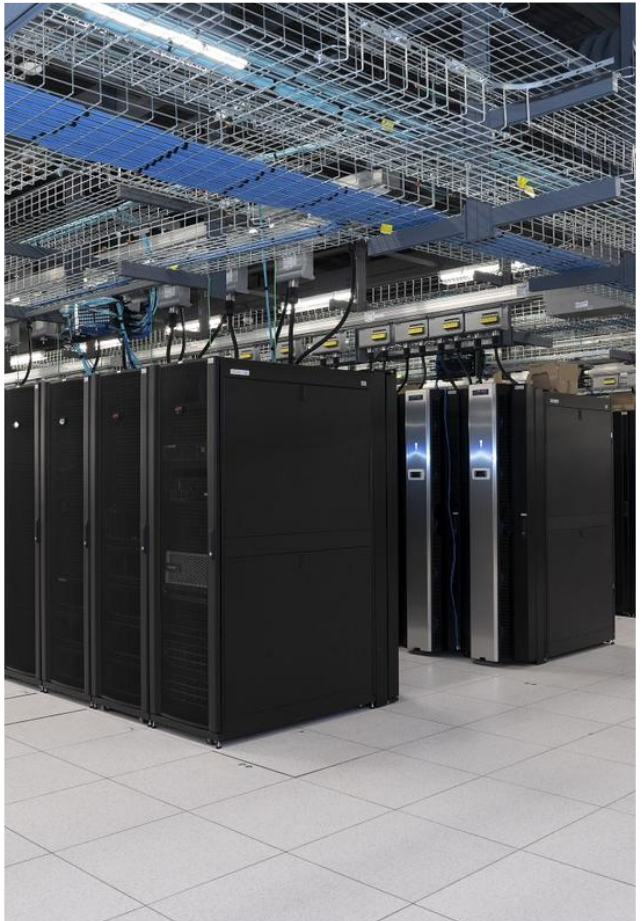
- ✓ **Ramping into substantial and growing multi-decade utility investment**
  - Weather normal sales growth rate of 4.8% YTD March
  - Continue to expect 2024 DEV weather normal sales growth rate of 4.5%—5.5%
- ✓ **Northern Virginia leads the world in data center markets**
  - Connected 94 data centers with over 4 GW of capacity since 2019
  - Additional 15 data centers expected in 2024
  - Individual data center demand growing from 30 MW to 60—90 MW
  - Larger data center campuses emerging; requests ranging from 300 MW to several GWs
- ✓ **Actively planning to serve demand growth while ensuring a safe and reliable grid**
  - Transmission and infrastructure investment in Northern Virginia and across the DOM Zone
  - Awarded 150+ electric transmission projects totaling $2.5B during PJM open window

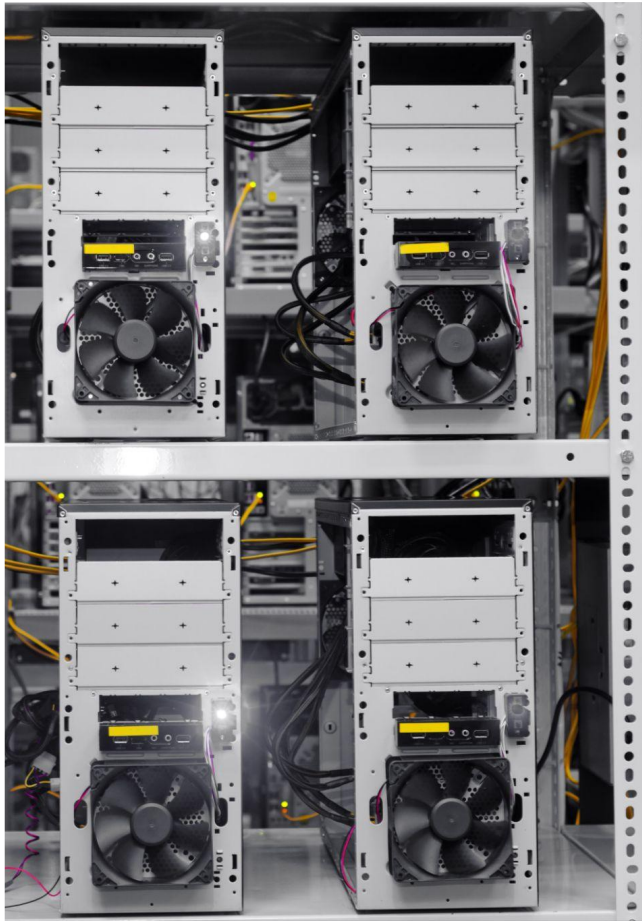
Dominion Energy

Dominion is committing the state to providing this power without any oversight or review of the infrastructure needed or the cost burden placed on ratepayers.

What is a data center?





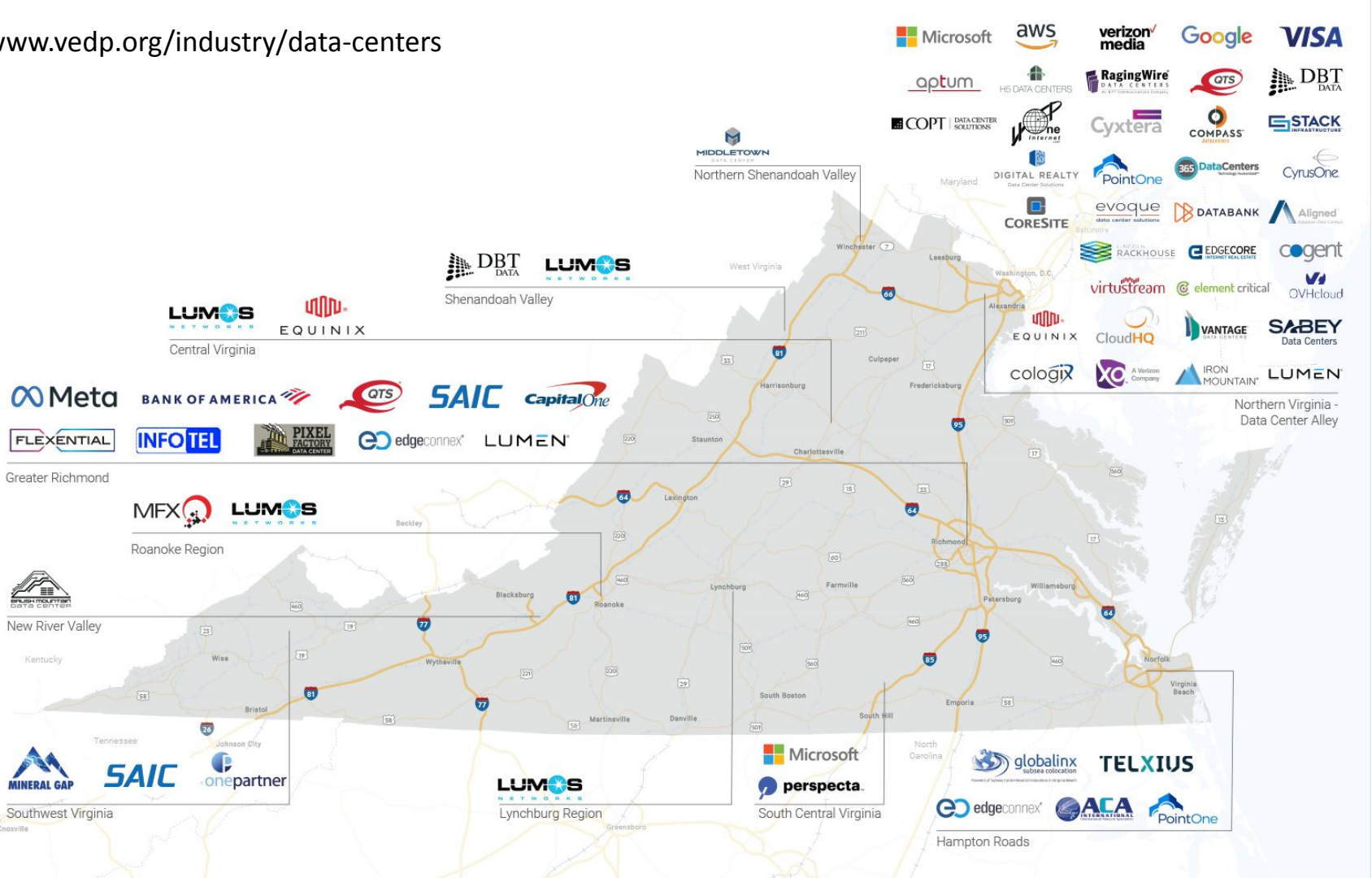



AI

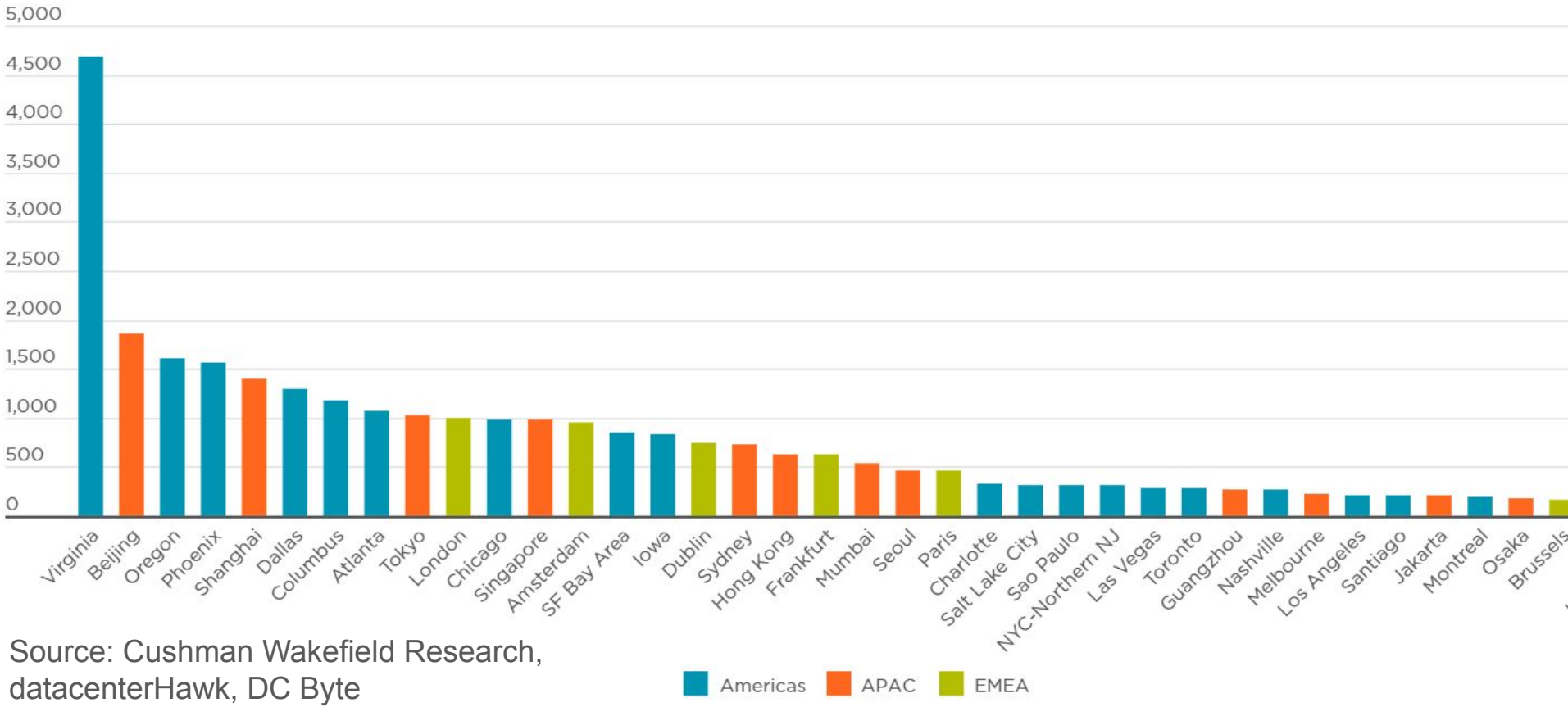
Data centers consume a huge amount of electricity

60 MW per building = 15,000 homes

Source: www.vedp.org/industry/data-centers



Operational IT Load (MW)



Source: Cushman Wakefield Research, datacenterHawk, DC Byte

Figure 6: Total Inventory vs. Under Construction by Primary Market, H2 2023

Source: CBRE Research, CBRE Data Center Solutions, H2 2023.

Figure 3: % of Total Primary Market Inventory

Source: CBRE Research, CBRE Data Center Solutions, H2 2023.

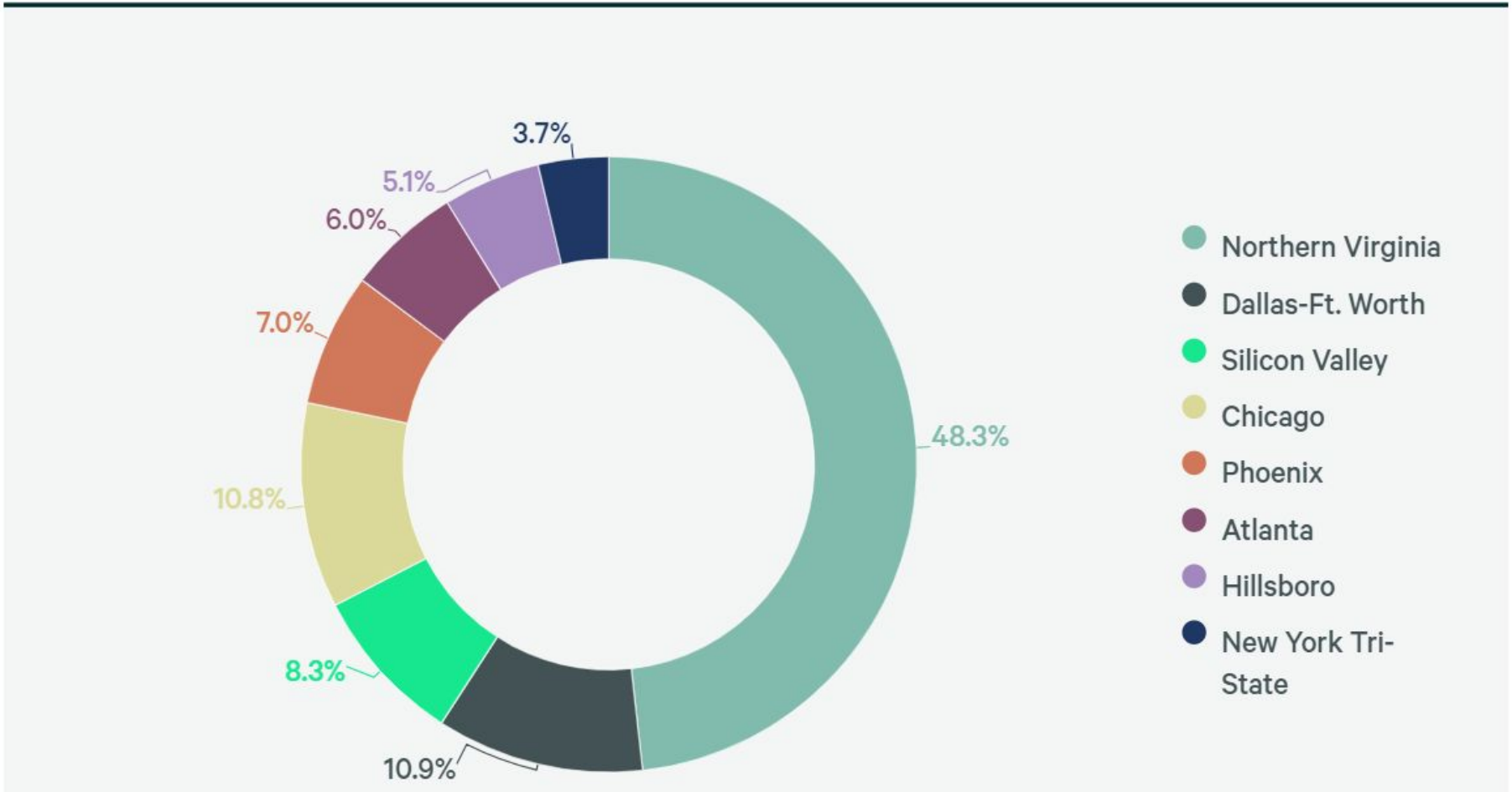
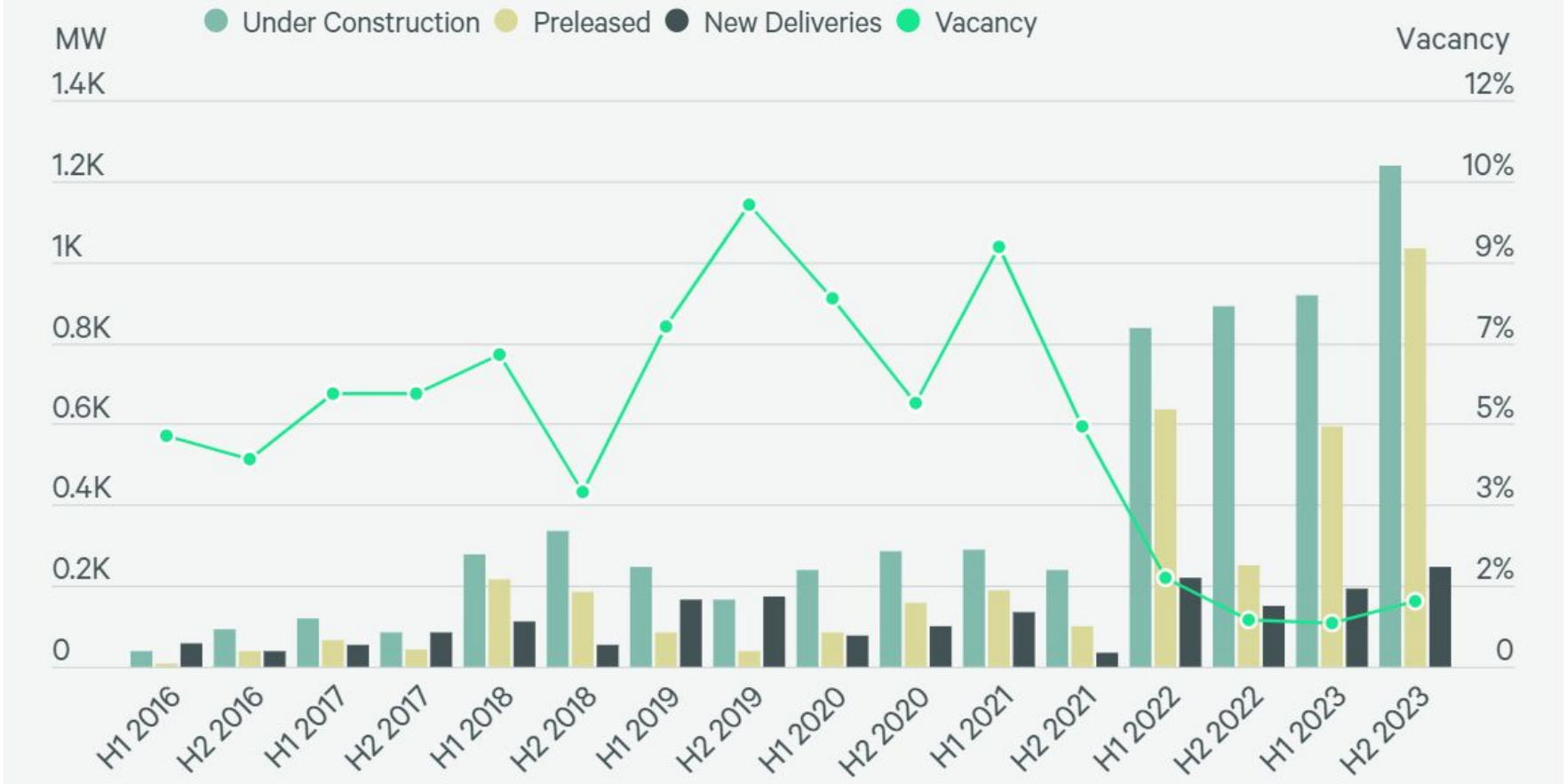


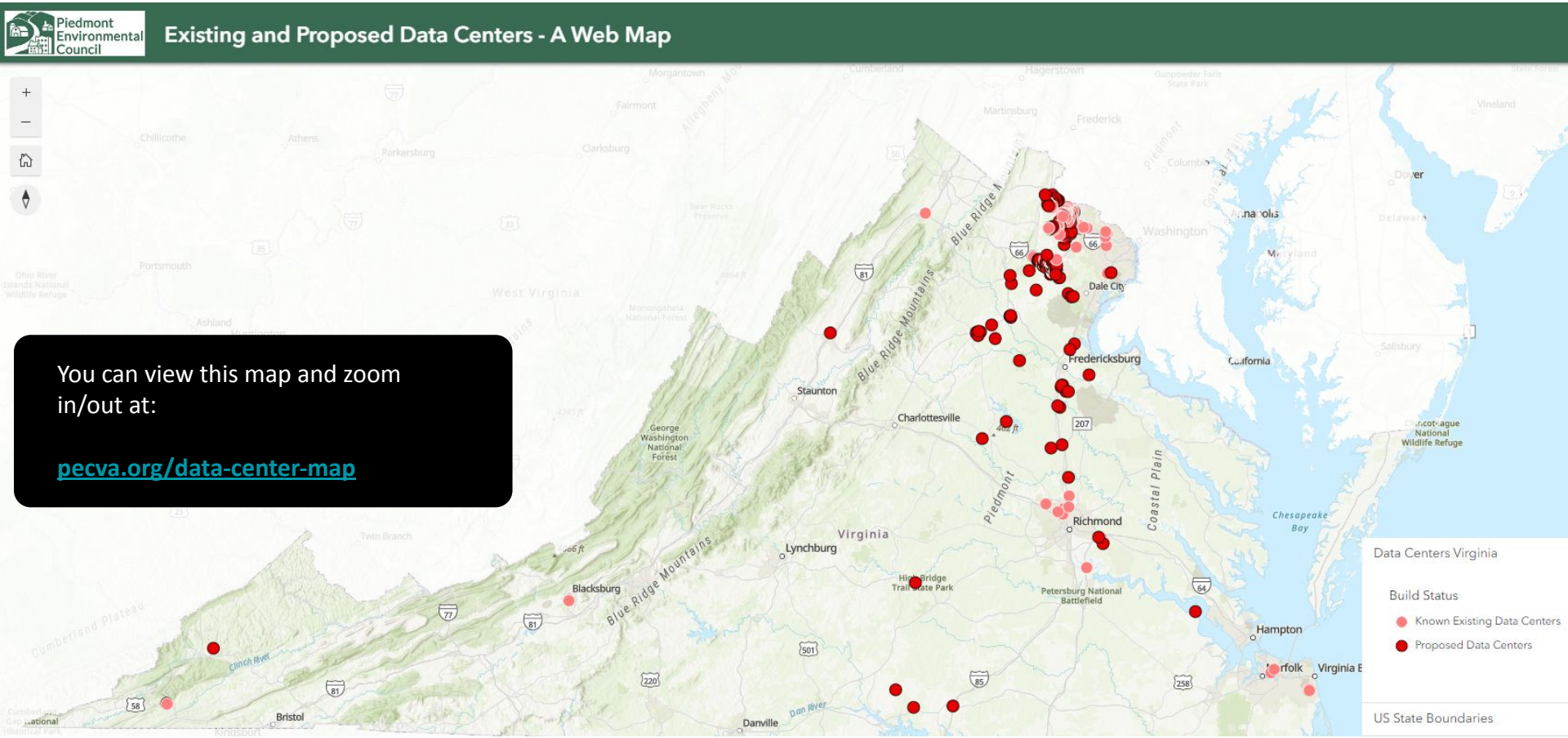
Figure 1: Historical Market Information

Source: CBRE Research, CBRE Data Center Solutions, H2 2023.

Northern Virginia Market



Data center proposals keep coming…



Currently 57 million square feet existing or being constructed in the state…

There’s another 180 million square feet approved or in the pipeline…

Estimated energy that could be demanded at build-out…

County	Sq ft	Estimated MW
Caroline	7,316,000	2195
Culpeper	9,145,000	2744
Fairfax	5,703,707	1711
Fauquier	7,041,000	2112
Hanover	11,000,000	3300
Henrico	675,000	203
King George	7,250,000	2175
Loudoun	42,266,143	12680
Louisa	10,400,000	3120

County	Sq ft	Estimated MW
Orange	5,000,000	1500
Prince Edward	1,300,000	390
Prince William	55,874,562	16762
Spotsylvania	11,000,000	3300
Stafford	6,010,000	1803
Virginia Beach	140,000	42
Wise	200,000	60

Buildout would result in absurdly high load demand…

Total Current Load From Data Centers in VA

= 3,200 MW

800,000 homes

Proposed Data Centers in the State could reach up to…

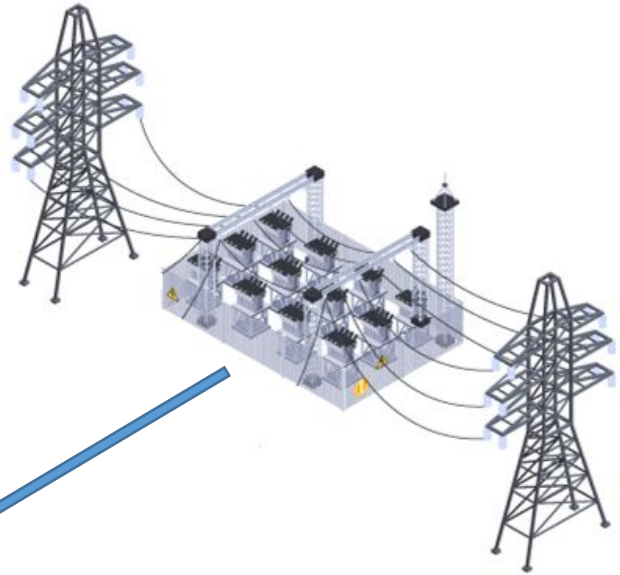
54,105 MW!

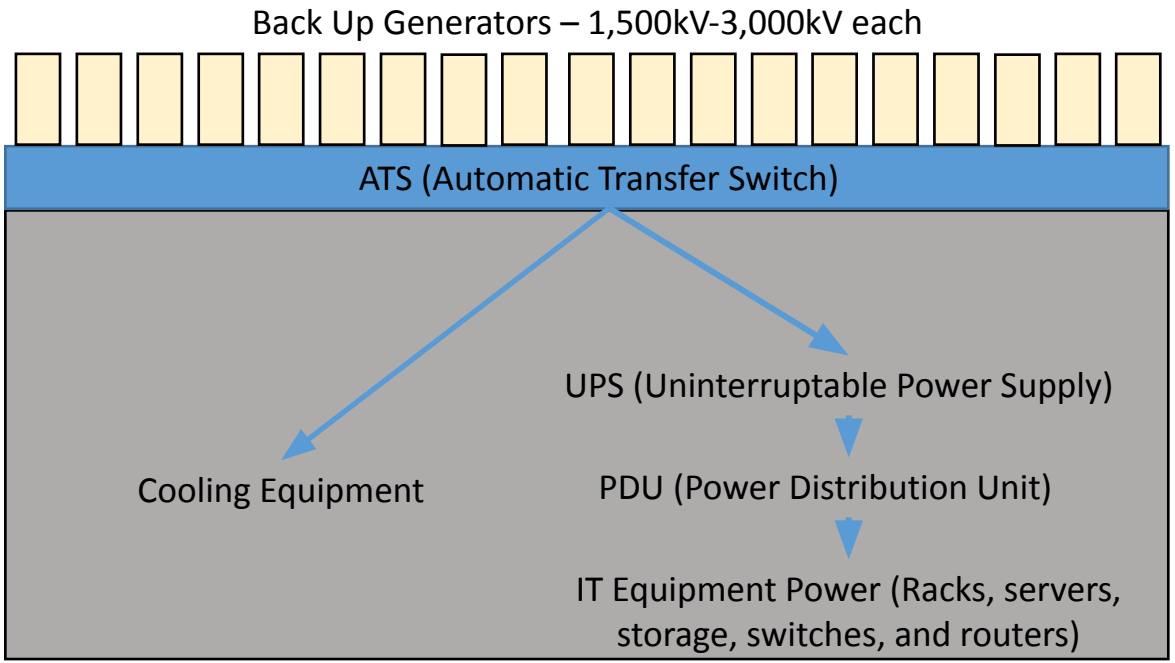
13.5 million homes!

11 “gigawatt campuses” have been approved!

Very few proposals have been denied…

Power Path for Typical Data Center

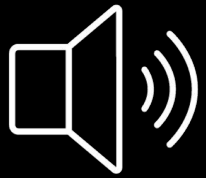




$$\text{PUE} = \frac{\text{Total Facility Power}}{\text{IT Equipment Power}}$$

They create a host of community-level impacts

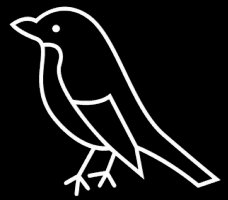
Parks and Trails



Noise

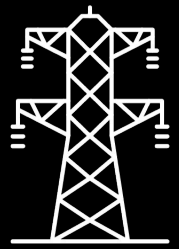
Water

Air Quality



Wildlife Habitat

Design



Transmission and Substations

Power Hungry → Land Hungry

Even if additional power is met through renewable utility scale solar that requires hundreds of acres of solar panels per building along with new substations and transmission lines.

1 data center = 30-90 MW

1 MW of solar ≈ 10 acres

One data center building ≈ 300-900 acres of utility scale solar

Moving towards data center campuses of 10 million sq ft +

That's 3,000 MW=30,000 acres!

Data centers are getting bigger and bigger…

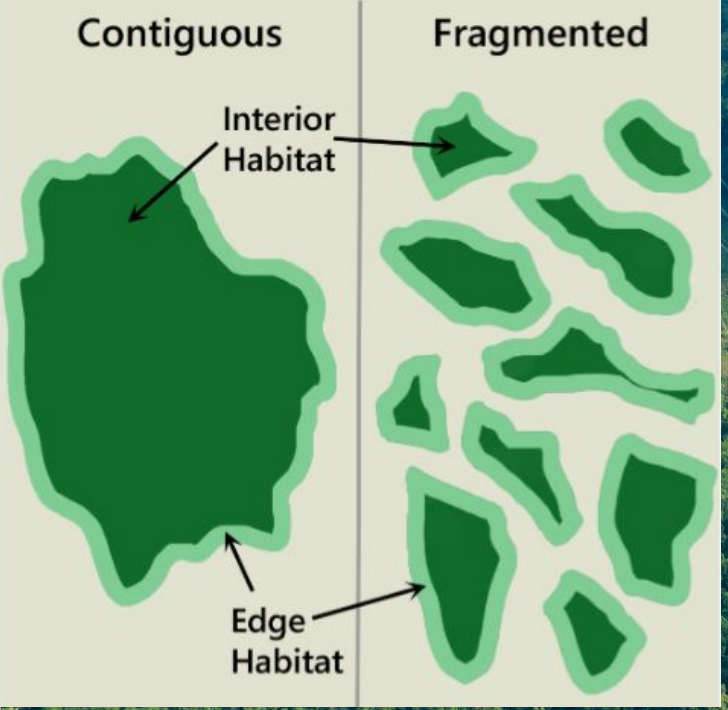
- In 2018 large data centers were around 50,000 to 100,000 sqft
- In 2023 large data centers are around 200,000 to 300,000 sqft
- 2018 -> 10-15 MW per building
- In 2023 -> 30-90 MW per building
- Multi building campuses are common using 600MW+

Data center development is consuming huge amounts of land…

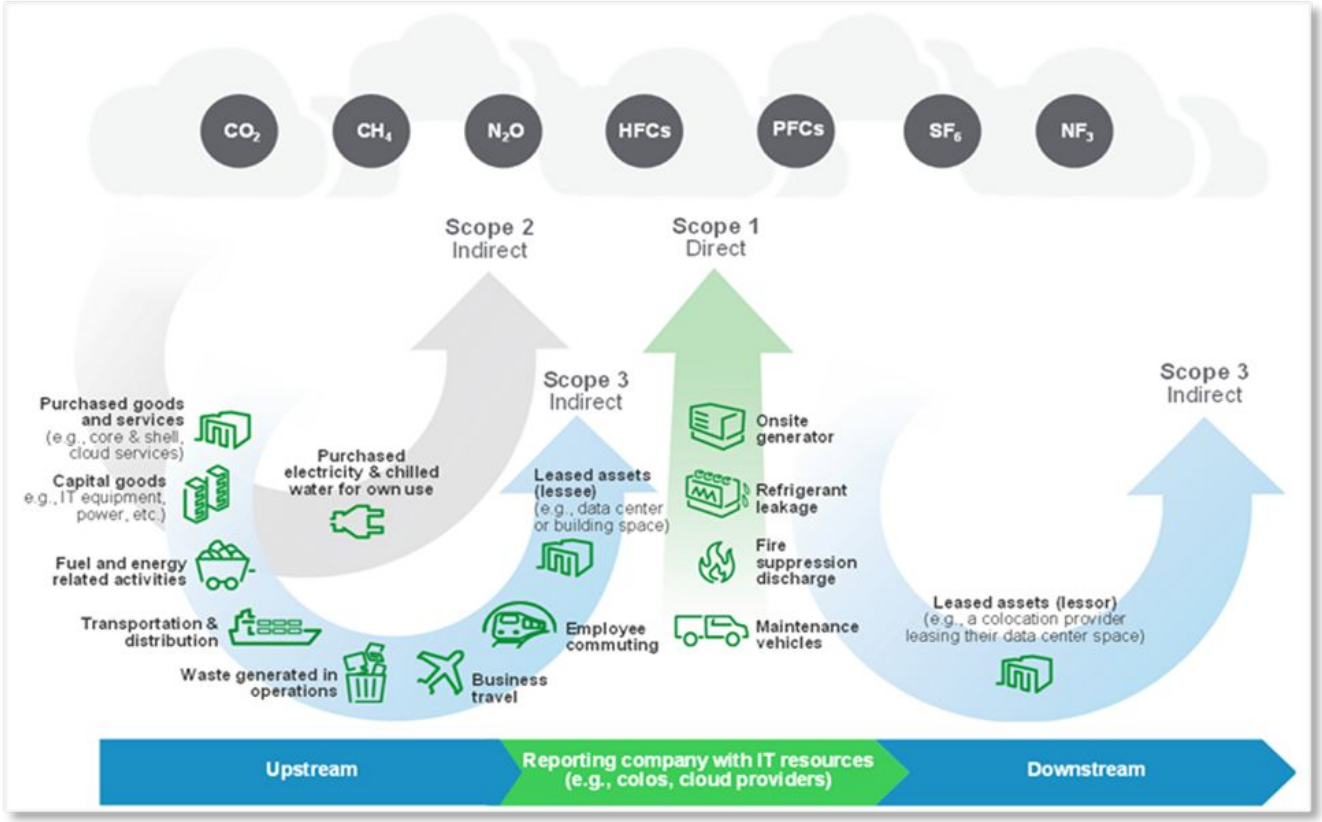
Proposed data center space in the state:

180,351,412 sqft

That's equivalent to 1,000 Walmart Super Centers, that's a lot of impervious surface!


Contiguous
Fragmented
Interior Habitat
Edge Habitat

Climate impacts from data centers are significant…



Source: Schneider Electric

Back up power is usually diesel generators…

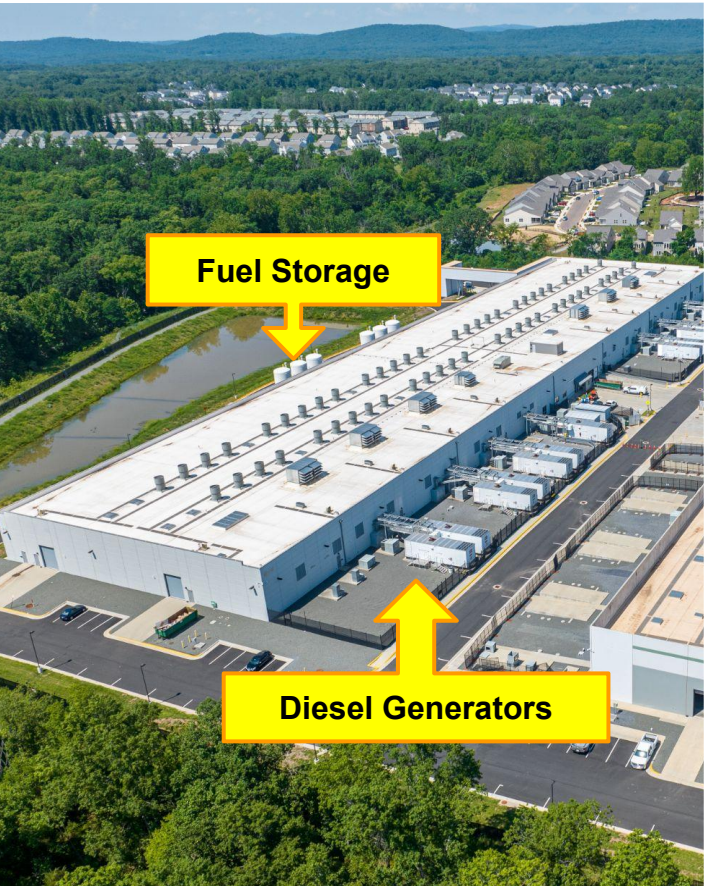
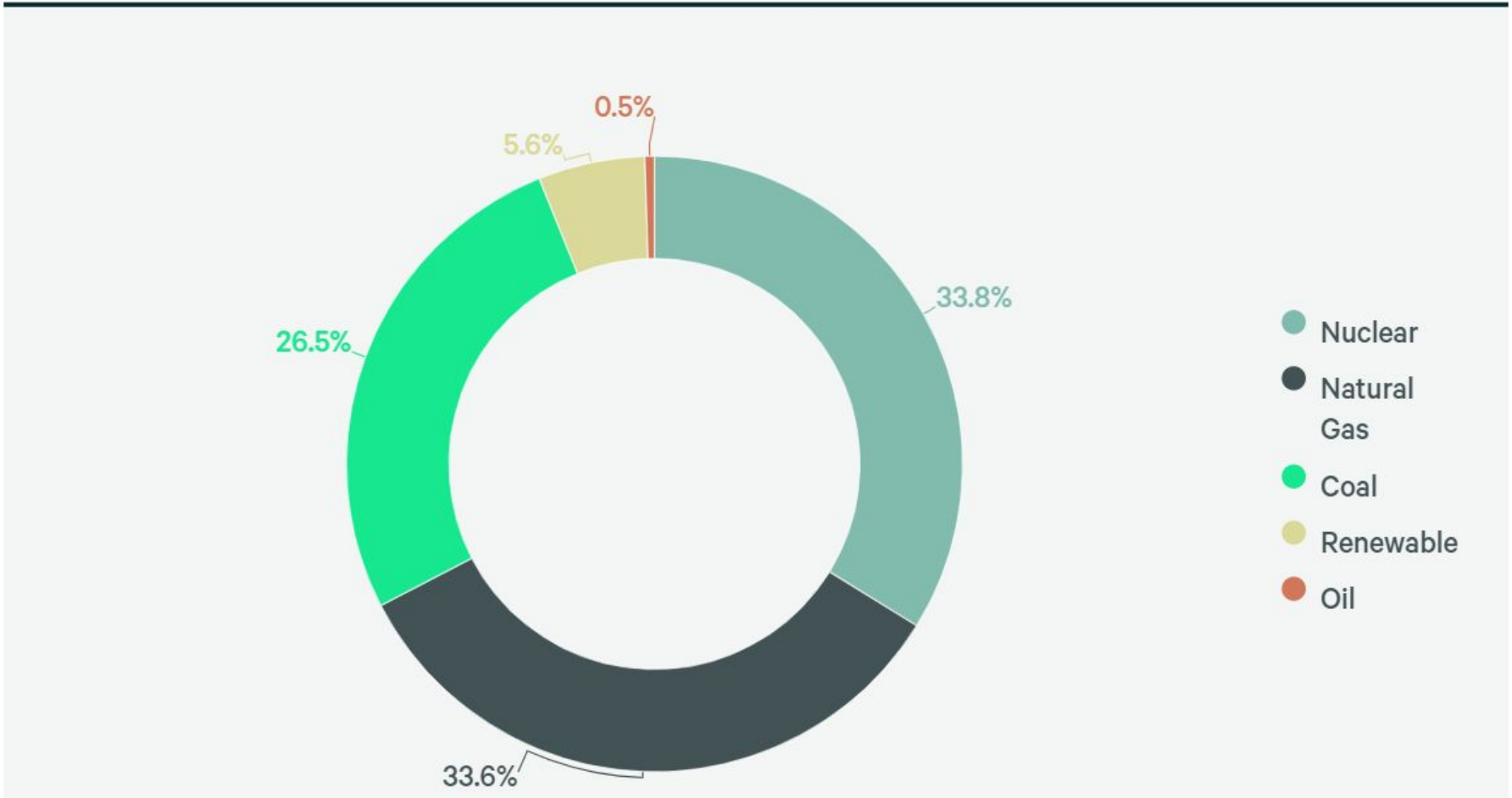


Figure 4: Market Fuel Mix

Source: Dominion Power.

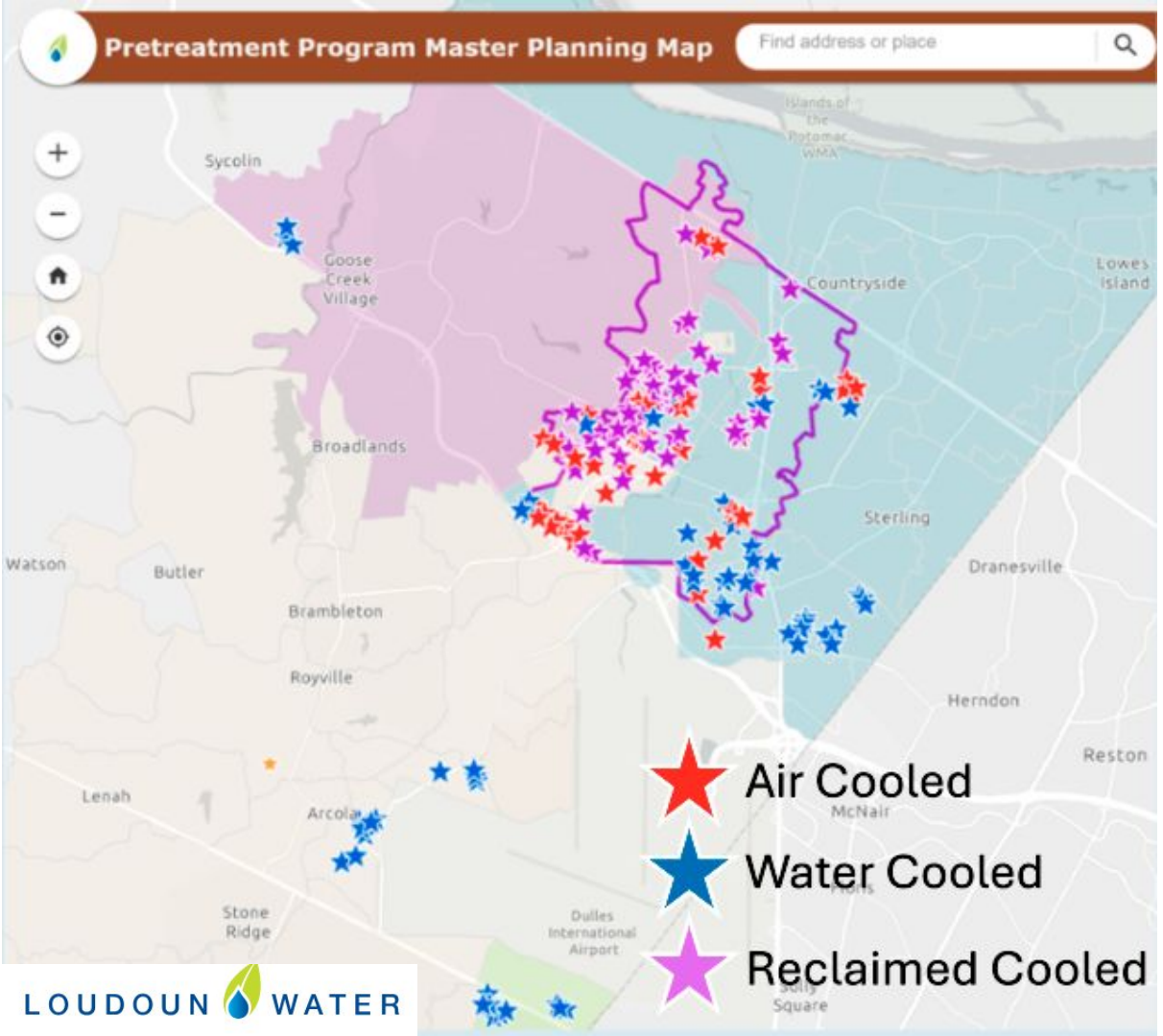


Large amounts of impervious surface and growing levels of potable water consumption…

From 2019-2023

Reclaimed Water Usage Up 20%

Potable Water Usage Up 250%!



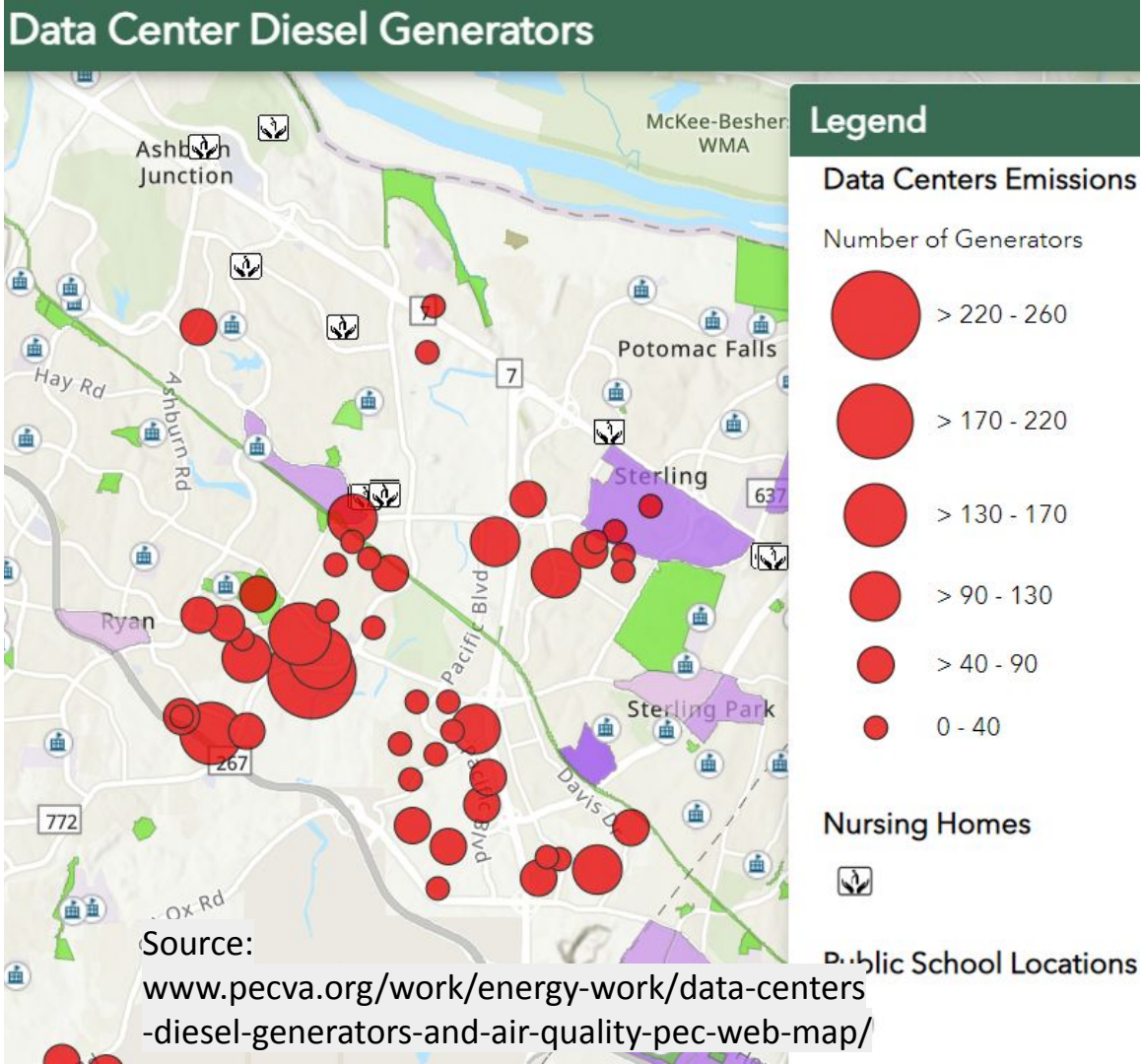
Potable Water Use - All Data Centers

Monthly Invoiced amounts (gallons)

	2019	2020	2021	2022	2023
January	15,208,780	15,065,320	19,618,896	30,707,401	39,933,409
February	15,937,553	13,831,312	18,848,923	26,728,979	61,740,263
March	15,284,499	14,554,998	18,607,791	29,906,535	42,030,985
April	17,037,828	21,084,049	26,725,211	36,058,398	49,354,305
May	21,249,844	18,050,884	34,656,263	42,563,709	72,312,425
June	30,346,218	30,243,603	49,121,301	59,377,051	63,927,216
July	43,281,261	51,555,910	71,868,368	80,120,601	98,047,745
August	54,311,869	78,942,241	88,517,108	110,892,431	134,493,991
September	47,488,505	65,151,395	83,762,238	113,230,578	120,268,346
October	38,602,146	43,241,750	53,695,627	82,199,218	100,594,449
November	23,137,950	24,985,624	36,757,327	49,819,863	62,841,199
December	15,331,834	22,945,442	28,078,071	43,167,675	53,503,678
	337,218,287	399,652,528	530,257,124	704,772,439	899,048,011

**usage includes all potable water use at the premise; irrigation, indoor fixtures, cooling, etc…*

There's over 4,000 diesel generators approved as back-up power for data centers in Northern Virginia…



Source: www.pecva.org/work/energy-work/data-centers-diesel-generators-and-air-quality-pec-web-map/

Violations of state and local land use regulations continue to happen during construction damaging and degrading historic and natural resources…

Prince William Times
May 26, 2024

80° Sunny

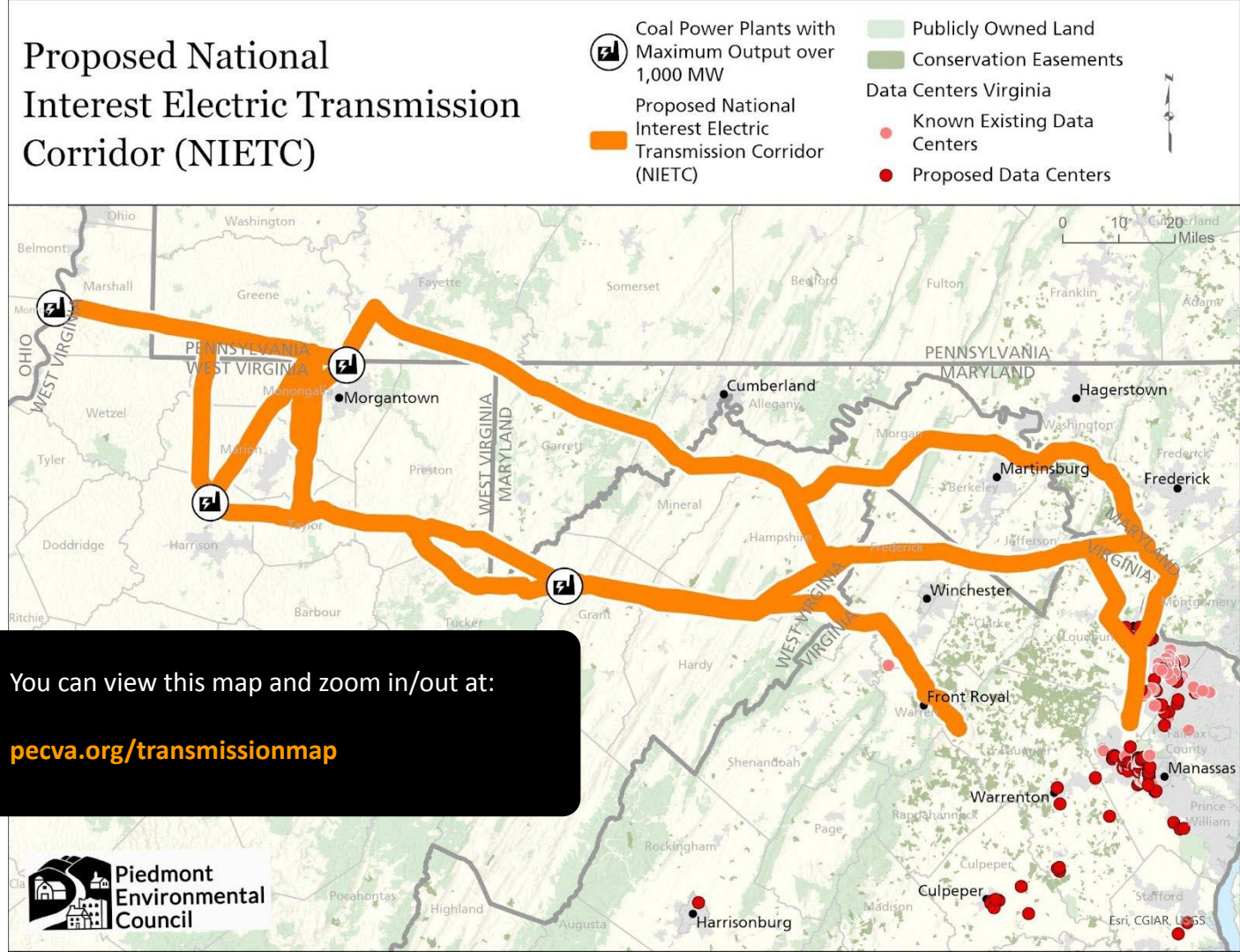
NEWEST EDITION

Data center construction damages 2 Black cemeteries

County's historical commission voices concerns, calls for action

By Cher Muzyk Staff Writer May 22, 2024 Updated May 23, 2024 1

And new electric infrastructure like transmission lines keep coming…



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

pecva.org/transmissionmap

Piedmont Environmental Council

Threshold Need Determination

Potential NIETC	Reliability	Resilience	Congestion	Consumer Costs	Future Generation & Demand Growth	Clean Energy
New York - New England	■	■	■	■	■	■
New York – MidAtlantic	■	■	■	■	■	■
Mid-Atlantic – Canada	■	■				■
Mid-Atlantic	■	■		■	■	
Midwest – Plains	■	■	■	■	■	■
Northern Plains			■	■	■	■
Delta – Plains	■	■	■		■	■
Plains – Southwest	■	■			■	■
Mountain – Plains – Southwest	■	■	■		■	■
Mountain – Northwest	■	■	■		■	■

Reliability = Operate transmission system elements within equipment and electric system thermal, voltage, and stability limits

Resilience = Withstand and/or recover from system disruptions or unanticipated failure of system elements, particularly extreme weather events

Congestion = Alleviate economic impacts on the users of electricity that result from a transmission constraint

Consumer Costs = Facilitate delivery of lower-cost resources to high-priced demand areas

Future Generation & Demand Growth = Accommodate likely scenarios of future power system characteristics driven by market forces and utility, state, and federal policies

Clean Energy = Interconnect clean energy resources to reduce greenhouse gas emissions

GDO GRID DEPLOYMENT OFFICE

Threshold Need Determination

Potential NIETC	Reliability	Resilience	Congestion	Consumer Costs	Future Generation & Demand Growth	Clean Energy
New York - New England	■	■	■	■	■	■
New York – MidAtlantic	■	■	■	■	■	■
Mid-Atlantic – Canada	■	■				■
Mid-Atlantic	■	■		■	■	
Midwest – Plains	■	■	■	■	■	■
Northern Plains			■	■	■	■
Delta – Plains	■	■	■		■	■
Plains – Southwest	■	■			■	■
Mountain – Plains – Southwest	■	■	■		■	■
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GDO GRID DEPLOYMENT OFFICE

Ratepayers costs are increasing with every additional approval…

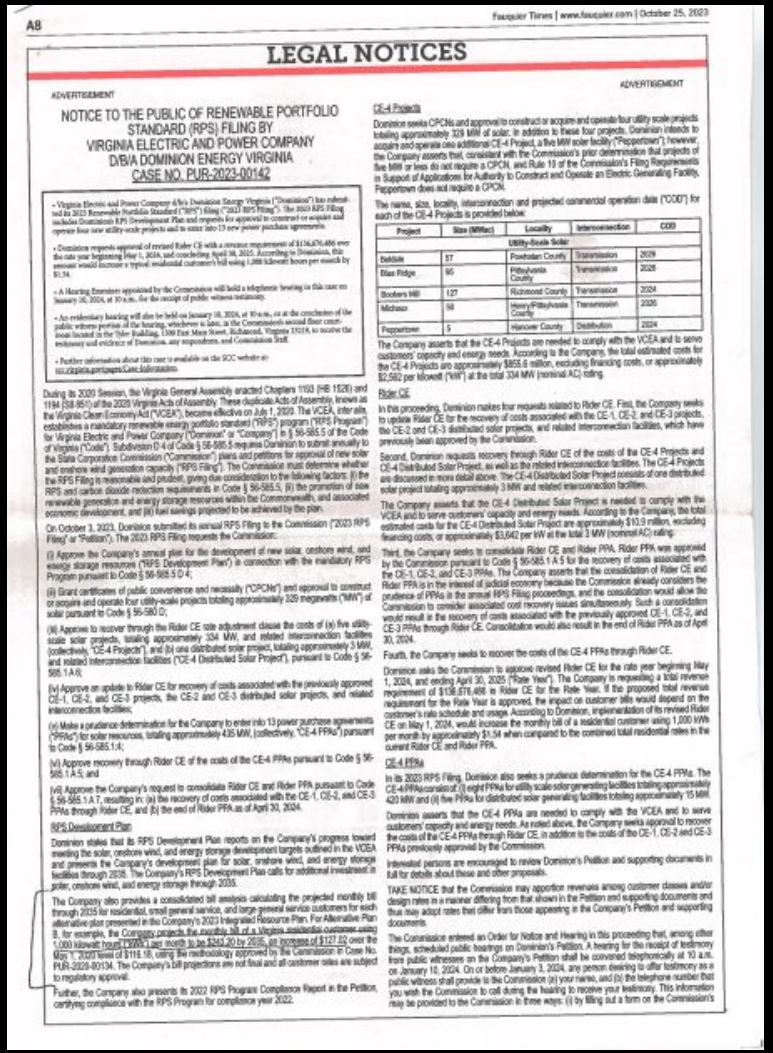
Executive Summary Table: 2023 Plan Results

	Plan A	Plan B	Plan C	Plan D	Plan E
NPV Total ($B)	$109.70	$127.70	$127.20	$140.90	$138.00
Approximate CO_2 Emissions from Company in 2048 (Metric Tons)	43.8 M	35.9 M	36 M	0 M	0 M
Solar (MW)	10,800 15 yr. 19,800 25 yr.	10,875 15 yr. 19,875 25 yr.	10,800 15 yr. 19,800 25 yr.	10,875 15 yr. 23,955 25 yr.	11,094 15 yr. 24,294 25 yr.
Wind (MW)	3,040 15 yr. 3,220 25 yr.	3,040 15 yr. 3,220 25 yr.	3,040 15 yr. 3,220 25 yr.	3,040 15 yr. 3,220 25 yr.	3,040 15 yr. 3,220 25 yr.
Storage (MW)	1,050 15 yr. 3,960 25 yr.	2,370 15 yr. 5,190 25 yr.	2,220 15 yr. 5,220 25 yr.	2,370 15 yr. 9,780 25 yr.	2,910 15 yr. 10,350 25 yr.
Nuclear (MW)	— 15 yr. — 25 yr.	804 15 yr. 1,608 25 yr.	804 15 yr. 1,608 25 yr.	1,608 15 yr. 4,824 25 yr.	1,072 15 yr. 4,288 25 yr.
Natural Gas-Fired (MW)	5,905 15 yr. 9,300 25 yr.	2,910 15 yr. 2,910 25 yr.	2,910 15 yr. 2,910 25 yr.	970 15 yr. 970 25 yr.	970 15 yr. 970 25 yr.
Retirements (MW)	— 15 yr. — 25 yr.	— 15 yr. — 25 yr.	— 15 yr. — 25 yr.	— 15 yr. 11,399 25 yr.	— 15 yr. 11,399 25 yr.

These costs are 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



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NOTICE TO THE PUBLIC OF RENEWABLE PORTFOLIO STANDARD (RPS) FILING BY VIRGINIA ELECTRIC AND POWER COMPANY D/B/A DOMINION ENERGY VIRGINIA CASE NO. PUR-2023-00142

- Virginia Electric and Power Company d/b/a Dominion Energy Virginia ("Dominion") has submitted its 2023 Renewable Portfolio Standard ("RPS") filing ("2023 RPS Filing"). The 2023 RPS Filing includes Dominion's RPS Development Plan and requests for approval to construct or acquire and operate four new utility-scale projects and to enter into 13 new power purchase agreements.
- Dominion requests approval of revised Rider CE with a revenue requirement of $138,676,486 over the rate year beginning May 1, 2024, and concluding April 30, 2025. According to Dominion, this amount would increase a typical residential customer's bill using 1,000 kilowatt hours per month by $1.54.
- A Hearing Examiner appointed by the Commission will hold a telephonic hearing in this case on January 16, 2024, at 10 a.m., for the receipt of public witness testimony.
- An evidentiary hearing will also be held on January 16, 2024, at 10 a.m., or at the conclusion of the public witness portion of the hearing, whichever is later, in the Commission's second floor courtroom located in the Tyler Building, 1300 East Main Street, Richmond, Virginia 23219, to receive the testimony and evidence of Dominion, any respondents, and Commission Staff.
- Further information about this case is available on the SCC website at: scc.virginia.gov/pages/Case-Information.

During its 2020 Session, the Virginia General Assembly enacted Chapters 1193 (HB 1526) and 1194 (SB 851) of the 2020 Virginia Acts of Assembly. These duplicate Acts of Assembly, known as the Virginia Clean Economy Act ("VCEA"), became effective on July 1, 2020. The VCEA, inter alia, establishes a mandatory renewable energy portfolio standard ("RPS") program ("RPS Program") for Virginia Electric and Power Company ("Dominion" or "Company") in § 56-585.5 of the Code of Virginia ("Code"). Subdivision D 4 of Code § 56-585.5 requires Dominion to submit annually to the State Corporation Commission ("Commission") plans and petitions for approval of new solar and onshore wind generation capacity ("RPS Filing"). The Commission must determine whether the RPS Filing is reasonable and prudent, giving due consideration to the following factors: (i) the RPS and carbon dioxide reduction requirements in Code § 56-585.5, (ii) the promotion of new renewable generation and energy storage resources within the Commonwealth, and associated economic development, and (iii) fuel savings projected to be achieved by the plan.

On October 3, 2023, Dominion submitted its annual RPS Filing to the Commission ("2023 RPS Filing" or "Petition"). The 2023 RPS Filing requests the Commission:

(i) Approve the Company's annual plan for the development of new solar, onshore wind, and energy storage resources ("RPS Development Plan") in connection with the mandatory RPS Program pursuant to Code § 56-585.5 D 4;

(ii) Grant certificates of public convenience and necessity ("CPCNs") and approval to construct or acquire and operate four utility-scale projects totaling approximately 329 megawatts ("MW") of solar pursuant to Code § 56-580 D;

(iii) Approve to recover through the Rider CE rate adjustment clause the costs of (a) five utility-scale solar projects, totaling approximately 334 MW, and related interconnection facilities (collectively, "CE-4 Projects"), and (b) one distributed solar project, totaling approximately 3 MW, and related interconnection facilities ("CE-4 Distributed Solar Project"), pursuant to Code § 56-585.1 A 6;

(iv) Approve an update to Rider CE for recovery of costs associated with the previously approved CE-1, CE-2, and CE-3 projects, the CE-2 and CE-3 distributed solar projects, and related interconnection facilities;

(v) Make a prudence determination for the Company to enter into 13 power purchase agreements ("PPAs") for solar resources, totaling approximately 435 MW, (collectively, "CE-4 PPAs") pursuant to Code § 56-585.1:4;

(vi) Approve recovery through Rider CE of the costs of the CE-4 PPAs pursuant to Code § 56-585.1 A 5; and

(vii) Approve the Company's request to consolidate Rider CE and Rider PPA pursuant to Code § 56-585.1 A 7, resulting in: (a) the recovery of costs associated with the CE-1, CE-2, and CE-3 PPAs through Rider CE, and (b) the end of Rider PPA as of April 30, 2024.

RPS Development Plan

Dominion states that its RPS Development Plan reports on the Company's progress toward meeting the solar, onshore wind, and energy storage development targets outlined in the VCEA and presents the Company's development plan for solar, onshore wind, and energy storage facilities through 2035. The Company's RPS Development Plan calls for additional investment in solar, onshore wind, and energy storage through 2035.

The Company also provides a consolidated bill analysis calculating the projected monthly bill through 2035 for residential, small general service, and large general service customers for each alternative plan presented in the Company's 2023 Integrated Resource Plan. For Alternative Plan B, for example, 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 of $116.18, using the methodology approved by the Commission in Case No. PUR-2020-00134. The Company's bill projections are not final and all customer rates are subject to regulatory approval.

Further, the Company also presents its 2022 RPS Program Compliance Report in the Petition, certifying compliance with the RPS Program for compliance year 2022.

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CE-4 Projects

Dominion seeks CPCNs and approval to construct or acquire and operate four utility scale projects totaling approximately 329 MW of solar. In addition to these four projects, Dominion intends to acquire and operate one additional CE-4 Project, a five MW solar facility ("Peppertown"); however, the Company asserts that, consistent with the Commission's prior determination that projects of five MW or less do not require a CPCN, and Rule 19 of the Commission's Filing Requirements in Support of Applications for Authority to Construct and Operate an Electric Generating Facility, Peppertown does not require a CPCN.

The name, size, locality, interconnection and projected commercial operation date ("COD") for each of the CE-4 Projects is provided below:

Project	Size (MWac)	Locality	Interconnection	COD
Utility-Scale Solar				
Bellisle	57	Powhatan County	Transmission	2029
Blue Ridge	95	Pittsylvania County	Transmission	2028
Bookers Mill	127	Richmond County	Transmission	2024
Midrace	50	Henry/Pittsylvania County	Transmission	2026
Pepperstown	5	Hanover County	Distribution	2024

The Company asserts that the CE-4 Projects are needed to comply with the VCEA and to serve customers' capacity and energy needs. According to the Company, the total estimated costs for the CE-4 Projects are approximately $855.6 million, excluding financing costs, or approximately $2,582 per kilowatt ("kW") at the total 334 MW (nominal AC) rating.

Rider CE

In this proceeding, Dominion makes four requests related to Rider CE. First, the Company seeks to update Rider CE for the recovery of costs associated with the CE-1, CE-2, and CE-3 projects, the CE-2 and CE-3 distributed solar projects, and related interconnection facilities, which have previously been approved by the Commission.

Second, Dominion requests recovery through Rider CE of the costs of the CE-4 Projects and CE-4 Distributed Solar Project, as well as the related interconnection facilities. The CE-4 Projects are discussed in more detail above. The CE-4 Distributed Solar Project consists of one distributed solar project totaling approximately 3 MW and related interconnection facilities.

The Company asserts that the CE-4 Distributed Solar Project is needed to comply with the VCEA and to serve customers' capacity and energy needs. According to the Company, the total estimated costs for the CE-4 Distributed Solar Project are approximately $10.9 million, excluding financing costs, or approximately $3,642 per kW at the total 3 MW (nominal AC) rating.

Third, the Company seeks to consolidate Rider CE and Rider PPA. Rider PPA was approved by the Commission pursuant to Code § 56-585.1 A 5 for the recovery of costs associated with the CE-1, CE-2, and CE-3 PPAs. The Company asserts that the consolidation of Rider CE and Rider PPA is in the interest of judicial economy because the Commission already considers the prudence of PPAs in the annual RPS Filing proceedings, and the consolidation would allow the Commission to consider associated cost recovery issues simultaneously. Such a consolidation would result in the recovery of costs associated with the previously approved CE-1, CE-2, and CE-3 PPAs through Rider CE. Consolidation would also result in the end of Rider PPA as of April 30, 2024.

Fourth, the Company seeks to recover the costs of the CE-4 PPAs through Rider CE.

Dominion asks the Commission to approve revised Rider CE for the rate year beginning May 1, 2024, and ending April 30, 2025 ("Rate Year"). The Company is requesting a total revenue requirement of $138,676,486 in Rider CE for the Rate Year. If the proposed total revenue requirement for the Rate Year is approved, the impact on customer bills would depend on the customer's rate schedule and usage. According to Dominion, implementation of its revised Rider CE on May 1, 2024, would increase the monthly bill of a residential customer using 1,000 kWh per month by approximately $1.54 when compared to the combined total residential rates in the current Rider CE and Rider PPA.

CE-4 PPAs

In its 2023 RPS Filing, Dominion also seeks a prudence determination for the CE-4 PPAs. The CE-4 PPAs consist of: (i) eight PPAs for utility scale solar generating facilities totaling approximately 420 MW and (ii) five PPAs for distributed solar generating facilities totaling approximately 15 MW.

Dominion asserts that the CE-4 PPAs are needed to comply with the VCEA and to serve customers' capacity and energy needs. As noted above, the Company seeks approval to recover the costs of the CE-4 PPAs through Rider CE, in addition to the costs of the CE-1, CE-2 and CE-3 PPAs previously approved by the Commission.

Interested persons are encouraged to review Dominion's Petition and supporting documents in full for details about these and other proposals.

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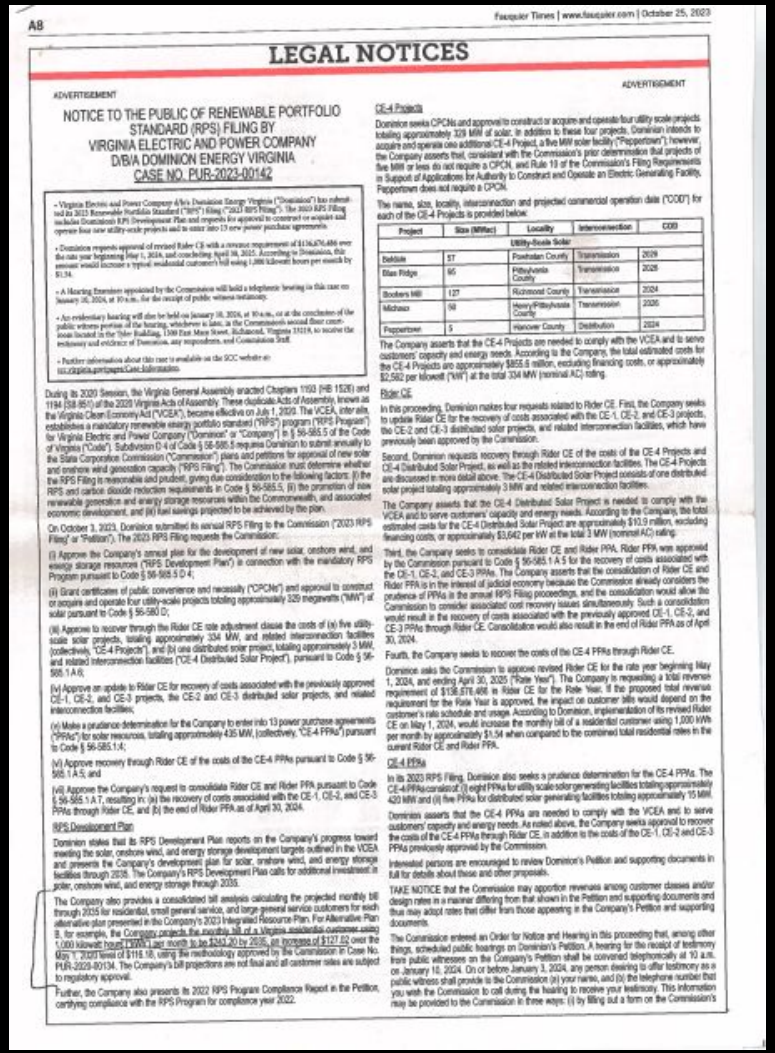
That's a 100% increase by 2035!



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There has recently been incredible national news coverage and progress though…

The Econom

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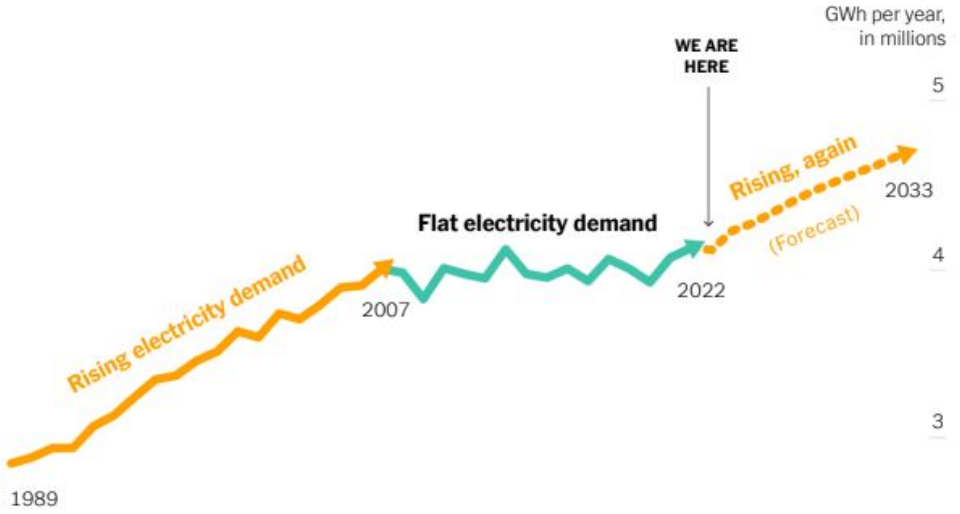
By Jennifer Hille
Lyttle for The Wa

April 29, 2024 9:00 am E

The New York Times

https://www.nytimes.com/interactive/2024/03/13/climate/electric-climate-change.html



A New Surge in Power Use Is Threatening U.S. Climate Goals

A boom in data centers and factories is straining electric grids and propping up fossil fuels.

By Brad Plumer and Nadja Popovich March 14, 2024

ANNOUNCING 2024

America's 11 Most Endangered Historic Places

National Trust *for* Historic Preservation
America's 11 Most
Endangered Historic Places

Wilderness Battlefield Area, Orange County, Virginia

Loudoun Times-Mirror

ALERT

In landmark vote, Board of Supervisors rejects Belmont Innovation data center proposal

By JESS KIRBY jkirby@loudountimes.com Mar 20, 2024 0 10 min to read

JLARC
JOINT LEGISLATIVE AUDIT AND REVIEW COMMISSION

Study Resolution

Data Centers

Authorized by the Commission on December 11, 2023

WHEREAS, there has been substantial growth in the data center industry in Virginia, particularly Northern Virginia which has the largest concentration of data centers in the world, Southern Virginia, the Greater Fredericksburg region, and the Greater Richmond region; and

WHEREAS, growth in the data center industry is expected to continue with increasing demand from deployment of advanced and innovative technologies used by individuals, business of all sizes across all industries, government agencies, and other organizations that require the digital infrastructure that data centers provide; and

WHEREAS, data centers can bring economic benefits to localities because they can create significant economic activity during construction, they can increase property tax revenue for local governments without placing high demands on government services like schools, and the clustering of data centers can make a region more attractive to other high tech businesses and help support ecosystems of vendors, service providers, and suppliers; and

WHEREAS, concerns exist over data centers because they require large amounts of energy, which

Tell Congress: Support the Artificial Intelligence Environmental Impacts Act

Posted on April 18, 2024 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.

A data center in Ashburn, VA. Credit Hugh Kenny/PEC

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

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 can you do?

1. Keep up progress on transition to renewable energy

- Well sited and designed utility scale solar
- Innovative grid solutions
  - Advanced conductors
  - Smart grid technology
  - More battery storage; longer-term storage pilot projects
  - Virtual Power Plants
- Lift cap on Distributed Generation (currently at 6% of peak load)
- More state incentives: parking lot, brownfield, agrivoltaics, rooftop

Photo Credit: Hugh Kenny, PEC

2. Data Center Policy Reform

- Share information with friends, family, contacts and neighbors.
- Ask County officials to demand full information and assess the cumulative impacts on grid, water, air quality, etc.
- 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
- Financially support the local efforts and the broader campaign needed!

Spreading the word and pushing for reform…

We need pressure 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 →*

Residents gathered outside the hearing to show their support for a new approach to data center approvals in Loudoun. Credit Gem Bingol/PEC

Talking to Legislators…

"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