STATE POLICY TOOLKITS FOR DATA CENTER REGULATION

Electricity Affordability and Reliability

CLIMATE X CHANGE

ELECTRICITY AFFORDABILITY AND RELIABILITY

About this Toolkit

As data centers spread across the country, they are imposing striking costs on utilities, ratepayers, water authorities, and communities. State governments are looking for new tools to contain the impacts of massive data center spread, including on public health and the climate. This toolkit draws from many examples in 2025 state legislative sessions, during which the Climate XChange team reviewed over 140 bills addressing data centers across 34 states, as well as emerging examples from 2026.

This resource represents one of five installments in Climate XChange's State Policy Toolkits for Data Center Regulation, which will be released throughout 2026. This document tackles the tools that states can use to address and mitigate the impacts that data centers have on electricity affordability and reliability. It should be considered alongside other toolkits describing state policies addressing data center impacts on water resources, greenhouse gas emissions, tax and employment justice, and transparency concerns. Look out for the complete Toolkit Series at Climate XChange's Resources for Regulating Data Centers Page.

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With the rapid buildout of data centers across the country, states must have strong policies to prevent their negative impacts on the environment, climate, energy systems, and local communities. Climate XChange's policy toolkits, educational programming, and technical assistance are solely focused on addressing these impacts. Our organization is not involved in advocacy, nor does it have the expertise to assess the broader societal and economic effects of widespread artificial intelligence adoption in the United States.

STATE POLICY TOOLKITS FOR DATA CENTER REGULATION

Contents

ELECTRICITY AFFORDABILITY AND RELIABILITY

Introduction

BACKGROUND

Data centers are the leading driver of electric load growth in the United States, and they have the potential to impact the affordability and reliability of the electric grid in several key ways. Across the country, data centers consumed around 25 gigawatts (GW) of electric power in 2024, equivalent to about four percent of U.S. electricity consumption. Interconnection queues in some states have grown to extraordinary scales. Though not all proposed data center projects will actually be deployed, estimates currently indicate that their power demand nationally could hit 106 GW by 2035—though such long-term projections are being revisited constantly as the market shifts. The massive growth rate in data center power demand is increasingly being driven by city-scale projects. Nearly a quarter of recently announced projects exceed 500 megawatts (MW), or enough electricity to power a medium-sized city.

The impact of this scale of load growth on electricity prices and reliability could be dramatic. As electricity demand grows, grid operators will increasingly call on more expensive generation sources, as well as power plants that otherwise may have been decommissioned, to help meet peak demand. Utilities will also have to invest in upgrades to transmission and distribution systems. The cost of these upgrades would traditionally be shared among all ratepayers, forcing the public to pay for infrastructure designed to supply a handful of corporations. In practice, wholesale electricity prices are already reportedly spiking in many areas near data centers. Regional reports share a similar picture: in the PJM regional market, data centers are credited as the primary reason for spikes in the cost for electric capacity, and already seem to have passed on $4 billion in transmission costs to ratepayers. These added costs are already impacting energy affordability.

The scale of this cost shifting onto ratepayers will be heightened if these data centers do not remain reliable energy consumers over the decades to come. Infrastructure upgrades to the transmission and distribution system may have 30-year useful lives, while data centers are often built around servers with a useful life in the range of two to five years. As hyperscale data centers potentially exhaust the supply of useful training data, and many AI applications fail to make a profit, there is the risk that the industry may become overbuilt in the years ahead. If so, excess energy capacity or grid upgrades may become stranded assets, with their costs fully passed on to ratepayers if data centers themselves cease to pay the electric bill, absent sufficient guardrails in regulation or legislation.

Introduction

Finally, data center demand threatens to exacerbate grid reliability issues, particularly in states that already face reliability concerns. Energy supply shortfalls associated with data centers **have been predicted** for several parts of the country. A sudden demand surge or drop from too many geographically clustered data centers **could overwhelm the grid**, particularly if they are not controlled or closely overseen by grid operators.

Grids that are already under capacity constraints could see reliability issues during peak seasons, as **NERC is currently predicting** for several regions during winter peaks. Data centers also pose reliability hazards as they introduce a massive amount of load that may react identically to small changes in grid conditions: for example, a small electrical malfunction may trigger a series of data centers to switch to backup power all at once, which would **cause a sudden imbalance in the flow of electricity, with rising voltage** requiring grid operators to take action, lest a widespread outage be triggered. Against the backdrop of an already aging power grid and increasing climate-driven natural disasters, data centers may add significant grid reliability challenges.

The risk posed by data centers to the electric grid is just one of the adverse impacts these facilities present, but it is also the risk attracting the widest amount of political concern across the country. State policymakers, in trying to safeguard communities' access to affordable and reliable power, have a complementary set of tools that they are uniquely positioned to deploy. This brief will tackle how state policymakers can respond, both by regulating the data centers on the grid and in the queue now, and shaping what the future queue may look like.

WHY STATES MUST ACT: THE JURISDICTIONAL CASE

While some data center regulation can happen at the local level, state governments have primary authority over the retail electric system. **About three quarters** of Americans get their electricity delivered by investor-owned utilities, which are regulated by state PUCs. Actors across state governments have a part to play in leveraging that authority.

State Public Utility Commissions (PUCs) set the terms by which utility companies will allow most data centers to connect to the grid, and they determine rates and may set operational requirements linked to grid reliability.

State executive branches can issue orders requiring the PUC to undertake these proceedings, and coordinate with other state agencies to encourage proactive planning for data center development.

State legislatures can also compel PUCs to undertake proceedings to regulate data centers, and may stipulate many of the terms by which they do so directly in statute.

Introduction

There is an exception to this authority that varies state by state. Approximately one quarter of Americans either receive their electricity from a municipally owned utility (munis), or in many rural parts of the country, a cooperatively owned utility (coops). Municipal and cooperative utilities are often exempted from PUC regulation or have limited regulation, meaning policymakers will have to assess the terms by which munis and coops are regulated in their state to understand what tools are available to them.

While states should remain the primary jurisdiction to address these issues, there is increasing interest at the federal level to pass legislation that would establish a national baseline of consumer, climate, and community protections. On the flipside, there is some risk that the federal government will try to preempt certain authorities in the future. In 2025, the Department of Energy indicated that it may seek to preempt state authority to regulate the interconnection process for large loads. The Federal Energy Regulatory Commission (FERC) is expected to make a final ruling on this subject by April 30, 2026. A ruling preempting state authority over interconnecting data centers would represent a radical shift in how the Federal Power Act has historically been interpreted and would likely be legally challenged. States would have a strong interest in continuing to regulate the safety, reliability, and affordability of their own electric grids.

THE VALUE OF A HOLISTIC APPROACH

In thinking about data center regulation across every issue area, states do not have to be reactive in responding to data center industry demands and trends. States that proactively consider what kind of data center development they want, where they want it, and how they want those facilities to operate will invite a more coordinated market response that matches their state's goals, from energy affordability to emissions impacts. Additionally, with data center operators largely prioritizing speed to market over other costs or incentives, states that can offer an expedited permitting and interconnection pathway for projects can demand significant collaboration from data center developers without losing their business.

Under a holistic approach, states might coordinate with utilities, communities, and projects to pursue win-win opportunities. An illustrative order of operations might include:

Incorporating data centers into long-term planning processes in order to proactively identify the most-desirable data center sites, such as near decommissioned power plants or already planned renewable development projects, where access to renewable energy or grid architecture is already available.

Introduction

Proactively pursuing local government and community engagement, to foreground local concerns, or identify opportunities for data center infrastructure to serve local goals, such as by supporting a microgrid that can power critical community infrastructure, or deploying waste heat into a potential thermal energy network.

Stipulating what kinds of operational flexibility or grid services a data center must provide, like helping balance the grid with on-site batteries.

Studying the real cost of serving data centers under those conditions, so that grid costs are actually collected from the projects that cause them. States should partner with local communities to spend that revenue (including rates, taxes, and other special fees) on local energy investments, such as heat pumps and weatherization, via community benefits agreements.

Offering expedited permitting or pre-permitting to projects that meet all these criteria, ensuring that the state can ask for ambitious collaboration from projects while serving the companies developing data centers what they prioritize most: speed to market.

The benefits of regulating data centers holistically go well beyond the issues of electricity reliability and affordability covered in this brief, and this theme will return in other modules of this series.

PRE-PERMITTING V. EXPEDITED PERMITTING

Expedited permitting can be effectuated in different ways. An unhelpful approach might simply require data centers to receive waivers from certain types of environmental analysis or community engagement, or strict time limits that would limit the scope of those processes. This approach can have huge costs to local communities. A less dramatic approach might involve consolidating interagency reviews.

Another path is possible: by proactively selecting what sites local communities would like to nominate for data center development, the state 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. The projects themselves may have greater clarity into their permitting path, and the scope of the permitting process may focus more on the nature of the project, rather than the site.

Analogous processes have taken place around renewables development on brownfields. For example, where 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. In the data center context, this might be specifically valuable where the state can identify sites with renewable energy or interconnection capacity available, such as near decommissioned fossil fuel plants. While states have begun offering proposals on this theme (such as Maryland's HB 940 (2026)), a full site selection and pre-permitting regime would be innovative.

THE TOOLS

Regulating Data Centers to Ensure Energy Affordability

ADDRESSING DATA CENTER AFFORDABILITY IMPACTS THROUGH LARGE LOAD TARIFFS

States have different tools at their disposal to help tackle affordability concerns arising from data centers. Most of these tools can be organized under a **Large Load Tariff proceeding***: a PUC-led inquiry that will assess what costs to the electric system are attributable to data center demand, and design an electric tariff to recover those costs from data centers over the long-term. According to the* Database of Large Load Tariffs*, 46 new large load tariffs were introduced in 2025 alone, out of the 65 total tariffs that exist across 34 states in the country.*

The map of state-level stakeholders who can advance this tool is broad. As noted above, these proceedings can be instigated by the PUC on its own motion, brought about by a utility out of necessity, or compelled by a piece of legislation or Executive Order.

Large load tariffs often replace one-off contracts signed between utilities and individual data centers. While these one-off contracts are usually intended to reflect cost-causation principles, they often do not. State regulators may be very cursory in their review of these agreements, or even explicitly allow ratepayers to subsidize data center development under certain conditions. For instance, **Kansas allows** regulators to approve special rates if it determines that the rate is in the state's best interest based on multiple factors, including economic development, local employment, and tax revenues, while **Mississippi actually strips utility regulators** of any authority to review contracts between a utility and a data center.

Large load tariffs are an improvement over these one-off contracts and generally provide more transparency, but to date, many tariffs have also been criticized for not capturing the full cost of serving

> "When it's a single consumer that is using so much energy—basically that of an entire city—and when that new city happens to be owned by the wealthiest corporations in the world, I think it's time to look at the fundamental assumptions of utility regulation and make sure that these facilities are really paying for all of the infrastructure costs to connect them to the system and to power them."
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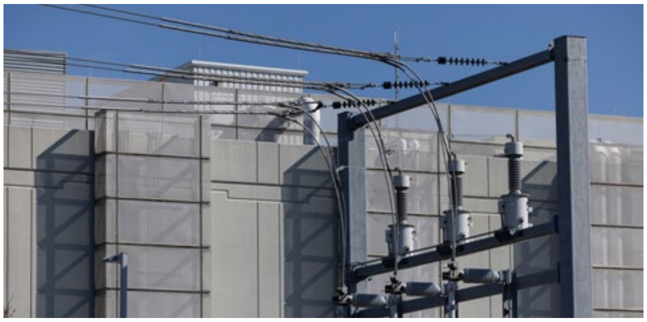


data centers, or for leaving customers at risk for footing the bill for stranded assets in the future. Considering just the cost of new generation, for example, a **Wood MacKenzie analysis** of the energy and demand charge components of 11 recent large load tariffs found that these charges collected substantially less, on a per megawatt-hour basis, than the cost of new combined cycle gas turbines required to serve the new loads (though the charges came closer to justifying new subsidized solar and storage). Harvard's Environmental and Energy Law Program **notes that**:

> *[a]ttributing utility costs to a specific consumer is an imprecise exercise premised on debatable claims about utility accounting records. The subjectivity and complexity of ratemaking conceal utility attempts to funnel revenue to their competitive lines of business by overcharging captive ratepayers.*

In short, it is very difficult for Large Load Tariffs to get the cost causation question right. For this reason, policymakers should be attuned to all of the potential elements of Large Load Tariffs, and be specific and conservative in articulating how data center costs should be assessed. Despite the difficulties in effectively designing large load tariffs, they remain the most effective means by which state regulators can interrogate all the costs that data centers impose on the grid and attribute them to the right customers. Among six strategies that we recommend to state policymakers on affordability, it remains the most comprehensive and potentially impactful.

STATE POLICY MECHANISMS FOR REGULATING DATA CENTERS TO ENSURE ENERGY AFFORDABILITY

State policymakers and advocates have many tools to ensure that data centers pay their fair share of the costs they impose on the electric grid, from changing how their power consumption is billed to influencing how they operate.

SIX STRATEGIES TO TACKLE DATA CENTER IMPACTS ON ENERGY AFFORDABILITY

State tools to regulate data centers' impacts on energy affordability fall into the following strategies:

1. Developing comprehensive large load tariffs.
2. Facilitating better data center contracting processes.
3. Using proactive siting and incentives to steer data center development where it will be most cost efficient.
4. Authorizing, incentivizing, or mandating different means for data centers to procure their own power.
5. Feeding data center surcharges into bill assistance programs.
6. Mandating studies of data center impacts on energy affordability.

STRATEGY ONE

1

States should develop comprehensive large load tariffs.

These tariffs should ensure that data centers and other large loads pay the full costs that they pose to the electric grid. There are many elements and consideration of a large load tariff proceeding, and the points below give a noncomprehensive list of topics that might be folded into that inquiry, or potentially tackled through another type of Commission docket or piece of legislation.

1 Clear rules on qualifying facility sizes can avoid data centers manipulating their projects to avoid tariffs.

There is no agreed-on threshold size for "large load customers," as recent utility proceedings have set the level anywhere between 25 and 100 MW of demand. Similarly, various thresholds have been proposed for the load factor of qualifying customers, or what percentage of possible electricity a facility actually consumes over the course of a year. While the right size and load factor for a given jurisdiction may depend on how such facilities would impact the existing local grid, tariffs should at least include aggregation clauses to prevent customers from splitting a large facility into smaller loads to avoid qualifying. The tariff should also indicate if the minimum demand is based upon the location, service point, or customer, as data centers might try to avoid paying the tariff by having multiple meter points for a single customer.

2 All system costs should be included under the tariff, including energy, capacity, transmission, distribution, REC market rates, and ancillary services.

This includes energy, capacity, transmission, distribution, REC market rates, and ancillary services. Challenging dynamics to consider in this context include:

ELEMENTS OF GRID COST

Legislative

Oregon's HB3546, one of the few successful large load proceeding bills in 2025, took a broad view of the costs the must be incorporated, stating that "*The Public Utility Commission shall require…a large energy use facility to enter into a contract with the retail electricity consumer that covers the provision of the electricity service, including, as applicable, transmission, distribution, energy, capacity or ancillary electricity services.*"

Capturing transmission costs.

Transmission costs are often left out of the assessment of data center impacts, and are not paid under individual contracts with utilities. FERC has the exclusive jurisdiction to determine how much utilities must pay for interstate transmission investments.

This determination is traditionally made with little transparency, and without considering which customers are driving the need for that investment, as bulk transmission systems have historically not been designed to provide electricity to specific customers.

PUCs then take FERC's determination and divide that dollar amount among different types of customers, effectively setting the transmission portion of different customers' electric rates. The disjoint in this two-step process can spread transmission costs among all customers without regard for who is creating the cost. PUCs should track transmission costs when they are designed to benefit a small subset of customers, and assign them to the customer or customers driving that investment through data center tariffs appropriately.

Squaring demand charges with actual costs.
Demand charges are a portion of a customer's electric bill that represents the maximum amount of power they use during some short (typically 15-minute) interval, regardless of how much power they consume overall. It can be measured during the customer's individual peak period, or during the wider system's peak.

When measured during the system peak, it is a useful tool for capturing the costs that customers pose on grid infrastructure, or energy capacity (the cost of paying enough generators to stand ready to meet peak demand, regardless of whether or not they are called on).

Data center operators, by lowering their demand for a few hours, can dramatically lower their demand charges. This can, of course, be helpful if utility investments actually reflect that behavior. But when money is spent on transmission, distribution, and capacity on the assumption that data centers will pay certain demand charges to cover it, and data centers then lower their peak demand and its associated charges, the rest of those costs may be passed on to other ratepayers. Setting minimum demand charges based on a percentage of contract demand can help avoid this risk.

3 Load ramp periods should minimize the risks of data centers not paying what they contracted for.

Data centers will often try to contract for more power than they will necessarily use on day one of operations. This can be problematic when utilities spend on grid upgrades in order to serve the contracted level of demand, but only recoup a fraction of the cost through volumetric rates. States have proposed different "load ramp" periods to force data centers to begin using some or all of the power they contracted for within the first few years of operation, ensuring that data centers pay for the full demand that the utility has invested in serving. Proposed and adopted load ramp periods from the **Database of Large Load Tariffs** range from one to 10 years.

4 Minimum load factors can help smooth out peaks and reduce system costs.

Load factor refers to the percentage of total possible demand a customer actually uses over the course of the year. Establishing a penalty for not achieving a minimum load factor will encourage data centers to use a steady year-round amount of power, which will be more predictable and cheaper to serve than a spikier load profile. Smoothing out peaks can lower the strain on power infrastructure and reliability. For example, the Montana-Dakota Utilities Company has **imposed a minimum load factor of 85 percent** through its data center tariff, with penalties.

5 Longer contract terms should minimize the risk of stranded assets.

The recovery period for investments in generation and transmission infrastructure is often 20 to 30 years. Different jurisdictions have proposed minimum contract terms between 10 and 20 years in order to minimize the risks of stranded assets, lest data centers might otherwise relocate or cease operating before that term expires. For example, in one of the longest contemplated contract terms around the country, Maryland HB0900 proposed that "*The contracts for service under the schedule are for an initial period of not less than the load ramp period plus 20 years*", which could stretch to 24 years overall. Notice periods can also be stipulated under these term requirements.

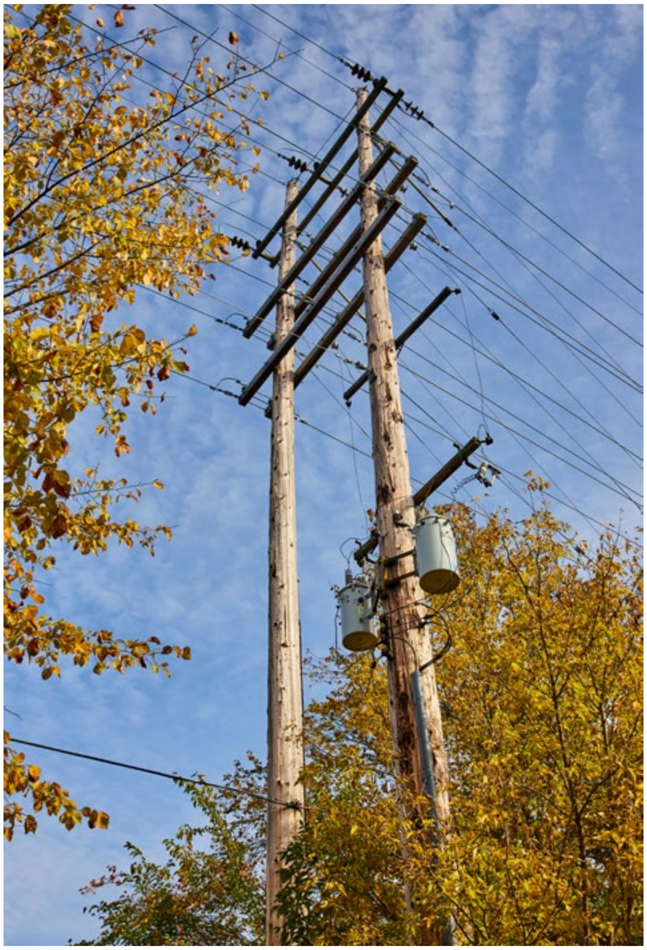
On the regulatory side, a proposed Kentucky tariff targets 20-year contract terms ending only upon five-years' notice from the customer. To mitigate the burden that longer contract terms would put on data centers, proposals include allowing data centers to transfer or trade their outstanding load obligation to each other in the event that a given facility closes. This may allow data centers to avoid high exit penalties while granting grid operators similar assurances of long-term load. These different policy tools can help ensure that data centers remain in place to mitigate against the risk of stranded assets, while potentially allowing some flexibility to the market.

6 High exit fees will discourage data centers from breaking contracts.

For example, a proposed Kentucky tariff included "a requirement to make a one-time payment equal to five-years' minimum billing…in the event of a permanent closure of the customer's facility prior to the end of the 20-year term." Such charges will ensure that data centers face an incentive to remain reliable customers over the term of their contracts.

7 Higher coincident demand charges will discourage data centers from consuming more peak power than necessary.

Demand charges are a price per kilowatt (kW) that a facility must pay for their highest energy usage period, often measured in 15-minute increments, over previous months. This charge represents the primary way that data centers pay for grid infrastructure and energy capacity purchased on their behalf. Fixing an absolute minimum demand charge based on a percentage of contract demand can help utilities recoup their costs, while incentivizing data centers to smooth their demand curves. When these charges are set based on demand during system peak hours, they will discourage data centers from contributing to peak periods.



8 Demand response, or simply power interruption agreements, can help shed load and ease strain on grid infrastructure.

The requirement to shed load, either through an interruptible tariff or through a demand response program, may help reduce grid strain during peak hours, extreme weather, or other grid events. Interruptible tariffs will spell out the conditions under which the utility may disrupt service to a customer, while demand response typically provides an incentive to voluntarily reduce electricity consumption when the grid operator calls for it.

Research from Duke's Nicholas Institute for Energy, Environment & Sustainability estimated that 76 GW of new load could be added for data centers if they could curtail demand by just 0.25 percent of the time, or roughly 22 hours a year, without requiring further distribution system investments. Even without an interruptible tariff or demand response program, some tariffs include language for the utility to be able to enter into demand shedding agreements directly with customers. Building the power to interrupt data center load into tariffs or service agreements can help maintain grid reliability while reducing costs for all customers.

9 High collateral requirements will minimize the risk of stranded assets and discourage applicants from proposing unrealistic load projections.

Several states, including Minnesota, Montana, and Maryland, have proposed bonding or collateral requirements for data centers as part of large load tariff legislation. At the regulatory level, AEP Ohio has adopted a credit and cash collateral requirement of 50 percent of contract lifetime minimum charges, one of few adopted requirements linking collateral levels to the full contract term.

DEMAND RESPONSE EXAMPLES

Legislative

Texas' SB 6, which passed in 2025, offers a mandatory approach to demand response. It authorizes the state's grid operator to "*establish a threshold before or during an energy emergency alert at which the [grid operator] may issue reasonable notice that large load customers with on-site backup generating facilities may be directed to either deploy the customer 's on-site backup generating facilities or curtail load*."

Notably, SB 6 was one of three bills put forward in the 2025 Texas legislative session encouraging data centers to curtail their load, with other proposals only going so far as to offer tax and permitting incentives for demand response.

Regulatory

Black Hills Energy's Electric Rates Blockchain Interruptible Service Agreement describes the requirements for "*negotiated service interruption agreements (size of interruptible load, notice of planned interruption, duration of interruption, and maximum hours of interruption per year)*," and providing that "*customers that fail to interrupt service as provided for in the Agreement shall be responsible for all costs incurred by the Company as a result of that failure*."

10 Adders on the price of power can help cover the costs of new generation.

Simply adding to the cost of energy itself is one way that utilities and regulators can help ensure that data centers pay the full cost of new power plants required to serve them. Under a Kansas tariff approved in November 2025, data centers will now pay a higher rate for power than standard industrial averages—around 10 percent higher—in order to account for the marginal costs of new generation.

11 Allowing or requiring on-site generation can help lower the cost of new grid-level generation.

In most states, utilities are the dominant generation owners and can earn a PUC-set rate of return that they collect from ratepayers on their investments in new power plants. As discussed further below in Strategy 4, states may wish to encourage data centers to procure their power either from a competitive market, from direct contracts with generators, or from on-site power. While these requirements can be integrated into a Large Load Tariff, they also might be adopted independently, and will be expanded on further below.

12 Assessing data center costs against the right baseline and on the right timescale is pivotal.

The costs of serving data centers ought to be considered for a large class of projects on a long-term basis—comparable with the 20-year projections made in other utility exercises, like Integrated Resource Planning—and against a baseline that otherwise assumes significant load growth from electrifying transportation and buildings. This is important because, generally speaking, every incremental load added to the grid forces utilities to make the next least-cost investment in order to serve that load. Assuming that data centers can scoop up all the least-cost investments in the short run, therefore, just ensures that future marginal loads will be served by more costly solutions.

For example, deploying certain grid enhancing technologies or advanced transmission technologies can dramatically improve the efficiency of the existing grid at relatively low cost. Meeting short-term data center load growth with these investments, however, might simply mean that other, longer-term load growth must be facilitated by more costly grid investments, effectively raising the price that ratepayers must shoulder in order to build out an EV charging network or replace natural gas heating systems. Building more robust, longer-term projections around data center growth, how to support it, and at what cost will also inform better efforts to steer that growth by guiding investment decisions that can unlock co-siting opportunities and shorten interconnection wait times. NRDC notes in A Better Path to Managing Data Center Load Growth:

> *A truly competitive state therefore needs to offer shorter interconnection times and abundant energy capacity (preferably clean). This will require states to make changes that benefit everyone by improving forecasting and planning processes, building more interconnected and reliable systems, and unlocking clean energy capacity, or by putting pressure on regional transmission organizations (RTOs) and state public utility commissions (PUCs) to make the changes that are needed.*

COMPARING AGAINST LONG TERM COSTS

Legislative

Idaho's proposed HB 395 provides an example of protecting other electric system needs from being cannibalized by data center investments, stating that "*a public utility providing a new large load service to a customer shall not provide such service from its existing resources or from resources that have been identified and are planned or anticipated to serve its general body of ratepayers within ten (10) years from the initial date of service of the new large load*."

As this voluminous list demonstrates, large load tariff proceedings can be the occasion for an expansive inquiry into data center impacts, and an opportunity to actually steer data center development towards more beneficial locations (from a grid perspective) and cleaner technologies. Many of the elements described above might be adopted in concert with or conditional to tools addressing other social impacts from data centers. For example, Illinois' pending SB 4016 (2026) would require data center loads be curtailable up until they bring their own new clean energy and capacity resources online. A holistic approach to data center regulation may use many of the tools above to help pursue goals beyond energy affordability alone.

Large load tariffs can also contribute to a virtuous cycle of increasing transparency around grid planning. Electric utility AEP Ohio, for example, reportedly slashed its interconnection queue by more than half with the introduction of a large load tariff that required companies to pay for the lion's share of their contracted demand. As similar tariffs improve, the interconnection queue should gradually represent a more accurate picture of potential data center load growth, allowing utilities and regulators to better plan for how to serve that load.

Large load tariffs, of course, may take time to develop (one estimate puts implementation timelines at one to three years). In the absence of large load tariff proceedings, states should also consider improvements to one-off contracts between utilities and data center customers, as noted in Strategy #2, below.

THE ROLE OF MORATORIA

Pending the development of large load tariffs that accurately assign the costs of connecting data centers, and impose other operational requirements as appropriate, states may consider moratoria on new data center interconnections. Large load tariff proceedings may take one to three years to show results. Delaware offers an example of pausing the flow of projects while regulators and utilities work out the details of new tariffs, while early tracking in 2026 legislative sessions shows at least a dozen states proposing legislation including some type of data center moratorium. Where a moratorium cannot resolve these issues, states may consider a data center ban.

STRATEGY TWO

Conduct more critical data center contracting processes.

Where no large load tariff exists, data centers will typically enter into one-off contracts directly with the utility, and a Commission will often give a perfunctory review.

The process for developing and approving these contracts can be improved in at least two ways:

1 Fund intervenors in data center contract proceedings

PUCs may give minimal oversight to data center service contracts, particularly if there are no other participants challenging the utility's filing or entering other evidence or testimony into the record. If a state cannot adopt a large load tariff, it should consider funding intervenors, as many states already do for more general purposes, specifically to participate in these contract approval proceedings to lend weight and counterbalance to the Commission's review. This mechanism can be particularly meaningful for foregrounding the voices of local advocates and officials who may be monitoring the same data centers at another jurisdictional level.

2 Set requirements or principles for developing special contracts

PUCs may set internal rules for how they will review contracts with large load customers, or may direct utilities to develop these contracts in accordance with certain rules or principles. In Kentucky, for example, the Public Service Commission (PSC) has self-imposed the obligation to make several findings on the record before approving a special contract (though these obligations could be equally imposed by a legislature). Under Kentucky's rules, special contracts that include discounts are allowed only when the utility already has excess generation capacity. The PSC must also find that the contract rate exceeds the utility's marginal costs to serve that customer and that the contract requires the customer to pay any of the utility's fixed costs associated with providing service to that customer.

Legislatures can impose many of the same requirements on PUCs and utilities in the contracting process as they might otherwise in the large load tariff proceeding context, such as minimum duration or exit fees.

REGULATORY EXAMPLES

Regulatory

Evergy Missouri's Special High-Load Factor Market Rate Schedule describes a contracting approach designed to shield ratepayers from stranded costs. "*The Special High-Load Factor Market Rate will be designed to recover no less than the incremental cost to serve the Customer…Non-MKT customers shall be held harmless from any deficiency in revenues provided by any customer served under this tariff or from any stranded investment or cost(s) associated with serving customers under this rate schedule* […].

Regulatory

Pending the development of a large load tariff in Colorado, the **Colorado PUC offered "principles"**, or nonbinding negotiating points, for contracts between utilities and data centers needing over 50 MW of power. Under these principles, any customer needing 50 MW or more of power would need to provide a $250,000 non-refundable study deposit and a cash security deposit or letter of credit. The data center would have to commit to a 15-year contract and early-exit fee equal to 75% of all the electricity the facility would have used over the life of the contract.

3

STRATEGY THREE

Use proactive siting and incentives to steer data center development where it will be most cost efficient, with a particular focus on minimizing adverse impacts on disadvantaged communities.

Jurisdictions looking to minimize the impacts of data center development on rates and reliability should consider engaging in planning processes, both at the utility and agency level, to identify locations where load expansion would minimize adverse impacts on rates and reliability.

Factors to consider can include existing grid capacity (for example, retired power plants), accessibility to specific energy resources, like renewable energy and battery storage, as well as local support, or even availability of complementary sites and services, like offtakers for waste heat or critical services for a microgrid.

For a legislative example on this point, North Carolina's proposed **HB 1002** would have created a statewide planning commission to study trends in the data center market and create a roadmap for data center deployment, complete with 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*."

For a regulatory example, Florida Power & Light Company in 2025 **proposed a large load tariff** that would proceed in two tranches: a general tariff for all large load projects, and a more favorable tariff for up to 3 GW of load that is geographically limited to counties proximate to existing transmission facilities and potential sites for incremental supporting generation.

BALANCING GRID OPTIMIZATION WITH LOCAL IMPACTS

Finding the optimal location for data center development from a grid perspective does not mark the end of the inquiry for policymakers. It is essential to consider the impacts that data centers will have on local air quality (given the popular use of on-site diesel generators), water usage, noise pollution, traffic, and more. For these reasons, it is imperative that state and local policymakers are aligned on responsible disclosure requirements, impact analyses (particularly related to disadvantaged communities), and community engagement.

We will discuss strategies for dealing with these issues specifically in other toolkits on water, emissions, and transparency. For now, we will highlight three categories of action that should not be overlooked in a race to site data centers where the electrical profile is most advantageous:

Requiring cumulative impacts studies of project impacts on local environmental burdens, as exemplified in **MD SB 978** (applying specifically to data centers), or **model rules**.

Disclosure requirements, ensuring that data centers cannot hide their impacts or force local policymakers to sign NDAs (as exemplified in California's **AB 1370** or Michigan's **HB 5399** on NDAs, or Georgia's **HB 528** on disclosure generally).

Establishing and attaching binding metrics to outreach and participation to ensure that all community members, not just those with existing connections to the government or developers, are able to meaningfully participate in permitting decisions. See Virginia's **SB 1046** for an example of community engagement requirements targeting noise concerns, specifically.

In addition to these tools for assessing local impacts, other toolkits in this series will suggest ways that specific types of local air and water impacts can actually be mitigated.

4

STRATEGY FOUR

Authorize, incentivize, or mandate different means for data centers to procure their own power.

As noted above, in most states, utilities own most of the power plants. The only way that utilities can truly insulate ratepayers from the risk of stranded assets, however, is by not actually owning those assets.

There are two primary ways that states can encourage the risk of stranded generation assets to shift from utilities—and ratepayers—towards data center companies themselves:

1 Require or allow data centers to participate in retail choice markets.

Historically, utilities owned generation in every state in the country. By the 1990s, however, a wave of states began creating competitive markets for privately owned generators to provide power to customers, reducing the utility's role to providing transmission and distribution services from whatever generator was selected by the customer. Other states allowed only a handful of large customers to choose their own power supplier. Today, **states that have not yet provided this option** could require new data centers to procure power through retail choice programs rather than confining them to utility-supplied power. By doing so, they would transfer the risk of stranded data center assets from ratepayers to private generators. In recent years, some states have begun offering a variation on this approach; **Clean Transition Tariffs** allow large load customers to contract directly with renewable energy projects, and this model has been held up by some as a solution to the risk of stranded generation assets that still attends large load tariffs.

2 Require or allow data centers to serve their own power needs on-site.

Putting generators and large loads directly into contract with each other might make the most sense where they can be co-located, not least of all because that could ease the interconnection process for both facilities. RMI has described **a version of this approach called "Power Couples,"** in which new renewable generators and new large loads would be co-sited around where an existing fossil fuel plant already has an interconnection rated for a sufficient power flow. Nationwide, RMI estimates that "Power Couples" at rarely used gas generators could rapidly satisfy over 50 GW of new data center or other concentrated loads with 88 percent carbon-free energy on average for less than $200 per megawatt-hour (MWh), without raising ratepayer costs. To make these technical prognostications a reality, however, policymakers may have to either:

Allow behind-the-meter generation at data centers under certain conditions.
This approach has been **recently legislated in Oklahoma** with the goal of expediting data center development, but without any particular emphasis on the renewable quality of that power.

States looking to move in this direction should be attuned to local air impacts in particular, given **the checkered history of data centers** powering their operations with heavily polluting generation.

Allow microgrids serving data centers.
Typically, state law will prohibit non-utilities from running electric distribution wires to serve one or a small group of customers. If an electric wire crosses a public right-of-way, it is deemed to violate the incumbent utility's franchise over that territory.

States have been modifying these rules to permit microgrid development or pilots in recent years, and in 2025, **West Virginia legislated on this subject specifically** with respect to data center customers.

This approach has promise and peril, depending on the type of on-site energy used. For promise, see Energy Innovations' 2024 report, ***Energy Parks***, which advocates co-locating data centers with abundant renewables and storage behind a single interconnection point (noting, "[e]ssentially, an energy park is a large-scale microgrid").

For peril, see reports where data center microgrid projects have been developed in order to **skirt environmental review** of their generation, and dramatically increase greenhouse gas emissions.

On-site power is a fraught consideration for data centers, as most current projects looking to shift their own power needs behind-the-meter are doing so with fossil fuel generation. Purely from an electricity affordability perspective, this can be helpful, but it comes with an array of other social costs. Policymakers looking to explore the ways that data centers can be directly served by renewable or low-emissions energy on-site should look out for our toolkit addressing greenhouse gas emissions.

CO-SITING AND THE ROLE OF LOCAL GOVERNMENTS

Data centers that co-site with their own energy resources can do more than insulate ratepayers from the risk of stranded assets: they can provide energy services to surrounding communities. One of the most common energy assets at data centers, for example, is the waste heat from processors. Channeling that waste heat into underground **Thermal Energy Networks** could **facilitate a district's transition away from natural gas heating**, and states have proposed **legislation** to study sites that might take advantage of that potential.

Similarly, microgrids represent a **model of local energy systems** that can create an island from the wider grid during outages in order to provide continuous electrical service to critical facilities like hospitals, nursing homes, police stations, and fire halls. Microgrids have been encouraged by state and local policymakers for more than a decade, but they require the right anchor tenant: a customer with a large and continuous enough power demand to justify the costs of building the generation, distribution, and controllers necessary to provide those resiliency services to adjacent facilities. Data centers pose an attractive candidate to fill this role.

Local governments are indispensable in identifying these and other opportunities to leverage data center energy resources for community benefit. State policymakers should be attuned to bringing in local expertise to PUC proceedings and state studies—or wherever data center siting is being considered proactively—to help find those opportunities and facilitate dialogue between state and local policymakers.

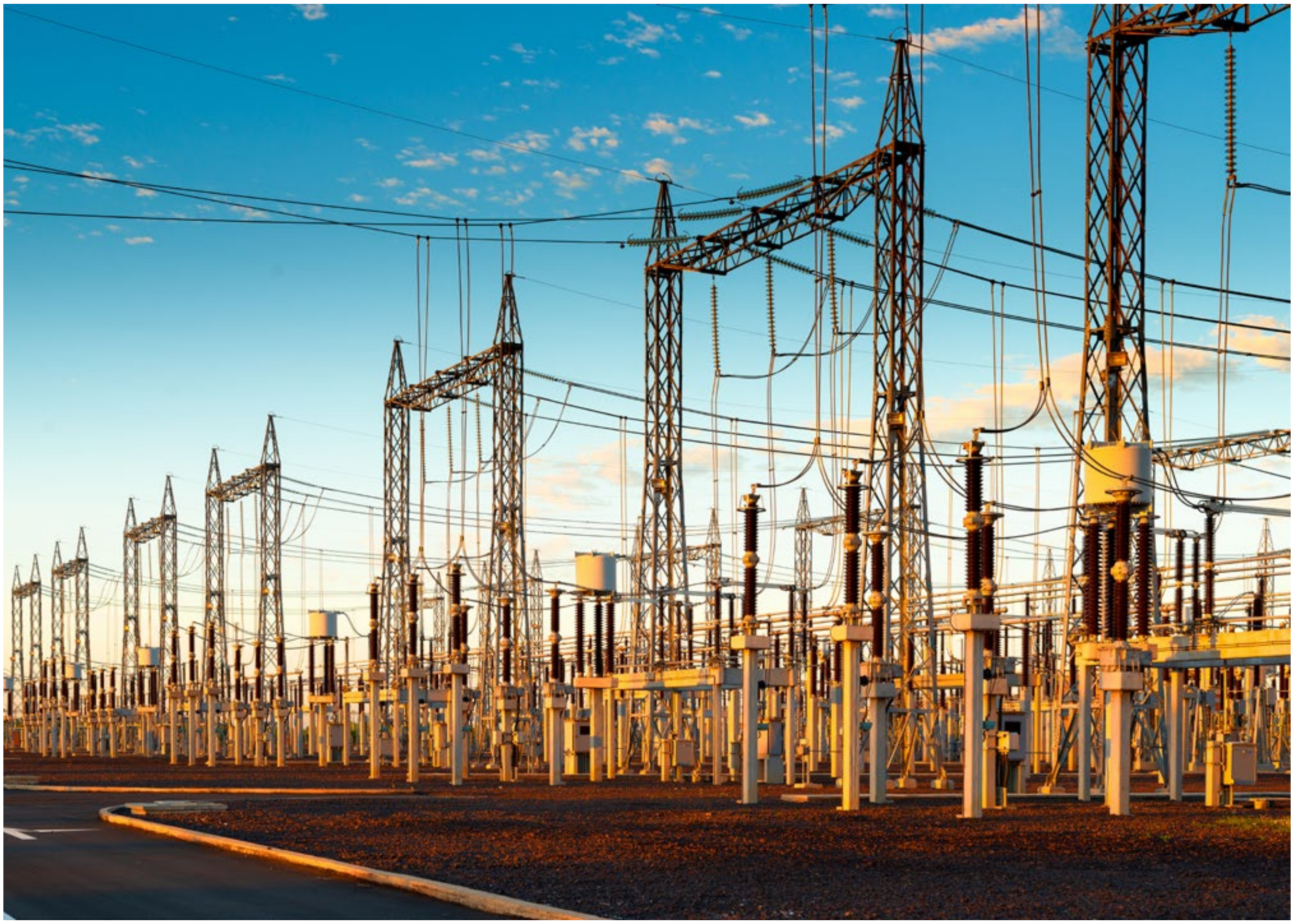
5

STRATEGY FIVE

Feed data center surcharges into bill assistance programs.

Where large load tariffs cannot be imminently developed, and other means of working through the PUC and utilities are too administratively burdensome, 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.

New York's proposed **S 6394** provides an interesting model of this approach, tasking the PUC to determine the correct surcharge within one year, following extensive public comment. A similar approach can be found in Minnesota's **HF 16**, which dedicated data center surcharges to help fund "energy conservation, weatherization, and associated activities", each of which helps reduce customer bills.



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STRATEGY SIX

Mandate studies of data center impacts on energy affordability.

State legislatures, executives, and PUCs can all initiate state studies examining the impacts of data center load growth on electricity affordability, and many have throughout the country.

One enacted model from 2025 sessions, California's **SB 57**, scoped the Public Utility Commission's task in the following terms:

(a) *The commission may assess the extent to which electrical corporation costs associated with new loads from data centers result in cost shifts to other electrical corporation customers. This assessment may include, but not be limited to, the following:*

(1) *An analysis of potential electrical corporation costs associated with utility procurement to meet growing load demands from data centers' increased energy consumption.*

(2) *An analysis of potential electrical corporation costs associated with the installation of new transmission and distribution assets to serve new data centers or expansions of existing data centers, including the costs of stranded assets and assets installed for an entity that ceases operation.*

(3) *Identification of opportunities to prevent or mitigate any substantial cost shifts, if the cost shifts are identified.*

Costs attributable to data center customers can be complex to understand, and in some jurisdictions a well-sited amount of data center load **might even reduce other customers' bills**. Studies can therefore vet the need for a large load tariff or other affordability measures in the future, and be supplemented with recommendations for the legislature or Public Utility Commission on appropriate steps to act on their findings. For an example of how such a state study produced actionable legislative recommendations, see the study, ***Data Centers in Virginia***, from the Joint Legislative Audit and Review Commission.

Relatedly, states can also impose requirements on utilities to study other means of improving energy affordability that might indirectly affect data centers. Noteworthy examples from 2026 sessions include Virginia's **HB 434**, a first-of-its-kind bill requiring utilities to study grid utilization—or how much energy is delivered per unit of capital costs. Regulators might use this information to require the use of key technologies—from energy storage to synchronous condensers, which reduce line loss—to improve efficient use of the grid. These efforts might indirectly affect how data centers are served by building more efficient assets around them.

THE TOOLS

Regulating Data Centers to Ensure Energy Reliability

The state toolkit to tackle issues related to electric reliability mostly overlaps with strategies to tackle energy affordability. Every strategy that reduces the strain that data centers place on the existing grid will also reduce the need to make large grid investments to manage that strain, and many of them can be tackled through the same PUC proceedings. Nevertheless, state policymakers that want to attack the reliability question specifically may choose to take on the strategies below independently.

STATE POLICY MECHANISMS FOR REGULATING DATA CENTERS TO ENSURE ENERGY RELIABILITY

State policymakers and advocates have many tools to ensure that data center load growth does not impair the reliability of the electric grid.

FOUR STRATEGIES TO TACKLE DATA CENTER IMPACTS ON ENERGY RELIABILITY

State tools to regulate data centers' impacts on energy reliability fall into the following strategies:

1. Incentivizing or mandating demand response and other forms of flexibility from new data centers during the interconnection process.
2. Requiring or incentivizing data centers to co-locate with generation and/or storage to reduce their strain on the grid.
3. Establishing transparency requirements that help regulators and utility planners better plan for load growth.
4. Proposing studies to determine what impact data center development will have on grid reliability.

1

STRATEGY ONE

Incentivize or mandate demand response and other forms of flexibility from new data centers during the interconnection process.

As noted in the Affordability Toolkit, data centers can be required or incentivized to reduce their power consumption from the grid in times of peak demand or other grid emergencies.

Texas' **SB 6** provides a useful example of legislation mandating this approach at the direction of the grid operator, while similar bills from the same session offer **tax** and **permitting** incentive-based alternatives. Beyond demand response, states have also proposed incentivizing other forms of flexibility from data centers, such as by conditioning tax incentives on the provision of ancillary services (see Texas' **SB 2222**), which include functions like using on-site batteries to help regulate voltage and frequency on the grid. It is unclear, however, whether data centers would practically be able to provide such services under existing rules.

STRATEGY TWO

States can require or incentivize data centers to co-locate with generation and/or storage, reducing their strain on the grid.

As noted above, there are multiple strategies that states might employ to encourage data centers to serve their own power needs with on-site or proximate power sources, from forming microgrids, to siting near renewables developments, or simply building clean backup power on-site.

These same tools will tend to make them less of a strain on the grid, and should be considered for their reliability benefits as well. Data centers may be incentivized with expedited permitting to co-locate with energy generation sufficient to meet a substantial part of their needs.

STRATEGY THREE

States can put in place transparency requirements that help regulators and utility planners better plan for load growth.

Data centers can be a source of highly speculative load growth, and utilities and grid operators alike are searching for ways to better understand the likelihood that large interconnection queues will manifest. The better visibility utilities and regulators have into future load growth, the better able they will be to plan for the types of grid investments that will support that load growth reliably.

A few recent bills offer interesting approaches to this problem:

Texas' SB 6 required data center operators to attest to other locations a given project has been proposed in order to get a sense of how much queue-loading data center operators are engaged in: "*[E]ach large load customer [must] disclose to the interconnecting electric utility or municipally owned utility whether the customer is pursuing a substantially similar request for electric service, inside or outside this state, the approval of which would result in the customer materially changing, delaying, or withdrawing the interconnection request. The disclosure may not require project specific details.*"

Texas' SB 1641 attempted to require new loads demonstrate that they were likely to be built before including them in forecasts: "*The commission by rule shall prohibit a transmission or distribution service provider from including in a load forecast… 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 at the level, location, and date reflected in the load forecast.*" The legislation lists leases or security deposits among ways that customers could demonstrate the likelihood of their project.

New Jersey's A5462 tried to weed out redundant projects by requiring that "*any new large load data center customer [must] demonstrate, to the reasonable satisfaction of the utility, 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.*"

Future iterations of this strategy will have to contend with novel ways that companies are shielding their projects from transparency, such as by organizing Special Purpose Vehicles to propose each project, which cannot necessarily be traced to the parent company. Nevertheless, developing better visibility into the interconnection queue will be a key priority for ensuring long-term electric reliability.

STRATEGY FOUR

States can propose studies to determine what impact data center development will have on grid reliability.

Either the state itself, or an interconnection applicant, might be required to conduct this study in order to inform future policy.

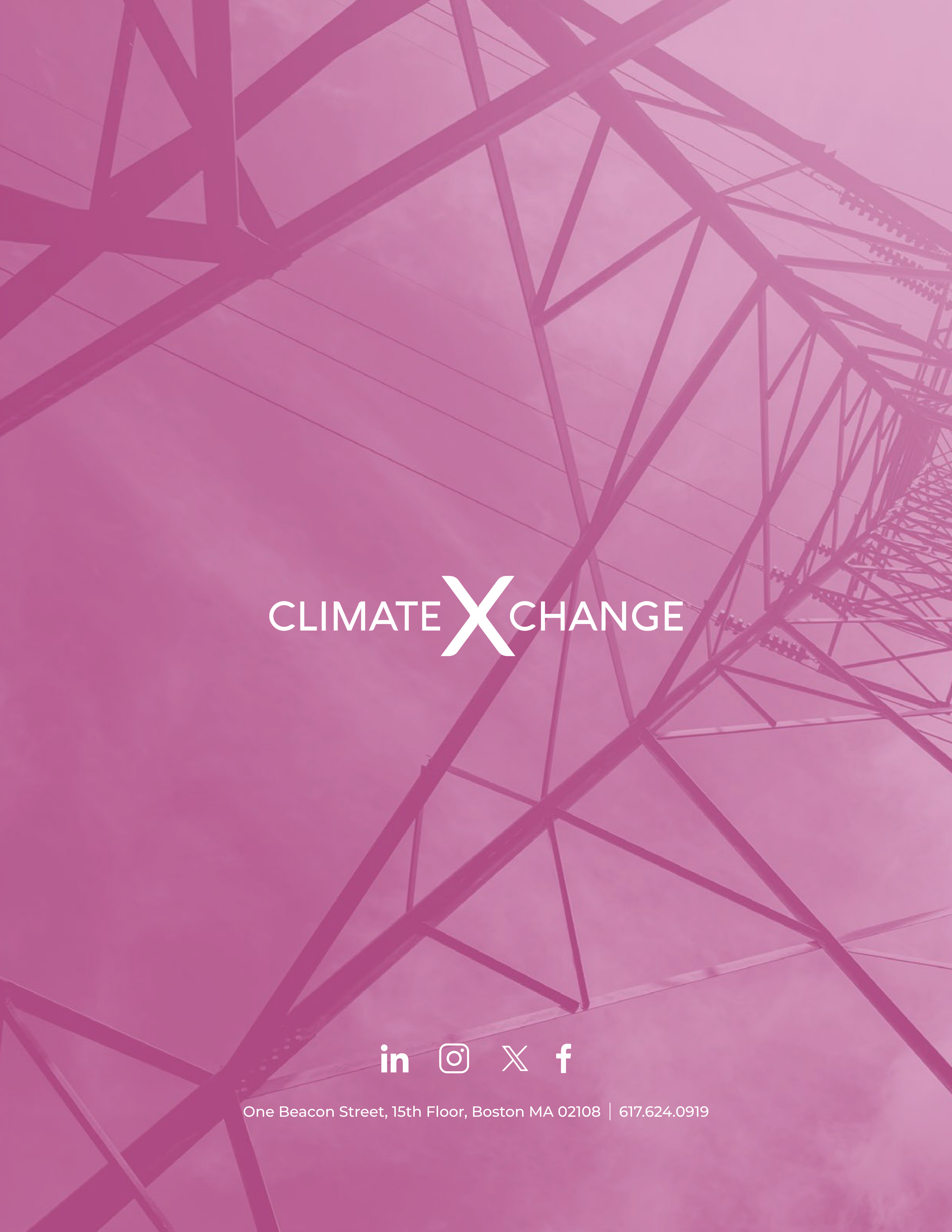
Examples of interesting study requirements can be found in Texas **SB 6** (enacted), Oregon **SB 553**, North Dakota **HB 1579**, and Maryland **HB 270** (enacted).

Conclusion

As data centers spread across the country at speed, threatening to impact not only the electric grid but also local water systems, tax revenues, and greenhouse gas emissions targets, state policymakers are instrumental in crafting regulatory guardrails to contain their impact. Policymakers have an evolving set of tools that can address issues surrounding electricity reliability and affordability. These tools can be mutually reinforcing, and many of them might be well-deployed together as elements of a large load tariff proceeding.

Moreover, states that want to avoid purely reactive policymaking can begin to ask what kind of data center development they might want, where they would want it, and under what operational constraints, in order to create more targeted opportunities and send stronger market signals to help guide data center development where it will have some societal co-benefits. That inquiry might precede or run in tandem with many of the tools in this toolkit, but either way, it will be essential for states to use the tools at their disposal to not just contain the impacts from data center development, but guide that development in a holistic, proactive way.

A holistic approach would also benefit from incorporating other tools in Climate XChange's Data Center Toolkits. This toolkit is intended to tackle just some of the issues attending data center development. It does not address issues related to water use, greenhouse gas emissions, renewable energy use, local air emissions, tax outcomes, and project transparency generally. To better understand how to address each of these issues in the context of data center development, please look out for our other toolkits on our **Resources for Data Center Regulation Page**.



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