

2026

Energy Affordability for Pennsylvania's Small Businesses:

Data Centers & Energy Choices in the AI Era



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Executive Summary

Pennsylvania's small and medium-sized businesses (SMBs) are confronting a growing energy affordability challenge. Rising electricity costs, increasing demand across the regional grid, and significant investments in new energy infrastructure are creating financial pressures that threaten business competitiveness, economic growth, and community resilience.

A major driver of this challenge is the rapid expansion of artificial intelligence (AI) and the data centers that support it. While data centers offer economic development opportunities and play an increasingly important role in the modern economy, they also require substantial amounts of electricity and can trigger costly investments in generation, transmission, and distribution infrastructure as well as other environmental and economic impacts. As Pennsylvania competes to attract investment associated with the AI economy, policymakers face a critical question: how can the Commonwealth support economic growth while ensuring that households and small businesses are not disproportionately burdened by rising energy costs?

This report examines the relationship among energy affordability, data center development, energy choices and small-business competitiveness in Pennsylvania. It evaluates the impacts of rising electricity demand on businesses and communities, explores the role of the regional electricity market, identifies the key institutional decision-makers shaping energy policy, and outlines policy recommendations to balance economic development, environmentally sound choices with affordability and reliability.

We believe this report is a first step in understanding the impacts on small and medium-sized businesses. We offer that these businesses should have a seat at the table to help make the choices and shape the policies that are in their best interest as well as for the economy of Pennsylvania. American Sustainable Business Network (ASBN), Pennsylvania Sustainable Business Network (PASBN), and Compound Impact are ready to support that engagement in Pennsylvania and any additional research and engagement elsewhere across the country.



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Key Findings

1. **Small businesses are particularly vulnerable** to rising energy costs due to limited purchasing power, narrower profit margins, and fewer opportunities to manage electricity expenses.
2. **Data center growth is increasing electricity demand** across the PJM region and accelerating the need for new infrastructure investments, which are disproportionately borne by small businesses and households.
3. Existing cost-allocation frameworks shift a significant portion of grid infrastructure costs onto households and small businesses rather than the entities driving demand growth, with **ratepayers covering 95% of data center transmission projects across PJM's territory in 2024.**
4. The **833% surge** in PJM capacity market prices for 2025–2026, **driven largely by data center demand**, is already translating into a 10–29% increase in electricity bills for Pennsylvania businesses.
5. **Rural communities, agricultural businesses, and disadvantaged communities face disproportionate impacts** from rising energy costs, compounded by older infrastructure and limited access to capital.
6. **Policymakers have opportunities to improve affordability** through cost-allocation reforms, community benefit agreements – effective only when paired with funded technical assistance and enforcement capacity, onsite and distributed generation incentives, and targeted relief programs.
7. While battery storage, hybrid renewable systems, and microgrids are making clean energy increasingly viable for AI data centers nationally, **Pennsylvania currently has no requirement that data centers source a defined share of their power from renewables**, unlike New York and Michigan, which mandate 70% and 90% clean-energy procurement, respectively. Without a similar standard, Pennsylvania risks attracting data center development without capturing the affordability or grid-relief benefits that renewable co-location and storage can offer ratepayers.

Introduction

Affordable and reliable energy has long been one of Pennsylvania's competitive advantages. The Commonwealth's diverse energy portfolio, strategic location, and industrial history have supported generations of manufacturers, farmers, retailers, service providers, and entrepreneurs.

Today, however, businesses across Pennsylvania are experiencing growing uncertainty regarding future energy costs. Electricity prices have risen sharply in many regions, while concerns about future rate increases have intensified as demand for power grows across the PJM Interconnection, the regional grid operator serving Pennsylvania and twelve neighboring states.

Nationwide, utilities requested more than \$29 billion in rate increases in the first half of 2025 alone, double the amount requested in the same period of 2024.¹ The average energy price has climbed from 13 cents per kilowatt-hour in 2019 to 17.3 cents by the end of 2025, a 33% increase, and states with high concentrations of data centers have seen far steeper increases.² Virginia, for example, saw prices rise by up to 267% over five years in areas adjacent to data centers.³ [continued on next page]

\$29 billion

Rate increases requested by utilities in the first half of 2025 alone.

27%

Average energy increase from 2019 - 2025.

267%

Virginia's increase in energy prices over five years due to high concentration of data centers.

Introduction [Continued]

These concerns are particularly significant for small and medium-sized businesses. Unlike large corporations, SMBs typically lack dedicated energy procurement teams, long-term power purchasing agreements, and the capital necessary to invest in alternative energy resources.

As a result, they are often more exposed to price volatility and increases in utility rates. At the same time, Pennsylvania is experiencing increasing interest from data center developers seeking locations capable of supporting the next generation of artificial intelligence technologies.

While these investments may provide economic benefits, they also raise important questions about how infrastructure costs, grid reliability, and new energy demands will impact affordability for the businesses and communities that bear the costs.

The challenge facing Pennsylvania policymakers is not whether the Commonwealth should participate in the AI economy. Rather, it is how to ensure that the benefits of economic growth are realized without undermining energy affordability and the economic and environmental well-being of the businesses and communities that are the backbone of the State's economy.



The Emerging Energy Affordability Challenge

Growth of Artificial Intelligence and Data Centers

The rapid expansion of artificial intelligence technologies is transforming energy demand throughout the United States. The data centers that support AI applications, cloud computing, and digital services require enormous amounts of electricity to power servers, cooling systems, and associated infrastructure.

Unlike residential and commercial customers whose electricity use fluctuates throughout the day, data centers operate continuously at near-constant load: 24 hours a day, seven days a week. Individual facilities can consume electricity equivalent to that used by tens of thousands of households; the most advanced AI-specific computing requires up to ten times more power than traditional servers, with individual facilities often requiring 100 or more megawatts.

Data centers currently account for roughly 4-5% of total U.S. electricity consumption, with projections reaching between 8-12% of total consumption by the end of the decade. As the nation moves more towards electrification, MIT projections indicate that electricity demand could increase by up to 48% nationwide in the next decade, with AI accounting for nearly a quarter of the projected increase.⁴ PJM projections indicate that data centers account for nearly all of their projected demand growth through 2030.⁵

4 - 5%

Total U.S. electricity consumption by
data centers.

8 - 12%

Total U.S. electricity consumption by
data centers within the next decade.

48%

Increase in electricity demand in the next
decade, with AI accounting for nearly a
quarter of the projected increase.

The Emerging Energy Affordability Challenge [Continued]

Growth of Artificial Intelligence and Data Centers

Pennsylvania has emerged as an attractive location for data center investment due to its strategic location, existing energy infrastructure, and access to major population centers. Additionally, Pennsylvania has seen heavy investments in clean energy workforce development, resulting in the clean energy workforce growing five times faster than the baseline employment growth rate in the state between 2017 and 2020.⁶ Regional efforts, such as Sustainable Pittsburgh's Clean Energy Workforce Roundtable aims to continue this trend, bringing together “hundreds of employers, educators, community-based organizations, labor leaders, and government partners to create an inclusive, coordinated clean energy workforce ecosystem across the 10-county region.”⁷

Data center development is concentrated near urban areas, with notable activity also occurring in northeastern mountain counties and, of increasing concern, in areas with significant agricultural activity. However, with a workforce ready and eager to increase clean energy capacity, data center development in Pennsylvania has the potential to accelerate the growth of clean energy capacity in the state.

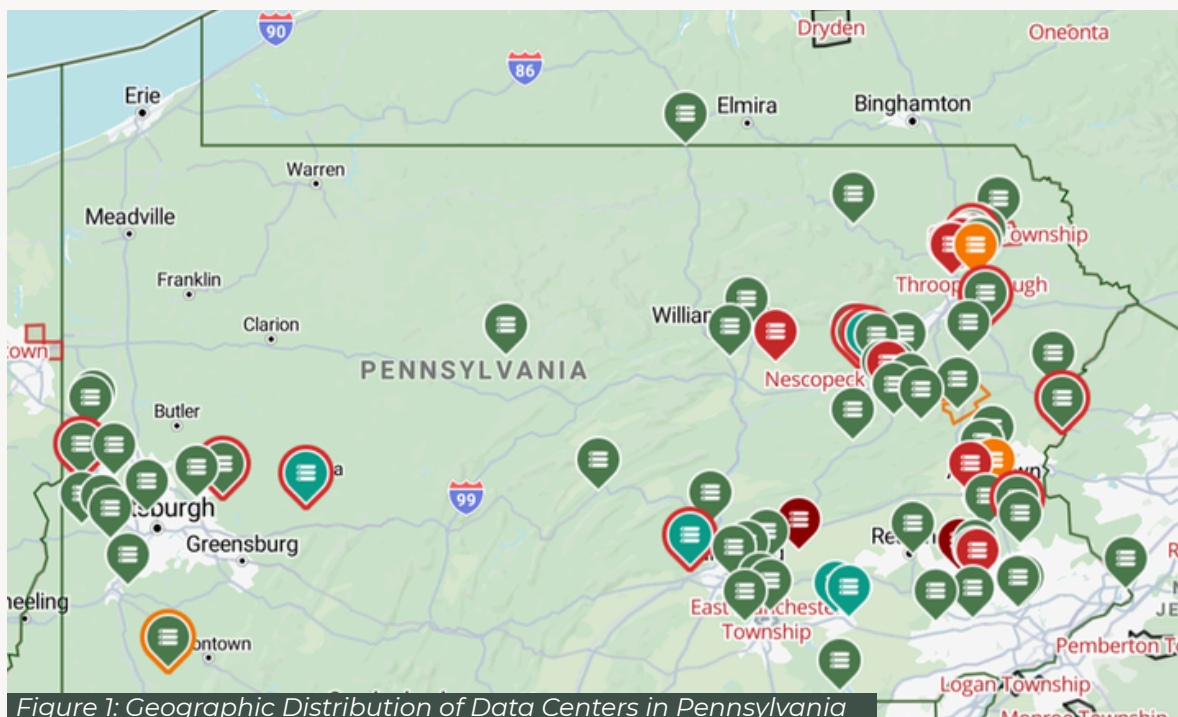


Figure 1: Geographic Distribution of Data Centers in Pennsylvania

Figure 1: Geographical Distribution of Data Centers in Pennsylvania

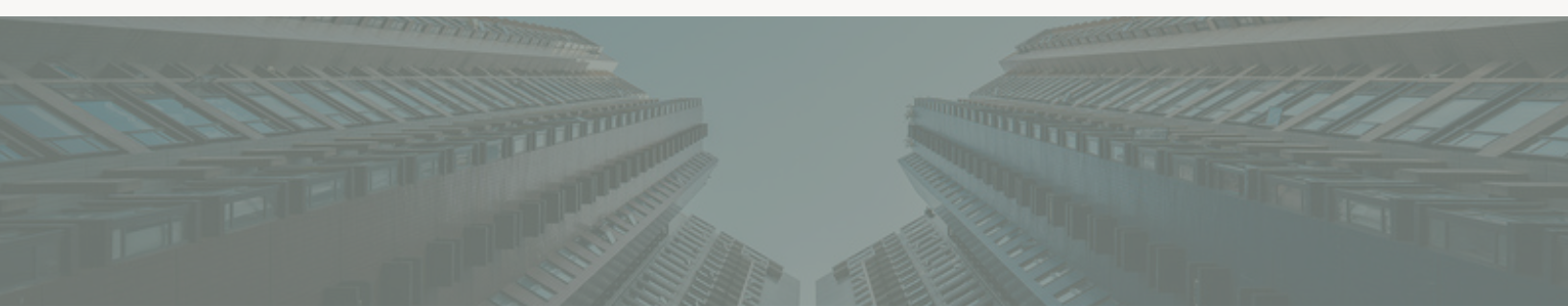
Understanding the Cost of Growth

Meeting growing electricity demand requires investments throughout the energy system. Utilities and grid operators must construct and maintain transmission lines, substations, distribution infrastructure, and generation resources that can meet new demand while maintaining reliability for existing customers. These investments can require billions of dollars in capital expenditures and often take years to permit and construct.

To support the new level of demand driven by data centers, utilities must invest in new transmission lines to move electricity from generation to high-demand areas, new substations to convert high-voltage power into usable electricity, and broad grid modernization and reliability upgrades. While these investments are critical for maintaining reliability, the costs are typically recovered through utility rates, meaning they are passed on to all customers regardless of who is driving the demand. One of the most significant questions facing policymakers is how these costs should be allocated. Under existing market structures, many infrastructure costs are recovered through rates paid by a broad base of customers throughout the PJM region. Small businesses and residential ratepayers absorb a disproportionate share of those indirect costs.

The Union of Concerned Scientists found that of the 130 data center transmission projects in PJM's territory in 2024, 124—or 95%—were paid for by ratepayers rather than the data centers that triggered them. Pennsylvania ratepayers paid roughly \$492 million in 2024 for data center infrastructure costs embedded in their monthly electric bills. Without legislative change, that cost trajectory will continue to fall on Pennsylvania SMBs.

The issue is not whether infrastructure investments are necessary—they are. The question is whether existing cost-allocation mechanisms appropriately assign responsibility to those creating the need for additional infrastructure.



Who Pays for Grid Expansion? The Role of PJM

At the center of the energy affordability debate are fundamental policy questions related to who should pay for the infrastructure necessary to support rapid growth in electricity demand. Understanding the answer requires understanding the institutional landscape that shapes electricity pricing in Pennsylvania.

Key Decision-Makers in Pennsylvania's Energy System

Energy affordability in Pennsylvania is shaped by a combination of government, regulatory, and private actors whose decisions collectively determine what businesses and households pay for electricity. The following table identifies the key institutional players, their roles, and their influence on energy costs.

Stakeholder	Level	Role	Function	Impact	Influence
PA Dept. of Environmental Protection (DEP) & Energy Programs Office (EOP)	State	Programmatic	Energy efficiency programs, emissions reduction, grantmaking	Low	Reduces demand through efficiency and renewable adoption.
PA Public Utility Commission (PUC)	State	Regulatory	Regulates utilities, approves rates, and oversees distribution	Medium	Approves rate increases, governs cost recovery
PA General Assembly	State	Legislative	Pass energy-related legislation	Medium	Sets long-term policy environment affecting supply mix and costs
Federal Energy Regulatory Commission (FERC)	Federal	Regulatory	Regulates wholesale markets and interstate transmission	High	Approves PJM rules that shape clearing prices

(Continued on next page)

Key Decision-Makers in Pennsylvania's Energy System [Continued]

Stakeholder	Level	Role	Function	Impact	Influence
U.S. Environmental Protection Agency (EPA)	Federal	Regulatory	Sets environmental and emission standards	Medium	Compliance costs are passed through to utilities and ratepayers
PJM Interconnection	Regional (RTO)	Market Design	Operates capacity markets, sets clearing prices, and manages the grid	High	Determines capacity auction prices and manages the interconnection queue
Utility Companies (PECO, PPL, Duquesne Light)	Private	Operational	Distribute electricity, maintain infrastructure	High	Pass wholesale and infrastructure costs to consumers
Power Generators	Private	Market Participant	Generate electricity, bid into PJM markets	Medium	Influence the supply curve and the clearing price through bids
Data Centers & Large Load Users	Private	Market Demander	Drive rapid demand growth	High	Increase marginal demand and raise the clearing price

At the state level, the Pennsylvania Department of Environmental Protection (DEP) and its Energy Programs Office (EOP) focus on energy efficiency, renewable energy development, and grid resilience, managing grants and environmental compliance. The Pennsylvania Public Utility Commission (PUC), the regulatory entity overseeing more than 8,400 utility entities across the state, including the 17 electric distributors, 446 electric suppliers, and 82 water/wastewater entities. They are responsible for approving utility rate increases, governing cost recovery, and protecting consumers.⁸ Pennsylvania has a deregulated electricity market, meaning the PUC oversees distribution while the PJM Interconnection manages the wholesale market. Pennsylvania's General Assembly sets the long-term policy environment through energy legislation, with key committees focused on energy, environmental resources, and consumer protection.

Key Decision-Makers in Pennsylvania's Energy System [Continued]

At the federal level, the U.S. Environmental Protection Agency (EPA) sets national compliance standards whose costs are passed on to utilities and ratepayers. The Federal Energy Regulatory Commission (FERC) regulates interstate electricity transmission and wholesale markets and has authority over PJM's rules. Critically, FERC can reject PJM rules only if they are deemed 'unjust, unreasonable, or unduly discriminatory,' not merely suboptimal.

PJM Interconnection, as the Regional Transmission Organization (RTO) serving 13 states and the District of Columbia, is arguably the most consequential factor for SMB energy costs. PJM designs and manages electricity and capacity markets that set consumer prices, manages the generator interconnection queue, and determines needed transmission infrastructure upgrades, all of which are funded through consumers' electric bills.⁹

The private utility companies – including PECO, PPL Electric Utilities, and Duquesne Light – distribute electricity and maintain infrastructure, passing wholesale and infrastructure costs directly to consumers. Power generators bid into PJM markets, influencing supply curves and clearing prices, while data centers and other large-load users drive the demand growth that is raising costs across the system.



How PJM's Capacity Market Works—and Why It Matters

PJM is required to ensure sufficient capacity to meet peak energy demands plus a margin for exceptional circumstances. To do this, PJM runs a clearing auction in which power plants and other energy resources submit bids to be available to provide electricity when needed. Generators whose bids are accepted 'clear' the market, and all accepted generators are paid the same clearing price, set by the highest offer that fulfills PJM's capacity requirement.⁷

The surge in data center demand is already having measurable and dramatic impacts on this market. The PJM capacity market saw an 833% price increase for 2025–2026, with data centers estimated to account for approximately 63% of that increase.¹¹

Because PJM operates as a regional grid, these cost increases are not isolated to the locations where data centers are built; they are spread across all customers in the system. This PJM capacity cost increase alone is expected to translate into a 10–20% rise in residential electricity bills and up to a 29% increase for businesses.¹²

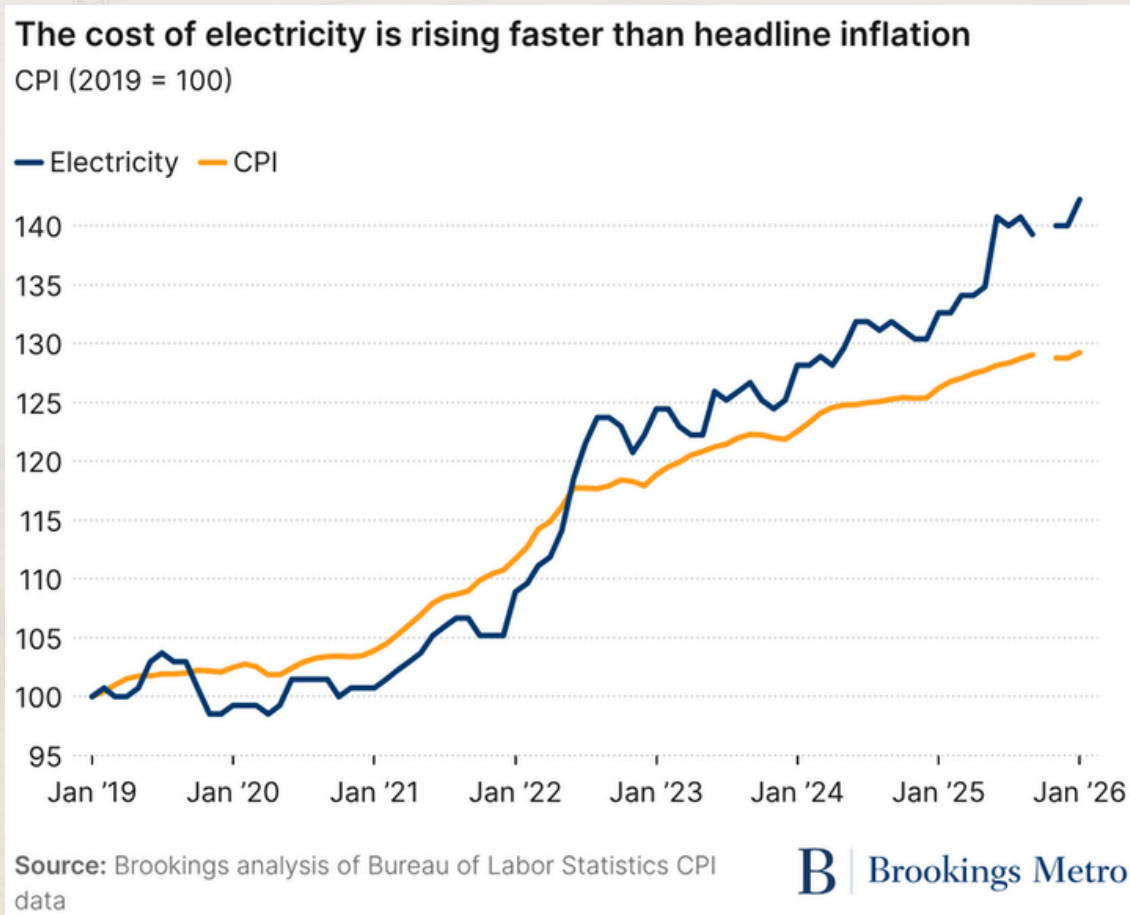


Figure 2: Electricity Cost Trends vs. Inflation

(Kane, 2026)

PJM's Minimum Offer Price Rule and Clean Energy

Compounding the capacity cost problem are structural rules within PJM that disadvantage cleaner, lower-cost energy sources. In June 2018, FERC found that PJM's Minimum Offer Price Rule (MOPR) was artificially suppressing capacity prices because some resources receiving state subsidies could offer prices below their actual cost. FERC ordered PJM to expand MOPR, the minimum price a resource can bid into the capacity market, to apply to a broader set of resources, including renewables such as wind and solar, as well as battery energy storage.¹³

The practical consequence has been that cleaner energy resources capable of delivering electricity at lower prices were either blocked from capacity auctions or forced to bid at higher prices. Auctions cleared using bids from older fossil fuel plants, raising the overall clearing price and making electricity bills more expensive.

While a 2021 shift to a 'focused MOPR' created more flexibility for clean energy projects, the structural bias persists. The current energy source mix in PJM as of late 2025 remains 66% fossil fuels, with only about 7% from renewables, and coal still accounts for 20% of PJM's electricity generation. Notably, PJM produces more new energy from polluting sources than any other RTO in the country.

Adding to this, PJM's interconnection queue, which processes requests for new generation projects, has been slow to approve renewable connections that are otherwise ready to proceed. Grid reliability concerns have led PJM to favor gas and nuclear generation. PJM's Reliability Resource Initiative, intended to fast-track 51 new generation projects, selected 39 gas plants, none of which are solar or wind projects.¹⁴

66%

current fossil fuel percent usage in
PJM's energy source mix.

7%

current renewable energy percent
usage in PJM's energy source mix.

PJM Overforecasting and Excess Costs

A further systemic problem is PJM's pattern of overestimating future electricity demand. An economic analysis commissioned by the Natural Resources Defense Council and the Sierra Club found that PJM overcharged customers by up to \$4.4 billion per year beyond what was needed for reliability, due to peak load forecasts that were consistently too high, often by more than 10,000 megawatts, reaching an excess of 18,000 megawatts in 2021.¹⁵

The analysis concluded that PJM's forecasting model failed to capture the well-established trend toward energy efficiency driven by improvements in appliances, lighting, buildings, and industrial processes. As a result, PJM over-procured generating capacity, with excess capacity paid for by consumers rather than released when reliability requirements were revised downward. PJM's year-round capacity requirement further inflates prices by barring suppliers from offering commitments for shorter peak periods, steering payments toward fossil-fired plants, and increasing both pollution and costs.

At the same time, the Trump Administration has delayed some coal plant retirements to meet increased demand from data centers, affecting plants that are costly to refurbish (up to \$1.3 billion for facilities built in the 1970s and 1980s) and have seen operating costs rise 28% between 2021 and 2024. These costs, and the related environmental costs, are ultimately passed on to consumers.

\$4.4 billion

Amount PJM overcharged customers
beyond what was needed for reliability.

Why Small Businesses Are Particularly Vulnerable

Small businesses face structural disadvantages within the electricity market that limit their ability to respond to rising costs.¹⁶ Unlike large corporations, SMBs typically lack access to wholesale electricity markets or the ability to negotiate long-term power contracts at lower rates. Many also lack the capital to invest in on-site generation or energy efficiency upgrades that could reduce their dependence on the grid.

Energy is a non-discretionary operating expense. It cannot simply be avoided when prices rise. With thinner profit margins and limited cash reserves, even modest utility increases can have a significant impact on financial stability. Larger corporations and data centers, by contrast, have dedicated energy procurement teams, the ability to negotiate electric contracts, and backup generation systems that small businesses lack.

American small businesses and individual ratepayers are subsidizing the utility needs of some of the largest publicly traded companies in the world. Top AI firms have a market value seven times that of the entire S&P 500 Utility Sector.¹⁷ Yet in PJM's territory, ratepayers absorbed the transmission costs for 95% of data center projects in 2024.¹⁸

A 2026 national survey¹⁹ found that **81% of small business owners reported rising utility costs over the prior year.** As a result of these rising costs:

65%
of small businesses
Increased their prices on
goods or services.

37%
Delayed business
investments.

20%
Froze hiring.

8%
Laid off employees.

Why Small Businesses Are Particularly Vulnerable [Continued]

The impacts are already being felt broadly and the national stakes are significant: there are approximately 33.2 million small businesses in the United States, and nearly half of all Americans are employed by small businesses.

An 8% layoff rate among small businesses would translate to nearly five million Americans losing jobs, an increase of approximately 2.9 percentage points in the national unemployment rate with cascading effects on household finances, consumer spending, and the broader economy.²⁰

Pennsylvania's 1.1 million small businesses employ approximately 2.5 million workers in the state, equal to about half of the state's private workforce. SMBs account for 99.6% of all businesses in the Commonwealth. An 8% layoff rate in Pennsylvania would mean a loss of 200,000 jobs that would create a devastating impact on the state's small business community. [Continued on next page].

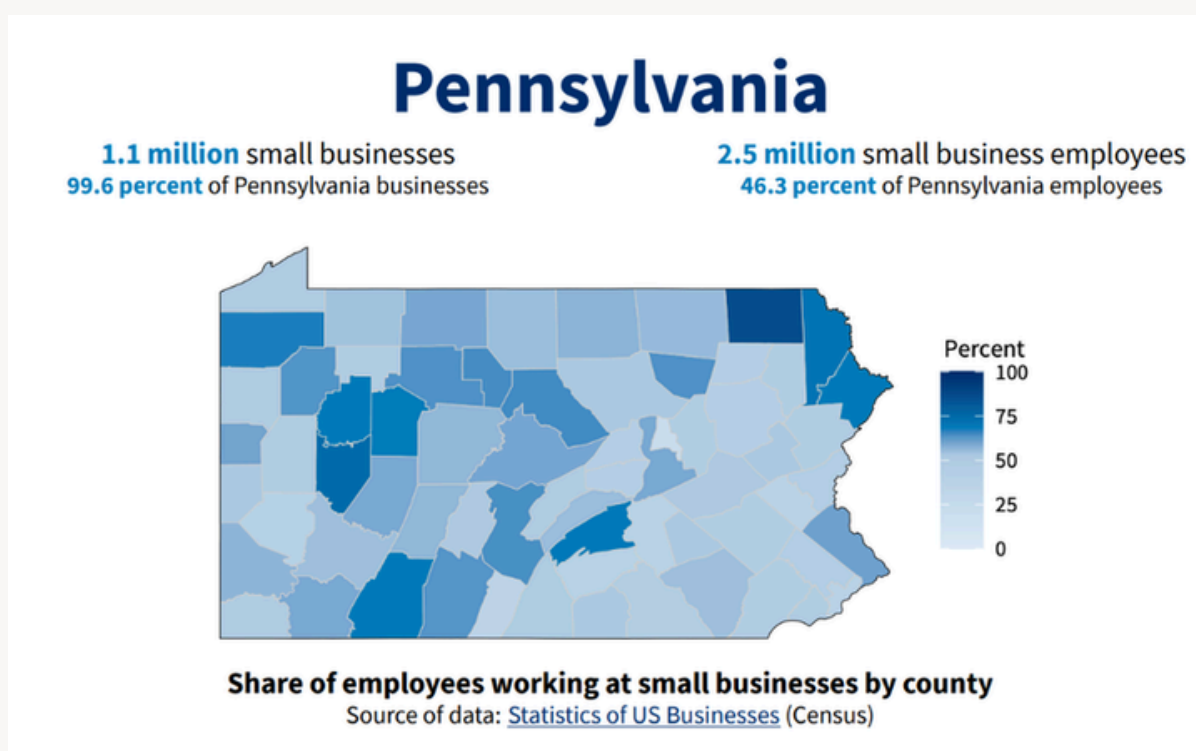


Figure 3: Pennsylvania's Small Business Landscape.

Uneven Impacts Across Pennsylvania

The impacts of rising energy costs are not distributed equally across the Commonwealth. Disparities across regions, industries, and community types mean that some Pennsylvania businesses and residents bear a disproportionate share of the burden.

Rural Communities and Agriculture

Many rural communities face unique challenges related to energy affordability. Agricultural operations rely heavily on electricity for irrigation, refrigeration, processing equipment, storage facilities, and livestock operations. As energy costs rise, these businesses face disproportionate financial pressure. Data center development compounds the challenge in multiple ways.

In the past several months, Pennsylvania residents and businesses have experienced a \$78.3 million monthly increase in energy costs, adding up to nearly \$1 billion annually.²¹ In 2025, approximately 24% of Pennsylvanians could not afford their energy bill at least once, and 30% were cutting back on food and medicine in order to pay them.²²

The geographic disparities are stark. Union County, a rural area with a significant agricultural industry, saw a 37.9% increase in electricity prices within the year. Tioga County—also rural, with strong agriculture and natural gas sectors—saw an even sharper increase of 58%.²⁴ By comparison, Pittsburgh saw a 25% increase over the same period.²⁵

\$1 billion

Total annual energy costs for
Pennsylvania residents & businesses.

37.9%

Annual increase in electricity prices for
Union County, PA.

Rural Communities and Agriculture [Continued]

Data center development in agricultural areas creates additional pressures beyond energy costs. The construction of data centers on rural land directly eliminates farmland, particularly affecting smaller farms that lack the scale to absorb the loss. Once farmland is converted for data center use, it is generally permanent.²⁶

Data centers consume large volumes of water, competing directly with agricultural needs. They also create air, land, and water quality concerns through development and production processes. These business and policy concerns reflect systemic tensions between industrial-scale digital infrastructure and agricultural communities.²⁷

Stakeholders have also raised concerns about transparency. Many residents report that, regardless of their participation in public meetings, decisions about data center development are made without meaningful public input.²⁸ Community members in Pennsylvania have described feeling 'up against a brick wall' when attempting to participate in board meetings about data center provisions.²⁹

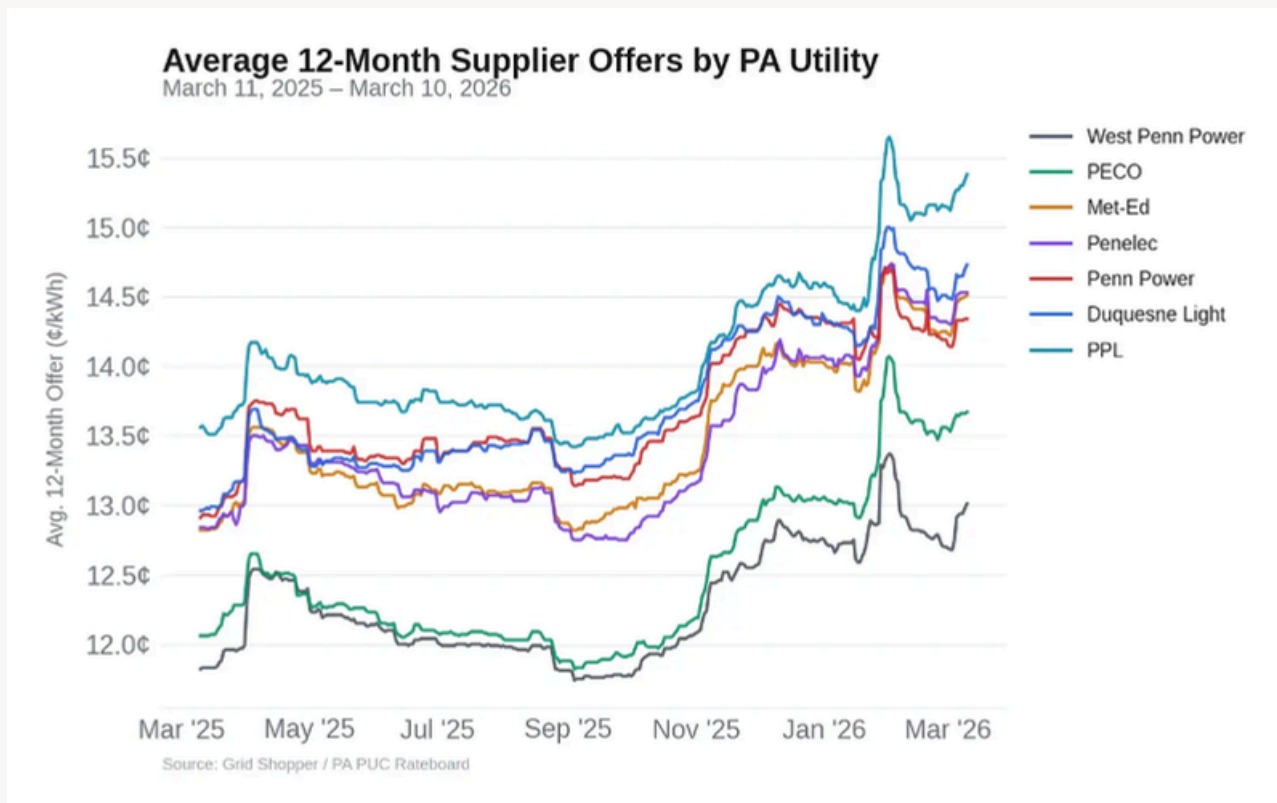


Figure 4: Electricity Supply Price Increases by Utility³⁰

Disadvantaged Communities

Energy affordability challenges are often compounded in lower-income communities. Disadvantaged communities frequently have older, lower-capacity infrastructure, making it harder to accommodate increasing electricity demand.³¹ Because land costs are lower in these areas, they attract more private investment with high electricity demands than middle-income neighborhoods experience, which increases the strain on already fragile infrastructure.

Research documents the disparities clearly. Disadvantaged communities are twice as likely to have low-voltage circuits and, in California, are 50% more likely to experience prolonged power outages.³² A study in Michigan found that a community that was 100% made up of Black, Indigenous, and People of Color (BIPOC) experienced 120 more residential disconnections than a community without a BIPOC population at the same income level.³³ Lower-income neighborhoods experience more disconnections overall, meaning that communities of color that are also low-income face the compounding challenge of poor energy infrastructure and an inability to afford consistent service.

2x

Disadvantaged communities are twice as likely to have low-voltage circuits.

50% more likely

Likelihood that disadvantaged communities are experiencing prolonged power outages (Benchmark: California)



Disadvantaged Communities [Continued]

The consequences for residents and business owners are severe. Inability to afford energy can force residents to forgo heat, resulting in cold, damp housing with documented impacts on respiratory and mental health, as well as sleep.³⁴ Households face impossible choices between energy bills and food or medicine, which in turn impacts local businesses. When businesses in these communities face energy insecurity or disconnection, the impacts ripple through the local economy.

Environmental burdens further compound the problem. Even without data center development, BIPOC and low-income communities experience polluted drinking water and poor air quality at higher rates and typically lack the funds to remediate these conditions, including exposure to chemicals like PFAS.³⁵ The addition of data center infrastructure—namely its demands on land, water, and the electrical grid—imposes new costs on communities already managing serious environmental and economic stress.

The solution to these structural inequities requires, among other things, investment in renewable energy that can reduce dependence on fossil fuels, which have long enjoyed tax and other financial subsidies.³⁶





Policy Options and Solutions

Pennsylvania policymakers have several tools available to address energy affordability concerns while preserving economic growth opportunities. The most effective approach combines upstream cost-allocation reforms that require data centers to pay their full system costs with downstream protections for small businesses through targeted relief and equitable rate design. Without such interventions, Pennsylvania risks embedding structural inequities in its energy systems that small businesses cannot afford to absorb.

Cost-Causation Pricing

Cost-causation principles seek to align infrastructure costs with the customers creating the need for them. Under this approach, large-load customers would bear a greater share of the costs associated with serving their facilities, rather than spreading those costs across all ratepayers. This reform is foundational. Until data centers pay costs proportional to the demand they impose, other relief measures will address symptoms rather than causes.

Upfront Grid & Transmission Payments: House Bill 1834

Pennsylvania State Representative Robert Matzie has proposed House Bill 1834, which would require data centers to pay upfront for the infrastructure upgrades needed to accommodate their energy demands. HB 1834 would also require utility companies to report accurate future prices for smaller customers, reducing the financial burden on ratepayers. The Bill passed the Pennsylvania House in March 2026 and remains pending in the Senate. [Continued on next page]

Upfront Grid & Transmission Payments: House Bill 1834

[Continued]

HB 1834 also references the Lancaster community benefit agreement (CBA) and would mandate CBAs for data centers above a defined megawatt threshold. Although an important step, the current draft of HB 1834 does not include funding for municipalities or small businesses to access the technical assistance needed to negotiate or enforce those agreements. The implications of that omission for negotiating and enforcing agreements are examined in the Community Benefit Agreements section below.

A comparable federal measure, the Stopping Hikes in Electricity from Large Load Demands (SHIELD) Act, introduced in Congress by Representatives Mike Levin (D-CA) and Kathy Castor (D-FL), would similarly protect families and small businesses from rising electricity costs driven by large energy users.

Large-Load Rate Structures and Targeted Taxation

Equitable rate structures can support innovation while protecting small businesses and consumers. For instance, regulators could establish separate rate classes for exceptionally large energy users to better reflect their impacts on infrastructure and capacity markets. Data centers would pay the full cost of the demand they impose on the electricity system rather than benefiting from pricing structures designed for typical commercial users.

Oregon recently enacted the POWER Act, which establishes a dedicated rate class for high-load data centers (defined as customers with peak demand of 20 megawatts or more) and requires them to fully cover the costs of their infrastructure buildout. The legislation also includes Cost-Responsibility Contracts that require long-term service agreements of at least 10 years and mandate annual reporting of electricity and water usage for community transparency and grid planning.³⁷ Pennsylvania State Senator Katie Muth has signaled interest in proposing similar legislation.

Alternatively, local policymakers could implement data center-specific taxes or fees to recover broader public costs, with corresponding tax relief or rebates for small businesses to offset their increased utility burden.



Community Benefit Agreements

Community benefit agreements (CBAs) are binding contracts in which a developer commits to specific, measurable obligations to a host community. CBAs have been used since the 1990s and are among the few mechanisms that translate community demands into legally enforceable developer commitments.³⁸

As of July 2026, the only data-center community benefit agreement we identified nationally is the one executed in November 2025 between the City of Lancaster and the developers of the Lancaster AI data-center campus.³⁹ Based on public reporting, the Lancaster agreement includes renewable energy commitments, water withdrawal provisions, decommissioning requirements, and a substantial community fund, negotiated without the typical package of local tax abatements.⁴⁰ This puts Pennsylvania in a unique position. While other states are resorting to moratoriums on data center development (with at least 63 local moratorium actions and 12 state moratorium bills filed in the current session), Pennsylvania has a working model for negotiated partnership.⁴¹

1 CBA

As of June, 2026, the Lancaster, PA AI data-center campus is the first Community Benefit Agreement on record nationally.



Community Benefit Agreements [Continued]

However, Lancaster also reveals what first-generation CBAs do not solve. Enforcement rests entirely with the City: the agreement creates no standing monitoring body, makes drawing a letter of credit the City's sole remedy where one is posted, and, critically, bars third-party enforcement, so residents and small businesses have no standing to compel performance.⁴² Reporting is limited to the owners' own annual clean-energy certification to City Council, not independent verification, across a twenty-year term governing multi-decade infrastructure.⁴³

Most fundamentally, the agreement addresses the facility's local externalities—noise, air, water, lighting, a community fund—but is silent on the ratepayer cost-shifting at the center of this paper; its clean-energy commitment can be satisfied with nuclear power and with renewable energy credits sourced anywhere in the country, so it does not necessarily add local generation or relieve the grid and capacity pressures borne by Pennsylvania SMBs.⁴⁴ CBAs must therefore be understood not merely as legal documents but as the basis for negotiating what communities actually need, and that requires funded technical-assistance capacity and a seat for the SMBs who ultimately absorb the rate impacts.

The Pennsylvania Office of Small Business Advocate (OSBA), the only state office of its kind in the nation, self-funded through utility assessments, provides a proven foundation for expanding this capacity. In fiscal year 2024–2025, OSBA secured \$264 million in utility rate savings for businesses with 250 or fewer employees through active participation in 222 rate cases. In March 2026, OSBA's intervention in a precedent-setting PPL Electric settlement created a new large-load rate class requiring data centers to pay their own infrastructure costs.

Scaling the CBA model statewide would mean building on this proven institutional capacity, giving communities negotiating power at the front end of development decisions, not just rate-case intervention at the back end.⁴⁵

Onsite and Distribution Energy Generation

A parallel and complementary strategy is expanding on-site and distributed energy generation that reduces SMB dependence on the shared grid. That could, if required of data centers, substantially reduce the cost socialization that is driving rate increases.

Pennsylvania public school districts provide documented proof of concept at scale.⁴⁶ The Midd-West School District in Snyder County became Pennsylvania's first school district to offset more than 100% of its electricity usage by installing a 2.56-megawatt system through a 28-year power service agreement at \$0.039 per kilowatt-hour. That is less than one-third of what PPL currently charges small business customers for supply alone, before delivery charges, which saves the district more than \$230,000 annually and generates net revenue through net metering.⁴⁷

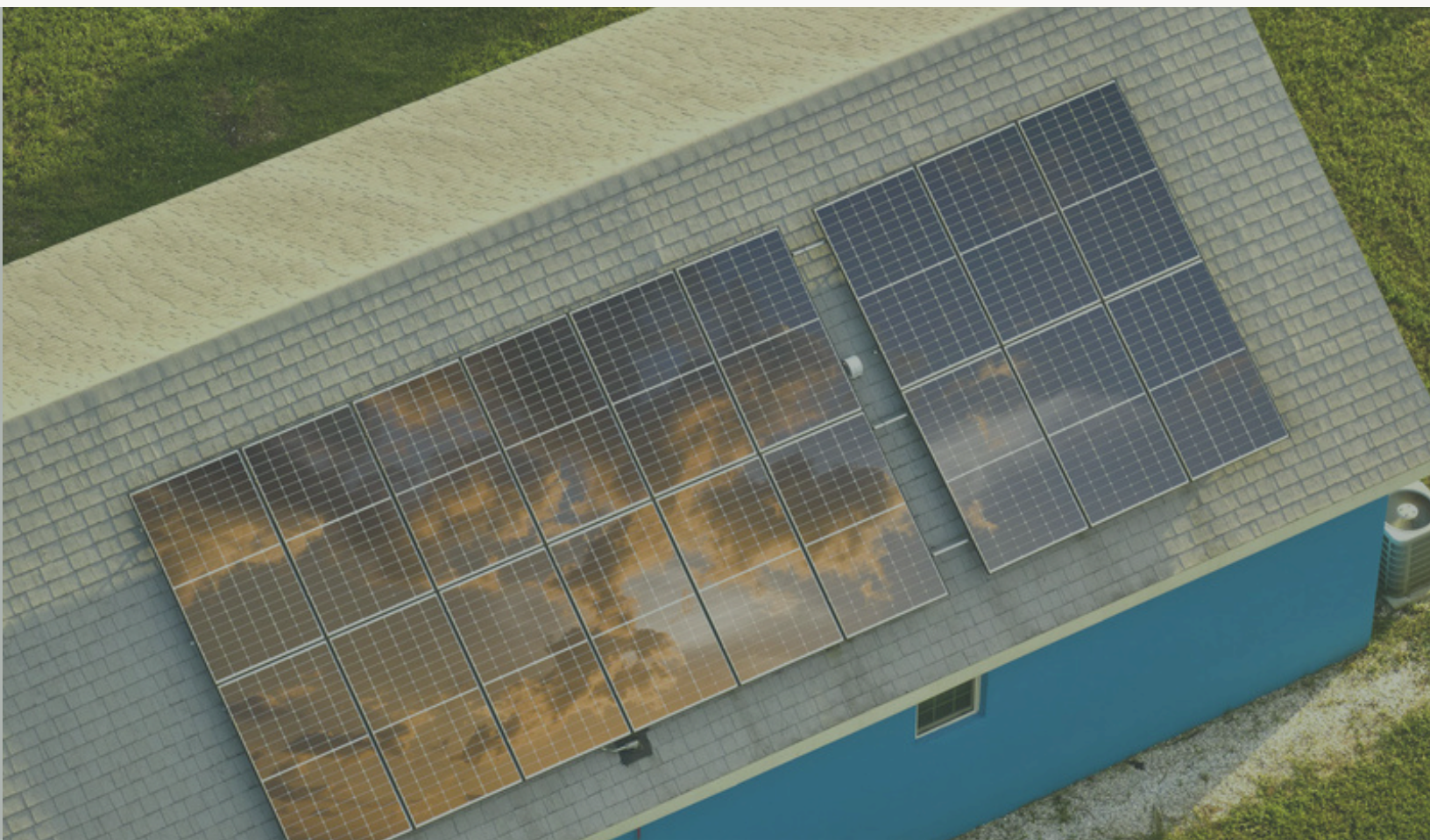
The Cornell School District in Allegheny County achieved a 100% solar offset through a 1.3-megawatt rooftop system under a 30-year power purchase agreement projected to save nearly \$2.5 million over the life of the contract.⁴⁸ Finally, Carlisle Area School District in Cumberland County installed the largest PA public school solar array, with 5,178 panels on 6.2 acres.⁴⁹ Seventy-four Pennsylvania schools have received Solar for Schools grants as of May 2025.⁵⁰

The key analytical bridge for SMBs is scale. A medium-sized Pennsylvania manufacturer or warehouse consuming 500,000 to 2 million kilowatt-hours per year falls within the same energy consumption range as a mid-sized school district.⁵¹ The same power purchase agreement structures, Solar Renewable Energy Credits (SRECs), and federal clean energy investment tax credits—including deductions for energy-efficient commercial building property and advanced energy projects covering up to 30% of qualified project costs—are available to commercial operators, often through the same solar developers who built the school projects.⁵² Distributed rooftop solar projects bypass PJM's congested grid queue entirely because small-scale installations are exempt from the multi-year approval process that bottlenecks large-scale renewable projects.⁵³ [Continued on next page]

Onsite and Distribution Energy Generation [Continued]

At a larger scale, Carnegie Mellon University (CMU) provides a Pennsylvania-based proof of concept comparable to small and medium data centers.⁵⁴ CMU's Pittsburgh campus consumes roughly 125 million kilowatt-hours annually, a scale comparable to a 14–18-megawatt data center at moderate utilization.⁵⁵ It has achieved the equivalent of 100% renewable electricity through a multi-year wind power purchase agreement and a 110,000-square-foot on-site solar array at Mill 19, along with district energy partnerships including the Bellefield Boiler Plant cooperative thermal system.⁵⁶

The tools CMU used are the same tools available to data center developers operating in Pennsylvania.⁵⁷ What is absent is a policy requirement that Pennsylvania-sited data centers use these tools rather than drawing from the shared grid at ratepayers' expense. In 2025, Amazon, Meta, Google, and Microsoft accounted for 49% of corporate power purchase agreement activity, demonstrating that the technical capacity exists.⁵⁸ These policy gaps remain are an ongoing challenge.



Incorporating On-Site Battery Storage to Increase Use of Renewables

Hanwha Data Centers, a company focused on renewable-powered "energy campuses" to support the hyperscaling of AI data centers, conducted an analysis of renewable energy integration in AI data centers, highlighting how engineering advances are overcoming the traditional mismatch between intermittent renewables and data centers' need for constant, uninterrupted power. On-site battery storage can now bridge this mismatch, storing renewable energy for use during low-generation periods.

Hybrid systems pairing solar and wind, which may also be on the same site as the data center, along with self-contained microgrids that can remove the data center from the main grid during outages, are also gaining traction. Hanwha's analysis concludes that well-designed microgrids can cut overall energy consumption by 20 to 30% compared to similar grid-dependent facilities. Specifically on battery storage, the analysis frames it as a core infrastructure element rather than a supplement, supporting not just renewable integration but also frequency regulation, peak shaving, and revenue generation for data center operators.

Finally, Hanwha's analysis rightly ties much of this momentum to policy. Federal tax credits (ITC/PTC) make the economics of renewable projects more attractive. State rules, including renewable-procurement mandates in New York and Michigan, and Virginia's tax-exemption proposals tied to efficiency standards, are starting to shape how and where data centers source their power.⁵⁹



Pennsylvania's Active Legislative Pipeline

Pennsylvania House Bill 2650 would write Governor Shapiro's voluntary GRID (Governor's Responsible Infrastructure Development) Standards into law by overhauling the data-center sales-tax break. Instead of an automatic exemption, a developer would have to earn "GRID certification" from the Department of Revenue by meeting five standards – energy affordability, transparency, community engagement, workforce development, and environmental protection – including a "bring your own power" expectation, and then prove ongoing compliance through annual reporting, with benefits revocable if they fall short.

The bill passed the House in a bipartisan 134–68 vote on June 24, 2026, and Senators John Kane and Steve Santarsiero announced companion legislation shortly after; the measure headed to the Republican-majority Senate. Importantly, the standards would remain voluntary: certification is the price of the tax break, not a universal mandate, so a developer can still build without it by forgoing the incentive. With the Senate considering the measure, this is a pivotal window for data center accountability standards in Pennsylvania.

Several bills currently in the Pennsylvania General Assembly offer opportunities to advance energy affordability for SMBs:

Table 1. Pennsylvania's Active Legislative Pipeline

Data center and energy-affordability legislation, 2025–26 session, as of July 2026

Bill	Sponsor	What it would do	Status
HB 1834 — Data Centers & Consumers	Rep. Matzie	Requires data centers to pay their own upfront infrastructure costs and to enter community benefit agreements.	Passed House — in Senate committee
HB 2650 — GRID Standards	Rep. Webster	Ties the data-center sales-tax break to GRID certification: energy affordability, transparency, community engagement, workforce, and environmental standards, with annual compliance.	Passed House — in Senate
HB 2264 — Virtual Power Plant Program	Rep. Davidson	Directs electric utilities to establish virtual power plant programs.	In House committee — hearing held

continued on next page.

Pennsylvania's Active Legislative Pipeline [Continued]

HB 2264 — Virtual Power Plant Program	Rep. Davidson	Directs electric utilities to establish virtual power plant programs.	In House committee — hearing held
HB 2223 — Advanced Transmission	Rep. Fiedler	Requires advanced transmission technologies in new lines to lower electric bills.	In House committee — hearing held
HB 2224 — Utility Profit Limits	Rep. Fiedler	Caps excessive utility profits (return on equity) to protect ratepayers.	In House committee
HB 2131 — Retail Market Fairness	Rep. Boyd	Promotes fairness in Pennsylvania's retail electricity market.	In House committee
HB 1457 — Alternative Ratemaking	Rep. Probst	Revises alternative ratemaking rules for utilities.	In House committee
PRESS & PACER — Clean energy & carbon pricing	Reps. Otten & Abney	Set a 35% clean-energy standard by 2035 and a carbon-pricing program returning 70% of revenue to customers; projected ~\$252M in ratepayer savings and ~15,000 jobs.	Introduced — pending

Reading the pipeline: Bills shaded green have passed the House and now await Senate action — the current decision point. Bills in gray remain in the House committee. PRESS and PACER are introduced proposals pending in the General Assembly. Status as of July 2026, per the Pennsylvania General Assembly (palegis.us); sponsors and descriptions per bill text.

Related measures: In the same June 2026 House-passed cluster, HB 2198 (Vitali) would repeal the data-center tax exemption. While HB 2650 conditions the tax break on GRID certification, HB 2198 would repeal it outright. HB 2496 (Friel) would give municipalities a 180-day siting pause. Both are now in the Senate and bear on data center accountability more broadly than on energy affordability directly.

Additionally, the proposed Pennsylvania Reliable Energy Sustainability Standard (PRESS) and Pennsylvania Climate Emission Reduction (PACER) Programs—introduced by Representatives Otten and Abney—would require 35% of utility energy to come from wind, solar, and small modular reactors by 2035, and establish a carbon pricing mechanism that would return 70% of revenues to customers as rebates. If adopted, PRESS and PACER are projected to save ratepayers an estimated \$252 million and create nearly 15,000 jobs.⁶⁰ As of July 2026, both legislative proposals are pending in the General Assembly.

Small Businesses Targeted Relief

While structural reforms are pursued, immediate support for small businesses facing rising electricity costs is essential. Options include:

- Targeted energy bill assistance programs, providing direct and timely support;
- Direct rebates or credits offsetting increased utility costs;
- Refundable tax credits for energy expenditures above a baseline;
- Rate caps for small business customers to limit exposure to capacity market surges;
- Expanded energy efficiency grants and low-cost loan programs through the PA DEP Small Business Ombudsman (currently offering grants up to \$12,000 and loans up to \$100,000 at 2% interest);⁶¹
- Demand-response participation opportunities; and/or small business energy rebates tied to efficiency and renewable energy investments.





Recommendations

Based on the evidence reviewed, Pennsylvania policymakers should consider the following actions, organized across funding and transparency, standards and representation, and participation and enforcement:

Funding and Transparency

1. **Establish a community fund for independent technical assistance.** Amend HB 1834 to set aside a defined percentage of any negotiated community benefit fund—or any ratepayer rate-base increase attributable to large-load interconnection—for independent community and SMB technical assistance. The PA DEP Small Business Ombudsman's existing infrastructure could be expanded as a model. Without funded capacity to negotiate, a mandate to negotiate CBAs provides limited access without meaningful agency.
2. **Require notice and a public comment period for large infrastructure projects.** Build on HB 1834's PUC contract review requirement by mandating that any project seeking ratepayer-funded infrastructure above a defined cost threshold pre-file its community benefit terms in the PUC docket before approval. Transparency at the front end of a proceeding is less costly than litigation and avoidable harms on the back end.

Standards and Representation

3. **Extend reform-oriented conditions across the energy sector.** Apply standard conditions to all large-scale energy projects receiving public subsidies, tax abatements, or rate-based treatment: benchmarks for upgrades to substandard transmission lines, local hire and procurement mandates, enforceable performance reporting, environmental protections, and clawback provisions for unmet commitments.⁶²
4. **Establish a state-level intermediary for CBA negotiation and monitoring.** A mandate to develop CBAs without intermediary support may promote unenforceable agreements. Building on the Office of Small Business Advocate's proven infrastructure, create an independent technical assistance office or designate staff to provide resources and training for negotiating, implementing, and monitoring community benefit agreements.
5. **Require renewable energy procurement standards for data centers.** Establish a defined clean-energy procurement requirement for data centers operating in Pennsylvania, paired with incentives for co-located battery storage, hybrid renewable systems, and microgrids. Tying these standards to interconnection approval would ensure new data center load brings proportional clean generation, helping offset the capacity and transmission costs now passed to small businesses and ratepayers.⁶³

Participation and Enforcement

6. **Seat SMBs in rate-case intervenor coalitions.** Direct a portion of public intervenor funding in rate proceedings to coalitions that include small and mid-sized business representation. That would ensure that SMBs have a voice, not only in rate cases, but in the siting and infrastructure decisions that determine whether rate impacts occur in the first place.
7. **Build enforcement capacity into every mandate.** Any Community Benefit Agreement or subsidy condition should carry a named monitoring entity, a public reporting cadence, and a penalty structure for non-performance. Designated personnel providing technical assistance within OSBA would be well-positioned to oversee compliance.

Additional Policy Actions

- **Improve transparency** regarding infrastructure costs associated with large-load development.
- **Evaluate cost-allocation** mechanisms to ensure fairness across customer classes.
- **Expand support** for small business energy efficiency investments and distributed solar adoption.
- **Protect affordability** for rural, agricultural, and disadvantaged communities through targeted programs.
- **Coordinate economic development and energy planning** efforts to avoid unintended cost burdens.
- **Advance PRESS and PACER** to increase the renewable energy share and return carbon pricing revenue to ratepayers.
- **Encourage PJM reform** to improve peak load forecasting accuracy and reduce overcharging of ratepayers.
- **Reform PJM's interconnection queue** to accelerate approval of renewable generation projects.



Conclusion

Pennsylvania stands at an important crossroads in its energy future. While the rise of artificial intelligence and data center development presents significant economic opportunities, it also introduces profound challenges related to affordability, reliability, environmental impact and fairness that will shape the Commonwealth's economy for decades.

Small and medium-sized businesses are essential to Pennsylvania's economic fabric, supporting jobs, local investment, and community vitality across every region of the state. Yet they are being asked – without their consent and often without their knowledge – to subsidize the energy infrastructure of some of the world's most valuable companies.

Fortunately, Pennsylvania has more tools available than most states. The Pennsylvania Office of Small Business Advocate provides a nationally unique institutional model for protecting SMBs in utility proceedings. The Lancaster community benefit agreement provides a working model for data center accountability. The Solar for Schools program demonstrates that distributed renewable energy is financially viable at scale. And an active legislative pipeline offers multiple entry points for reform. The Pennsylvania Sustainable Business Network, the American Sustainable Business Network and many of its business allies are poised to support SME engagement.

The goal has never been to prevent growth. Rather, it is to ensure that growth strengthens Pennsylvania's economy without placing disproportionate burdens on the households and businesses that depend on affordable, clean and reliable energy. The question Pennsylvania policymakers must answer—and must answer soon—is at whose expense and for whose benefit.



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American Sustainable Business Network (ASBN) amplifies the collective voice of sustainable business to lead the way to a regenerative economy that is stakeholder-driven, just, and prosperous. As a multi-issue, membership organization advocating on behalf of every business sector, size, and geography, ASBN works to advance its mission to inform, connect, and mobilize sustainable business leaders, transforming the public and private sectors toward a just and regenerative economy.

Pennsylvania Sustainable Business Network

Pennsylvania Sustainable Business Network (PASBN) unites businesses, policymakers, and community leaders across the state to advance a more just and equitable economy for all Pennsylvanians. As a state affiliate of the American Sustainable Business Network, PASBN is guided by shared values of sustainability, justice, collaboration, innovation, and impact, and works to inform, connect, and mobilize sustainable business leaders throughout Pennsylvania. PASBN's work is organized around four core objectives: advocacy and engagement, partnerships and action, thought leadership, and strategic communications.

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