



Local Strategies for Data Center Reform

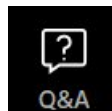
October 30, 2025

www.cleangroup.org

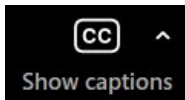
Webinar Logistics

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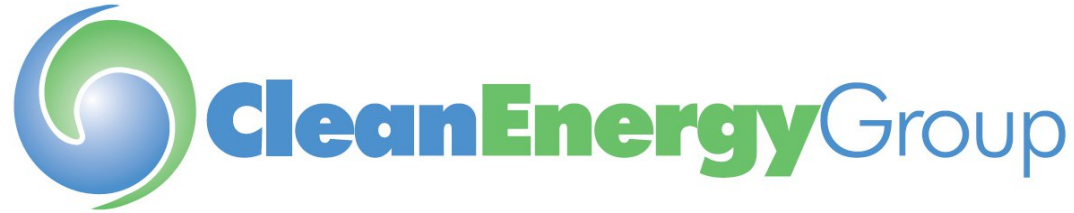
Automated **captions** are available



Speaker bios will be made available in the Chat

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Affordable, reliable, clean energy for all.



**Climate Resilience and
Community Health**



**Distributed Energy Access
and Equity**



**Energy Storage and Flexible
Demand**



Fossil Fuel Replacement

Phase Out Peakers

Replacing peaker power plants with clean alternatives in environmental justice communities.



Ravenswood Generating Station in Queens, NY. Credit: Bigstock

WEBINAR SPEAKERS

Local Strategies for Data Center Reform



KD Minor

Community
Solutions Manager
*Alliance for
Affordable Energy*



**ALLIANCE FOR
AFFORDABLE
ENERGY**



Julie Bolthouse

Director of Land Use
*Piedmont
Environmental
Council*



**Piedmont
Environmental
Council**



Matthew Shorraw

Policy and Program
Coordinator
*Physicians for Social
Responsibility
Pennsylvania*



**Physicians for Social
Responsibility
Pennsylvania**



Eva Morgan

Project Manager
*Clean Energy Group
(Moderator)*



**CleanEnergy
Group**

Upcoming Webinars

Tools to Tackle Affordability and Cost Allocation in Electricity Rate Design (November 6)

MassCEC's Vehicle-to-Everything Demonstration Program (November 12)

Battery Energy Storage Systems in Massachusetts: Benefits and Safety Considerations (November 18)

Read more and register at www.cleanegroup.org/webinars



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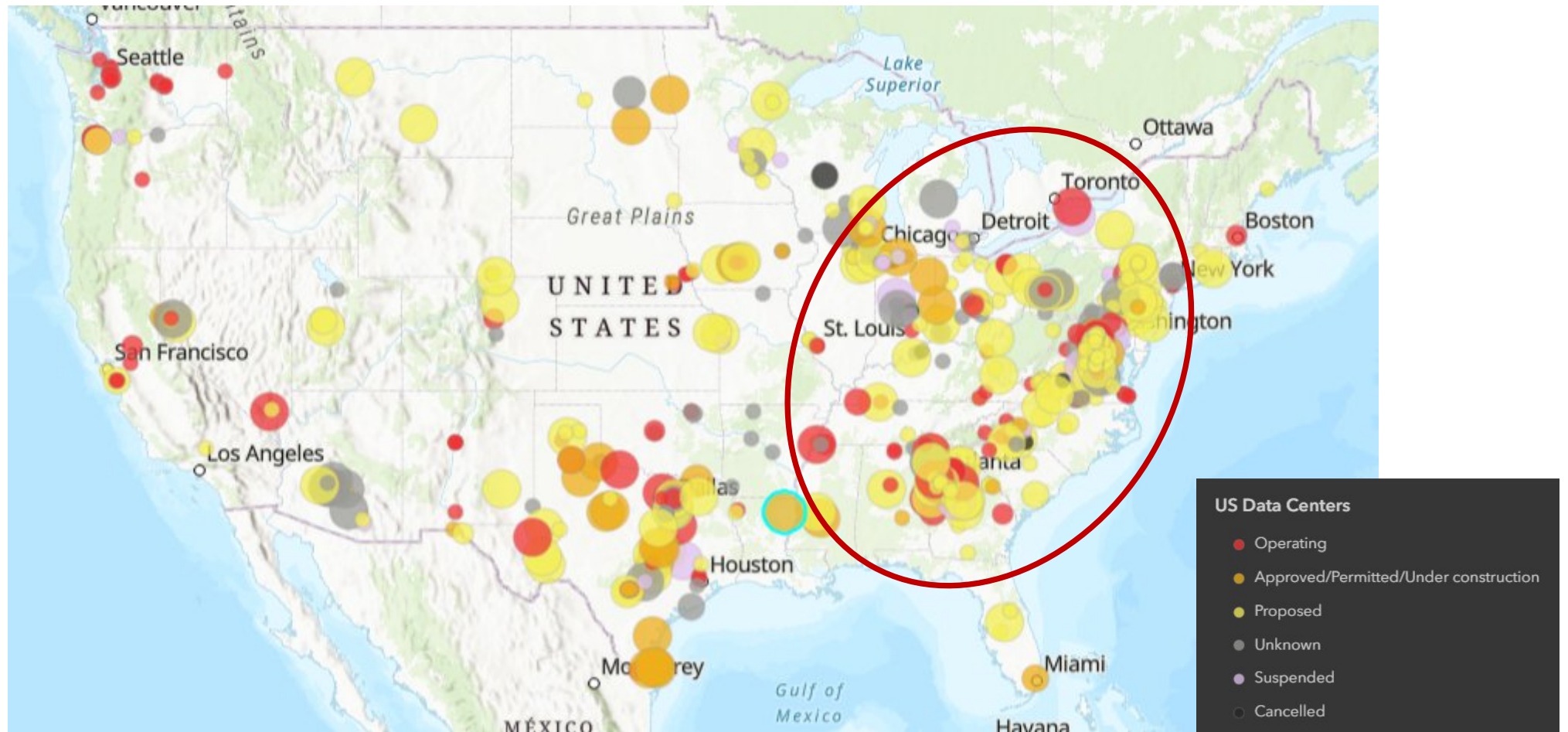
Data Centers Overview

What are Data Centers?

- Facilities that hold servers and other computing hardware
 - Used for cloud computing: streaming, emails, search engine etc.
- Cooling systems and back-up generators are also on these campuses.
- Owned directly by the companies that use them (like big tech) or third-party companies that lease out the computing power.



Where are data centers being built?



Data center map from FracTracker Alliance (2025)

Why are there so many new ones?

- The rise of artificial intelligence use and generative AI
- Investments from private equity
- Federal and state incentives to “win the AI race”



Key Concerns: Energy Use & Load Growth

- **Hyperscale** data centers can consume enormous amounts of electricity, often requiring hundreds to thousands of megawatts.
- The electricity is used to power servers, cooling systems, and power conditioning.
- Can build their own electricity or connect to the grid
- Typically a non-flexible load

What will this mean?

- New fossil fuel power plants
- Delayed retirement of power plants
- Higher electricity bills

Key Concerns: Water Use

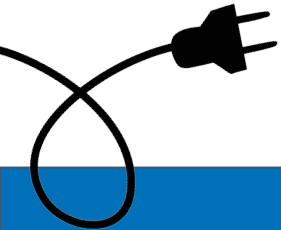
- Most data centers use water to cool their servers
- A 100 MW data center consumes 2 million gallons of water per day
- Roughly 80% of the water used to cool data centers is evaporated
- Two thirds of new data centers since 2022 are planned for water-stressed regions.



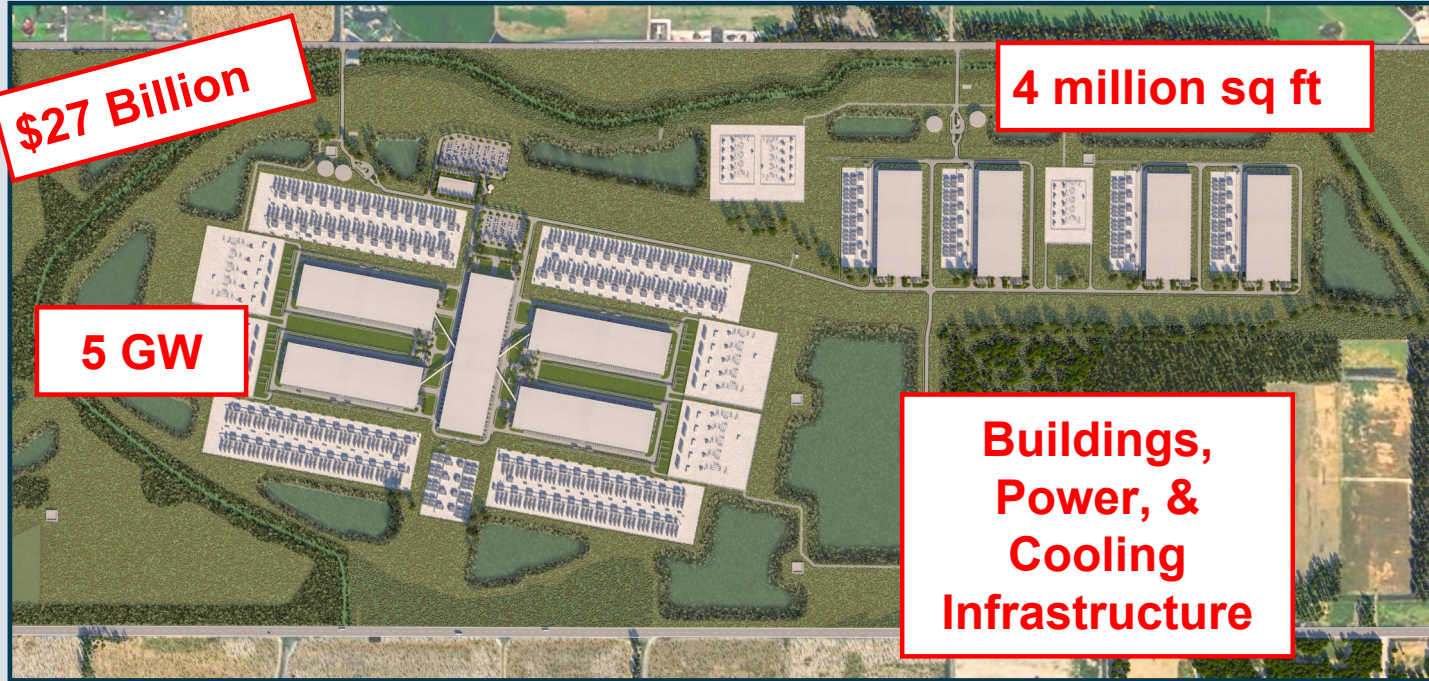
ALLIANCE FOR
AFFORDABLE
ENERGY

Meta's Flatulent Deal

KD Minor, Community Solutions Manager



Hyperion



\$27 Billion

4 million sq ft

5 GW

**Buildings,
Power, &
Cooling
Infrastructure**

~5 miles



Just **HOW** big is
Meta's planned
data center
near Monroe?



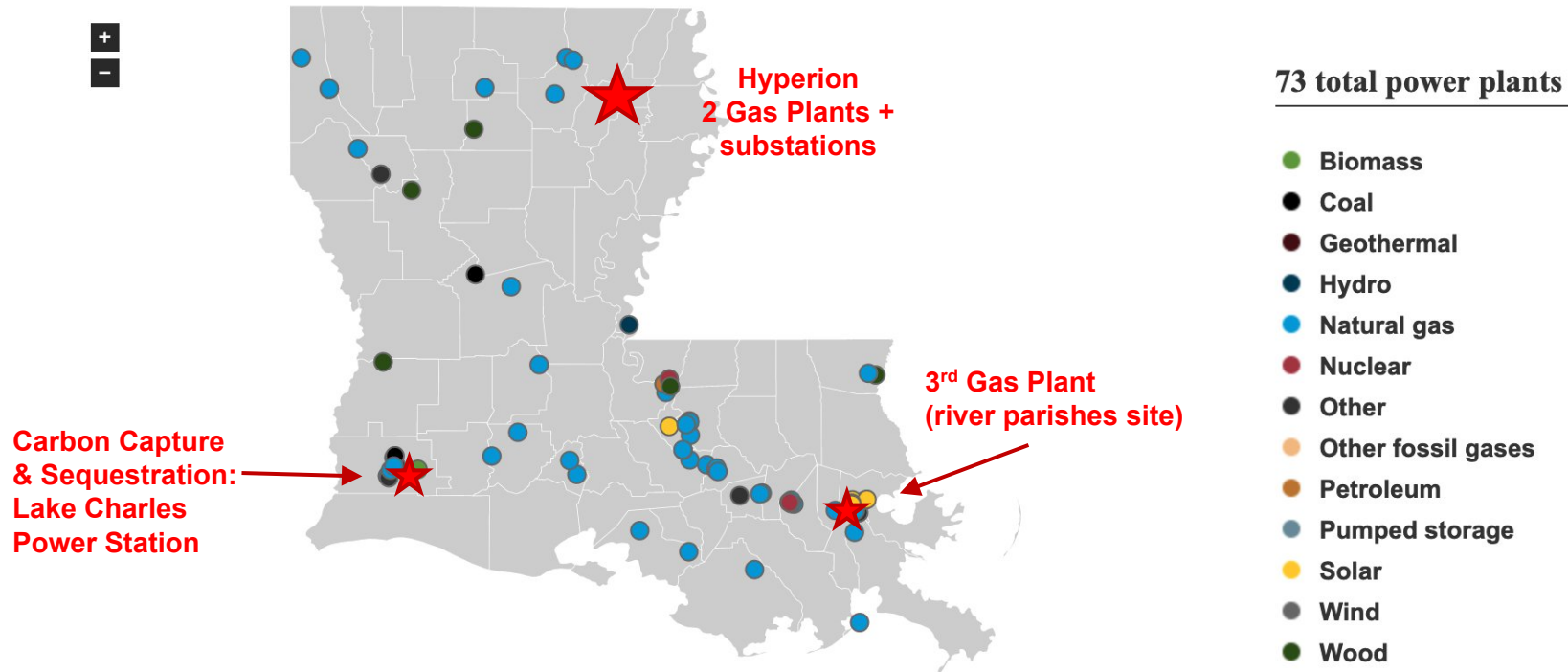
The energy-hogging data center
site could fit **173 Superdomes**.



4,000,000 sq ft

POWER GENERATION

Number of plants for all fuels, Louisiana, all sectors



People in Power

Louisiana Public Service Commission



Eric
Skrmetta



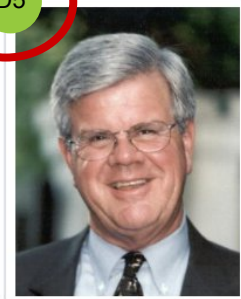
Jean-Paul
Coussan



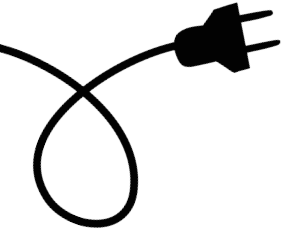
Davante
Lewis



Mike Francis



Foster
Campbell



An Unprecedented Process

This is the first time

- A utility has asked to **build 3 power plants** at one time.
- A utility has asked to **invest billions** for a single customer.
- A utility has expanded its service demand by 30% with one customer.

This won't be the last. The LPSC approval has set the stage for commission decisions about data centers for years to come.

The Promises

1. 500 permanent jobs ; 5000 construction jobs
2. 1500 MW of Renewable energy
3. Carbon Capture Integration



The Risks

1. First hyperscale center in LA
2. No accountability on jobs promise
3. Residents pay for 3 new gas plants
4. Electrical impacts to Richland residents
5. Potential threat to nearby Grand Gulf nuclear plant
6. Sacrificed sales + property tax revenue
7. Major emissions increase*
8. Extreme water use
9. Secret political dealings

1

HSPM Figure 3



2

3

4 Q35.

[Redacted]

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500 Jobs Claim

“To be certified as an approved data center by Louisiana Economic Development, the data center facility operator shall provide a sworn attestation that the project will create a minimum of **fifty new direct, permanent jobs**”

- LA RS 47:305.73 Data Center sales tax exemption

PILOT Level	Capital Investment (In Billions)*	FTE Jobs (Targeted Employment)	Immovable (Real) Property PILOT Percentages	Movable (Personal) Property PILOT Percentages
1	\$5	300	40%	0%
2	\$8	450	30%	0%
3	\$9.5	475	25%	0%
4	\$10 and above	500	20%	0%

Natural gas prices send Louisiana electricity bills higher amid peak summer heat

BY: WESLEY MULLER - AUGUST 6, 2025 8:27 PM

- Entergy LA **bills last month already up 11%** from same time last year.
- Bills across Louisiana getting up to levels not seen since 2022 price spike.
- If Commission approves this project Wednesday, Entergy LA customers would **pay for fuel costs** of serving Meta data center.
- However, increased gas prices **impact all Louisianans' bills.**



Fuel Costs



Meta's Louisiana data center could provoke outages, advocates say. Entergy says safeguards in place.

BY JOSIE ABUGOV | Staff writer Jun 7, 2025



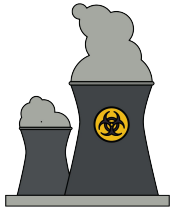
3 min to read

Subscriber Exclusive

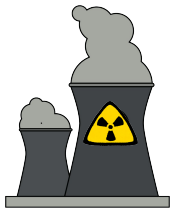
Entergy's plan to power [Meta's massive data center](#) in northeast Louisiana is being portrayed in starkly different terms in new filings, with advocacy groups warning of the potential for major outages and company officials maintaining that safeguards will be in place to prevent them.

The utility is asking state regulators to build three new gas-fired power plants at a cost of \$3.2 billion plus other transmission infrastructure for an airport-sized facility in Richland Parish. The data center would help Meta – the parent company of Facebook, Instagram and Whatsapp – expand its artificial intelligence technology and compete with rival companies like Google and OpenAI.

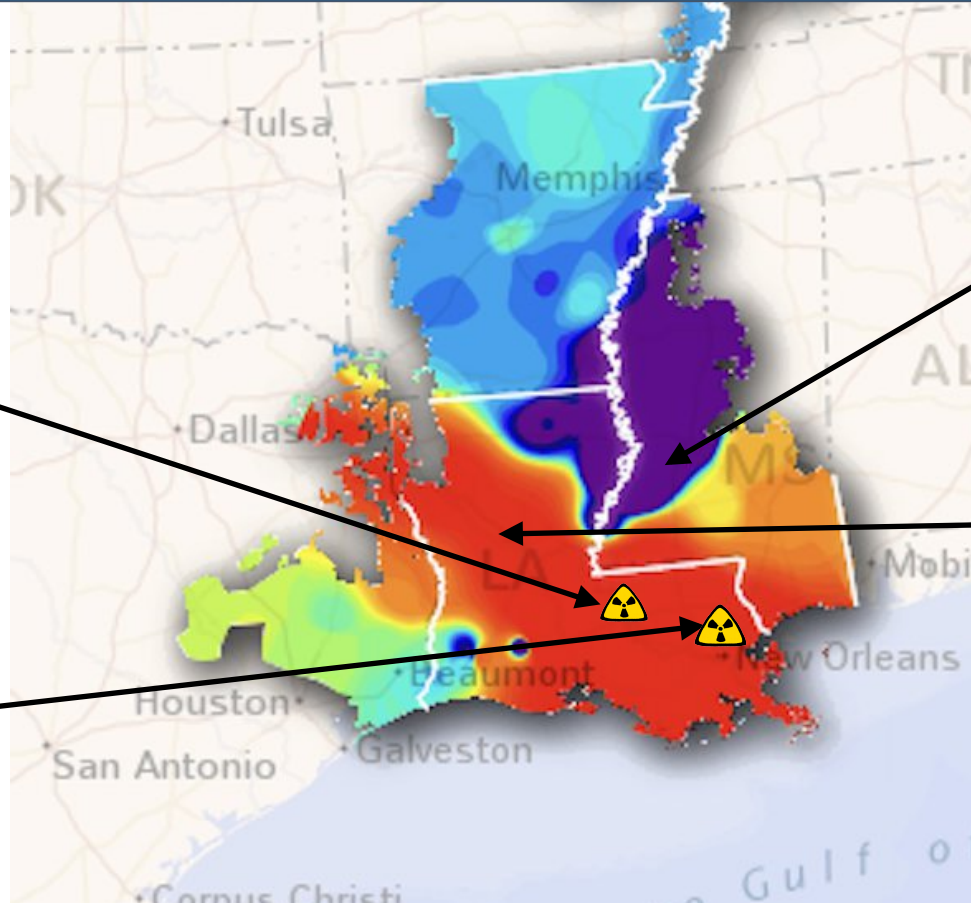
Recent Blackouts



Riverbend
Nuclear
Facility



Waterford
Nuclear
Facility



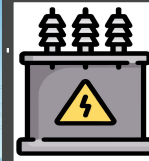
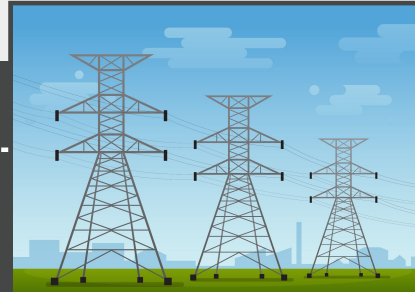
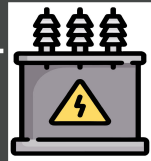
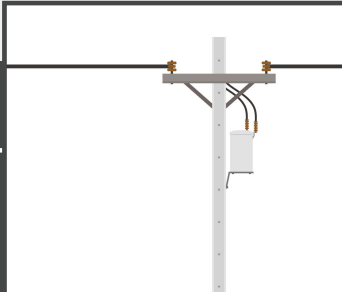
MS HUB
-\$187 /
MWh

LA HUB
\$1,550 /
MWh

This permit was processed as an expedited permit in accordance with LAC 33:1Chapter 18.

Emissions, in tons per year, are as follows:

Pollutant	Emissions (tons/year)
PM ₁₀ /PM _{2.5}	275.00
SO ₂	61.34
NO _x	485.44
CO	3926.38
VOC, total	1353.18
Sulfuric acid	93.76
GHG (Carbon dioxide equivalents, CO ₂ e)	5,199,215





AI's Impacts on Water, Environment

Meta has made a request to withdraw **5.6 million gallons of water per day**, enough to supply over 50,000 people, impacting local water sources and water infrastructure, highlighting the industry's ongoing lack of transparency.

- Texas is on track to have consumed over 49 billion gallons of water for data centers by year's end for.
- Across Virginia, data centers consumed over 2.1 billion gallons of water in 2023.

Source: img.vasierra.club/UnconstrainedDemand_SinglePage.pdf



Entergy shareholders

+\$178M in profits annually



**\$27B in infrastructure costs
backed by us and privatized
debt**

Louisianans

The bill

**All the
Reward,
None of the
Risk**

Entergy wants to add CCS to Lake Charles Power Plant for Meta.

- Meta said they will pay a “significant” portion of Lake Charles CCS \$1B* upgrade cost

But this “significant” number is not public!

Entergy is building Franklin Farms power plants to be “CCS ready.”

Commission Staff testified that CCS is “**not proven at scale**” for power plants.

Meta & CCS

LPSC Docket No. U-37425
Direct Testimony of Constantine Gonatas – *Public Redacted Version*
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Q. [REDACTED]
[REDACTED]

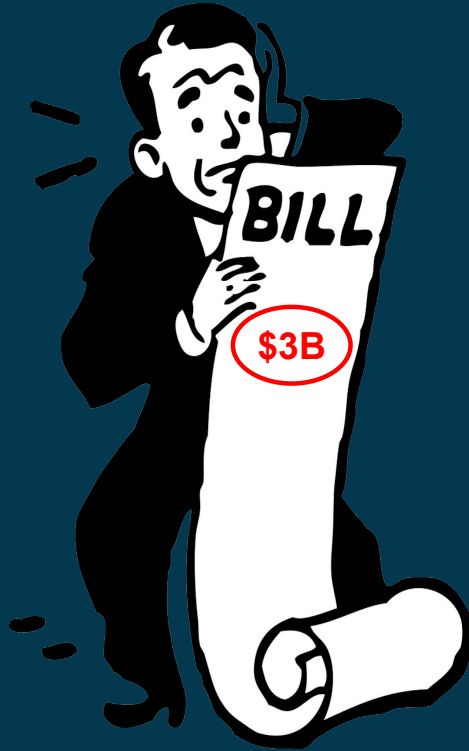
■ [REDACTED]
[REDACTED]
[REDACTED]

5 [REDACTED]]

6 Q. If the Company proceeds with the CCS project, are there still potential risks to
7 ratepayers?

8 A. Yes. According to the Ingram testimony, the Customer may discontinue service to its LCO
9 subscription by giving advance notice to ELL.⁶² The notice period would give the
10 Company an opportunity to find another subscriber, but if the Company cannot do so, then
11 remaining costs would be included in rates for all other customers net of a termination
payment by the Customer.⁶³ [REDACTED]
[REDACTED]
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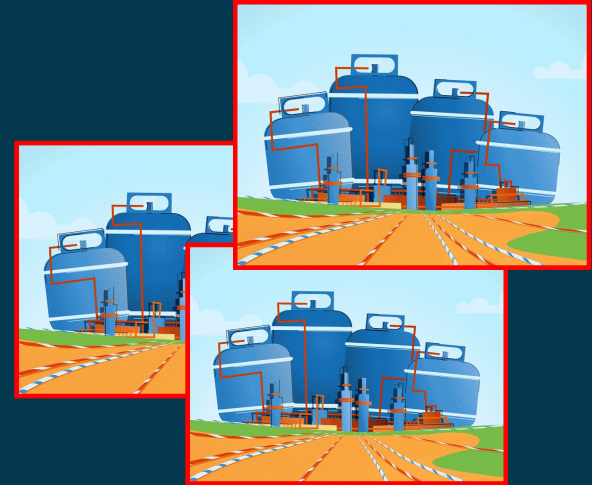
THE COST OF OUR AI USE



**No RFP
Process**

**Increases
Energy
Demand by
25%**

**3 New Costly
Gas Plants**



What can a win look like?

1. Data center pays for 100% of the interconnection costs
2. No subsidies from ratepayers for generation supply
3. Clear criteria for load shifting and reliability impacts
4. Security deposits for failure to perform
5. Consider micro grid approach to support energy needs
6. Transparency on contract provisions that reflect rates, discounts, reliability commitments, costs to ratepayers



Data Center Impacts on Communities



Piedmont
Environmental
Council

Julie Bolthouse, Director of Land Use

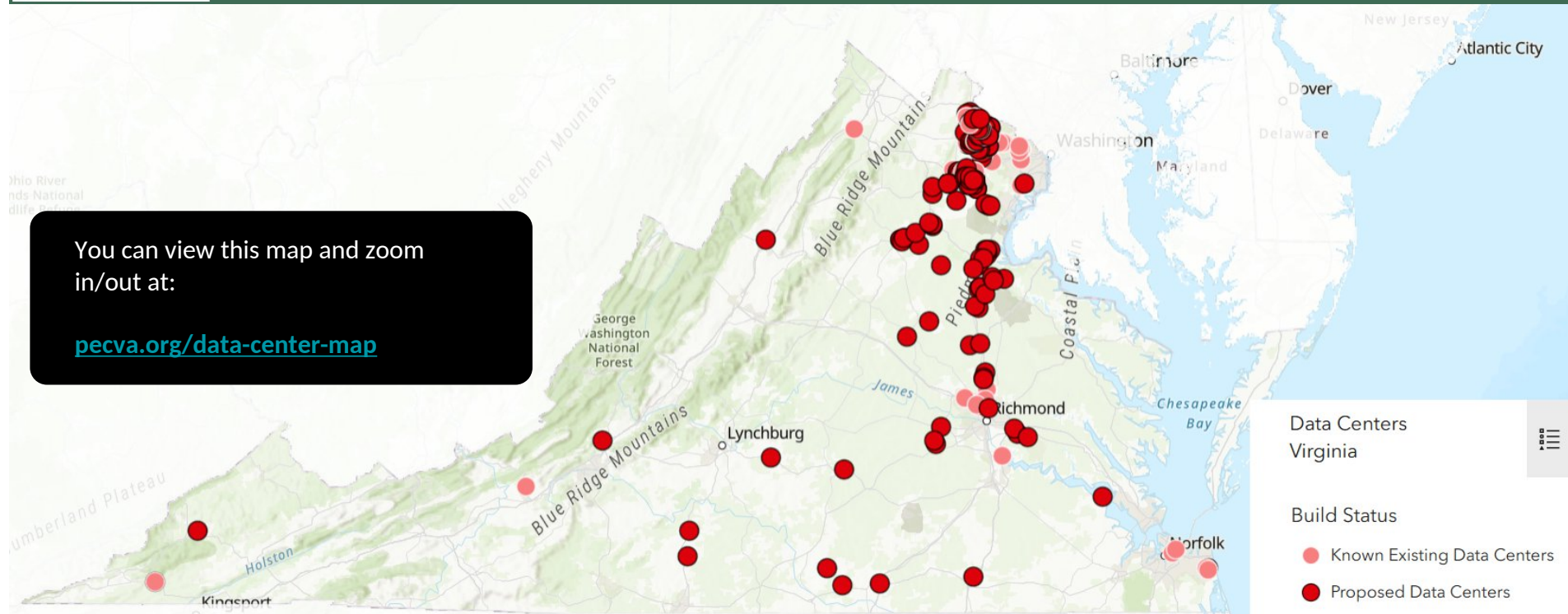
Data Center Projects In Virginia



Existing and Proposed Data Centers - A Web Map

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

pecva.org/data-center-map

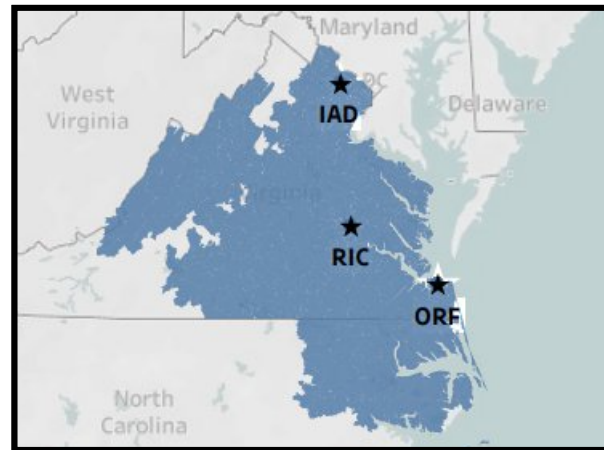
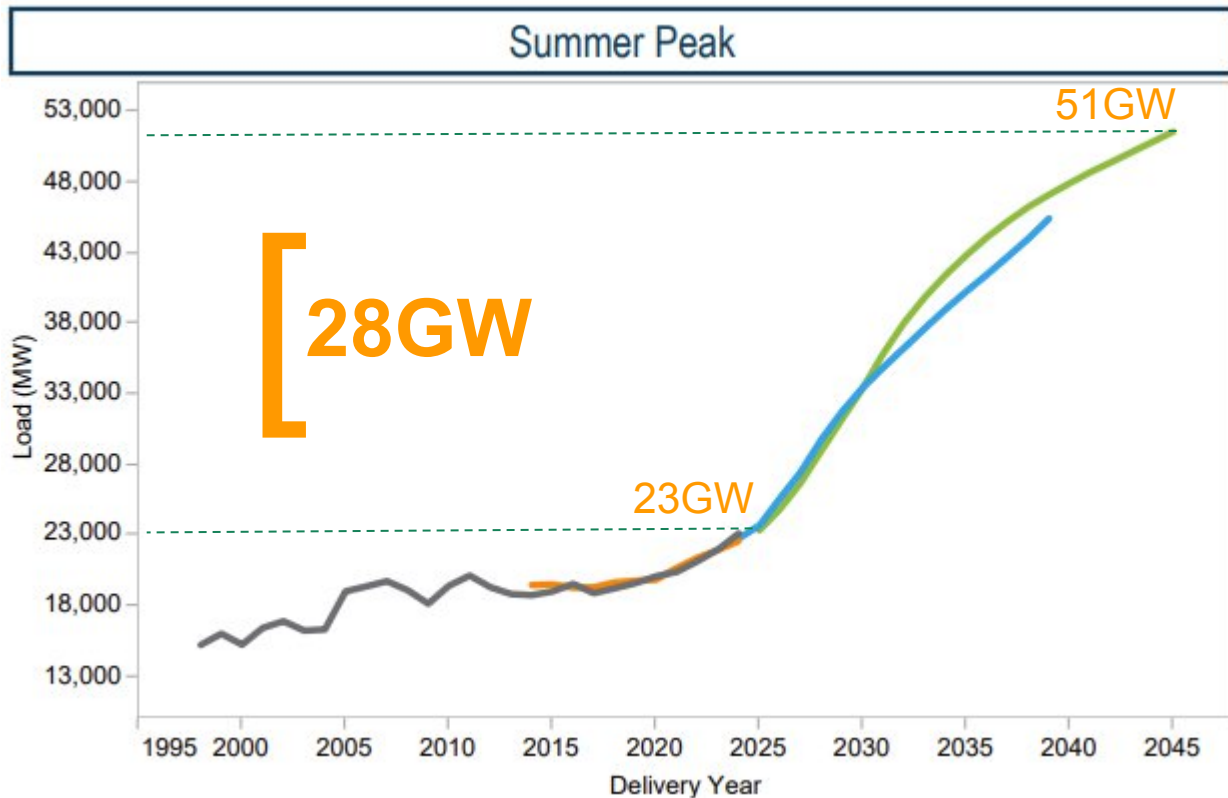


**Currently about 60 million square feet existing
or being constructed in the state**

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

Skyrocketing Load Demand

Dominion Energy's 20 Year Forecast



Green = 2025 projection
Blue = 2024 projection

Who pays and who bears the risk?

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 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



Data center development is unprecedented

- **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.

Overall the impacts have been...

- **Higher electric bills** to pay for infrastructure and increasing capacity and fuel costs
- **Public and private right of way taken** for transmission lines
- **Land conversion and habitat loss** for data centers and energy infrastructure
- **Renewable energy transition forfeited** and climate action put on hold
- **Industrialization of community** and pushing out of other land uses
- **Air quality degradation** from onsite power and power plants
- **Water supply and water quality impacts** from cooling and effluent (blowdown)



Loudoun County, Virginia



Fairfax, Virginia



Hidden Danger of Generators



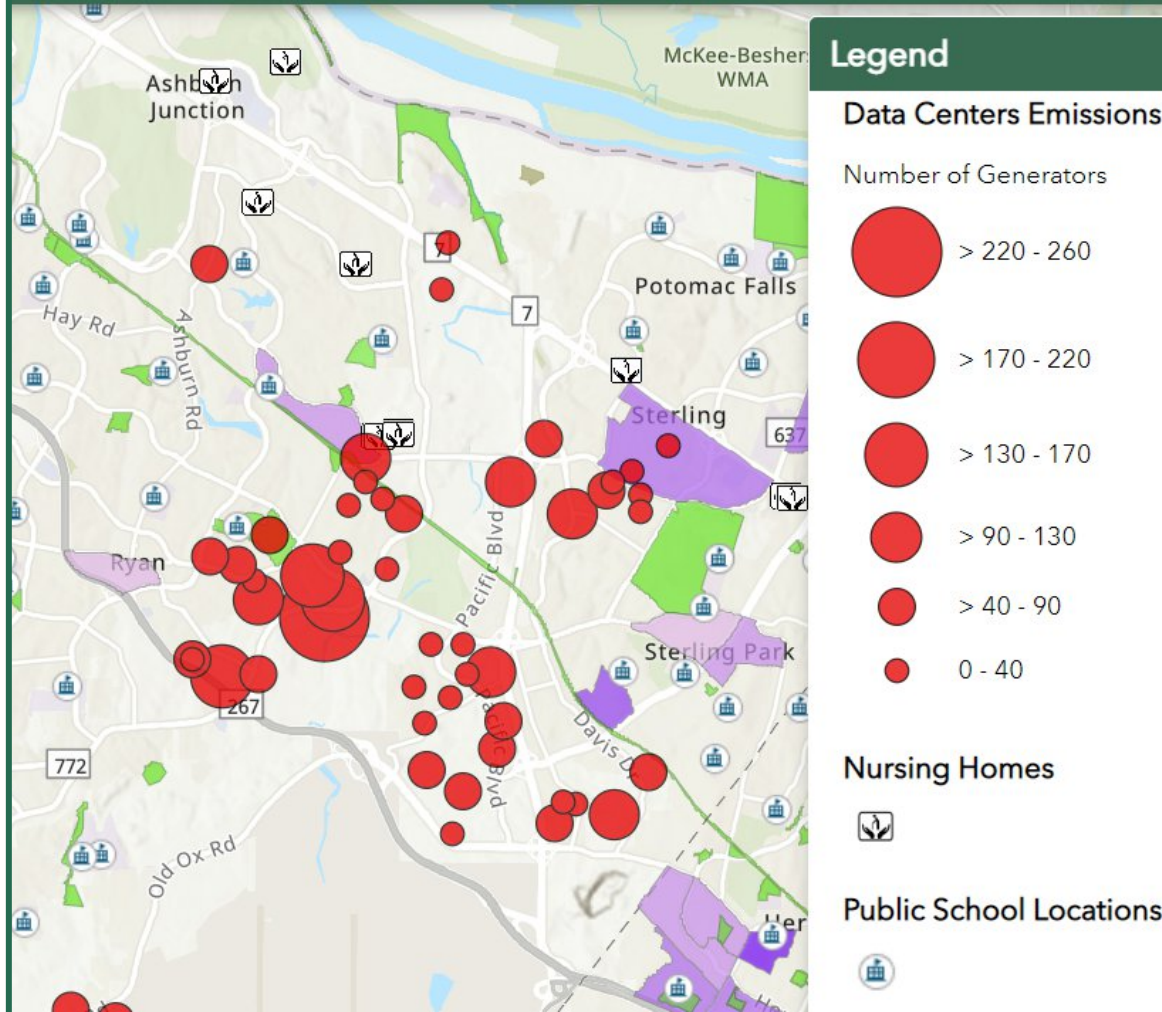
W&OD Trail, Loudoun County

There are nearly 9,000 diesel generators permitted at data centers in Virginia

About 2,000 are in this area around the W&OD Trail!

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

Data Center Diesel Generators



Air Pollution Modeling Using EPA modeling tool - COBRA

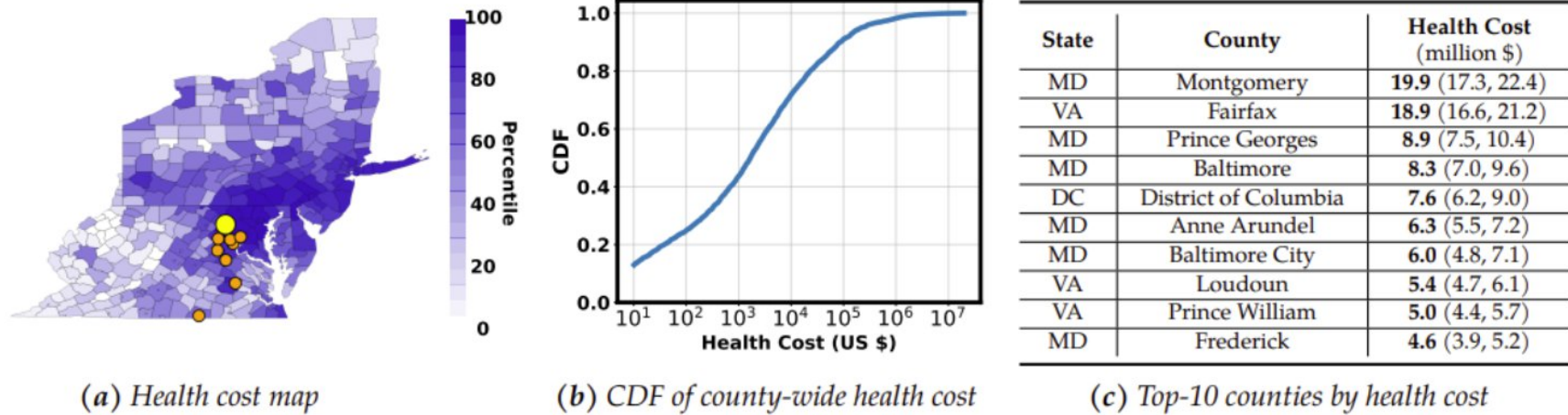
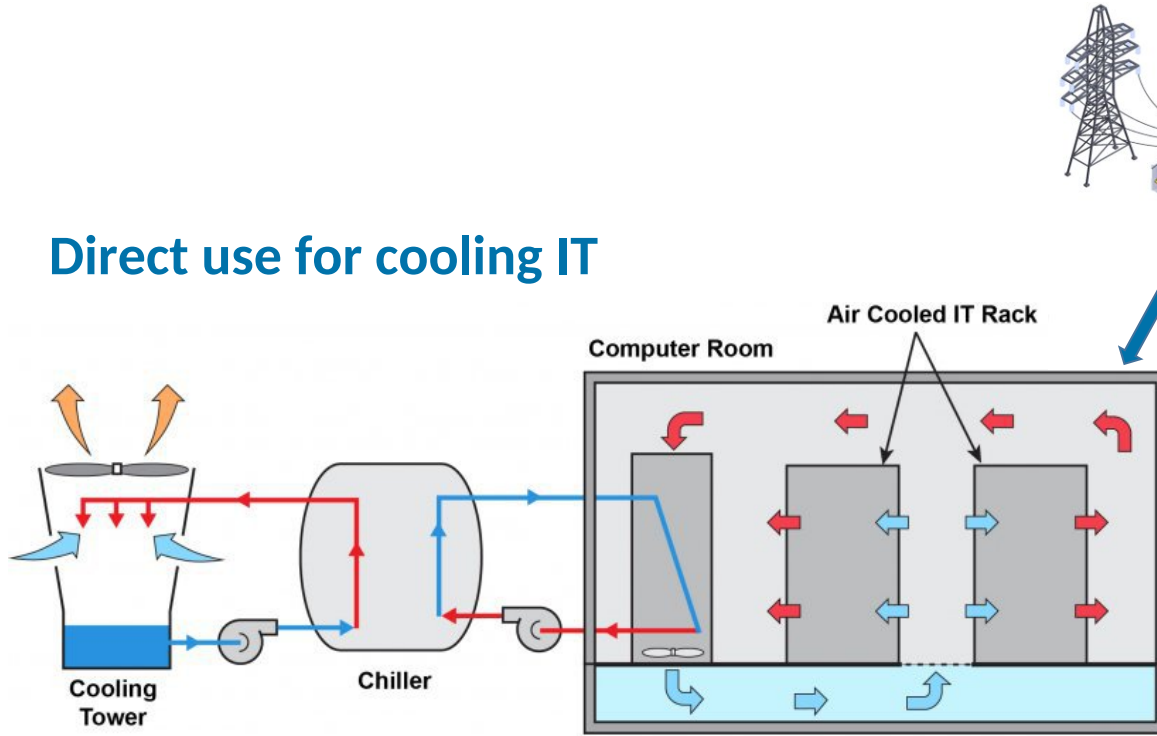


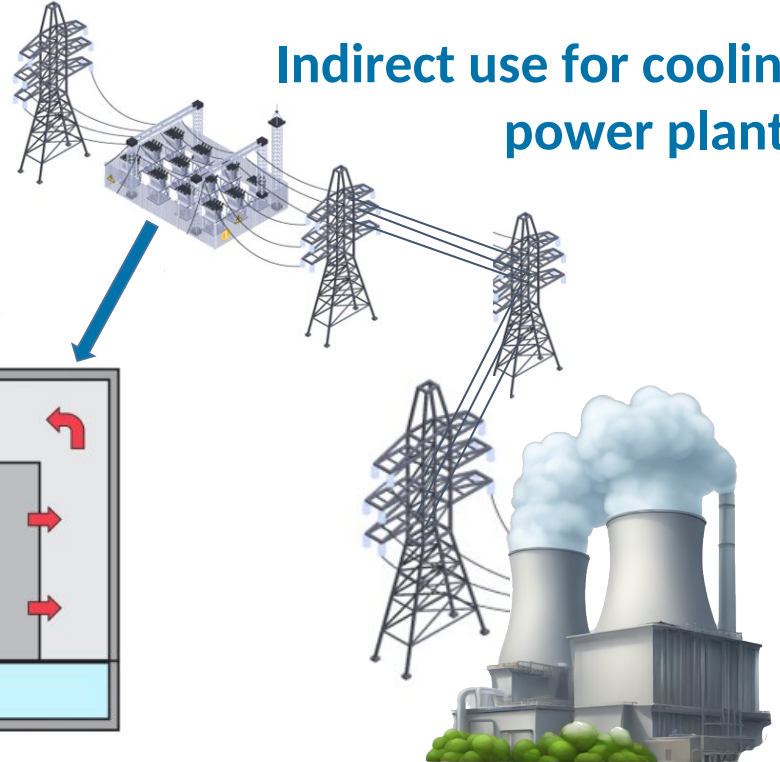
Figure 1: The county-level total scope-1 health cost of data center backup generators operated in Virginia (mostly in Loudoun County, Fairfax County, and Prince William County) [57]. The backup generators are assumed to emit air pollutants at 10% of the permitted levels per year.

Water Consumption – Cooling and Power

Direct use for cooling IT



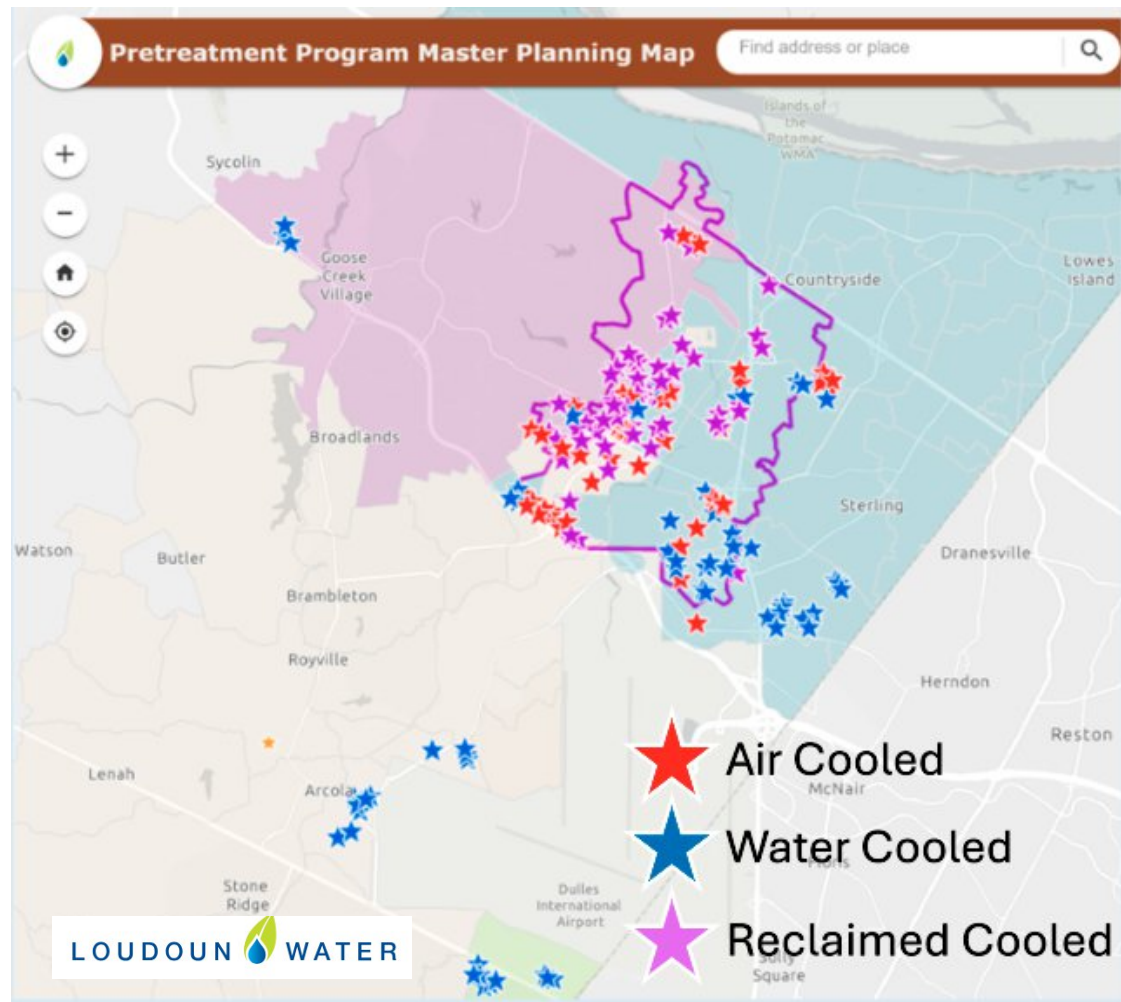
Indirect use for cooling power plants





2024 Total Data Center Water Consumption in Loudoun County

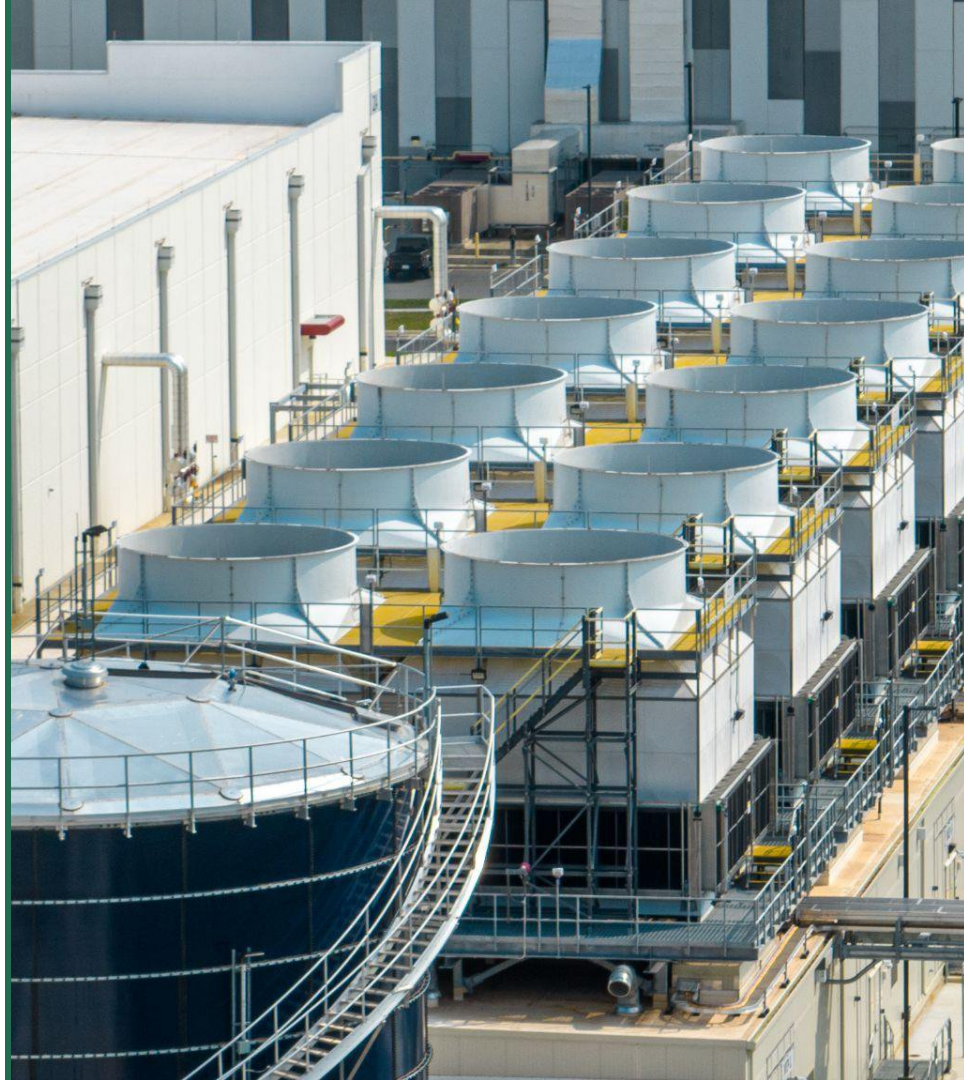
- **Reclaimed** – 704 million gallons
- **Potable** – 937 million gallons
- **9% of total system capacity**
- **242 million gallons in August**



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





Data Center Impacts in Pennsylvania

And The Role of Local Ordinances

Matt Shorraw, Policy and Program Coordinator

Mission

Physicians for Social Responsibility Pennsylvania (PSR PA) promotes socially and environmentally responsible practices, policies and programs to safeguard and improve public health. We accomplish this through education, training, direct service, and advocacy.

Climate Change



Environment Health



Youth Mentorship



What Are Data Centers?

- **Facilities that store and process digital data (AI, cloud, and web services)**
- **Require constant power and cooling**
- **Often located near substations or industrial parks**



FEIXU CHEN / NEXT GENERATION NEWSROOM, AERIAL VIEW OF TECFUSION DATA CENTER CAMPUS, UPPER BURRELL, WESTMORELAND COUNTY. (SPOTLIGHT PA)

The Rapid Growth of Data Centers

- **Explosive growth across the U.S. driven by AI and cloud demand**
- **One large data center = power use of ~50,000 homes**
- **States like Virginia face grid strain and policy conflicts**

Why it Matters for Pennsylvania

- **PA has abundant infrastructure and industrial land**
- **Data Centers can mean investment – but also:**
 - **Increased air pollution**
 - **Noise and light impacts**
 - **Limited local input**
 - **Habitat disruption**

Energy and Climate Implications

- **Many facilities lack renewable energy requirements**
- **Risk of locking in natural gas dependency**
- **“Green” claims often rely on renewable credits (not new generation)**

Health and Environmental Impacts

- **Increased fossil fuel use = more PM2.5 and ozone**
- **Health Risks: asthma, heart disease, premature death**
- **Noise, light, and vibration disturb both people and wildlife**



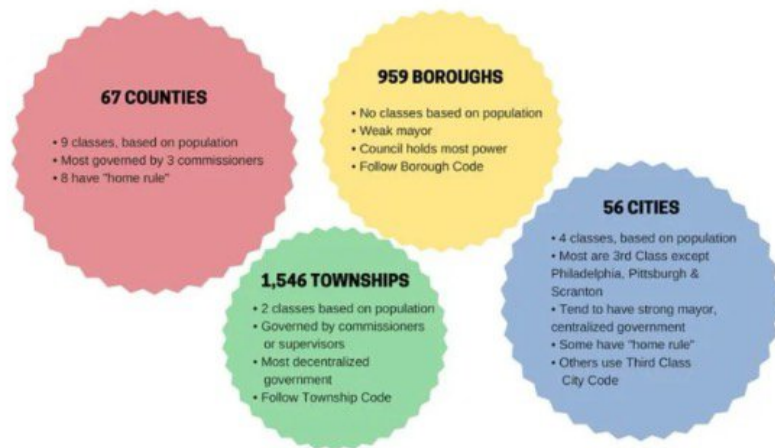
*Amazon Web Services Data Center in Boardman Oregon, August 2024.
(AP/Jenny Kane)*

Case Study: Salem Township, Luzerne County, PA

- **Amazon Data Center: 77 Emergency Generators (fossil fueled)**
- **Labeled "emergency use", but cumulative emissions are significant**
- **Illustrates gap between state air permits and local protections**

The Strength of Local Governance in PA

- PA has 2,500+ municipalities
- Governed by Municipalities Planning Code (MPC) and Home Rule Charter Law
- Broad Authority over zoning, land use, and public health ordinances
- Local governments = first line of defense



The Role of Local Ordinances

- **Enact nuisance control ordinances (noise, light vibration)**
- **Use zoning laws to restrict siting and keep project in areas that make sense.**
- **Require environmental impact assessments, bonding, and public benefits agreements.**
- **Limit generator testing and use.**
- **Ensure public hearings and transparency.**
- **Require emergency preparedness plans.**

Key Ordinance Elements

- **Measurable and Reasonable noise/vibration limits**
- **Shielded lighting and dark-sky compliance**
- **Water and air monitoring requirements**
- **Tree and buffer zones**
- **Community participation before approval**

Strengthening Local Voices

- **Local officials are closest to community concerns**
- **Residents should have a say in:**
 - **Location**
 - **Energy Source**
 - **Operating impacts**
- **Local action = community driven democracy**

Looking Ahead

- **Key Questions:**
 - **How will demand affect the grid and emissions?**
 - **Who benefits, and who bears the costs?**
 - **Are local voices at the table?**
- **Collaboration between state, local, and community stakeholders is essential.**

Conclusion

- **Data Centers = Tech Opportunity + Environmental Challenge**
- **PA's strong local governance = key to balance**
- **Thoughtful ordinances protect health, climate and quality of life**
- **Together we can ensure a sustainable, community-driven energy future that takes cumulative impacts into consideration.**



Contact Information

Matt Shorraw

Policy and Program Coordinator

matthew@psrpa.org | www.psrpa.org