OFFICE OF LEGISLATIVE RESEARCH
Objective Research for Connecticut's Legislature

ResearchReport

Data Center Energy Impacts and State Responses

By: Mary Fitzpatrick, Principal Analyst
October 14, 2025 | 2025-R-0164

Issue

This report discusses the energy impacts of data centers and state efforts to mitigate those impacts. It does not discuss non-energy-related aspects such as their potential impact on state and local economic development and tax revenue.

Summary

While data centers are not new, advances and increased interest in artificial intelligence (AI) have led to increased data center deployment and energy use. The U.S. Department of Energy (DOE) estimated that data center annual energy use accounted for 4.4% of the nation's electricity consumption in 2023, or 176 terawatt-hours (TWh), up from 60 TWh in 2016. The department projects increased data center energy use after 2023, ranging from 6.7 to 12% of nationwide energy consumption by 2028.

In areas where data centers have located, this increased energy demand has led to rate impacts due to the increased need for generation and transmission. Other energy-related impacts include implications for carbon emissions, increased technology company participation in energy markets, and, for people living near data centers, possible power distortions.

New England has not experienced these effects to the same extent as other parts of the country, according to a 2024 white paper from the New England States Committee on Electricity (NESCOE). The paper also notes that data center issues are likely to become more salient due to increasingly high demand for new data centers.

States have responded to data center energy demand in various ways that may reflect (1) the extent to which data centers have already located in the state, (2) how states balance economic development goals with ratepayer impacts, and (3) the existing regulatory landscape in the state. In recent years, states have passed laws that, among other things:

1. encourage or make it easier to build more electric generation (power plants) (IN, MD, and SC);
2. make it more difficult to retire existing generation (IN);
3. require public utility commissions to create tariffs (separate rates) for customers that use large amounts of electricity (e.g., "large load customers") and set extra requirements for these customers (MD, MN, MO, and OR);
4. include green building standards or other energy-requirements as a condition of receiving a tax incentive (AZ, IL, IA, MI, MN, and WA);
5. make it easier for data centers to buy "off the grid" or "behind the meter" generation (NV, NH, OK, TX and UT);
6. require data centers to pay fees or use other revenue to support energy-related programs (MD and MN);
7. allow utilities to limit service in certain cases (NE, UT, and TX)
8. attach requirements to special contracts (rates negotiated for individual data centers) (WY); and
9. require a study or workgroup on these topics (CA, MT, NJ, ND, TX, UT, and WA).

Data Center Types and Trends

As described by the Congressional Research Service (CRS), a data center generally is a physical facility that houses and runs large computer systems. A data center typically contains multiple computer servers, data storage devices, and network equipment to store, manage, process, and transmit large amounts of data.

Data centers are not new. IBM, Amazon, and others refer to rooms used to store early computing equipment in the 1940s as early examples of data centers. As computers became more efficient and smaller, companies typically maintained private data centers on-site at their place of business, sometimes in network closets or server rooms. Advances in cloud computing in the 2000s and 2010s prompted a shift towards "colocation" or "managed" data centers, where third-party companies host hardware offsite for multiple customers. These data centers may be geographically distributed and interconnected, allowing multiple users to remotely access resources. Data centers

support various common online activities, including search engine queries, cloud storage, email, data processing, and media streaming.

In recent years, advancements in AI have increased demand for data centers and specifically those most equipped for AI tasks. Data centers that specialize in AI tasks may have different hardware (graphic processing units (GPUs) rather than central processing units (CPUs)).

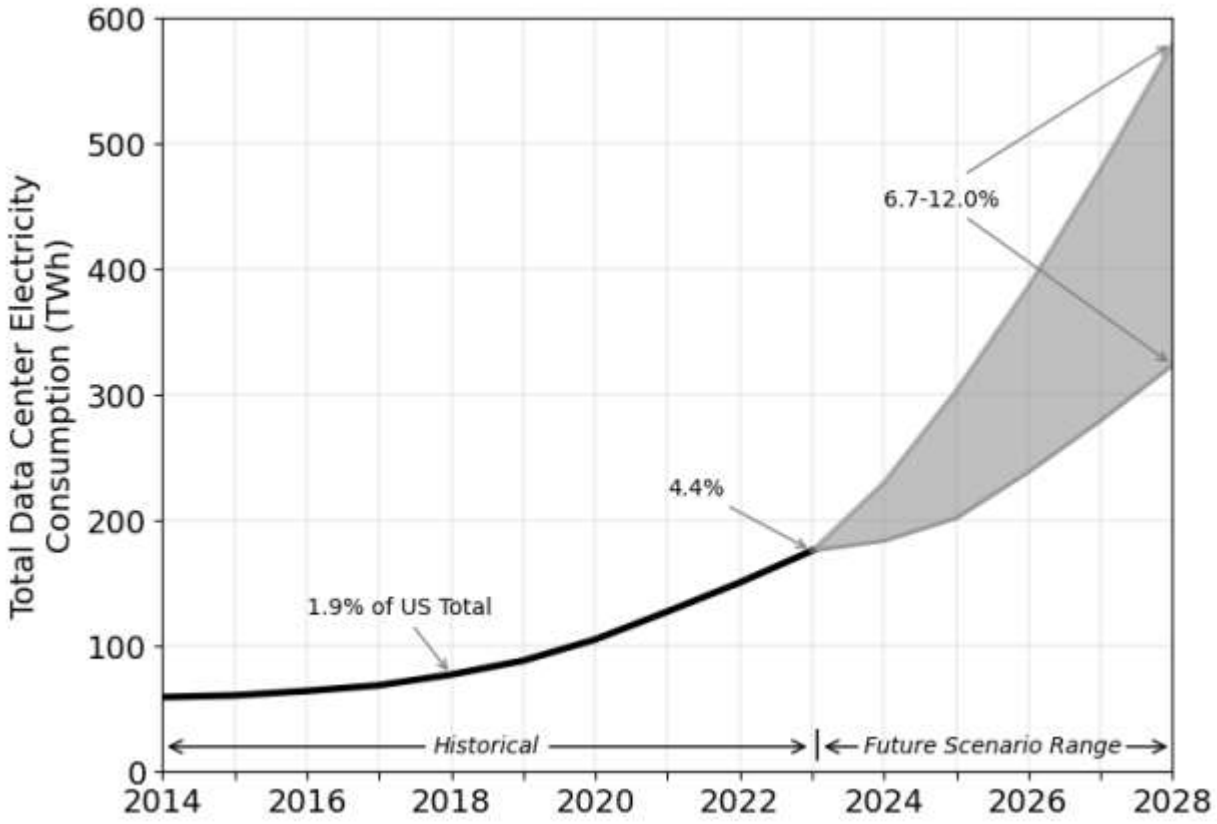
Increased investment in AI has prompted companies to build and operate more "hyperscale data centers," an industry term for data centers that contain at least 5,000 computer servers, occupy at least 10,000 square feet, and have electric power ratings over 100 megawatts (MW).

Energy Use Estimates

All data centers use energy to operate their equipment and keep it from overheating. Advancements in AI have increased data center energy demands in size and in kind, as the GPUs that AI tasks rely on use more energy than CPUs. In addition, AI loads may have less predictable usage patterns than traditional data center tasks, which can lead to more demanding cooling and energy requirements.

The federal Energy Act of 2020 required DOE to study data center energy consumption (P.L. 116-260). The study, published in 2024, estimated that data center annual energy use accounted for 4.4% of the nation's electricity consumption in 2023, or 176 TWh, up from 60 TWh in 2016 (see Figure 1 below). (Estimates exclude cryptocurrency activities.) The study projects increased data center energy use after 2023, ranging from 6.7 to 12% of nationwide energy consumption by 2028. The study notes that hyperscale data centers are experiencing rapid growth and that over half of them are owned by Amazon, Microsoft, and Google (p. 36).

Figure 1: Total U.S. Data Center Electricity Use (2014-2028)



Source: Lawrence Berkeley National Laboratory (2024)

The study also notes that data centers are not uniformly spread across the United States. Colocation and hyperscale data centers "strategically position themselves close to their clients and cloud services users to ensure high availability and low response times. Factors such as proximity to population centers, electricity cost, network infrastructures, and local utility prices influence their location choices" (p. 36).

Electricity consumption has correspondingly increased in states that have experienced rapid development of large data centers. According to the U.S. Energy Information Administration (EIA), growth in commercial energy demand between 2019 and 2023 is concentrated in a few states like Virginia, which has become a hub for data centers due to its access to telecommunications infrastructure, and Texas, where low electricity and land costs have attracted data centers and cryptocurrency mining operations. Other states experienced flat or declining commercial electricity consumption over this period. Thus, data center energy impacts (described below) are currently concentrated in certain areas of the country where data centers have located.

Energy Impacts

Rate Increases

Several reports indicate that electric rates have risen and will continue to rise in areas where data centers are locating. A Bloomberg analysis estimates that, in areas located near significant data center activity, electricity currently costs up to 267% more for a single month than it did five years ago. A report from the market monitor for PJM (a regional transmission organization and grid operator for parts of 13 states and Washington D.C.) showed that data center load increased capacity revenues by 82%. (Capacity markets allow power generators to receive payments, which are ultimately paid by ratepayers, for guaranteeing to provide power over a future period.) A report from Virginia's Joint Legislative Audit and Review Commission (JLARC) estimated that certain residential customers in Virginia could see electricity cost increases between $14 and $37 per month by 2040 due to data centers' increased energy demand. A study from Carnegie Mellon University and North Carolina State University projected that data center and cryptocurrency mining growth through 2030 could increase electricity bills 8% nationally and by as much as 25% in some regional markets.

Data center energy use may result in higher electricity prices for a few different reasons. Like other markets, wholesale electric markets respond to supply and demand. Generally, when demand for electricity surges due to large users like data centers and supply stays constant, price increases. On the other side, when data centers seek to co-locate with existing generation through bilateral contracts, that power is no longer bought or sold in wholesale markets, reducing supply and similarly pushing prices upwards. In vertically integrated states (where utilities own generation and include it in their rates), building more power plants to meet higher demand will also likely lead to higher rates.

Additionally, transmission upgrades needed to connect new generation and larger load customers to the electric grid are typically paid for by all ratepayers. The total costs are determined at the federal level, and state public utility commissions may then allocate those costs among ratepayer classes.

The JLARC report also noted that the data center industry creates financial risk to electric utilities and their customers "because of the sheer size of the industry's energy demand. One risk is that utilities will build more generation and transmission infrastructure than is needed if forecast demand does not materialize, or several large data centers close. This could strand utilities with infrastructure costs that would have to be recouped from their existing customer base."

While some states and public utility commissions have negotiated agreements with technology companies to pay for some these costs, the details are not always public.

Other Energy-Related Impacts

The increased energy demand caused by data centers may have other energy-related impacts, such as implications for emission reduction goals and climate impacts. In 2024, Reuters reported that utilities, regulators, and researchers in the United States and elsewhere believe that "the surprising growth in power demand driven by the rise of artificial intelligence and cloud computing is being met in the near-term by fossil fuels like natural gas, and even coal, because the pace of clean-energy deployments is moving too slowly to keep up." On the other hand, to the extent technology companies opt to rely on zero emission resources, their investments can support projects (e.g., a 150 MW geothermal project in New Mexico to supply a data center for Meta). However, company emissions claims are disputed. In September 2025, attorneys general from 16 states requested information from technology companies, alleging that their renewable energy claims are misleading.

Increased AI investment has also led to increased technology company involvement in energy markets generally. In August 2025, the New York Times reported that technology companies (Amazon, Google, Apple, and Microsoft) have invested in power generation to power their data centers and sell what they do not use. According to the article, the companies' subsidiaries have sold $2.7 billion on the wholesale electricity markets in the past 10 years.

For people living near data centers, power distortion may also be an issue. A Bloomberg analysis compared power readings with data center locations and found that over three-quarters of highly distorted power readings in the country are within 50 miles of significant data center activity. This distortion can damage home appliances and increase risk of fire, among other things.

Impacts in Connecticut and New England

New England has not experienced these effects to the same extent as other parts of the country. A 2024 NESCOE white paper states that to date, New England has remained mostly out of the fray when it comes to the issue of data centers, but it also notes that data center issues are likely to become more salient due to increasingly high demand for new data centers. It continues: "As the potential for data center development eventually spreads further into New England, the New England states, and the region as a whole, will have to weigh the costs and benefits of data center development and grapple with issues such as whether or not to offer data center tax incentives, how to deal with data center sustainability issues, how regional system planning will account for data center demand, and how the region will allocate costs for any necessary transmission

infrastructure upgrades." The paper also describes the debate around one company's proposal to build a hyperscale data center next to Millstone Power Station in Waterford (pp. 26 & 27).

State Responses

States have responded in various ways to address data center energy use. Among other things, states have enacted laws that (1) require public utility commissions to create separate tariffs for customers with large loads, (2) encourage or enable co-location or other types of "off the grid" service apart from utility services, (3) order investigations or work groups to study the topic, (4) encourage new generation buildout, (4) include additional requirements from large load customers as a condition of service, and (5) attach green building requirement standards to tax incentives. These laws are described below. Incentives for data centers are only described to the extent they include energy-related requirements.

A number of states are currently considering legislation on this topic (e.g., Delaware (SB 205); New York (S6394A); North Carolina (HB 1002); Pennsylvania (several bills)). And, additional work on this topic has occurred at public utility commissions (e.g., Public Utilities Commission of Ohio's order in Case 24-508-EL-ATA; Pennsylvania Public Utility Commission Docket No. M-2025-3054271; Georgia Public Service Commission Docket 55378).

Arizona

The state's tax incentives for data centers generally last 10 years, but for projects that qualify as a "sustainable redevelopment project," the tax incentive lasts 20 years. To qualify as a sustainable redevelopment project, newly constructed data centers must have at least a $200 million investment, attain certification in a green building standard, and not have been previously certified. For data centers that occupy existing facilities, to qualify as a sustainable redevelopment project, the center must either (1) occupy an existing facility that was at least half vacant for half the previous year or (2) achieve a green building standard (Ariz. Rev. Stat. § 41-1519).

Arkansas

The Arkansas Data Centers Act of 2023 requires digital asset mining businesses operating in the state to, among other things, operate in a way that causes no stress on an electric public utility's generation capabilities or transmission network. A "digital asset mining business" is a group of computers working at a single site that consumes more than one MW annually to generate digital assets (e.g., cryptocurrency) (Ark. Code § 14-1-601 et seq.) According to local reporting on the legislation, at least one of the state's electric utilities has offered discounted rates to these businesses for allowing their electricity to be shut off "to prioritize other critical services."

California

This year, the California state legislature passed SB 57, which authorizes the state's public utility commission to assess the extent to which electric costs associated with new loads from data centers result in cost shifts to other electric customers. The assessment may (1) analyze increased costs for utility procurement to meet these increased loads and associated transmission and distribution installation costs and (2) identify opportunities to prevent or mitigate any substantial cost shifts. The law requires the commission to submit any assessment it completes to the legislature and post it on its website by January 1, 2027. Reporting in the Los Angeles Times provides additional information on this legislation.

Colorado

State law requires large building owners to report certain data on energy performance and greenhouse gas pollution to the Colorado Energy Office (CEO) and meet certain performance standards. Utilities must provide information to these building owners on their energy use. The law requires CEO to develop guidance on individualized target and compliance guidelines for building owners with increased energy use caused by expanding data center activities. The law allows the building owner's individualized energy efficiency target to reflect its data center's increased electricity consumption if all cost-effective energy efficiency and electrification measures have been performed. Targets and timelines may be adjusted multiple times based on the building's evolving energy consumption growth (Colo. Rev. Stat. § 25-7-142).

Georgia

In 2024, the state legislature passed a bill that would have suspended Georgia's data center tax incentives for two years (HB 1192). Local reporting described the bill as an effort to "allow the state to assess the impact these massive energy consumers have on the grid." The governor vetoed the bill, arguing that it would undermine investment and noting that the state's lawmakers had only recently voted to extend the sales tax exemption.

Illinois

By law, to be eligible for various tax exemptions in Illinois, data centers must certify to the Department of Commerce and Economic Opportunity (DCEO) that they (1) are carbon neutral or (2) have attained certification under a green building standard. They must make this certification within two years after being placed in service. The law prohibits DCEO from issuing any new exemptions after July 1, 2029 (20 Ill. Comp. Stat. § 605/605-1025). According to local reporting, the legislature will consider energy legislation during its veto session (October 14 to October 30) that may address data center energy use. The article references a draft version.

Indiana

Electric utilities in Indiana are vertically integrated, meaning they own or otherwise provide generation to meet their loads and receive regulated rates for that generation. The legislature recently passed Public Law 217 (2025), which, among other things, creates an expedited process for the state's public utility commission to approve utility requests to acquire generation resources to meet large load growth, including a specific process for projects that serve a "large load customer." As part of the process, the act requires large load customers to commit to various financial assurances, including reimbursement of certain costs associated with the project. The act also seeks to increase generation resources by slowing retirements. It creates new requirements for utilities seeking to retire or refuel generation resources. According to local reporting, the refueling and retirement provisions are meant to discourage utilities planning to close coal-fired plants or convert them to natural gas.

Separately, the public utility commission has approved a settlement between data centers and a utility there that sets contract, payment, and other requirements that may apply to other large electric load customers, according to related reporting.

Iowa

In order to be eligible for certain tax incentives, data centers in Iowa must comply with sustainable design and construction standards (Iowa Code §§ 423.3, 423.4 & 103A.8B). In marketing to data center developers, Iowa's Economic Development and Finance Authority notes that the state is first in the nation in wind energy as a percentage of total power output and offers a tool to compare various metrics and policies in Iowa to those of other states. CNBC reports that a previously decommissioned nuclear plant in Iowa plans to restart in 2028 and quotes company leadership stating that, if successful, the project will "create a hot bed of data center activity around that facility."

Kansas

Kansas recently enacted a sales tax exemption for data centers (SB 98 (2025); Kan. Stat. Ann. §§ 74-50,332 & 79-3606(xxxx)). The state's Department of Revenue describes the new law in a recent notice. To qualify, data centers must, among other things, commit to purchasing energy for 10 years from the electric utility where the data center is located (§ 2(b)(4)). The new law prohibits utilities from offering commercial and industrial customer discount rates to data centers that qualify for the sales tax exemption (§ 5).

The new law also requires the commerce secretary to get approval from the Kansas Fusion Center Oversight Board before awarding any financial assistance or benefit (including the sales tax

exemption) to a data center project. The Kansas Intelligence Fusion Center must evaluate the project's equipment and software for potential security threats and advise the board of any risks. The board may approve a project, recommend or require changes to it, or deny a project if it determines it would pose a threat to critical infrastructure (§ 4).

The state also recently amended its laws that allow customers to export energy to the electric grid from onsite generators to (1) allow utilities to exclude customers that receive service at higher voltages from participating and (2) exclude data center load from calculations used to determine caps on participation (HB 2149 (2025); Kan. Stat. Ann. § 66-1,184).

Maryland

A new law requires each electric utility in Maryland to submit a specific rate schedule by September 1, 2026, for large load customers, which are those with an aggregate monthly demand of at least 100 MW and a projected load factor of over 80% (HB 1035 (2025)). The law states the legislature's intent that residential retail electric customers should not bear the financial risks associated with large load customers interconnecting to the electric system serving the state. The law requires the public utility commission to consider various factors when deciding whether to approve the rate schedule, including whether it (1) requires a large load customer to cover just and reasonable costs associated with electric transmission and distribution buildout, (2) protects residential retail electric customers from certain financial risks, and (3) sufficiently ensures that costs allocated under the rate schedule do not result in other customers unreasonably subsidizing large load customers' costs. The law requires large load customers to take certain actions before signing a contract for service under the rate schedule.

The same legislation also contains provisions that seek to increase the amount of power generated in the state. It directs the state's public utility commission to issue solicitations for dispatchable energy generation and large capacity energy resources. Local media coverage describes the governor's belief that the state must generate more energy in the state to reduce consumer bills as demand increases in their 13-state electric grid (PJM), chiefly because of AI and data centers.

State law also directs a portion of income tax revenue generated from data centers to the Strategic Energy Investment Fund (Md. Code. Tax - General § 2-614.1). By law, the fund is administered by the Maryland Energy Administration and has numerous energy-related purposes, including programs on energy efficiency, renewable energy, climate change, low-income customer rate relief, public education and outreach, and electric vehicle charging, among other things (Md. Code. State Gov't § 9-20B-05).

Michigan

Among other things, to be eligible for tax incentives in Michigan, a data center must (1) get at least one green building standard and (2) procure clean energy equivalent to 90% of its forecasted annual electricity use. Additionally, the law prohibits these facilities from receiving electric service under specific rate structures, including any that cause residential customers to subsidize costs incurred to provide electric service to the data center (Mich. Comp. Laws §§ 205.94cc & 205.54ee). Separately, the state's public utility commission is considering at least one application for a tariff for large load customers (Case U-21859).

Minnesota

A new law passed this year contains several provisions addressing data centers (HF 16 (2025)). Local reporting provides more information on this legislation (MPRNews, Minnesota Reformer). Among other things, the law authorizes the state's public utility commission to approve a tariff or agreement between a utility and a "very large customer." The commission must consider whether the tariff or agreement achieves the following outcomes:

1. all costs attributable to the utility's very large customers are assigned to them;
2. electricity provided by the utility to a very large customer achieves the state's renewable energy objectives (similar to a renewable portfolio standard, Minn. Stat. § 216B.1691);
3. the tariff or agreement contains protections to ensure that other customers are not at risk of paying stranded costs associated with the utility serving the very large customer; and
4. any other outcome the commission deems important to ensure the tariff or agreement is in the public interest.

The new law also establishes a "qualified large-scale data center fee" that ranges from $2 million to $5 million per year based on a data center's peak demand. These funds are deposited into the state's energy and conservation account to be spent on low-income programs and certain solicitation processes.

The legislation also extends a sales tax exemption for data centers and for large-scale data centers, adds a requirement that they be certified under a sustainable design or green building standard within three years of being placed in service.

Mississippi

The state recently passed legislation described as an incentive package for Amazon Web Services (AWS) (SB 2001 (2024)). Among other things, the legislation contains provisions that (1) allow a

utility to enter into a "large customer supply and service agreement" with a customer without approval from the public utility commission; (2) prohibit the commission from making any changes to the agreement, including its pricing and charging for electric services; and (3) make any such agreement a trade secret. The legislation requires the agreement to be designed to provide other utility customers with an economic benefit resulting from the added electrical service needs.

Missouri

A new law requires utilities serving more than 250,000 customers to submit schedules in their tariffs for customers who are reasonably projected to have annual peak demand above 100 MW. Under this legislation, the schedule "should reasonably ensure such customers' rates will reflect the customers' representative share of the costs incurred…and prevent other customer classes' rates from reflecting any unjust or unreasonable costs arising from service to such customers." The law establishes a similar requirement for smaller utilities (SB 4 (2025)). Local reporting discusses debate around an initial proposal under the law's provisions.

Montana

In Montana, if a data center owns a generator and sells power produced by that generator to a public utility, state law caps the price at the cost of production and gives the utility the right to annually audit the generator's operating cost at the utility's expense (Mont. Code Ann. § 69-3-2X1).

State law also prohibits the public utility commission from establishing a rate classification for digital asset mining that creates unduly discriminatory rates (Mont. Code Ann. § 69-3-332).

As described in local reporting, an interim committee is studying related issues including energy transmission (Senate Joint Resolution 12), interstate power grid development (Senate Joint Resolution 21), and AI (House Joint Resolution 4), with reports due in September 2026.

Nebraska

This year, Nebraska passed a law that authorizes public power suppliers (e.g., municipal electric utilities) to impose requirements on cryptocurrency mining operations for the cost of infrastructure upgrades. This may include (1) requiring direct payment or a letter of credit for the cost or (2) imposition of terms and conditions on their operation. The law requires anyone intending to install a cryptocurrency mining operation to notify the local public power supplier. It requires public power suppliers to conduct load studies before they impose requirements and publish related information on their website. It also requires cryptocurrency mining operations to allow a public power supplier to interrupt service according to their established rate schedules and policies (LB526 (2025)).

Nevada

State law specifies that equipment used by a data center to provide electricity at agreed-upon prices to people on the data center's premises to store, process, or distribute data is not included in the definition of "utility" (Nev. Rev. Stat. § 704.021). Separately, Nevada's public utility commission recently approved a tariff that allows Google's data centers to purchase renewable energy to power their facilities (see Docket 24-06014).

New Hampshire

A new law in New Hampshire defines "off-grid electricity provider," specifies that these providers are not utilities, and exempts them from utility regulation. Under the law, an off-grid electricity provider is any entity that (1) generates, transmits, distributes, or sells electricity at retail to consumers; (2) is not connected to any existing transmission or distribution system for primary or backup supply; (3) operates independently of existing utilities and other regulated entities, and (4) is not located within or does not cross any federal, state, or municipal roadway, right-of-way, or state boundary (HB 672-FN (2025)). Local reporting notes that some advocates believe that connecting to the grid is a difficult and costly process and that this law creates a new pathway to circumvent those challenges. Others noted that it could protect consumers from energy price spikes, but only if the provision is widely used. Because off-grid providers are not required to meet state renewable energy standards, wide uptake of this provision may have negative environmental impacts.

New Jersey

A new law requires the state's public utility commission to study the effect of data center electricity use on electricity costs in the state. Among other things, the study must estimate the portion of residential electricity rates that are attributable to data center energy demand (currently and in the future) and assess various policy alternatives that could mitigate or avoid rate increases (Bill A466 (2025)).

North Dakota

A recent law in North Dakota requires legislative management to study the impact of large energy consumers, including data centers, on the state's electric grid, regulatory structure, and economic development. Among other things, the study must evaluate electrical grid reliability and infrastructure requirements, regulatory consistency throughout the state, economic impacts affecting the energy industry, market dynamics, cost and impacts of public utilities, and regulatory and exemption criteria related to various factors (HB 1569 (2025)).

Oklahoma

This year, the state passed a law that allows private firms to build and manage their power generation on their own premises without being regulated as utilities. It appears to also exempt from utility regulation wholesale generators and entities indirectly providing electric service by contracting with a public utility, rural electric cooperative, or municipality to furnish electricity to a specific customer. The law specifies that utilities are not obliged to serve customers getting electric service from these sources. It also requires these projects to use a natural gas component (SB 480 (2025)). Local reporting provides additional information.

Oregon

Legislation passed this year in Oregon requires the state's public utility commission to create a tariff for "large energy use facilities," which are those that use or are able to use at least 20 MW and are engaged in computing infrastructure, data processing, web hosting, and related services. Among other things, the tariff must (1) allocate costs of serving large energy use facilities in a way that is equal or proportional to the cost of serving this class of customers or directly assign the costs of serving this customer class and (2) mitigate the risk of other customer classes paying unwarranted costs. The law also sets requirements for contracts between electric companies and large energy use facilities, including that they specify a duration of at least 10 years and meet any other conditions the commission may require in the public interest. Contracts must require the facility to pay a minimum amount (determined by the commission) based on its projected electricity use.

The new law also requires the commission to report every two years until 2035 to legislative committees. The reports must review trends in load requirements and other implications from large energy use facilities and other retail electricity consumers that use large amounts of electricity (HB 3546 (2025)). Local reporting provides additional information.

South Carolina

South Carolina's Energy Security Act does not reference data centers specifically, but some of its provisions are described by proponents as efforts to lessen the impact of building new power plants and reduce "sticker shock" by spreading costs out more evenly through a streamlined regulatory proceeding resulting in more frequent rate increases. It also allows Santee Cooper (a public power utility in the state) to enter into an agreement with another company to build a gas power plant (Act No. 41 (2025)). Local reporting discusses debate on the law's potential impacts. Separately, Santee Cooper approved a new rate for large customers in April 2025.

Texas

A new law in Texas addresses data center load growth by, among other things, requiring utilities to develop a protocol to allow a "transmission-voltage" customer's load to be curtailed during a firm load shed (SB 6 (2025)). It requires these customers to install shutoff equipment before the customer is connected to the electric grid. A load shed event occurs when a grid operator temporarily reduces power demand through a controlled customer outage to prevent larger outages when energy supply is struggling to meet demand. In other words, this provision allows utilities to shut off a large load customer's power to maintain reliability for other customers (§ 4).

The law also requires the Electric Reliability Council of Texas (ERCOT, the grid operator) to competitively procure demand reductions from large load customers to be deployed during an anticipated emergency condition (§ 4). (Due in part to the geography of the electric grid in Texas, ERCOT is not subject to the same type of federal regulation as other regional grid operators. As a result, the state's legislature and public utility commission have more direct oversight over ERCOT.) This provision allows large load customers to be compensated for voluntarily reducing their electricity use.

The law also requires the public utility commission to set standards for interconnecting large load customers. Among other things, the standards include various disclosure requirements and require the large load customers to pay at least $100,000 for transmission studies (§ 2).

The new law addresses co-locating generation and large load customers, including notice requirements and provisions allowing utilities to object to net metering arrangements for this generation. The law requires ERCOT to study system impacts of proposed net metering arrangements and allows the public utility commission to approve, deny, or impose conditions on these net metering arrangements. These conditions may include, among other things, requiring the customer served by behind-the-meter generation to reduce load during certain events or requiring other customers to be held harmless for stranded or underutilized transmission assets resulting from the project (§ 4).

The law also requires the public utility commission to study whether existing methodology used to charge wholesale transmission costs to distribution providers appropriately assigns costs for transmission investment (§ 6). Local reporting provides more information on the law.

Utah

A new law in Utah establishes alternative processes for providing electric service to customers with large electric loads. Generally, utilities are required to serve all customers in their service territory.

Under this law, large load customers must make a large-scale service request to utilities for service. If the utility cannot provide the requested service within the time-frame specified in the request, the utility is not required to provide electric service and the large load customer can make agreements with other generation providers, either a "large-scale generation provider" that registers with the state's public utility commission or a "closed private generation system" which operates independently from a utility's transmission system.

The law requires periodic reviews of the program and reports to the legislature. It also requires the state's public utility commission to study the feasibility of a large load flexible tariff (SB 132 (2025)).

Virginia

Virginia has enacted at least two laws addressing data center energy use. One law creates a process that allow the state's nonprofit electric co-operatives to create an affiliate to serve large electricity users to reduce impacts on other ratepayers (HB 2644 (2025)).

Another law requires the state's public utility commission to determine whether existing classifications are reasonable when considering utility rate increase requests (2025 Uncodified Acts, Chapter 395). This article discusses these laws and other bills that did not pass.

Washington

Tax incentives in Washington require data centers to attain certification in a sustainable design or green building standard within three years of being placed in service (Wash. Rev. Code § 82.08.986).

The governor has also established a data center workgroup to recommend policies that balance industry growth, tax revenue needs, energy constraints, and sustainability. Its findings are due December 1, 2025 (Executive Order 25-05).

Wyoming

State law allows utilities to enter into service agreements with customers with projected electric usage over 5 megawatts, subject to approval by the state's public utility commission (Wy. Stat. § 37-3-116). According to local reporting, this provision is intended to insulate regular residential and business ratepayers from the risks that big-load customers might pose.

Resources

Associated Press, "US Electric Grids Under Pressure from Energy-Hungry Data Centers are Changing Strategy," September 13, 2025.

Bloomberg, "AI Data Centers are Sending Power Bills Soaring," September 29, 2025.

The Conversation, "AI Supercharges Data Center Energy Use – Straining the Grid and Slowing Sustainability Efforts," July 11, 2024.

CRS, "Data Centers and Their Energy Consumption: Frequently Asked Questions," August 26, 2025.

Delaware Public Media, "New Bill Would Impose More Regulations on Data Centers Looking to Set Up Shop in Delaware," September 29, 2025.

E&E News by Politico, "Rulemakers Play Catch-up as Data Centers Multiply," July 18, 2025.

EIA, "Commercial Electricity Demand Grew Fastest in States with Rapid Computing Facility Growth," June 28, 2024.

EIA, "Electricity Use for Commercial Computing Could Surpass Space Cooling, Ventilation," June 25, 2025.

Goldman Sachs, "AI to Drive 165% Increase in Data Center Power Demand by 2030," February 4, 2025.

Johns Hopkins Ralph O'Connor Sustainable Energy Institute, "A State Playbook for Managing Data Center-Driven Load Growth," June 2025.

Joint Legislative Audit and Review Commission (Virginia), "Data Centers in Virginia," December 9, 2024.

Lawrence Berkeley National Laboratory, "2024 United States Data Center Energy Usage Report," December 20, 2024.

Monitoring Analytics, "Analysis of the 2026/2027 RPM Base Residual Auction Part A," October 1, 2025.

NESCOE, "Data Centers and the Power System: A Primer," June 25, 2024.

The New York Times, "Big Tech's AI Data Centers are Driving up Electricity Bills for Everyone," August 14, 2025.

North Dakota Legislative Council, "State-by-State Data Center Regulation," January 2025.

PBS Newshour, "How AI Infrastructure is Driving a Sharp Rise in Electricity Bills," September 5, 2025.

RTO Insider, "Limited Demand for Large-Scale Data Centers in New England," June 9, 2025.

S&P Global, "Datacenter Companies Continue Renewable Buying Spree, Surpassing 40 GW in US," March 28, 2023.

Smithsonian Magazine, "AI is on the Rise, and so is the Environmental Impact of the Data Centers that Drive It," September 29, 2025.

Stateline, "Lawmakers Fear AI Data Centers will Drive Up Residents' Power Bills," April 10, 2025.

MF:co