NJ IMPACT OF DATA CENTERS PANEL DISCUSSION

1. **The Basics of Electricity Pricing – Betsy Longendorfer**
2. **Data Center Impacts and Recommendations – Steve Miller**
3. **Real World Opposition to Proposed Data Center**
   - **Princeton/Central NJ Data Center – Kip Cherry**
   - **Orangetown NY (abutting Bergen County) Data Center – Chris Kielbiowski**

NJ IMPACT OF DATA CENTERS & PANEL DISCUSSION

- Part 1: The Basics of Electricity Pricing
- Part 2: Proposals for PJM Actions
- Part 3: Real World Opposition to
  - Orangeburgh NY Datacenter
  - Princeton NJ Datacenter

Part 1:
The Basics

How to understand the issues & proposed solutions

Betsy Longendorfer
Member, NJ Sierra Club Building Electrification Committee

Substack article covers Part 1 in more detail:
https://njecn.substack.com/p/more-detailed-explanation-of-njs

PJM Manages Your Power
Who are they?

Your Bill

(40%) Delivery cost

- Distribution lines, meters, etc managed by local utility
- Regulated by NJ BPU. It is increasing but is not the cause of the major jump in rates.

(60%) Supply cost

- Energy cost, managed by PJM, NOT the State of NJ
- Price is determined by auctions

SUPPLY COST:
Long Term & Short Term Planning

Yearly Auctions/Fixed Costs

Buying Capacity

15%, not this time!

Paid to Standby

Daily Auctions/Operating costs

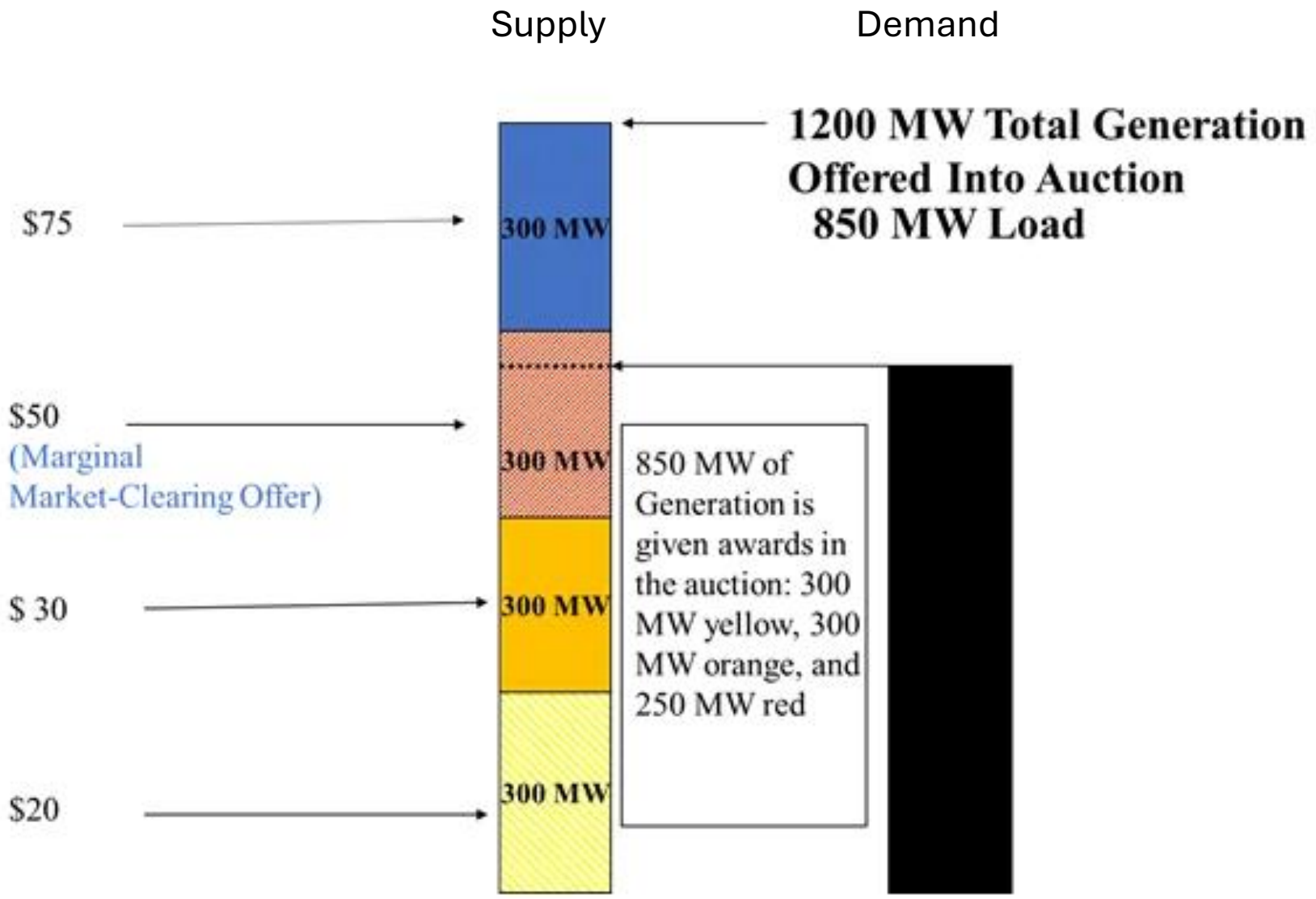
Buying Energy

75%

Energy you actually use

Auctions

- PJM forecasts the demand
- Power generators bid a price and amount
- At end of auction, keep choosing least price supplies until all demand is covered
- All suppliers are paid the same price



All suppliers paid the maximum price accepted -> the “marginal market-clearing offer”.

Figures courtesy of “Explaining the Grid”, https://mestes.substack.com/p/how-does-the-explosive-growth-of

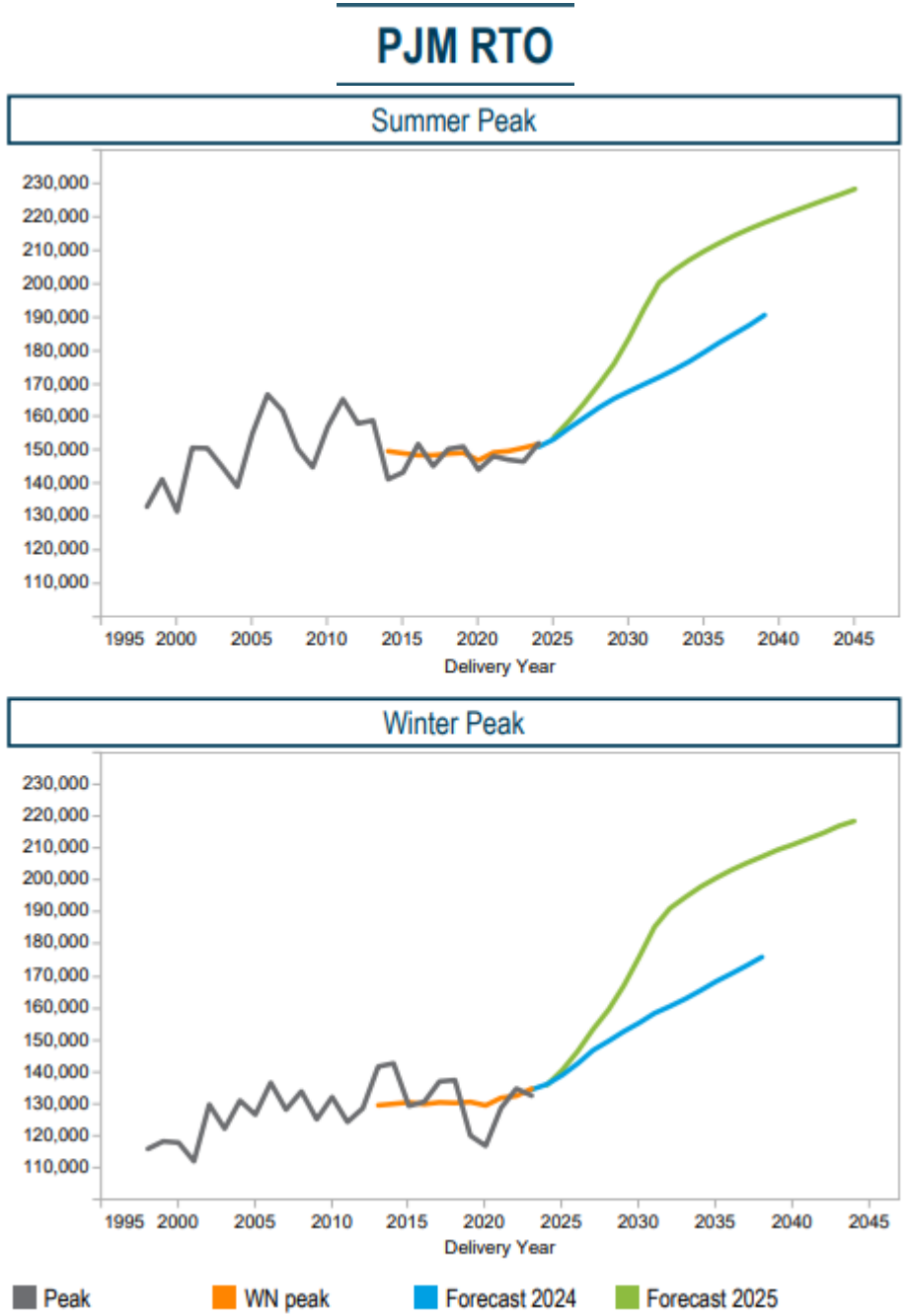
ACTUAL DEMAND FORECAST:

- PJM is forecasting large increases in demand, after years of steady demand. But is it real?
- Forecast is still increasing
- Mostly due to datacenters - ~40% of capacity auction cost was data center loads, most of which haven't been built yet. Why are we paying for it now?

https://www.utilitydive.com/news/data-centers-pjm-capacity-auction/808951/

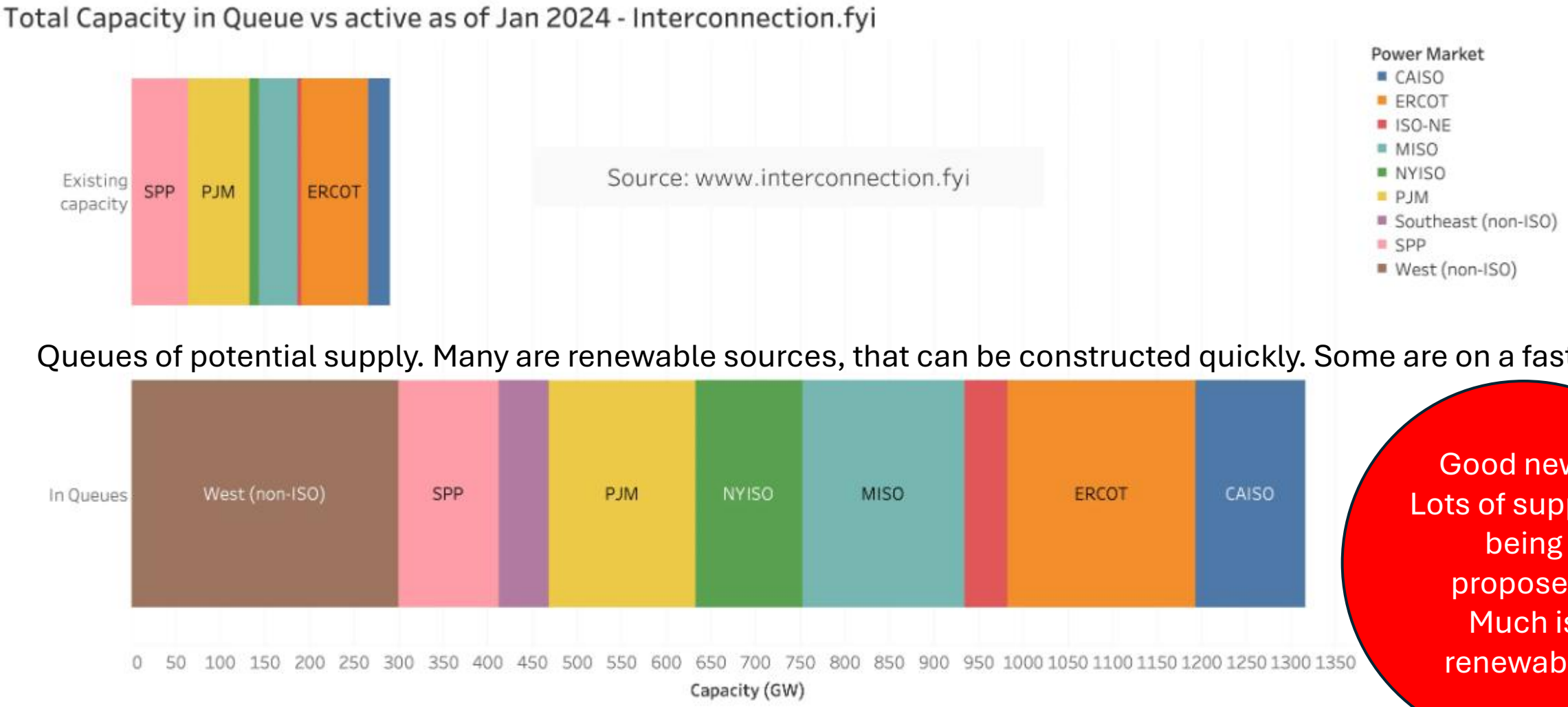
Bad news! Demand is skyrocketing!

News flash! Latest projection is down slightly



https://www.pjm.com/-/media/DotCom/library/reports-notices/load-forecast/2025-load-report.pdf

ACTUAL SUPPLY FORECAST:



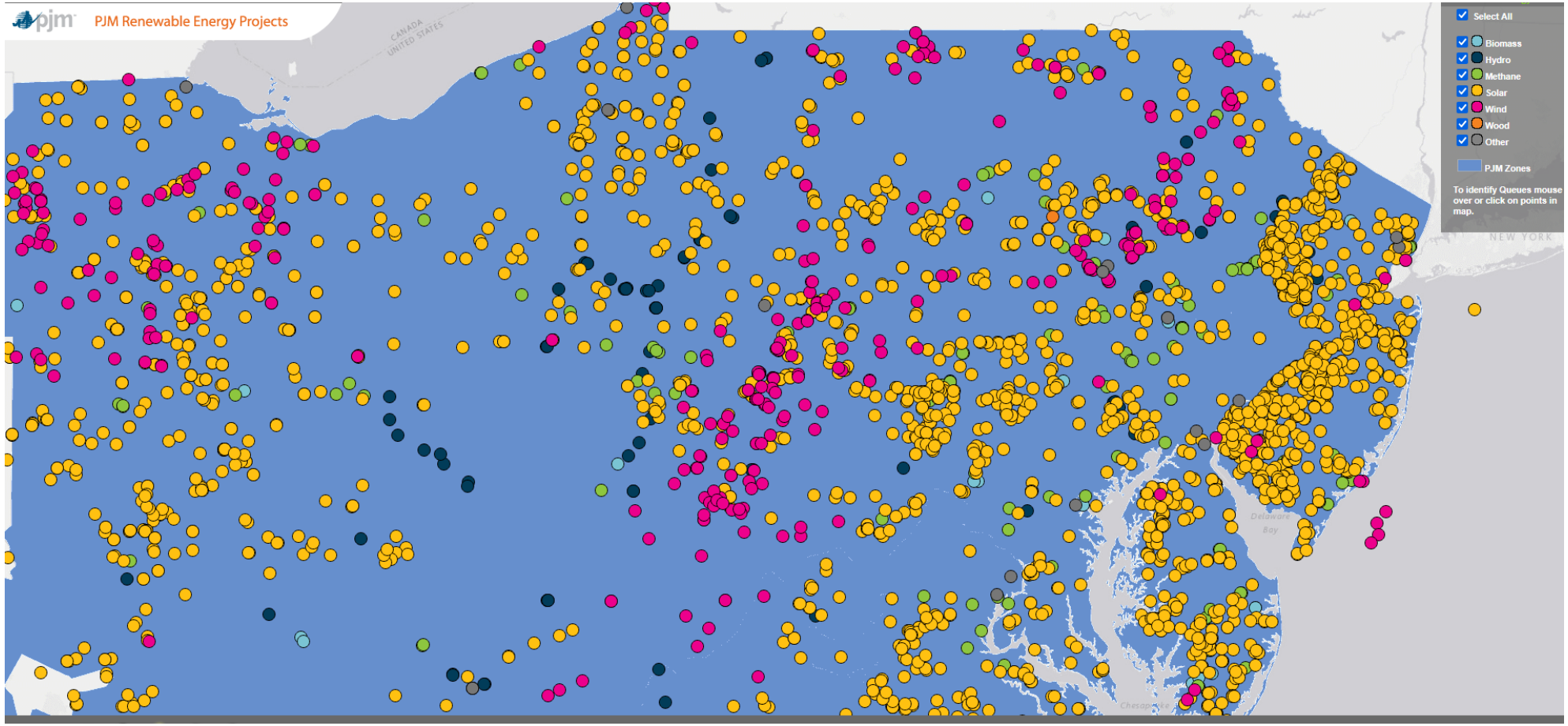
Queues of potential supply. Many are renewable sources, that can be constructed quickly. Some are on a fast track.

Good news! Lots of supply is being proposed! Much is renewable!

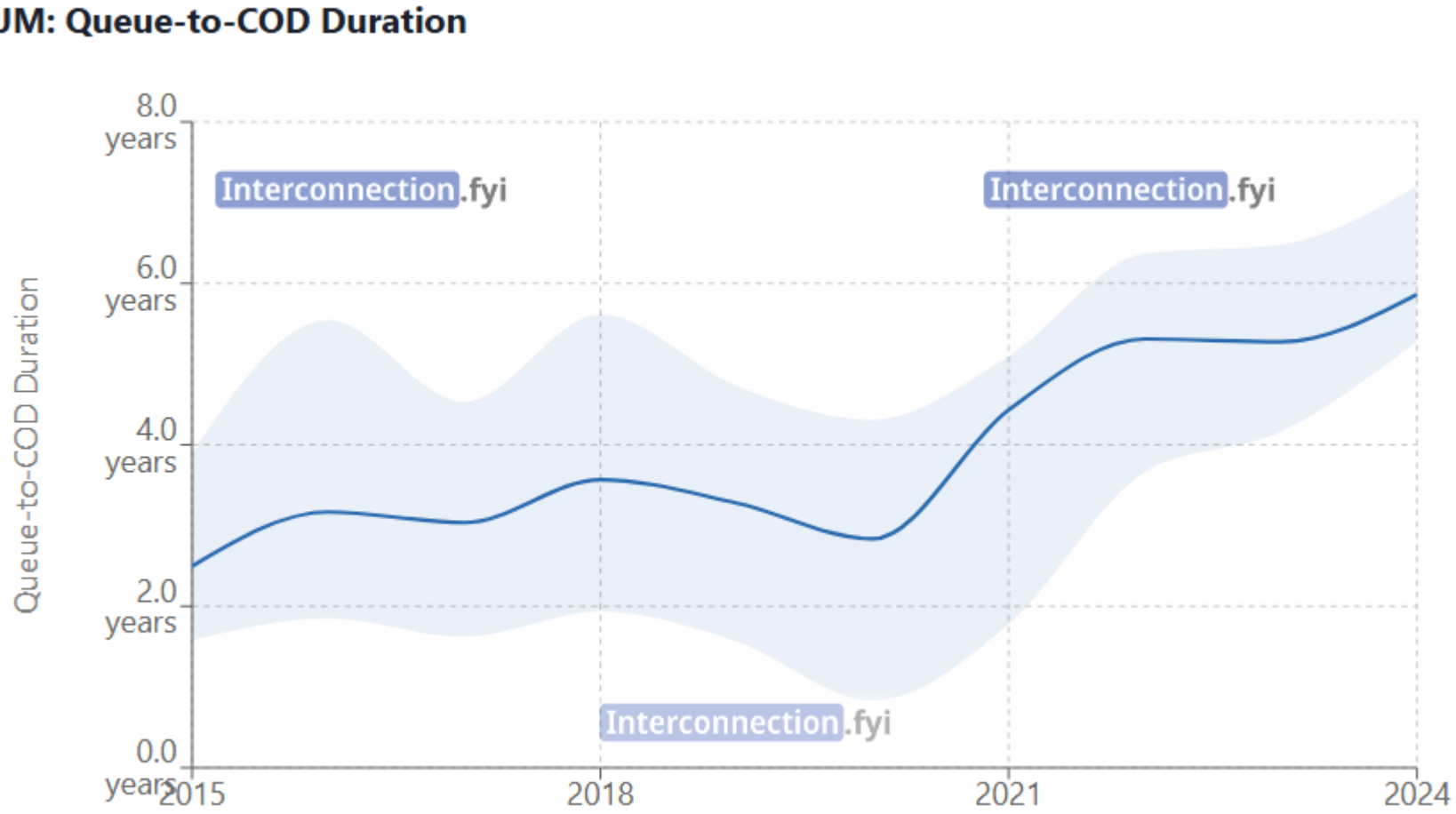
https://www.interconnection.fyi/blog/state-of-interconnection-jan-2024

Proposed PJM Renewable Energy Projects

Queue is large but has been worked on in 2025; Building solar is a lot faster and cheaper than building a gas plant; Accepting a project often requires transmission line upgrades



Queue of Proposed new SUPPLY



For projects that reached commercial operation in **2017**:

- Sample size: **64 projects**
- Typical timeline (median): **3.0 years**
- Interquartile Range: **1.6–4.5 years**

(25th to 75th percentile - middle 50% of projects)

For projects that reached commercial operation in **2024**:

- Sample size: **60 projects**
- Typical timeline (median): **5.9 years**
- Interquartile Range: **5.3–7.2 years**

(25th to 75th percentile - middle 50% of projects)

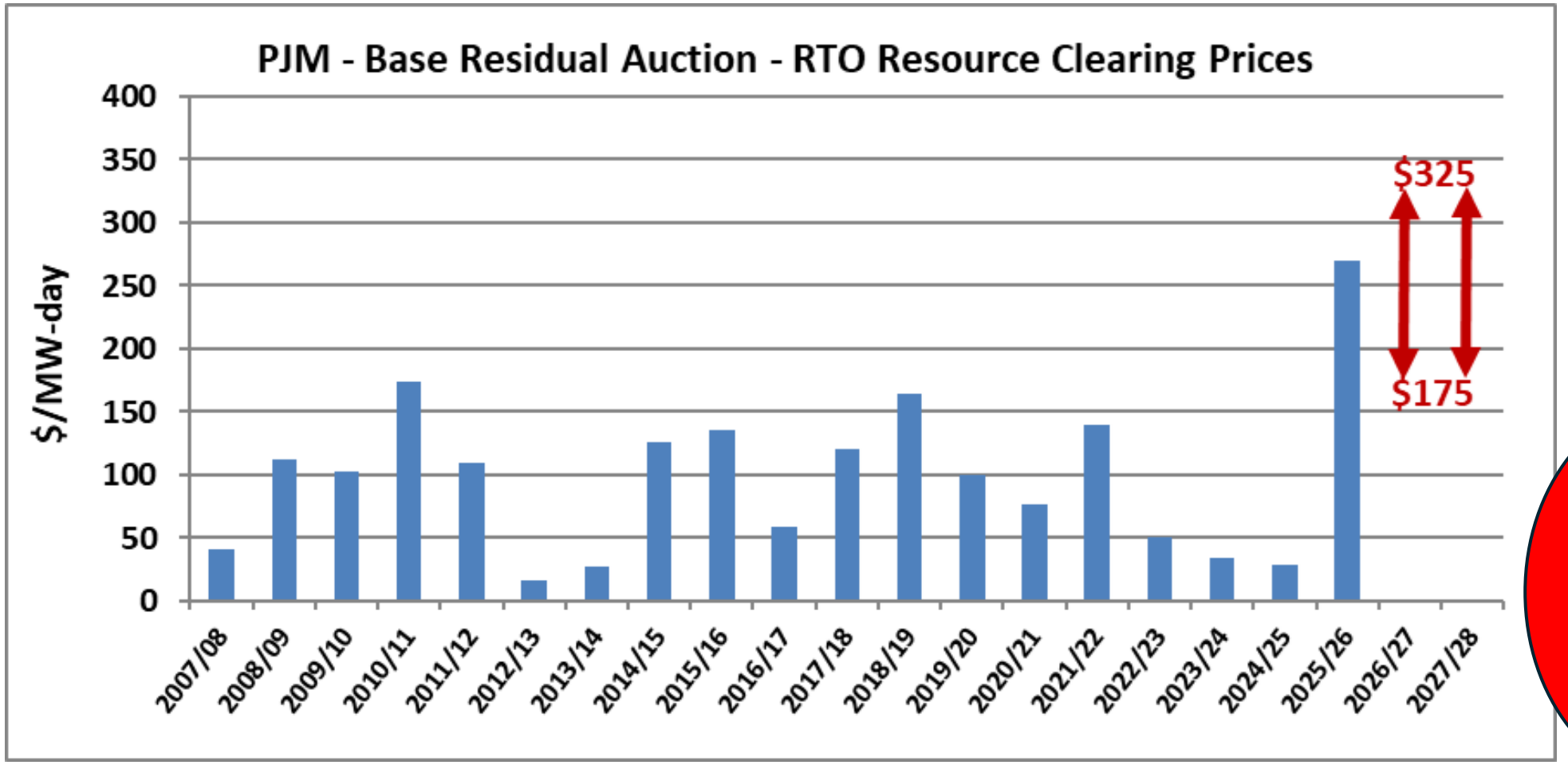
Time from when a project is proposed until it's built (COD: Commercial Operation Date)

Recently, some projects have been fast-tracked, mostly natural gas

Bad news! Supply is being built MUCH more SLOWLY!

Source: https://www.interconnection.fyi/blog/2023-to-2024-queue-changes

So, What Happened in the Last Capacity Auction? Prices ⇔ Supply & Demand



Law of supply v demand! Speakers will propose fixes.

GridLab's Generation Interconnection Scorecard

How are RTOs doing?

TABLE ES- 1 | Generator Interconnection Scorecard Grades

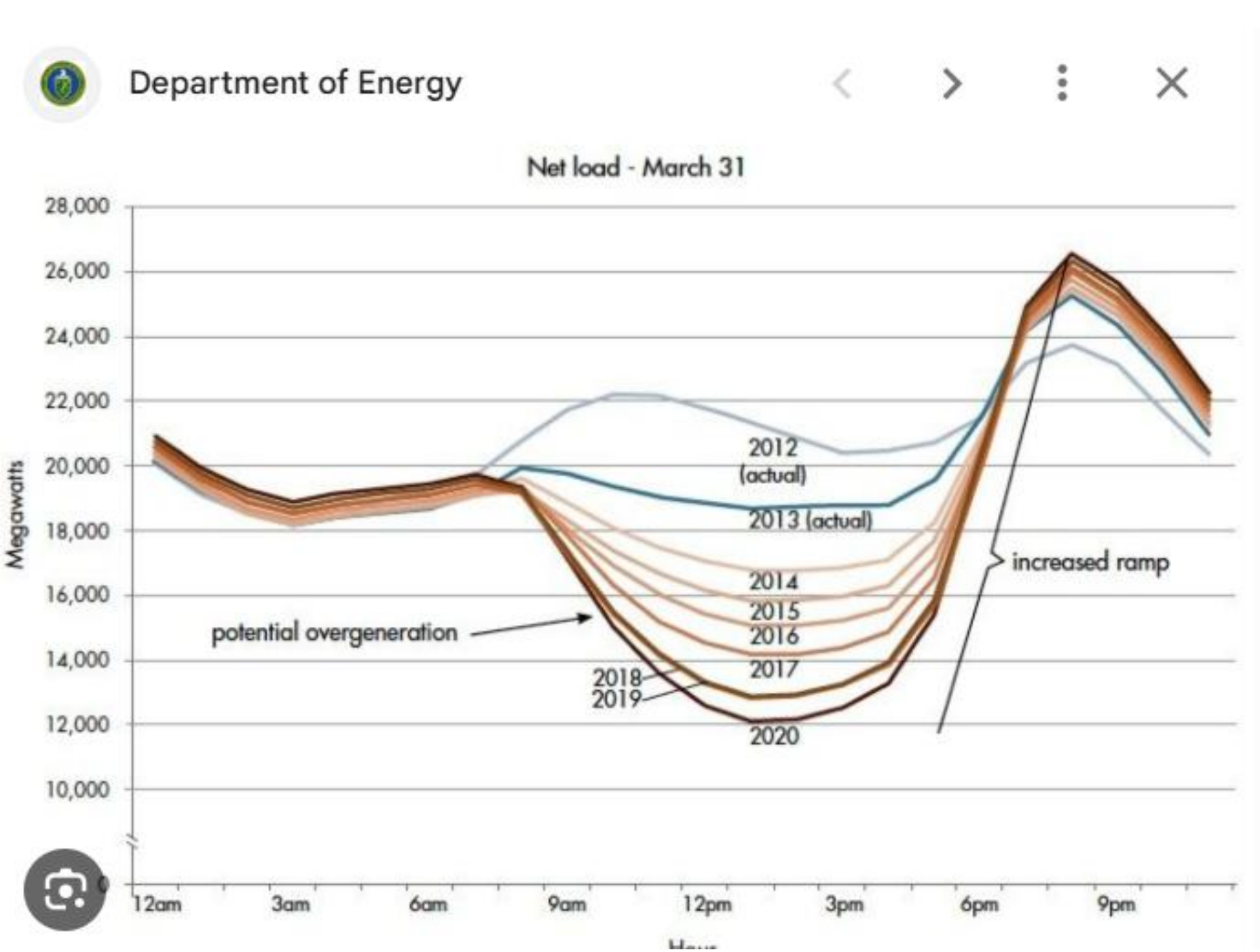
	Overall Scorecard Grade
CAISO	B
ERCOT	B
ISO-NE	D+
MISO	C-
NYISO	C-
PJM	D-
SPP	C-

https://gridstrategiesllc.com/wp-content/uploads/2024/03/AEI-2024-Generation-Interconnection-Scorecard.pdf

Different issue:

Can we smooth out daily energy demand?

- Duck curve shows energy usage during the day
- The grid has to handle the peak. The peak determines the price since all chosen suppliers are paid the maximum accepted price.
- If we can cut off the spike 6pm-10pm, much less peak energy is needed.
  - Batteries
  - Demand response
  - “Virtual power plants”



Price increases are due to supply/demand mismanagement, NOT renewable energy

Request a free electrification coaching session at NJECN.substack.com

The Sierra Club has developed a policy for datacenters, showing you how to advocate for reasonable policies:

https://www.sierraclub.org/sites/default/files/2026-01/policies-for-data-centers-2026.pdf

Part 2:

Proposed Solutions for Increasing Supply and Reducing Demand

Steve Miller

Co-chair, NJ Sierra Club Building Electrification Committee

In NJ a 20% Increase in Electricity Prices (So Far)

The Miller household is almost all-electric.

- Our electricity bill for December is $450.
- Our highest bill before this: $350.
- This jibes with a 20% increase (plus $10 deferred summer payment) from one year ago.
- The next increase is already set.

DATA CENTER IMPACTS TO LAND & NEIGHBORHOODS IN VIRGINIA

- Over **390,000,000** square feet of data centers are proposed, built, or under construction.
- In Fairfax County, VA, data centers are increasingly encroaching on residential areas: **55% are within 200 feet of homes**.

IMPACTS ON WATER

- A single large data center can consume **5 million gallons of water per day**, enough to supply 50,000 people, impacting local water sources and often **operating without disclosing its consumption**, highlighting the industry's ongoing lack of transparency.

DATA CENTER IMPACTS, Cont.

DEMAND FOR ENERGY

- If unconstrained growth continues, energy demand will be well over 60 GW of power for data centers, the equivalent to 68 coal plants.

IMPACTS ON CARBON EMISSIONS, AIR QUALITY & HEALTH

- Two massive data center projects in Pittsylvania County are tapping into the Mountain Valley Pipeline (MVP) for fracked gas power.
- 8,910 cheapest, highly polluting diesel backup generators

IMPACTS ON ELECTRIC BILLS

- Dominion Energy projects that residential electric bills will rise from an average of $142.77 today to $315.25 by 2039

CURRENT STATUS
DATA CENTERS IN VIRGINIA

MINIMAL OVERSIGHT
HIGHLY SECRET
NON-DISCLOSURE AGREEMENTS
UNCHECKED TAX INCENTIVES
RACE TO THE BOTTOM!

PROTECTING RESIDENTS FROM LARGE ENERGY USERS

Recommendations for Immediate Policy Interventions

1. **Energy & Infrastructure Planning**: Ensure data centers contribute to grid stability as well as fund necessary, clean, renewable energy infrastructure rather than shifting costs to ratepayers.
2. **Fair Taxation**: End the Data Center Tax Exemption, or place conditions, to ensure Big Tech builds efficient, renewable powered facilities.
3. **Water Use Regulations**: Impose limits on data center water consumption to protect local resources.

Recommendations for Immediate Policy Interventions, Cont.

4. **Stronger Environmental Protections: Require sustainable energy such as on-site renewable generation requirements and stricter emissions controls on backup generators.**
5. **Land Use Oversight: Establish state-level planning standards to prevent reckless expansion adjacent to residential areas and on agricultural land.**
6. **Transparency: Mandate full disclosure of energy and water use, emissions data, and expansion plans to allow for informed public discourse and policy decisions.**

PROTECTING RESIDENTS FROM LARGE ENERGY USERS

Recent Policy Interventions

Oregon, “The POWER ACT” (passed 2025)

Authorizes the PUC to creates a data center and crypto specific rate class.
Data centers pay their cost of service, not socializing it among all customers.
Allows data centers to bring their own generation resources.
Oregon PUC will monitor growth and trends of all very large customers.

New Jersey, S4307/A5462, Approved Jan 8, 2026, by Senate Budget & Appropriations Committee, Never brought to Floor

Authorizes BPU to create a tariff for large load customers to be assigned all costs.
Ensures that other customers are protected from stranded costs.
Assures large loads will pay 85% of their requested service for at least 10 years.
Incentivizes large load to conserve energy (re-use all heat they produce).

Data Center State Policies, 2026 (1/14/2026)

Mitigating the Impacts of Data Centers on the Environment, Communities, and Affordability (Sierra Club)

Protect Customers | Clean Energy Comes First | Fair Rules for Tech | Protect Public Health

Protect Customers: Large Load Tariffs, Transparency,
Rate Classes and Prevention of Cross Subsidies

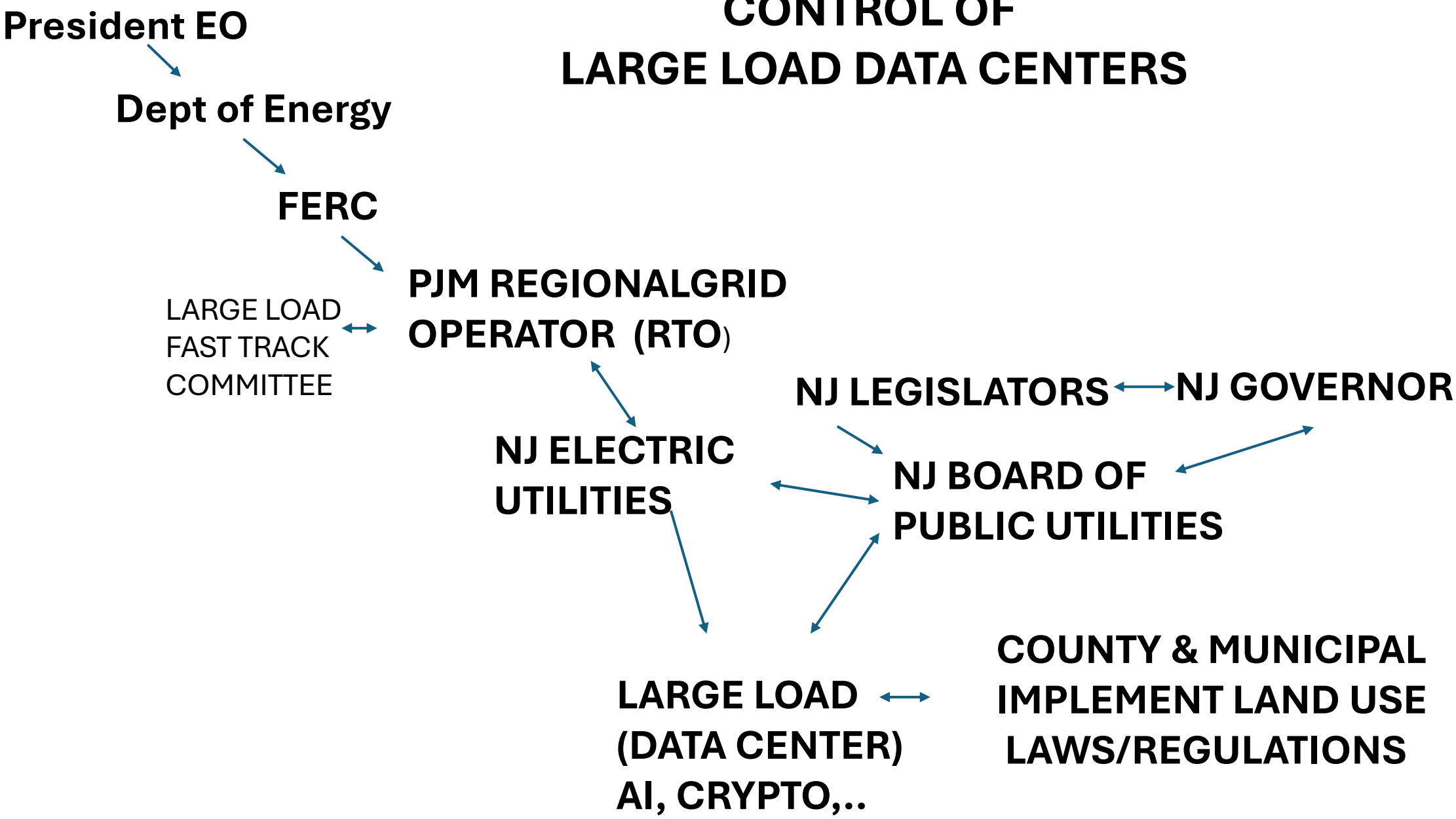
Clean Energy Comes First:
Enforce RPS/CES, Prioritize On-Site Clean Energy, Mandate Zero Fuel Cost Procurement

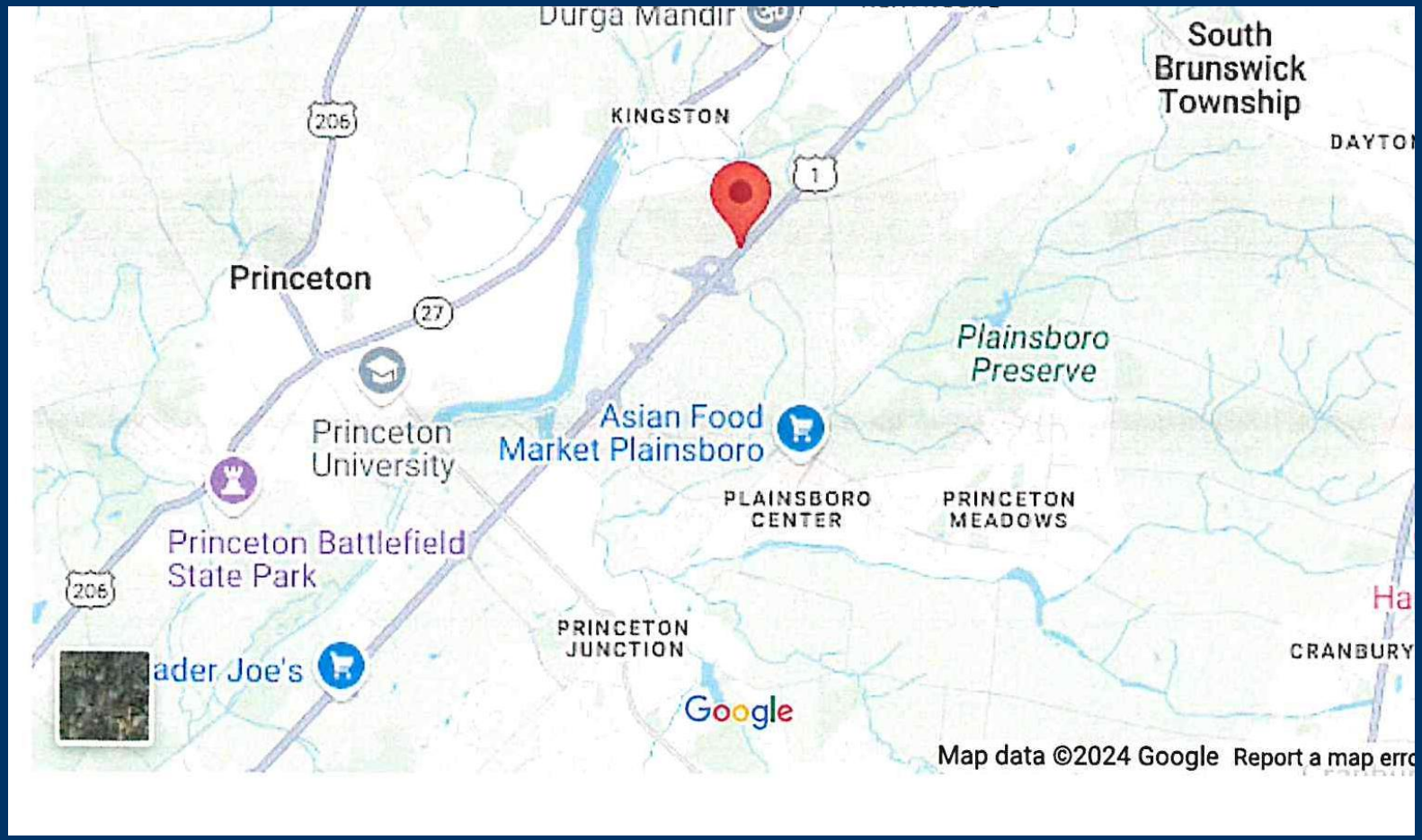
Fairness for All
Removing or Reducing Incentive Tax Rates and Incentive Utility Rates

Protect Public Health
Cumulative Impacts & Air Permits, Onsite Battery Storage Requirements

https://www.sierraclub.org/sites/default/files/2026-01/policies-for-data-centers-2026.pdf

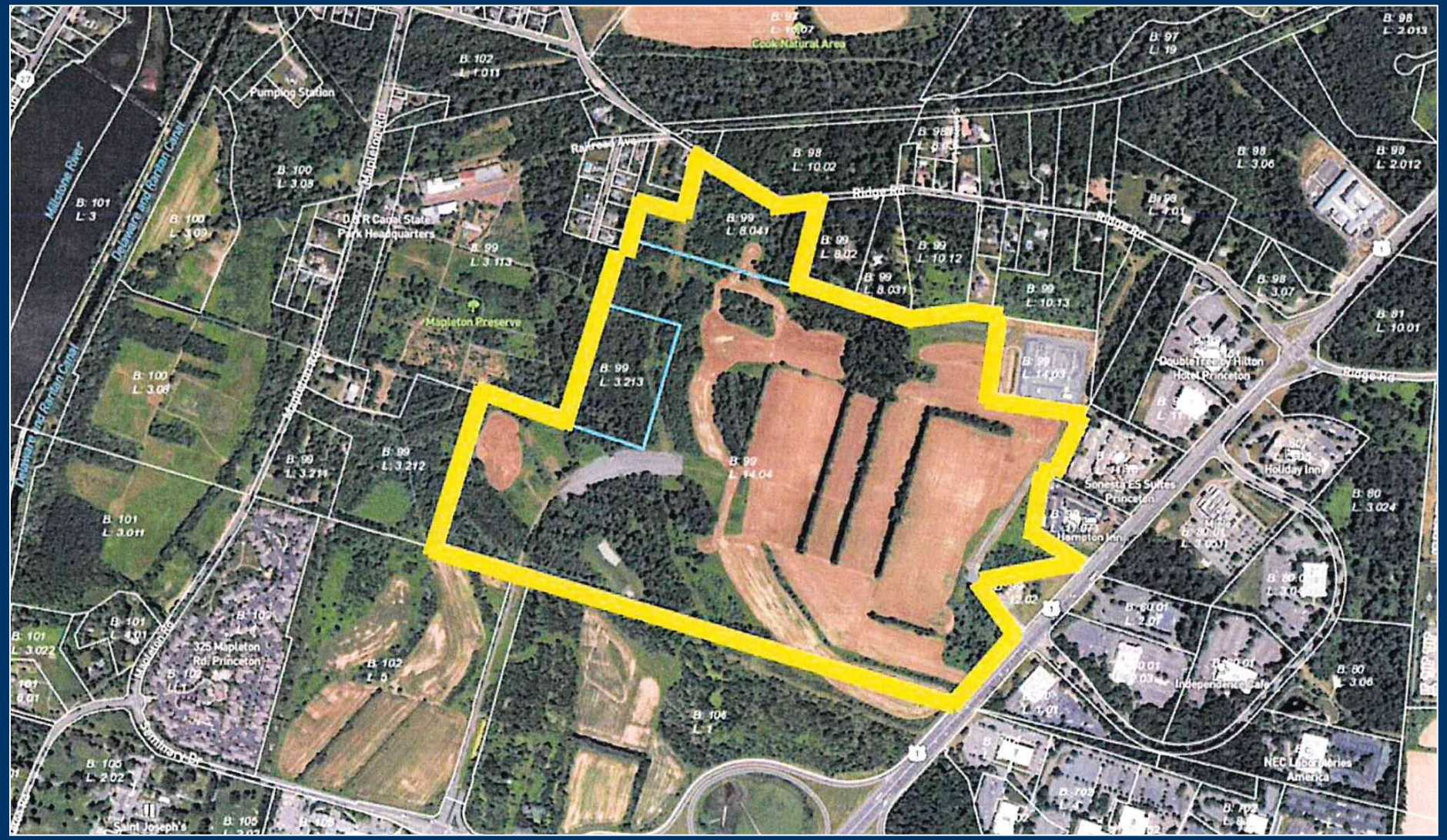
CONTROL OF LARGE LOAD DATA CENTERS





SENTINEL DATA CENTER, S. Brunswick NJ
2026

Sierra Club NJ



SITE LOCATION: Princeton Nurseries
Redevelopment Plan
Note: Proximty to Millstone River, Wetlands,
Residential and Commercial Areas

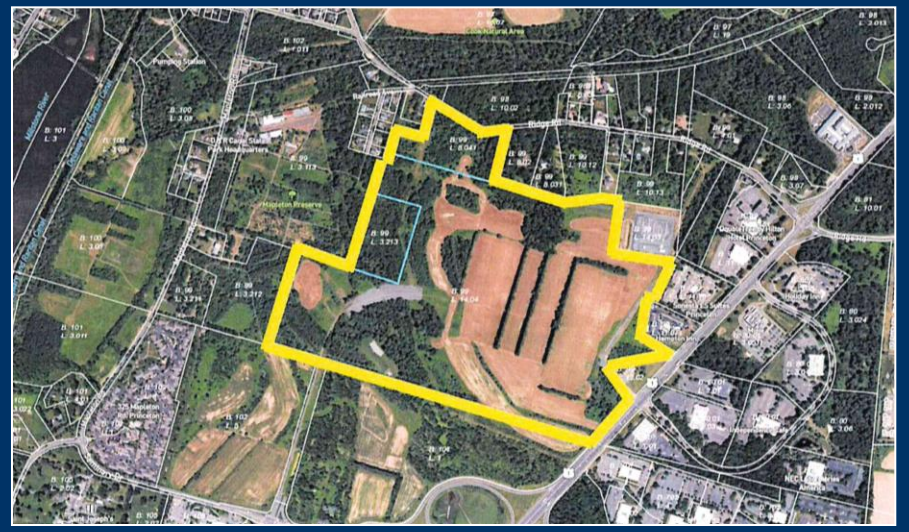
DATA CENTER

- Abuts PSEG Substation - Towards Front of Site

- Data Center Runs 24/7 with three Shifts – 100/Shift
  (ie. Bitcoin, Ai, Machine Learning, etc.)

•Transformers, 21 Chillers,
18 Regularly Tested Generators
at Full Load Using 140 gals/hr,
Large Diesel Fuel Tanks,

•113 Parking spaces



AGREEMENT BETWEEN PRINCETON UNIVERSITY & DEP

- Monitoring of Berm
- Inspection of Geotextile
- Sampling
- Testing
- Remedial Action Protectiveness Biennial Certification

- Awareness seems to be missing by New Owner in not Disturbing the Piles

Contaminated Berm showing Geotextile & Newly Planted Trees & Basin – June 4

Millstone Tributary (Heathcote) and Freshwater Wetlands

PRINCETON NURSERIES REDEVELOPMENT PLAN

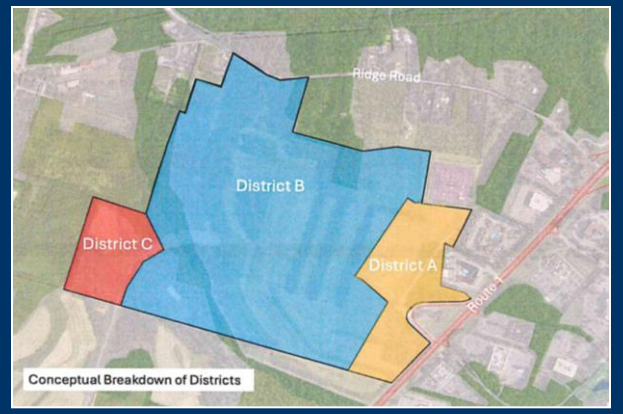
- South Brunswick (Middlesex County) and Plainsboro (Mercer County) – Data Center / High Density Residential & Retail

- Site is Covered by Pesticide Contamination,
  Contaminated Berms in Rear with Homes Behind the Berms

- Previously Unsuccessfully Litigated Permitting Process
  LSRP (Licensed Site Remediation Professional)

- 341,000 S.F. Data Center

- Sold to Princeton University in 1986



ENVIRONMENTAL ISSUES

- Site-wide contamination – Dieldrin & Chlordane
- Potential for Contamination Entering the Millstone River, a Drinking Water Source
- Noise & Vibration Impacting Residences & Hotels – Noise Close to Legal Limit
- Wetlands Preservation & Contamination
- Air Emissions – Air Cooling/Generator Exhaust
- Congestion – Employees & Trucks - (Road Subject to Future Expansion Connects to Rt. 1 via a Rt. 1 Jughandle (Issue)
- Lighting Impacts
- Visual Impacts - Windrows
- Use of Power Grid – Emissions - MO Requirements Presently for Renewables

DIELDRIN (AND CHLORDANE) – from nursery operation

- Insecticides – Synthetic Forever Chemicals

-Banned by EPA

-Chlordane - Same Group as DDT

-Exposure Increases Risk of Cancer, Decreases Function of Immune System, & Liver Problems

-To Prevent Exposure - Avoid Skin & Eye Contact

-Binds to Soil

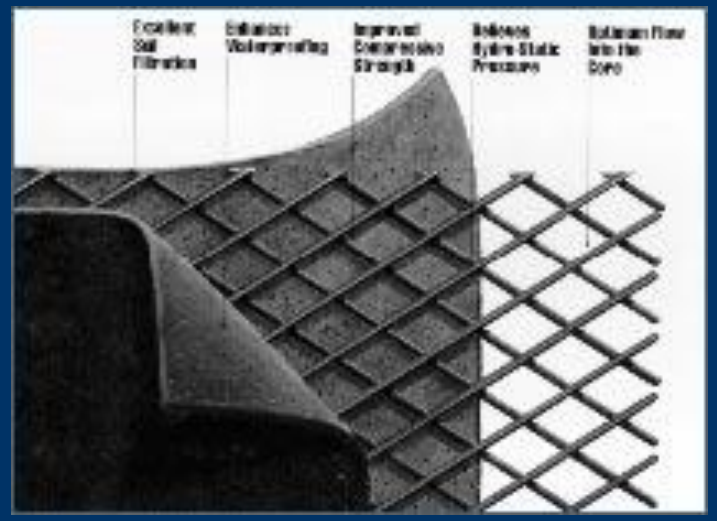
-Generally not Water Soluable but Has been Found in Marine Tissues

-Can be Released by Change in Acidity, or as Dust

-Possible Contaminates Entering Stormwater Management System and entering Millstone River (a Major Drinking Water Source) via Heathcote Brook, etc.

INITIAL REMEDIATION OF SOIL CONTAMINATION

- Ransom – An Environmental Engineering Co. – MA & Hamilton
- Remediation – wo Permits following DEPs Remediation Procedures
- Berm Capping w Geotextile – Stablization & Marking
- Deed Restriction
- Inspection Agreement with DEP
- Current Status – Proposal by Applicant to plant trees on Berm
- Violation of Agreement / Even with Addition of More Top Soil will Cause Penetration of Geotextile
- Talking about More Berms??
- Contaminated Material is to be Kept on Site

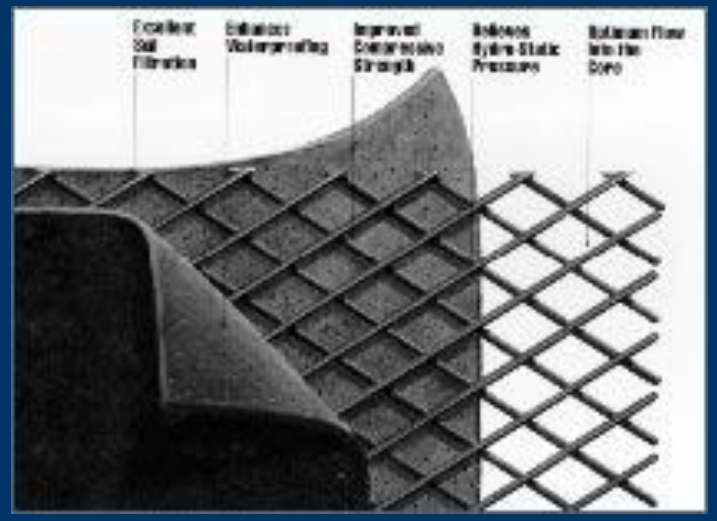


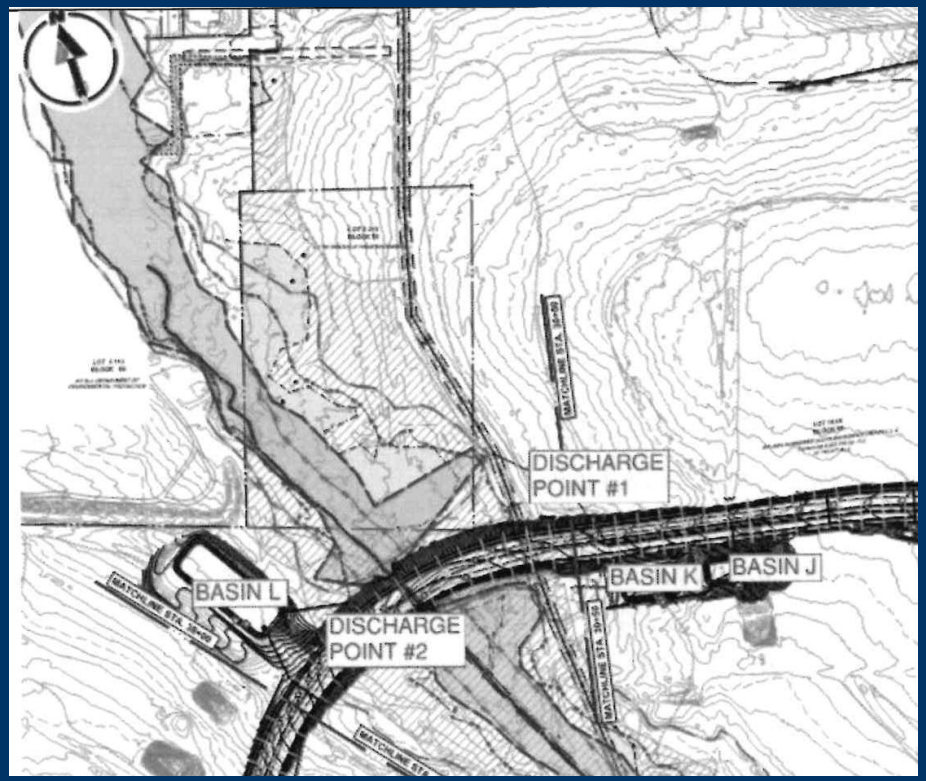
REGULATORY REVIEWS

- Remediation
- Appeal of Remediation by the Smiths
- S. Brunswick Planning Board Approval
- Appeal of Planning Board Decision - Ongoing
- DRCC Approval
- Appeal of DRCC Approval – Ongoing
- Amicus Brief of DRCC Appeal - Ongoing
- DEP Air Permit – Ongoing

QUESTIONS REMAINING

- Construction w/o full Permits
- DEP Stormwater Permitting/Design
- DEP Air Permit (Requesting Hearing)
- Millstone Water Sampling





Princeton Hydro Study
Proposed Stormwater Management System – East side along Rt. 1

West side discharging into unnamed Tributary to Heath Cote Brook and the Millstone

IMMEDIATE MEXT STEPS

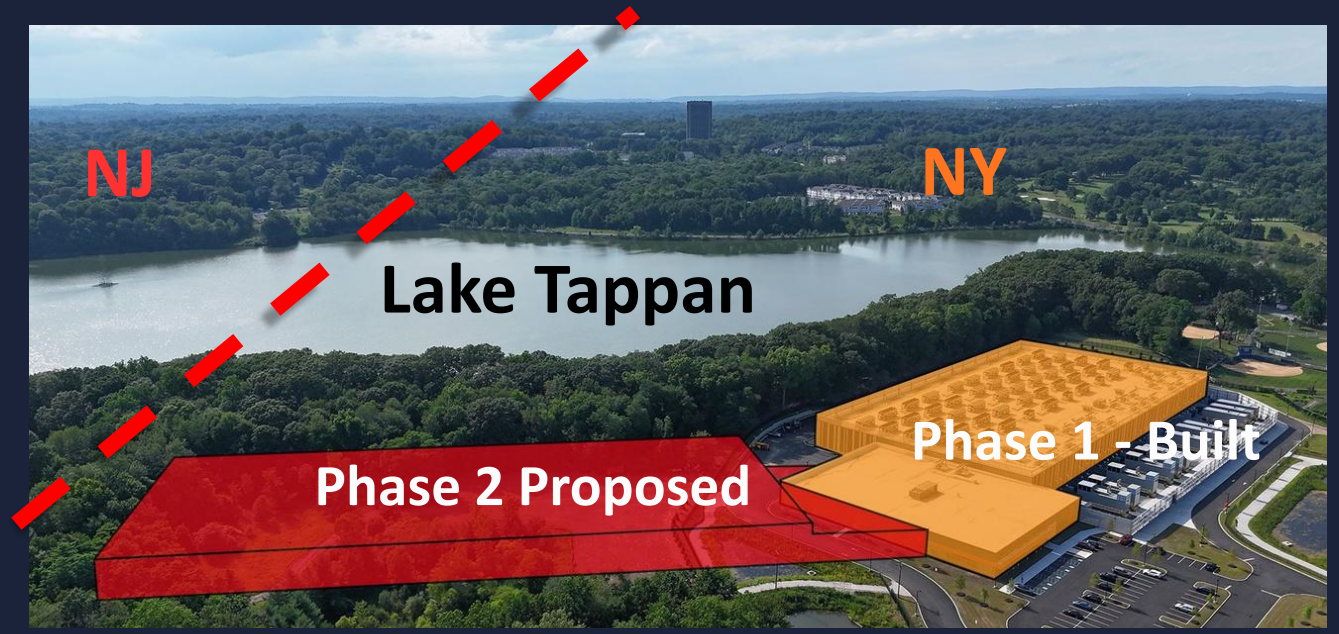
- Smith Family Appeal of DRCC Approval
- Sierra Club Submitting Amicus Brief
- Air Permit (Air Emissions from Backup Generators) - – Requesting Hearing

QUESTIONS REMAINING

- Construction w/o full Permits
- Stormwater Permitting/Design
- Air Permit (Air Emissions from Backup Generators) – – Requesting Hearing
- Millstone Water Sampling

THANK YOU!!

DataBank's AI Datacenter Expansion on Lake Tappan : Orangetown NY



Presented by Datcenter Crisis of NY & NJ

Environmental Impacts

- **Direct impacts to NYS DEC Class I & Class II wetlands**

The project affects Class I and Class II wetlands, the most highly protected wetlands under New York State DEC regulations, due to their exceptional ecological, flood-control, and water-quality value

- **Threat to a regional drinking-water reservoir**

The site borders Lake Tappan, a critical drinking-water source for Northern New Jersey and part of the Hackensack River watershed.

- **Wildlife habitat destruction**

These protected wetlands and reservoir buffers support sensitive species, including bald eagles, whose nesting and foraging areas depend on intact ecosystems.

- **Industrial hazards in an environmentally sensitive area**

Diesel generators, fuel storage, high-voltage equipment, and battery systems introduce spill, fire, and air-quality risks incompatible with protected wetlands and reservoir proximity.

Economic & Infrastructure Impacts

- **Extraordinary electric demand**

AI data centers consume power comparable to tens of thousands of homes, driving substation expansion and long-term grid strain.

- **Higher regional electric costs**

Grid upgrades and capacity expansion ultimately burden ratepayers, not just the developer.

- **Over $50 million in county tax abatements**

Granted despite minimal permanent job creation, shifting financial risk to the public.

- **Public cost, private gain**

Environmental damage and infrastructure obligations remain local, while profits leave the community.

- **Permanent footprint, temporary promise**

Short-term market demand risks leaving Orangetown with a permanent industrial structure, limited reuse potential, and irreversible environmental impacts near critical water resources.

- **The Rockland County Planning Board unanimously rejected the project,**

However the town planning board is seeking ot overrule it. Citing that Phase 2 violates conditions imposed on Phase 1 and represents an incompatible industrial use for the site. The Board found the proposal failed to adequately protect regulated wetlands and water resources and would place unacceptable strain on regional electric and utility infrastructure.

Protect Our Water. Protect Our Community. Protect Our Cost of Living.

- **Protect Our Water. Protect Our Community. Protect Our Cost of Living.**
- **This project threatens New York's most protected wetlands, a regional drinking-water reservoir serving New York and New Jersey, and local infrastructure, while delivering minimal public benefit.**
- **Its massive power demand risks higher electric costs for families and businesses on both sides of the NY–NJ border. Community engagement is what stops bad planning decisions.**

DCC

DATACENTER CRISIS COALITION

NEW YORK + NEW JERSEY // PROTECT + PRESERVE

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- ***facebook.com/DCCNYNJ***