

State Policy Solutions *for* Data Center Impacts:
**Electricity Affordability
and Reliability**

APRIL 14TH | 1:00PM ET

Introduction

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[SCPN]

State Climate Policy Network



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- NGO advocates
- Researchers
- State agency staffers
- Organizers and activists
- Business leaders

... working on state climate policy

www.climate-xchange.org/network

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We specialize in state climate policy design and analysis.
Reach out to kristen@climate-xchange.org with your requests on:

- **Example states** and **model rules** for a given policy
- **Gap analysis** of your state's climate policy landscape
- **Connections** to other actors working on similar issues

State Policy Solutions for Data Center Impacts: Electricity Affordability and Reliability



McKenna Beck
*Ralph Cavanagh Climate
Solutions Fellow*
NRDC



Jordan Gerow
Policy & Research Director
Climate XChange

Agenda

1. Data Center Load Growth & Risks
2. State Policies to Address Data Center Electricity and Reliability
3. Q&A

Speaker

McKenna Beck



**Ralph Cavanagh Climate Solutions
Fellow**
NRDC

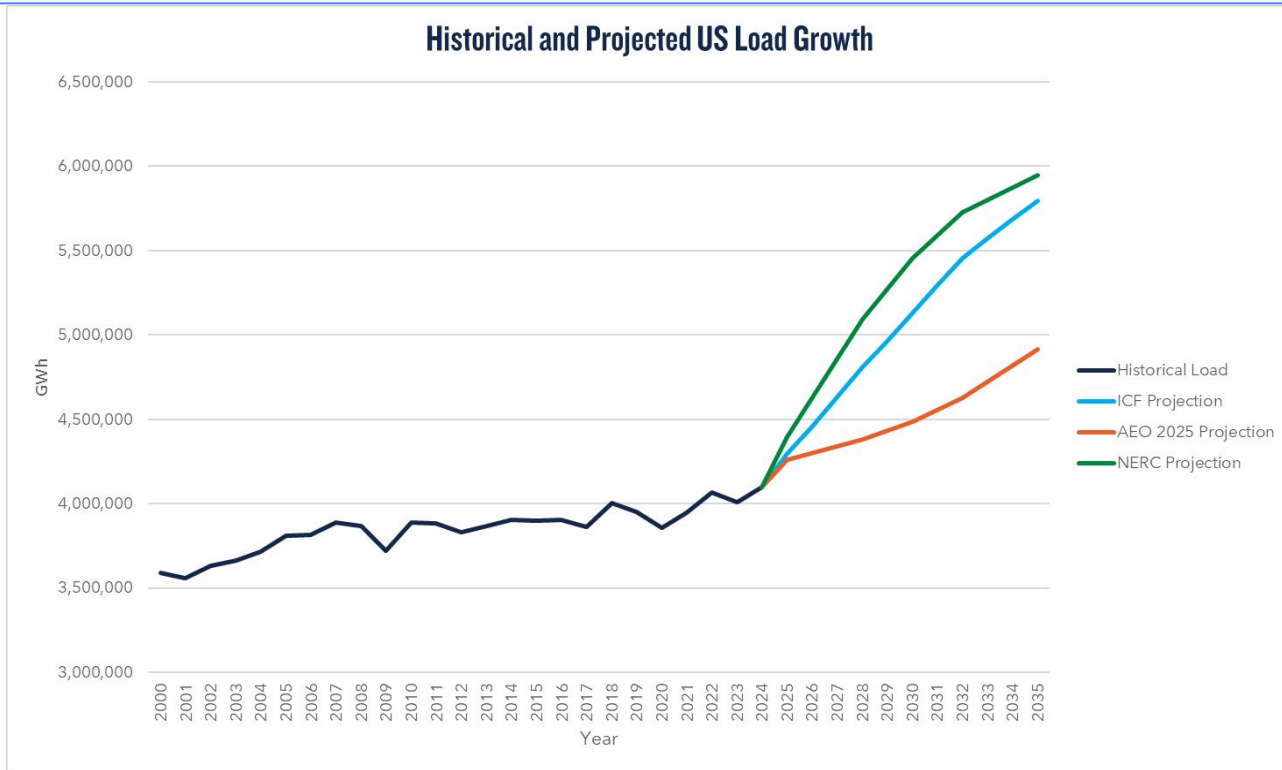


At the Crossroads

A better path to managing data center
load growth

April 2026

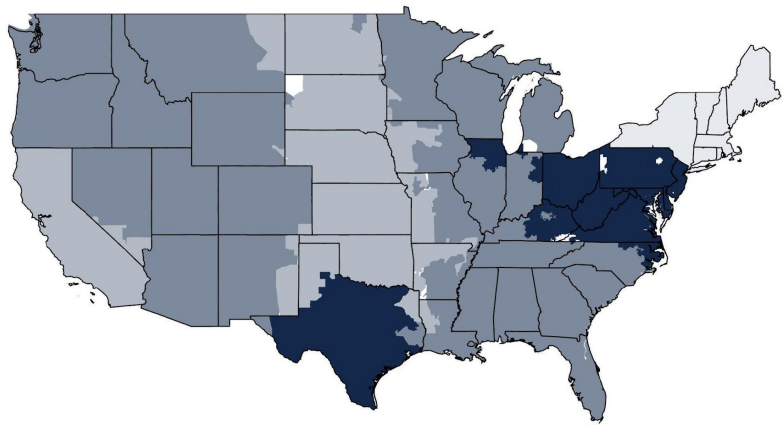
Data Centers are #1 Driver of Load Growth



Source: NRDC (data from EIA, ICF, AEO, NERC)

Growth is Highly Concentrated

LOAD GROWTH BY REGION THROUGH 2035



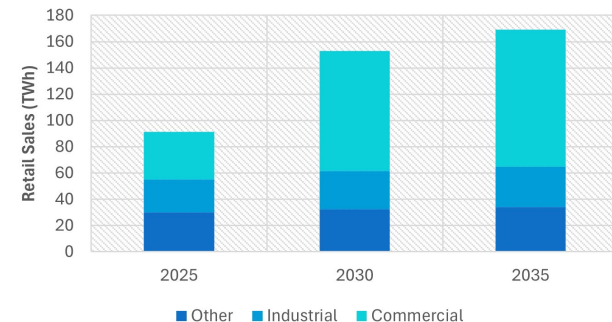
Total Load Growth
between 2025 and
2035

- 250-500 TWh
- 190-250 TWh
- 125-190 TWh
- 30-125 TWh
- 0-30 TWh

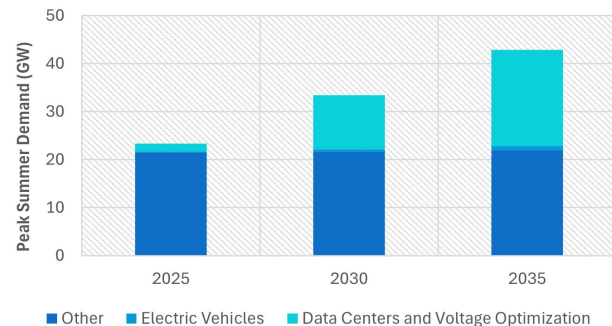
NRDC

Map adapted from Lalit Batra, Deb Harris, George Katsigiannakis, Justin Mackovyak, Himali Parmar, and Maria Scheller, "Rising Current: America's Growing Electricity Demand," ICF.

Georgia Power



Dominion Virginia



Risks to Affordability

Uncertain demand forecasts and the risky nature of data center developments threaten affordability.

Risks include:

- Stranded costs
- Contracts offering preferential rates
- Volatile energy and capacity markets
- Cost shifts from large investments in shared infrastructure (i.e., transmission network upgrades) designed to serve data centers

A fraction of proposed data centers will get built. Utilities are wising up.

One expert estimated that speculative interconnection requests were five to 10 times more than the number of actual data centers, but the scale of the problem remains elusive.

'Game changer'? What 'DeepSeek' AI means for electricity.

By Christa Marshall | 01/29/2025 06:53 AM EST

The Chinese company says its AI model is cheaper and uses less energy than those of its competitors, driving questions about predictions of enormous power demand.

Microsoft cancels leases for AI data centers, analyst says

BY [RYAN VLASTELICA](#), [NEWLEY PURNELL](#) AND [BLOOMBERG](#)

February 24, 2025 at 5:08 AM PST



Climate Targets at Risk




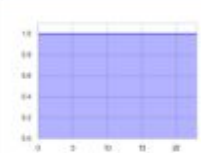










Concerning national trends in the face of surging demand:

- Increased reliance on existing fossil fuels
- Buildout of new gas
- Delayed retirements of coal and gas plants
- Existing carbon free energy cannibalized by data centers



Meta's announced data center in Richland Parish, LA, which is roughly the size of Manhattan, will be powered by 3 new gas turbines.

Large, uncertain, and inflexible loads create the biggest challenge

Load	Residential EV charger	Residential heat pump	Fleet EV charging/ Charging depots	Data centers	Clean manufacturing facilities	Food processing/ packaging facilities	Hydrogen electrolysis
Load shape							
Forecast uncertainty							
Flexibility potential	Somewhat flexible: longer duration of charge for Level 1 and 2 chargers.	Somewhat flexible: setpoints dictate operation.	Somewhat inflexible: driven by market demand and operational constraints.	Highly inflexible if deployed for AI tools; Highly flexible if focused on mining crypto.	Somewhat flexible: some processes take time to ramp.	Somewhat inflexible: product risk.	Highly flexible: economics sensitive to electricity cost.
Economic development benefits	New Jobs: Low Tax Revenue: None	New Jobs: Low Tax Revenue: None	New Jobs: Low Tax Revenue: Low	New Jobs: Low Tax Revenue: High	New Jobs: Medium Tax Revenue: High	New Jobs: High Tax Revenue: High	New Jobs: Medium Tax Revenue: High

Source: RMI, April 2024 (not published)

What are states solving for?

- Affordability
- Grid reliability
- Emissions and Environmental Impacts

- Economic Development
- Federal headwinds/AI Dominance

Ratepayer Protection Pledge



Protecting American Families. Strengthening
the Grid. Powering AI Responsibly.

Expansive State Toolkit

Affordability

- Large Load Tariffs
- Low Income or DSM Programs

Clean Energy

- Incentives
- Mandates
- BYONCE
- Clean Transition Tariffs

Reliability

- Reporting
- Forecasting and Planning
- Technical or IX Requirements

Grid Benefits

- Flexibility
- Performance Standards
- Grid hardening
- Backup Generation

Large Load Tariffs

Utilities and PUCs can ensure large loads can pay their fair share by creating a new large load rate class that require financial commitments to requested capacity.

Elements of a Capacity Commitment Framework

Eligibility	Terms	Duration	Other
<ul style="list-style-type: none">• Collateral• Large load definition	<ul style="list-style-type: none">• Initial fees• Min. demand charges• Exit fees	<ul style="list-style-type: none">• Long term (12+ years)• Ramp period• Resizing clause	<ul style="list-style-type: none">• Economic dev. payments• Reporting• Flexibility

Some states have implemented stop gap measures to cover unattributable cost shifts in the near term, such as payments into low-income assistance, grid hardening, and/or DSM programs.

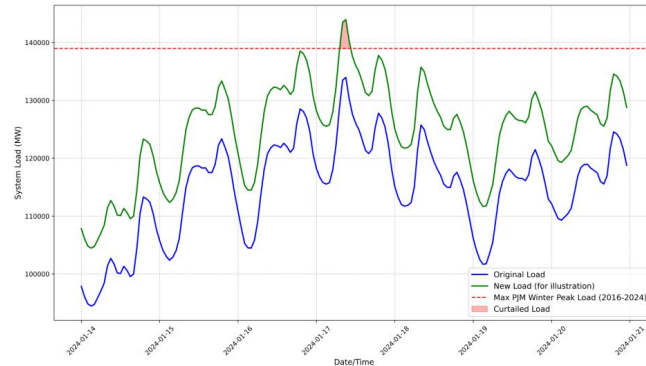
Flexibility can Lower Costs, but will it Lower Emissions?

Flexibility can improve speed to power, boost reliability, and lower costs

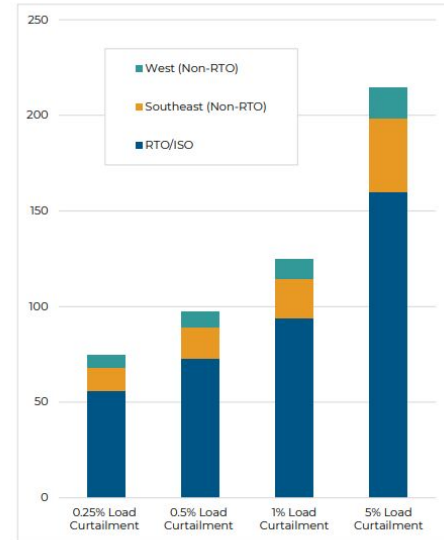
- Duke's Nicholas Institute found 100 GW of headroom in US that new large loads can use with minimal curtailment requirements

Open questions:

- Is curtailing economic for data centers?
- Will flexibility enable increased use of diesel/gas backup generators?
- Is this a realistic and/or economic near-term solution?



Illustrative Load Flexibility in PJM



Headroom Enabled by Load Curtailment

Snapshot: Who's Driving State Action

PUC

LL Tariffs

- Indiana: I&M
- Ohio: AEP
- Michigan: Consumer's & DTE
- California: PG&E
- Illinois: ComEd
- Virginia: Dominion
- Georgia: Georgia Power

CTT

- Kansas: Evergy
- Nevada: NV Energy

Legislature

- Oregon: HB 3546
- Texas: SB 6
- Oklahoma: HB 2845

Hybrid

- Pennsylvania: PUC Docket (M-2025-3054271) & HB 1834
- Minnesota: HF 16 and Xcel LL tariff
- Potential legislation out of California, Illinois, Colorado, and others?

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Speaker

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Policy & Research Director

Climate XChange

State Policy Toolkit for Data Center Regulation

Electricity Affordability and Reliability

Jordan Gerow, Climate XChange
April 2026

The Toolkit

- Goal: Provide **strategies, analysis, bill elements, and examples** for regulating data centers' impacts on electricity rates and affordability
- Use case: State policymakers and advocates utilize policy strategies that work for **their state's specific priorities**
- Context: This webinar covers tools from **one of five Climate XChange toolkits on data center regulation**. It overlaps in content with themes around GHG emissions, transparency, and tax, but does not address those topics directly!

The Value of A Holistic Approach

- **Tradeoffs** between affordability, reliability, GHG emissions, water, and more.
- Coordination with **local governments** and impacted **communities**
- Synergy across state **priorities**: economic, energy, climate, public health, and environmental

New and forthcoming data center regulation toolkits on [water](#), [transparency](#), [GHG emissions](#), and [tax and economic justice](#).

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State Policies for Data Center Regulation: Electricity Affordability and Reliability



Large Load Tariff
Proceedings and Other
Financial Mechanisms

Require data centers to **pay** for incremental costs to electric service, based on rigorous analysis to avoid stranded costs, against electrification baseline.



Load Flexibility

Require or incentivize data centers to **operate flexibly** in response to grid conditions



Optimizing Location

Considering **surplus interconnection capacity**, nearby clean power, and local support



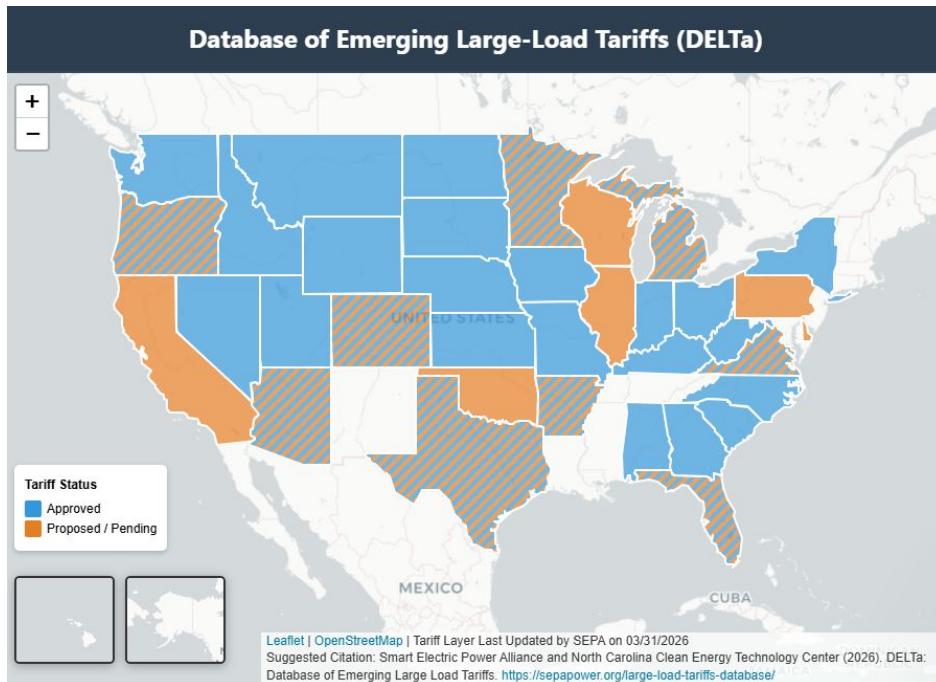
Disclosures and Planning

Ensure data centers' **interconnection queues** provide the most accurate picture they can for grid planners

Large Load Tariffs

A Spreading Trend Across the Country

- 76 proposed or enacted tariffs tracked around the country in 36 states
- 51 enacted, 25 proposed
- Only 15 pre-date 2025
- Qualifying size thresholds between 1 and 100 MW



Source: [SEPA](https://sepapower.org/)

Large Load Tariffs

PUC-Led Proceedings to Attribute Grid Costs to Data Centers

1. Capturing all of the elements of grid costs:
 - a. Energy
 - b. Capacity
 - c. Distribution
 - d. Transmission
 - e. REC market rates
 - f. Ancillary services

Challenges: How to capture transmission costs?

- FERC has jurisdiction to determine how much utilities must pay for interstate transmission investments.
- Traditionally made with little transparency, and without considering which customers are driving the need for that investment
- Traditionally, PUCs then split those costs among all customers according to formula (e.g., 55% to residential rate class)
- [\\$4B in transmission costs](#) passed onto PJM ratepayers

Stranded Assets

The Need to Shift Risk from Ratepayers

- Grid infrastructure upgrades may have 30-year useful lives
- Data centers are often built around servers with a useful life in the range of two to five years
- Hyperscale data centers may potentially exhaust the supply of useful training data
- Many AI applications fail to make a profit (2025 report cites “95% of organizations are getting zero return”)
- Risk that the industry may become overbuilt in the years ahead
- Excess energy capacity or grid upgrades may become stranded assets

Large Load Tariff Terms

And How They Can Shift Stranded Asset Risk Back Onto Data Centers

- Minimum demand charges
 - Load Ramp Periods (e.g., you have four years to use 90% of your contracted demand – examples range from 1 to 10 years)
- Minimum contract term (e.g., 20 years plus load ramp, see Maryland [HB0900](#))
 - Consider [allowing data centers to transfer or trade their outstanding load obligation](#) to each other in the event that a given facility closes.
- High exit fees (e.g., a [proposed Kentucky tariff](#) includes “a requirement to make a one-time payment equal to five-years’ minimum billing”)
- Notice requirements (e.g., [five years](#) before exit)
- High collateral requirements (e.g., AEP Ohio has [adopted a credit and cash collateral requirement of 50 percent](#) of contract lifetime minimum charges)

Despite clear best practices, many tariffs around the country list these terms as “not specified” or “negotiable”!

One-Off Contract Review

Where Large Load Tariffs Don't Exist, Make Sure PUCs Review Contracts Carefully

Not all jurisdictions will want to develop a large load tariff. Even where they do, developing tariffs can take between one and three years. In the meanwhile:

- Set standards for contract review
 - [Colorado PUC offered “principles”](#), or nonbinding negotiating points, for contracts between utilities and data centers needing over 50 MW of power.
 - Kentucky PSC [has self-imposed the obligation to make several findings on the record](#), showing no discounts without excess generation capacity, contract rate exceeds the utility's marginal costs to serve, and that data centers pay utility's fixed costs
- Fund intervenors to participate in contract review

Fees To Support Bill Assistance

Where Large Load Tariffs Don't Exist, Simply Funnel Fees Towards Assistance

A simple and immediate approach involves legislatively creating a data center energy surcharge that will be used to fund new or existing bill assistance programs, or other investments that reduce customer bills.

- New York's proposed [S 6394](#) would have required the PUC to determine the correct surcharge within one year, following extensive public comment.
- Minnesota's [HF 16](#) dedicated data center surcharges to help fund “energy conservation, weatherization, and associated activities”, each of which helps reduce customer bills.

Load Flexibility

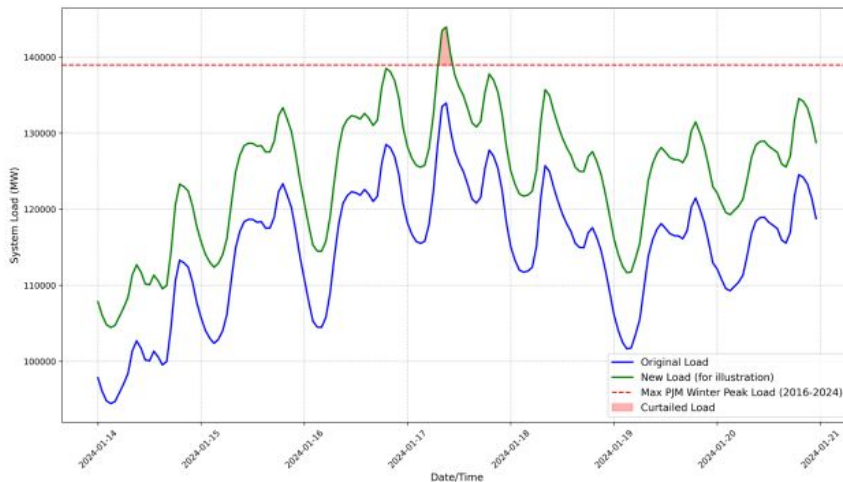
Data centers can be incentivized or required to reduce their burden on the grid

Small amounts of demand response can help large amounts of data center demand integrate with existing grid (e.g., 22 hours/year unlocks 76 GW of new load).

Texas' [SB 6](#) authorizes ERCOT to mandate data centers switch to backup or curtail load. Other proposed Texas approaches include [tax](#) and [permitting](#) incentives.

Other types of flexibility?

Figure 4. Illustrative Load Flexibility in PJM



Source: [Duke's Nicholas Institute](#)

Optimizing Location

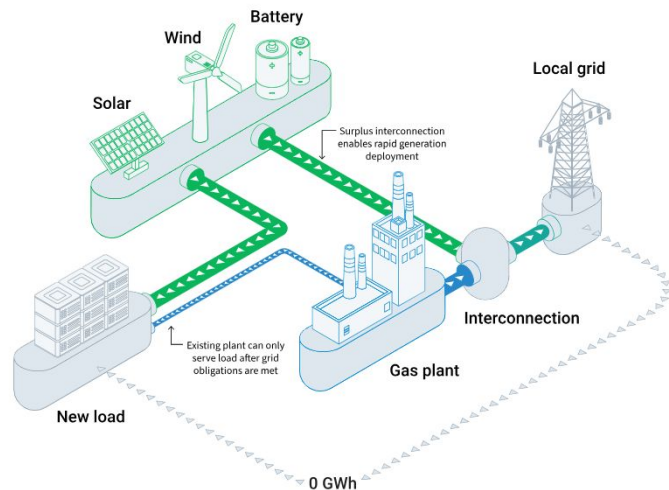
Data centers can be steered towards where they will least strain the grid

Surplus interconnection sites can be an opportunity to minimize grid costs, and also site new clean power behind-the-meter (e.g., RMI's projection of 50GW load at 60% carbon free power under \$200/MWh).

Other examples:

- NC [HB 1002](#), creating a statewide planning commission to name preferred data center locations, based on “existing electric grid and energy,” as well as “consideration of fiber, water, labor, and latency related to data centers.”
- [MD HB 940](#), providing expedited interconnection for projects at surplus interconnection sites
- Florida Power & Light Company [proposed tariff](#) in two tranches: a general tariff, and a more favorable tariff for 3 GW of load proximate to existing transmission facilities and potential generation sites.

Exhibit 1: Power Couple Co-location at Site of Existing Natural Gas Generator



Source: [RMI](#)

Permitting Incentives

Strategies for expedited permitting without sacrificing review quality

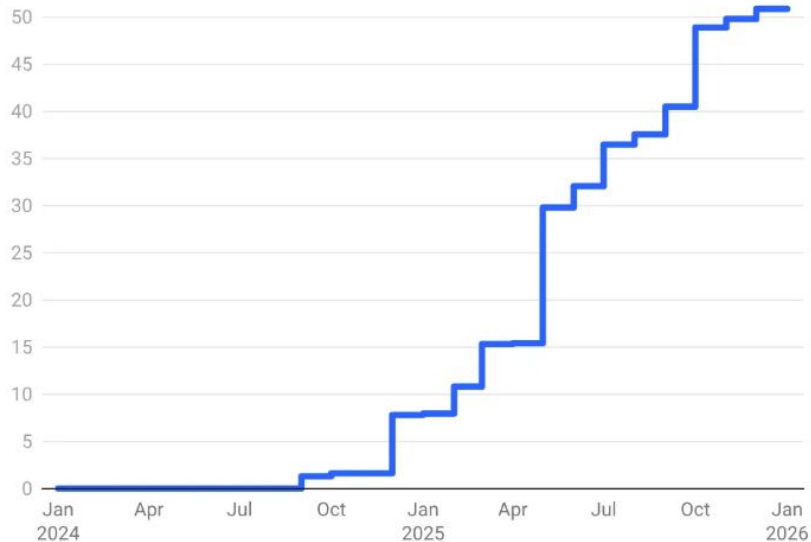
When states proactively identify data center locations, they can conduct pre-permitting for data center projects at a specific location, of a certain size, and with certain operational characteristics, and then offer those sites up for qualifying projects.

Analogous processes have taken place around renewables development on brownfields. E.g., [New York](#) and [Massachusetts](#) have tasked a state agency with much of the work that a developer would otherwise do to receive permitting approval for renewable development at a brownfield or other repurposed site, so that permitting a specific project can be done expeditiously.

Caution on On-Site Power

Clean Technical Potential Exists, But Many States Are Rushing Ahead on Fossils

Capacity of announced behind the meter data centers (GW)

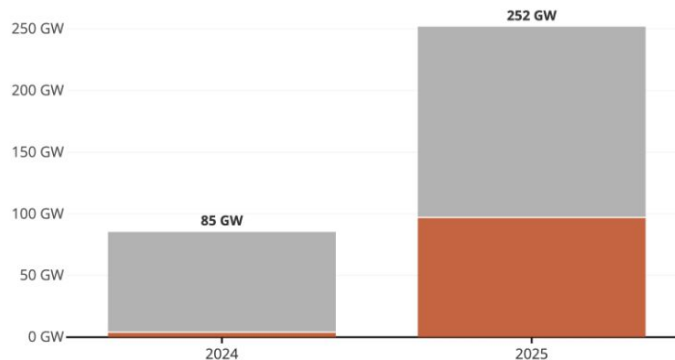


Source: [Cleanview Project Tracker](#)

U.S. triples gas power plans to meet data center demand

Gas-fired capacity announced, in pre-construction and construction phases, in gigawatts (GW)

On-site for data centers All other



Source: [Global Energy Monitor](#)

"The United States now has the most gas-fired power capacity in development [and] more than one-third of this capacity is slated to directly power data centers on-site."

Disclosures and Planning

States Need a Clear View Into Their Queues to Plan for Load Growth

The better visibility utilities and regulators have into future load growth, the better able they will be to plan grid investments. Recent proposals include:

- **Texas' SB 6:** “[E]ach large load customer [must disclose] whether the customer is pursuing a substantially similar request for electric service, inside or outside this state[.]”
- **Texas' SB 1641:** “[A] load forecast [shall not include] any projected addition of retail demand of 25 MW or more at a single point of delivery unless each retail customer associated with the addition demonstrates that the customer is reasonably likely to take electric service.” Leases or security deposits may be evidence.
- **New Jersey's A5462:** Requiring evidence “that the proposed project is unique and not duplicative of any other large load data center project, whether located in New Jersey or elsewhere, or to identify the project's interdependencies.”

Special Purpose Vehicles pose a longer-term problem for these types of requirements.

“Conservatively, you’re seeing five to 10 times more interconnection requests than data centers actually being built.”

Concluding Thoughts...

- Affordability a top-line concern for legislatures in 2025 and 2026
- The details of how large load tariffs are developed will determine their effectiveness
- Looking for states to take a more proactive approach to identifying sites that optimize grid and emissions outcomes

Look out for data center regulation toolkits on [water](#), [transparency](#), [GHG emissions](#), and [tax and economic justice](#).

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Q&A

Thank you for joining!

**Reach out to
kristen@climate-xchange.org with any
additional questions!**

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Meeting Load Growth with Clean, Affordable, Reliable Electricity

36 states have data center tax incentives.

It takes 1-2 years to build a data center, but up to 8 years to connect one to the grid.

Strategies that hasten connections also are cleaner, affordable, and reliable.



Ongoing State Work

Legislative Avenues

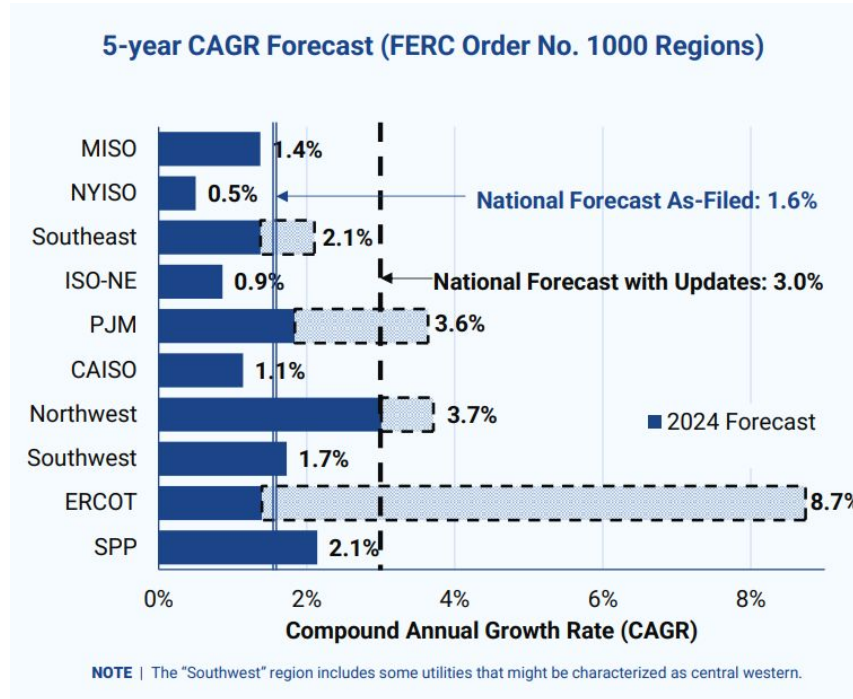
- Incentive structures
 - Speed to connect
 - IL
 - Reformed tax incentives
 - CA – stalled (70% annually)
 - MI – enacted, bad (90% annually)
- Clean Energy Mandates
 - OR, MN – enacted
 - CA, CO, IL, PA – proposed
- Large load tariffs
 - OR, MN – enacted
 - CA, CO, IL, PA – proposed

Regulatory Avenues

- Clean Transition Tariffs
 - Requirement in recently enacted MN bill
- Large Load Tariffs
 - MI – DTE and Consumer's Energy
 - IL – ComEd
 - PA – PA PUC (En Banc Hearing)

*this is a non-exhaustive, illustrative list

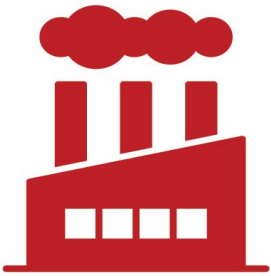
Regional Projections



EMISSIONS FROM PROPOSED NEW GAS PLANTS IN THE SOUTHEAST

The new gas facilities proposed by the southeast utilities Dominion, Duke, and Georgia Power could emit an average of **1 billion tons of CO₂*** throughout their lifetime, or **25 million tons of CO₂** per year.

That's about as much CO₂ emitted per year as...



6.2 coal plants
operating for
one year



5.4 million
cars driven for
one year



3.1 million
homes powered
for one year

*Calculated assuming a plant life of 40 years.

Environmental pollution by Vectors Point and car by
Serena from Noun Project (CC BY 3.0)



Google, Kairos Power ink 500-MW advanced nuclear reactor deal

The master development agreement has Kairos delivering the first small modular reactor by 2030 and developing, building and operating additional power plants through 2035.

Published Oct. 15, 2024

NATIONAL

Three Mile Island nuclear plant will reopen to power Microsoft data centers

SEPTEMBER 20, 2024 · 1:40 PM ET

ENERGYWIRE

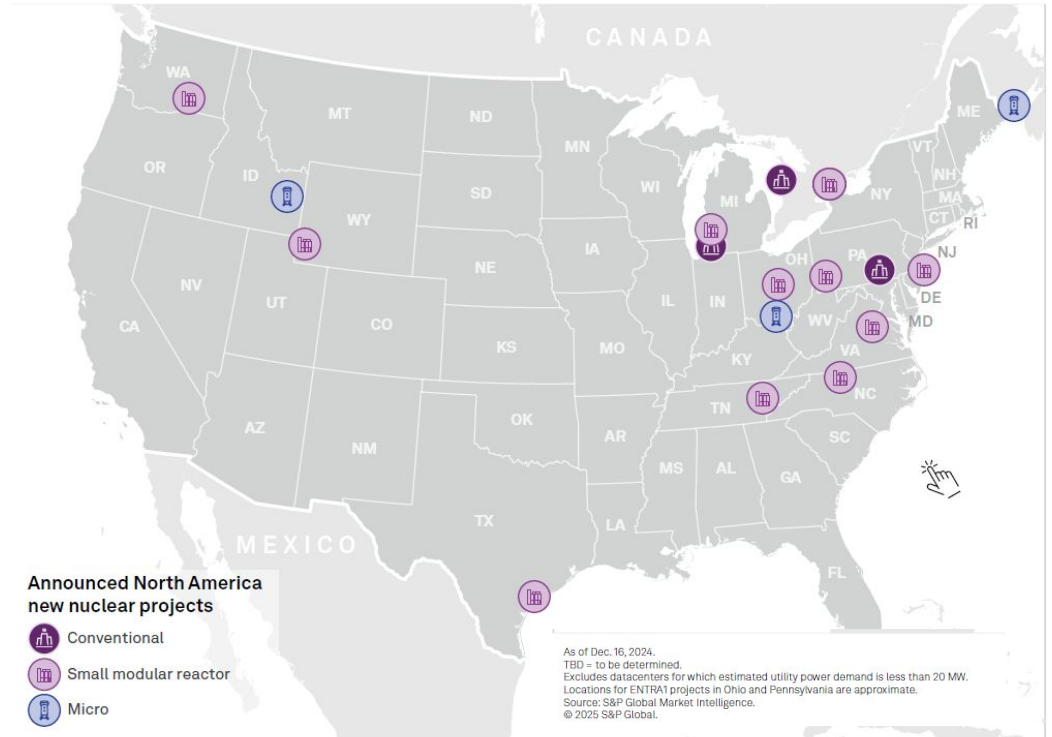
Talen Energy sues over FERC's rejection of nuclear-powered data center

By Jeffrey Tomich | 01/29/2025 06:51 AM EST

The lawsuit targets an order that blocked an Amazon data center from connecting to a Pennsylvania power plant.

Announced Nuclear Projects

- Google & 500 MW Kairos advanced nuclear reactor fleet by 2035
- Amazon plans to bring 600 MW of SMRs through X-energy in WA and VA



Behind the Meter Nuclear

- 93 GW in PJM, MISO, NYISO, ISO-NE
- If even half go BTM, could result in over 155 million tons CO2 annually
- Importance of additionality



PSEG nuclear plant in New Jersey