

A Plan for American Electricity Affordability

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Introduction and summary

In 2025, electricity prices rose at more than twice the rate of overall inflation and were one of the fastest drivers of inflation, outpacing other basic expenses including groceries, vehicles, and medicine.¹ Residents in some states experienced electricity price increases of more than 10 percent between January 2025 and January 2026, including in Washington, Oklahoma, Ohio, and Maine.² After more than a decade of electricity prices rising at the rate of inflation, American families are now struggling to keep up with increasing costs. In 2024, utility companies shut off power 13.4 million times.³ Over the past 12 months, 66 percent of Americans report increases in their electricity bill.⁴ Utility debt is on the rise, roughly 1 in 6 households are behind on their bills, and low- and moderate-income households are spending up to 10 percent of their income on energy.⁵

This problem will continue to worsen: Under current policies, nationwide average residential electricity rates are projected to increase by nearly 18 percent before the end of this presidential term and are on track to increase by more than 37 percent before the end of the next presidential term.⁶ In a recent poll, 65 percent of voters identified utility prices as a top cost concern, second only to rising food and grocery costs. And 70 percent of respondents reported changing their habits over the past year because of increasing utility and energy costs.⁷

The direct causes of electricity price hikes include not only the high costs of natural gas to fuel power plants but also the expenses of rebuilding after climate disasters, replacement costs for aging electric grid components, and surging demand forecasts for electricity from artificial intelligence (AI) data centers.⁸ All of this comes as utilities and energy companies are reporting strong earnings and growing profits, even as electricity rates are rising.⁹ After decades of stagnant expansion and deferred upgrades to the electricity system, the country needs to meet increasing demand by expanding the supply of energy with more new sources of power and building a better, bigger electric grid.¹⁰

The U.S. economy is growing, and its electric grid must grow with it. In a scenario of rising AI data center demand and the increasing electrification of the modern economy, modeling from the Rhodium Group forecasts a need for almost 50 percent more power generation in the next 15 years.¹¹ That equates to an additional 1.8 terawatts of new energy capacity by 2040.¹² To keep utility bills affordable and sustain the economy of the future, the United States needs more energy—and fast.

Until 2025, the United States was on a path to lower electricity costs over time by building new clean energy, including wind, solar, and batteries.¹³ Not only are these clean sources of power, but they are now also often the cheapest and fastest to build.¹⁴ Federal investments were building an electricity system that would be less expensive, more resilient, and would help solve climate change instead of cause it.

Now, at a time when the grid needs far more energy—not less—the Trump administration is blocking clean energy projects, forcing ratepayers to prop up expensive coal power plants, driving up costs and uncertainty through its sweeping tariffs, and repealing federal investment incentives.¹⁵ This disastrous set of policies will block almost half of the new electricity generating capacity that would have been added over the next decade, including significant amounts of new natural gas and new clean electricity generating capacity.¹⁶

The Center for American Progress proposes an American Electricity Affordability Plan to expand the supply of energy by building more capacity to generate electricity and by building better grid infrastructure to ensure the American people can afford to heat and cool their homes. This includes major reforms to break down permitting and siting barriers that obstruct or slow good decision-making, boost public and private investment, and realign incentives for utilities to build the most cost-effective projects rather than the costliest.

Rather than blocking wind and solar as the Trump administration is attempting to do, the United States must build a diverse portfolio of energy resources for its power system, including energy sources such as wind and solar, which are the most affordable and fastest-to-deploy power sources today, as well as resources that can lower total system costs through lower generation costs, little to no fuel costs, and increased efficiency. Natural gas is a significant part of the current energy mix, but due to the high costs of operation and the long lead times for building new power plants, a diverse array of clean energy is the primary path toward a more modern, reliable, and low-cost grid for all Americans.¹⁷

While new grid infrastructure and new power generation capacity are under construction, new policies are needed to protect residential consumers from today's rising prices and to require that the rapid and large build-out of industries such as data centers pay their fair share of the sudden costs of their development. CAP proposes three new policy approaches:

1. **A program to expand supply by building a better, bigger power system**, including reforms to accelerate permitting of new transmission and generation capacity, align utility incentives for lowering costs, and make public investments in manufacturing and construction of both clean energy and grid infrastructure
2. **A rate relief fund** to provide public funding for cost-effective electricity system improvements to states that choose to freeze or lower residential electricity rates for four years, immediately taking the cost pressure off households while the better, bigger power system is built
3. **A national AI data center fair share policy** that sets standard rules for all data centers to pay their fair share of the costs of the energy and grid infrastructure they impose on the electricity system and makes sure residential consumers do not foot the bill while avoiding creating an incentive for data centers to be built off-grid

This combination of immediate relief and investment offers a solution that lowers electricity system costs and delivers savings directly to residential consumers. Freezing rates for four years would spare residential consumers an estimated \$129 billion in rate increase costs, or roughly \$921 for the average household over that period, allowing time for new investments and reforms to lower the costs of electricity for everyone by building a more affordable power system.¹⁸

This report first explains why electricity prices are rising and then presents these three new policy approaches: the rate relief fund, the national fair share policy, and a program of reforms and investments to build a better, bigger power system.

Why electricity prices are rising

The following section explains the trends and events that have led to increasing electricity prices and how extreme weather, natural gas costs, and surging demand affect how electricity rates are set.

Supply shocks and rapidly growing demand are driving up electricity prices

Electricity demand and costs are trending upward. From 2010 through 2020, electricity demand was relatively stable, and between 2013 and 2023, electricity prices closely mirrored or even rose more slowly than inflation.¹⁹ Even as the economy grew, innovations such as LED lighting, a highly efficient lighting system, and other efficiency improvements kept demand flat.²⁰ Yet over the past few years, electricity demand has begun to increase, and in 2025, electricity prices increased at double the rate of overall inflation.²¹

The rise in the cost of electricity is in part attributable to an increased reliance on natural gas.²² By 2016, natural gas had overtaken coal as the primary source of electricity.²³ The first liquefied natural gas (LNG) terminal to export natural gas from the continental United States began operations in February 2016, and capacity has grown quickly since.²⁴ The United States today exports as much natural gas as it uses in all residential and commercial buildings combined.²⁵ When Russia invaded Ukraine in February 2022, even though domestic gas production was higher than ever before, U.S. LNG exports responded to the global supply shock, U.S. natural gas prices nearly doubled, and average electricity prices jumped 13 percent by August 2022.²⁶

Adding to cost pressures is the growth in data center demand, driving a need for more electricity generation and infrastructure. In November 2022, ChatGPT was released, and tech companies were off to the races building AI data centers.²⁷ Between 2014 and 2022, data center power demand increased nearly 150 percent, and it could grow by another 338 percent by 2030 under a high-growth scenario, according to the Rhodium Group. (see Figure 5) Other analysts estimate even faster

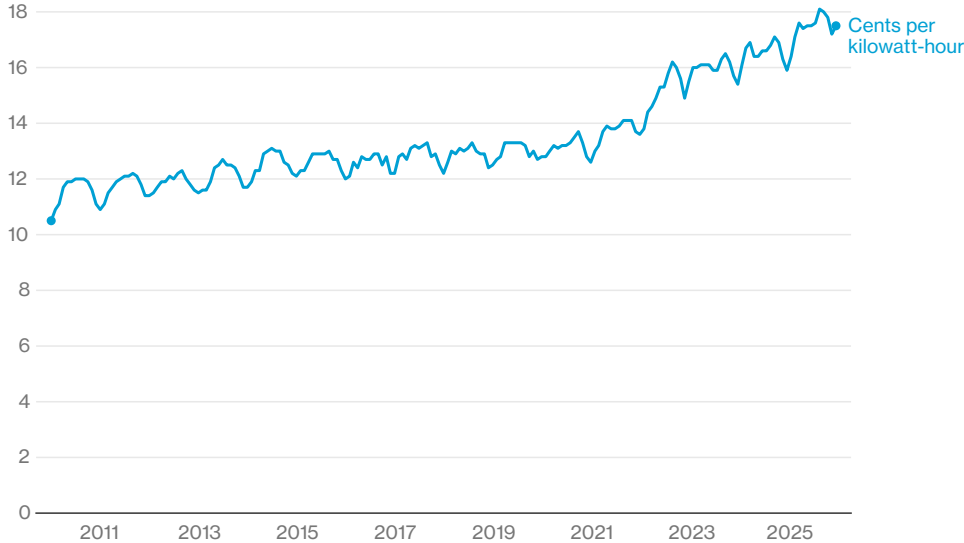
data center power demand growth, but there is large uncertainty in these projections.²⁸ In addition to the need for more power generation, data center demand growth will affect the entire electric grid system, including transmission and distribution. The actual and forecasted demand from new data centers increased the costs of the mid-Atlantic electric grid operator, known as PJM, auction for capacity for 2025–2026 by more than \$9 billion, increasing retail electricity bills for other PJM customers.²⁹ While data center impacts have started out as regional, their projected growth is more widespread and could strain the grid, raising costs for ratepayers who may not even be in the same state as the data center being built.³⁰

All these trends are meeting at a point where many parts of the electrical grid have already or soon will reach the end of their intended lifespan and require investment for upgrades and replacement.³¹ In addition, climate disasters and extreme weather are further driving up grid costs both because infrastructure damaged by fires or hurricanes must be rebuilt and because rebuilding to ensure resilience against higher risks of future damage is more expensive.³² The combination of supply shocks, increased energy demand, aging infrastructure, and rebuilding after extreme weather results in higher prices for residential customers, as shown in Figure 1.

FIGURE 1

Residential electricity prices have been rising, reaching a high of 18 cents per kilowatt-hour in 2025

Average nominal price of electricity for residential customers in cents per kilowatt-hour, January 2010–January 2026



Source: U.S. Energy Information Administration, "Monthly Energy Review: Table 9.8 Average Prices of Electricity to Ultimate Customers, Residential" (last accessed April 2026).

Electricity ratemaking tends to favor utility companies over residential consumers

The delivery of electricity is generally thought to be a natural monopoly, and state utility commissions regulate electricity as an essential service.³³ Almost every area of the country is served by one of the nation’s 2,900 utilities, and private companies known as investor-owned utilities (IOUs) serve about 72 percent of customers.³⁴ Two-thirds of load is served by one of the nation’s seven regional grid operators, known as regional transmission operators (RTOs) or independent system operators (ISOs), which operate day-ahead and real-time electricity markets.³⁵ In regulated states, utilities can earn a return on equity for investments in generation, distribution, and transmission assets.³⁶ In deregulated states—known as “restructured” markets (13 states plus Washington, D.C.)—utilities can still earn a rate of return on distribution and transmission investments, but power generation is purchased through wholesale markets and passed on at cost to ratepayers.³⁷ State oversight over rates has varied in effectiveness, and on average, publicly owned utilities have kept electricity rates in check better than privately owned utilities.³⁸ Retail rates for residential ratepayers are approved by state regulatory commissions, where utilities have structural and economic advantages over ratepayers. Utilities justify rate increases using complex, opaque models that consumer advocates often lack the capacity to adequately challenge.³⁹ Moreover, there is a clear revolving door for the officials who serve on these commissions. One study found that one-fourth of commissioners came from the fossil fuel or utility industries, and about half of those who came from the utility industry returned to the industry after public service.⁴⁰ On top of this, the electric utility industry spent nearly \$132 million on federal lobbying in 2024, with eye-popping amounts spent on state and local lobbying.⁴¹ For example, the four major IOUs in California spent \$21.8 million lobbying in the state.⁴² In Texas, the electric utility industry spent \$11.6 million in 2024 on state lobbying, outspending the oil and gas industry according to data from OpenSecrets.⁴³ And too often, utilities can recover these lobbying costs from consumer bills.⁴⁴

This system incentivizes capital investment above other expenditures and insulates utilities from the financial hardships facing ratepayers. In recent years, many utilities around the country have simultaneously asked to increase electric rates while also requesting higher overall profits. Utility shareholders have enjoyed a rate of return above the average performance of the stock market, and utilities have been granted a return on equity significantly higher than the average cost of capital.⁴⁵ Some experts have estimated that utility profits exceed the cost of capital by as

much as \$50 billion each year.⁴⁶ Further, when adjusted for inflation, IOUs saw their annual net operating income increase by 6 percent on average between 2020 and 2024, compared with a decrease of 3 percent between 2015 and 2019.⁴⁷

Although electricity rates are largely regulated by government agencies—the Federal Energy Regulatory Commission (FERC) in the case of interstate transmission and wholesale electricity, and state PUCs or their equivalent otherwise—it is clear that the systems in place to protect consumers are not working reliably. CAP’s plan suggests new ways for federal and state governments to work together to take back power from utility companies, provide proper oversight over households’ electricity rates, and increase overall investment in a more affordable, more capable grid that serves the needs of all ratepayers.

Costs are rising for construction, operation, and maintenance of the electric grid

In addition to profits, there are two main components of the cost of electricity: generating power and delivering it to customers. Generation is the production of electricity, which includes amortized costs of initial construction as well as the costs of operations and maintenance, which—in the case of some power plants—includes the cost of fuel. Certain markets ensure that there will be enough generation to meet future demand through a separate “capacity auction,” which provides transparency into one of the main components of generation costs and provides enough advance notice to attract investment in building new sources of electricity.⁴⁸ Once electricity is generated, it is carried at higher voltages by transmission lines to substations, where it is transformed to lower voltages for distribution lines to carry it to homes and businesses.

About 60 percent of electricity cost—including the cost of capacity—is the expense of buying electricity from energy sources (in competitive markets) or directly operating the energy sources (in vertically integrated markets).⁴⁹ Natural gas today fuels roughly 40 percent of electricity generation, and the price of natural gas fuel is the predominant marginal cost of generating electricity from these power plants: Roughly one-third of the total cost of electricity from natural gas power plants is the cost of fuel.⁵⁰ By contrast, wind, solar, hydropower, geothermal, and batteries have no fuel costs, and the marginal costs of operating a nuclear power plant are predominantly driven by operation and maintenance rather than the price of nuclear fuel.⁵¹ In utility markets where companies compete to sell

electricity, the wholesale market price for power at any given time is set by the most expensive power plant dispatched to meet additional demand, which is typically a natural gas plant.⁵² This is one reason why batteries save money: The energy stored throughout the day can be used to reduce the need for the most expensive peaking plants—most of which are fueled by natural gas—dropping the price of electricity for everyone.⁵³ For example, energy storage produced \$750 million in market savings when Winter Storm Heather hit Texas in January 2024, freeing up to 3 gigawatts (GW) of generation from gas plants,⁵⁴ which also alleviates price pressure on the natural gas used to heat homes. Natural gas prices can strongly influence electricity prices, particularly in states that are highly dependent on gas for generation, resulting in increased exposure for a state’s ratepayers to fluctuations in global natural gas prices.⁵⁵

About 10 percent of electricity cost—at least in the mid-Atlantic region where the cost is transparently broken out—is the expense of securing enough generation to meet forecasted demand.⁵⁶ Forecasted AI data centers can drive up costs in capacity markets by forecasting enormous demand growth in the future, creating the appearance of insufficient power to meet load growth and bidding up prices, even if the demand never materializes.⁵⁷ Even after the One Big Beautiful Bill Act made wind and solar up to twice as expensive to build by excluding them from federal tax credits, they are still the cheapest and fastest sources of new capacity.⁵⁸ Batteries, wind, and solar can provide reliable power when it is needed, such as during the September 2022 California heat wave when solar generation during the day and batteries discharged in the evenings helped to prevent blackouts.⁵⁹

Once generation facilities are operational, power is conveyed through high-voltage transmission lines, converted to lower voltages via transformers, and delivered to homes and businesses through local distribution lines. About 12 percent of electricity costs is the expense of paying back the costs of building and maintaining electricity transmission lines.⁶⁰ New transmission lines are costly to construct, and these initial capital costs are amortized over decades and ultimately paid by ratepayers. Currently, annual transmission spending is at an all-time high with most of the investment in the transmission system driven by lower-voltage reliability upgrades and replacing aging equipment.⁶¹ These upgrades total billions of dollars, yet neither state nor federal regulators provide adequate oversight, which leads to higher costs for households.⁶² In the next decade, the growing grid will need more high-capacity transmission. Breaking down barriers to building new infrastructure and resetting transmission organizations’ incentives to make the most cost-effective infrastructure choices instead of the costliest will save money

over time. In addition, just as other widely used infrastructure—including highways, transit, and water—is paid for by a mix of user fees and public funding,⁶³ public financing should play a greater role in the electric grid.

About 25 percent of costs is the expense of paying back the costs of building and maintaining the local electricity distribution grid.⁶⁴ Between 2019 and 2024, electric IOUs' expenditures for distribution increased significantly more than transmission, while generation expenditures declined.⁶⁵ Load management can avoid and lower distribution system upgrade costs by billions of dollars, but utilities have little incentive to pursue load management strategies over costly distribution upgrades when their profits are tied to capital expenditures.⁶⁶ The distribution system is even more costly to build and to rebuild as lines are knocked down by weather events and wildfires that climate change is making more extreme. For example, in Florida, Duke Energy implemented a \$32 per month increase for one year starting in March 2025 to recover costs incurred from hurricanes Debby, Helene, and Milton.⁶⁷ In California, Southern California Edison increased rates by approximately \$17 per month in October, in part to mitigate wildfire risk, after having increased rates earlier in the year to cover payments from a previous wildfire.⁶⁸ Researchers from Lawrence Berkeley National Laboratory have found that wildfires have significantly increased energy costs in Western states, with California experiencing the most pronounced increase.⁶⁹

Extreme weather, high natural gas prices, an aging electric grid, and surging demand are all contributing to electricity prices outpacing the rate of inflation after a decade of closely mirroring the rising cost of goods and services.⁷⁰ Federal policy should support solutions to address these rising challenges.

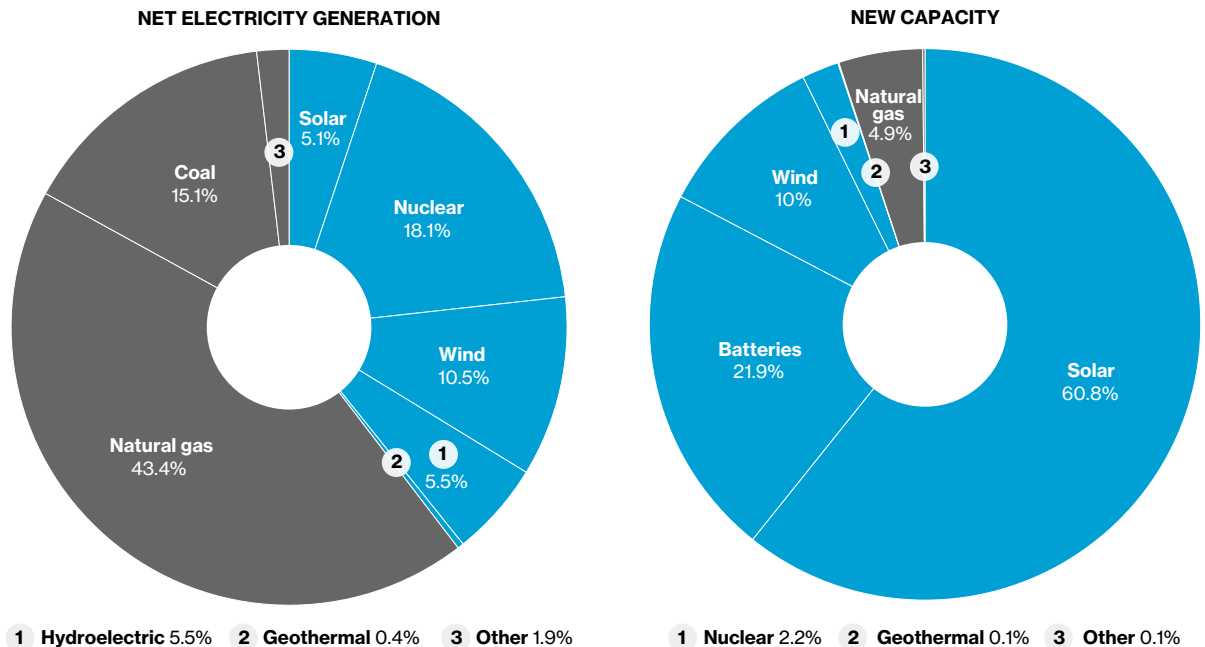
Clean energy is the most affordable source of electricity

At a time when demand on the electricity system is growing quickly, the United States needs more energy to control costs. For years, clean energy has been growing the fastest and at the lowest cost.⁷¹ As Figure 2 shows, clean energy sources powered 40 percent of the United States in 2024 but amounted to 95 percent of new capacity additions.⁷² In Texas, for example, solar contributed record levels of generation in 2025, and together with wind energy provided more than half of total system demand for several hours when coal plants in the state went offline for unexpected maintenance.⁷³

FIGURE 2

Clean energy accounted for 40 percent of electricity generation but 95 percent of added new capacity in 2024

Net electricity generation and new capacity added to the grid in the United States, 2024



Note: For electricity generation, the "hydroelectric" category includes conventional hydroelectric power and hydroelectric pumped storage; "other" category includes petroleum, other fossil gases, biomass wood, biomass waste, and other sources. For added capacity, the "wind" category includes both offshore and onshore wind; the "natural gas" category includes gas fired combined cycle, fired combustion turbine, internal combustion engine, steam turbine, and other natural gas; and the "other" category includes biomass wood, biomass waste, conventional hydroelectric, landfill gas, and petroleum liquids.

Source: Data include only generation that was operating as of the October 2025 dataset release. U.S. Energy Information Administration, "Table 7.2a Electricity Net Generation: Total (All Sectors)" (last accessed December 2025); U.S. Energy Information Administration, "EIA 860M October 2025" (last accessed December 2025).

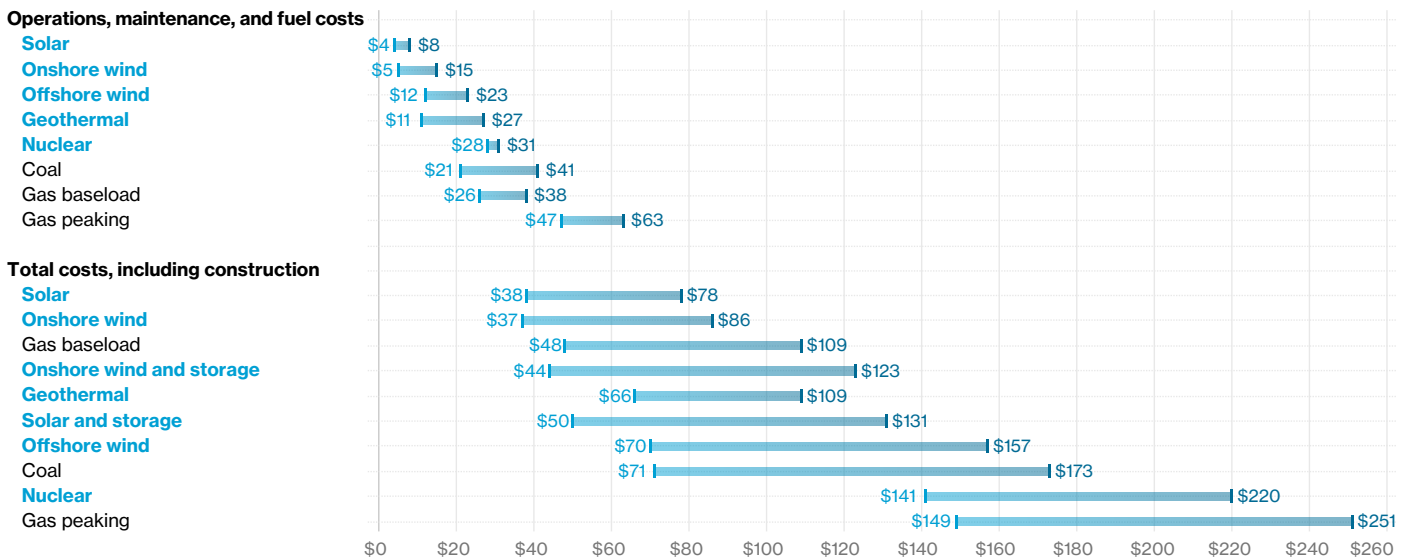
Signed by President Donald Trump in 2025, the One Big Beautiful Bill Act (OBBBA) repealed the federal clean energy investment incentives of the Inflation Reduction Act, wiping away more than half of the energy that would have been added to the grid in the coming decade, including nearly three-quarters of the clean energy that would have been added.⁷⁴ That is a projected loss of roughly 500 GW of new wind, solar, and battery capacity and even a projected loss of roughly 10 GW of new natural gas peaking power capacity that would have come online to help balance the intermittency of the new renewables.⁷⁵ This loss of new generation is equivalent to almost 40 percent of the capacity of the entire U.S. grid in 2024.⁷⁶ By making new capacity more expensive upfront, the OBBBA is forcing the electric system to increase generation from older, more expensive power plants instead of building new capacity to meet new demand.

In addition to cutting in half the amount of energy that would have been added to the grid over the coming decade, the administration’s termination of federal investment incentives raised the cost of new energy capacity, causing electricity rates to increase for consumers by more than \$110 per year in 2026 and up to 18 percent by 2035.⁷⁷ The technology-neutral incentives for private clean energy investment in the Inflation Reduction Act were just beginning to accelerate the deployment of new wind, solar, battery, geothermal, nuclear, and other energy sources that deliver major cost savings because they have no ongoing fuel combustion costs.⁷⁸ The investment incentives saved ratepayers up to half of the cost of the upfront capital investment for new projects that paid construction workers prevailing wages, trained workers through apprenticeships, used an increasing share of domestic steel, and created jobs in energy communities.⁷⁹

FIGURE 3

Solar and onshore wind are the least expensive energy generation sources

Range of energy cost, **clean** vs. fossil fuel, by type, nationally (in dollars per megawatt-hour)



Note: The authors refer to Lazard’s “Gas Combined Cycle” category as “gas baseload” and “Solar PV-Utility” as “solar.”

Source: Lazard, [Levelized Cost of Energy](#), pp. 39-40, June 2025.

As seen in Figure 3, even without federal investment incentives, new wind and solar projects are still generally less expensive than new gas or coal power plants.⁸⁰ On average, the levelized cost of energy (LCOE) from new utility-scale solar is 26 percent cheaper than new natural gas baseload power.⁸¹ Once initial construction

costs are fully paid off, the average operations and maintenance costs of solar are more than 80 percent cheaper than those of gas baseload power.⁸² The cost advantage persists even when considering the need for firming up the variability of power: The LCOE from geothermal or onshore wind and solar with batteries is more than 50 percent cheaper than the LCOE of a new gas peaking power plant.⁸³

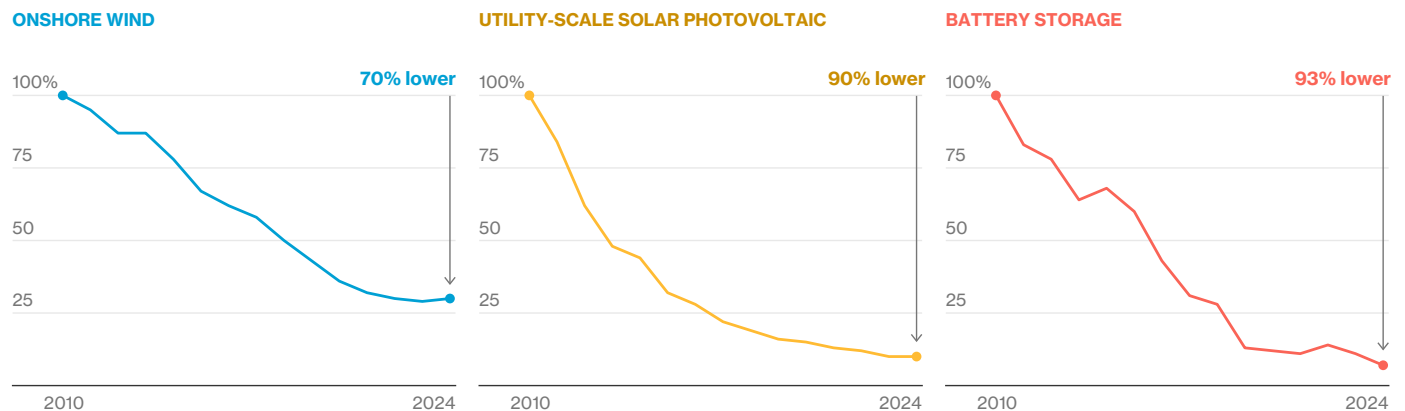
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All sources of energy still play a role in the current electricity system. Nuclear, geothermal, and other baseload power plants are almost always available. A wide transmission network averages out the intermittency of wind. Demand flexibility, peaking power plants, and batteries together balance the intermittency of solar. Already, California has had renewable energy supply meet or exceed 100 percent of electricity demand during part of the day for 132 days in 2024, including for nearly eight weeks in a row in the spring.⁸⁴ And when the sun sets and solar is not available, battery storage in the state can continue to power a large portion of the grid—on some days supplying more than 30 percent of California’s electricity in the evening, and recently hitting a high of more than 42 percent—the equivalent output of about 12 GW or six Hoover Dams.⁸⁵ In Texas, the addition of 5 GW of grid-scale battery storage in 2024 contributed to \$750 million in energy cost reductions, which was roughly \$30 per Texas household that year.⁸⁶

FIGURE 4

Renewable energy costs have drastically declined since 2010

Global average levelized cost of energy (in 2024 USD per kWh) and total installed electricity storage project costs (in 2024 USD per kWh, usable), as a percentage of 2010 values, 2010–2024



Source: International Renewable Energy Agency, “Renewable Power Generation Costs in 2024: Figures 1.2 and 9.2” (Abu Dhabi, 2025): pp. 28, 181.

Restricting the construction of new capacity forces the system to fall back on running existing power plants more. As the Trump administration's policy is blocking the addition of new clean energy capacity, the system is forced to run existing fossil fuel power plants at higher rates and keep online uneconomic plants that were scheduled to retire. Blocking new clean energy capacity and relying on existing plants could also lead to fewer new natural gas plants getting built.⁸⁷ This is more expensive, more polluting, and more vulnerable to spikes in the price of fuel. The best way to meet America's energy needs is to add clean electricity generating capacity to the power system.

The Trump administration's war on clean energy is raising costs for consumers

Despite new solar and wind power being the least expensive new energy sources, the Trump administration is doing everything in its power to essentially ban wind and solar projects. From issuing a day one executive order (EO) banning permits for new wind projects to requiring the U.S. secretary of the interior to personally review any decisions related to solar and wind projects on federal lands and waters (and possibly some nonfederal lands and waters), this administration is working hard to prevent the cheapest and fastest-to-deploy sources of new energy from coming online.⁸⁸ Following the directive from the day one anti-wind EO—which not only paused permitting for new projects but called for an unprecedented review of already permitted and approved projects—the Trump administration issued a slew of stop work orders on projects already under construction and cancelled the approval of lawfully permitted projects.⁸⁹ Even after courts overturned the stop work orders, and the anti-wind EO was found illegal in December 2025, the administration continues to stall bringing wind and solar projects online.⁹⁰

On December 22, 2025, Interior Secretary Doug Burgum announced a pause on offshore wind projects already under construction or near completion: Coastal Virginia Offshore Wind (Virginia), Vineyard Wind 1 (Massachusetts), Revolution Wind (Rhode Island and Connecticut), Sunrise Wind (New York), and Empire Wind (New York).⁹¹ In Massachusetts, one week of paused construction on Vineyard Wind 1 cost ratepayers \$2 million in benefits, while ratepayers throughout New England will have to pay an estimated \$7 million as a result of Revolution Wind's delay.⁹² If all five of these projects were successfully cancelled, ratepayers across 15 eastern states and Washington, D.C., would have to pay an additional \$45 billion in energy costs over the next 10 years.⁹³

The project developers for all five projects sued the administration soon after the freeze, and the courts granted preliminary injunctions to restart construction for all projects.⁹⁴ In March, Vineyard Wind 1 completed construction, and Revolution Wind and Coastal Virginia Offshore Wind began delivering power to the electric grid.⁹⁵ Construction has continued for all four projects still in development, and they are all expected to deliver power by 2027.⁹⁶ While the administration has thus far declined to appeal the court rulings, it continues to try new tactics to prevent the build-out of offshore wind, such as paying foreign energy companies almost \$2 billion to cancel already purchased offshore wind energy leases for multiple projects.⁹⁷ And they have brought their wind vendetta onshore, delaying routine permits for more than 150 new onshore wind projects on private lands that would add an additional 30 GW of electricity capacity to the grid.⁹⁸

In addition to blocking construction of clean energy projects, the administration has gone out of its way to prop up more expensive fossil fuel generation at direct cost to ratepayers. Under the Trump administration, the U.S. Department of Energy (DOE) has issued dozens of orders⁹⁹ using the Federal Power Act Section 202(c) to force uneconomic plants—plants that cost more to operate than to retire—to run more or stay open past planned retirement (even as utilities themselves and state regulators object), already raising costs for consumers in Washington, Colorado, Indiana, Pennsylvania, and Michigan by \$250 million and counting.¹⁰⁰ A 2025 analysis found that if the DOE forces fossil plants scheduled to retire between 2025 and the end of 2028 to remain operational, it could cost ratepayers more than \$3 billion per year.¹⁰¹

A significant consequence of these policy choices is that new sources of energy will come online slower and cost more than they would have, increasing costs for ratepayers and causing the power system to fall back on the prolonged operation of old, expensive power plants. The OBBBA alone is expected to increase average annual electricity costs by \$110 per household in 2026, with some states seeing annual increases of more than \$200.¹⁰² Average annual residential electricity rates are expected to increase by almost 18 percent by the end of the current presidential term.¹⁰³

A new federal policy approach that is truly focused on reducing energy bills for households is needed. The remainder of this report presents policy recommendations, beginning with the rate relief fund and the national fair share policy, then the program to build a better, bigger power system.

Average annual residential electricity rates are expected to increase by almost 18 percent by the end of the current presidential term.

Create a federal rate relief fund

The economic burden of rapidly escalating electricity bills is landing heavily on American households. One in six U.S. households is already behind on their energy bills, and about 4 million households faced power shutoffs in 2025, an increase of nearly 500,000.¹⁰⁴ An April 2026 EIA report, the first under a federal rule passed in 2023 to collect data from power companies disconnecting customers, found that utility companies disconnected Americans' power over 13 million times in 2024.¹⁰⁵ And the financial stress is not affecting Americans equally. High utility costs are disproportionately affecting Americans with low incomes, one-quarter of whom are spending more than 15 percent of their income on energy bills compared with the 2–3 percent wealthier households spend.¹⁰⁶ Working-class Americans are facing tougher decisions to either cut back on other necessities such as groceries or health care, accrue debt, or face power shutoffs, which only exacerbate their financial insecurity.

Voters and candidates are taking notice of higher electricity bills and looking for immediate relief. In New Jersey, newly elected Gov. Mikie Sherrill (D) won election in a race that featured the issue of electricity bill affordability, explaining that electricity bills are rising because of a failure to build clean, affordable power fast enough and promising both a temporary rate freeze and a commitment to accelerate clean energy generation such as solar, nuclear, and grid upgrades as the durable path to lower costs.¹⁰⁷ State-level rate freezes have been implemented in the past, and policy design lessons from their experiences are important. For example, several states across the country implemented temporary rate freezes at the turn of the millennium as they prepared to restructure their electricity markets. Among them were Michigan and several New England states, which saw residential and smaller commercial customers benefit from lower prices during the period of rate freezes.¹⁰⁸

The way to lower electricity costs over 10 to 15 years is to invest in more capacity to supply energy and more grid infrastructure improvements to increase resilience and flexibility, but federal options for immediate relief are limited. While the federal Low-Income Home Energy Assistance Program (LIHEAP) provides some relief for recipients, only 17 percent of eligible households currently receive assistance, and LIHEAP funding was cut from \$6.1 billion in 2023 to \$4.1 billion in 2025.¹⁰⁹

Expanding LIHEAP and other energy bill assistance and efficiency programs such as the Weatherization Assistance Program are steps in the right direction, but serving only some households is insufficient.¹¹⁰ Similarly, relief checks or utility refunds from excess profits may be helpful and appropriate in certain circumstances, but the need for a one-time infusion of cash is not unique to utility burdens. Further, relief checks are retroactive in nature and do not fix the underlying underinvestment in the grid, nor do they shield households from future higher costs. Concrete action is also needed to reduce costs across the board. A structured and temporary rate freeze, accompanied by an infusion of public funding for the grid to fill the gap could help accomplish both short-term and long-term goals to reduce costs.

Today, funding for building new capacity and expanding and maintaining the grid comes almost exclusively from ratepayers. If a rate freeze were to starve the electricity system of capital, the resulting failure to invest would substantially increase the actual costs of the electricity system and risk reliability problems and delays of service to new customers. But like highways, transit, and broadband, the electricity system is a public good that does not need to be funded by ratepayers alone. Public funding can ensure that critical, results-based investments continue even as a rate freeze provides immediate relief.

Electricity sector investment and reforms are necessary and will reduce costs over time—see CAP’s recommendations in the section below on building a better, bigger power system, for example—but energy supply and grid expansion can take years, while stressed consumers need relief now. A temporary freeze of residential rates allows time for the cost savings of public investment and reform to be realized.

Policy proposal: A rate relief fund

Congress should offer states the option to participate in a new rate relief fund that provides federal funding to lower costs that would otherwise be borne by households. While states would retain jurisdiction over utility regulation, states that implement an immediate rate freeze for residential customers would unlock federal funding from the rate relief fund to help pay for electricity system costs. This federally funded rate relief fund could be used to cover fluctuations in the costs of operation and maintenance, invest in the most cost-effective grid and energy expansions, and support utility reforms that improve affordability.

Each state would choose how to administer its proceeds from the rate relief fund, and funding approvals and disbursements would be overseen by the DOE.¹¹¹

Utilities would be required to make the savings from the rate relief fund freeze program prominent in their bills to consumers. In exchange for this federal funding, the rate relief fund would require three commitments from the states that choose to participate, whether through the enactment of new state laws or exercising existing authorities.

1. Continue investing in improvements that lower total system costs

By freezing residential rates and having the federal government make up the difference, long overdue and necessary investments in the power system can be made without burdening ratepayers.

Each participating state must submit to the DOE an investment plan that will meet projected demand, maintain reliability through new resource and infrastructure improvements that lower ongoing system costs, and deliver flat or lower residential rates at the end of the rate freeze. While “rate” freeze is often used as shorthand, qualification for the program must actually ensure that total annual revenues per kilowatt-hour from residential ratepayers do not increase in order to prevent utilities from using accounting tricks or added charges and riders that could also increase bills even if the electricity “rate” were frozen. Any funding needed to make these investments that exceeds the amounts available under current rates would qualify for federal funding. Already 39 states require utilities to submit a similar plan, often through an integrated resource plan, to ensure ratepayer dollars are spent wisely and future electricity demand is met.¹¹² States would develop an investment plan with organizations and companies responsible for generating, transmitting, or delivering power (such as load-serving entities, transmission companies, and local distribution companies) and could also include other stakeholders. The DOE would promptly approve or reject the state’s proposal, subject to revision and resubmittal, reviewing cost estimates and projected benefits across state proposals. The DOE’s vantage point from reviewing multiple proposals would provide the DOE with comparative metrics to help avoid “gold-plated” or excessive requests that do not actually reduce costs over the long term.

The DOE would allocate funds from the rate relief program to states on the basis of each state’s funding request for reasonable costs to cover the years of the program. Disbursement would be contingent on performance or delivery of projects identified as the basis of the request. These expenses could include building or purchasing contracts for low-cost generation capacity, distributed energy resources, energy efficiency or demand response programs, energy storage, and grid-enhancing technologies (GETs) such as dynamic line ratings alongside general grid modernization and the replacement of aging grid infrastructure.¹¹³ Funding requests could also include necessary and beneficial replacement, expansion, and modernization of distribution and transmission infrastructure.

In addition to investments that lower overall costs and improve reliability, Congress could consider reserving some of the rate relief fund to reward states that demonstrate a targeted reduction in energy burdens and bring down bills significantly (such as programs to make home repairs so households qualify for the Weatherization Assistance Program or eliminate utility debt through an arrearage management program). Some rural electric co-ops and other utilities are saddled by the debt of uneconomic power plants that ratepayers continue paying even when new power sources are cheaper; the rate relief fund could also be used to pay down this debt, recycling capital that saves ratepayers money (sometimes millions of dollars).¹¹⁴ Debt relief for older grid infrastructure or for households whose bills are in arrears could also be part of a cost-lowering package. States that contract with utilities to deliver the investments can include reasonable rates of return or administration cost reimbursements as part of the program.

2. Shield consumers from price spikes

In order to ensure that utilities that own their own power plants can continue to generate electricity, regulators typically allow vertically integrated utilities to add “riders” or “surcharges” when natural gas prices rise, even though it was the utility and not the ratepayers who chose which type of generation to build.¹¹⁵ An abrupt freeze on such fuel surcharges would jeopardize utilities’ access to operational capital, but allowing residential ratepayers to foot the bill would violate the promise of the rate freeze. As part of the rate relief fund, the federal government can offer low-cost loans to provide operating cash to cover the temporary costs of fuel price spikes, ensuring they are not passed onto residential consumers during the rate freeze, but must at the same time require that the participating state work with its vertically integrated utilities to lower fuel combustion levels during the rate freeze (such as through demand response programs, battery installations, expanding new generation capacity, and energy efficiency programs) so that the program does not incent excessive cost. Moving forward, as discussed in a later section, vertically integrated utilities should be required to internalize the risk of price volatility when deciding what generation capacity to build so that this split incentive will no longer be a problem moving forward.

For utilities in competitive markets, the cost of supplying electricity from the wholesale market can increase when gas prices spike, and the rate relief fund should include funding for the utilities to provide on-bill credits to residential customers to cover price spikes in the wholesale markets.¹¹⁶ Note that the “fair share” program described in the next section of the report is complementary by ensuring data centers are covering the costs of their rising demand and containing costs the federal government would pay.

A similar type of cost pressure arises after major disasters, as utilities often raise rates to cover the costs of rebuilding, such as when Duke Energy raised monthly electric bills by \$32 to recover costs incurred from hurricanes Debby, Helene, and Milton in Florida.¹¹⁷ To keep residential consumer rates frozen after disasters, the rate relief fund should offer zero-interest loans even to utilities that are otherwise ineligible for disaster relief funding for the costs of disasters that may occur during the period of the rate freeze on the condition that the investment is used for rebuilding grid infrastructure with cost-effective resilience measures that reduce future risk of catastrophic damage.

3. Protect ratepayers from unnecessary expenses

Participating states would need to demonstrate that they have scrutinized utility profits and right-sized rates of return.¹¹⁸ Utilities in participating states would be barred from passing on the costs of lobbying and trade association membership dues to ratepayers. This idea is especially popular—a recent poll found that Americans overwhelmingly support policies that eliminate utility junk fees.¹¹⁹ In addition, utilities should be encouraged to facilitate access to assistance programs for home weatherization, energy assistance, and electrification—programs that help Americans reduce their energy consumption and shield them from the impacts of extreme weather, such as during heat waves.¹²⁰ Similarly, Congress should extend protections against electricity service disconnections for households for the duration of the rate relief fund, as was done under the CARES Act.¹²¹

If all states were to participate from 2029 through 2032, CAP estimates that this federal rate relief fund would cost roughly \$129 billion over four years and would hold residential electricity rates constant for the duration.¹²² The program would provide immediate relief to households without impairing the capital needed for operations or investment and would even contribute to lowering total system costs by directly investing in cost-effective grid improvements.

Make AI data centers pay their fair share

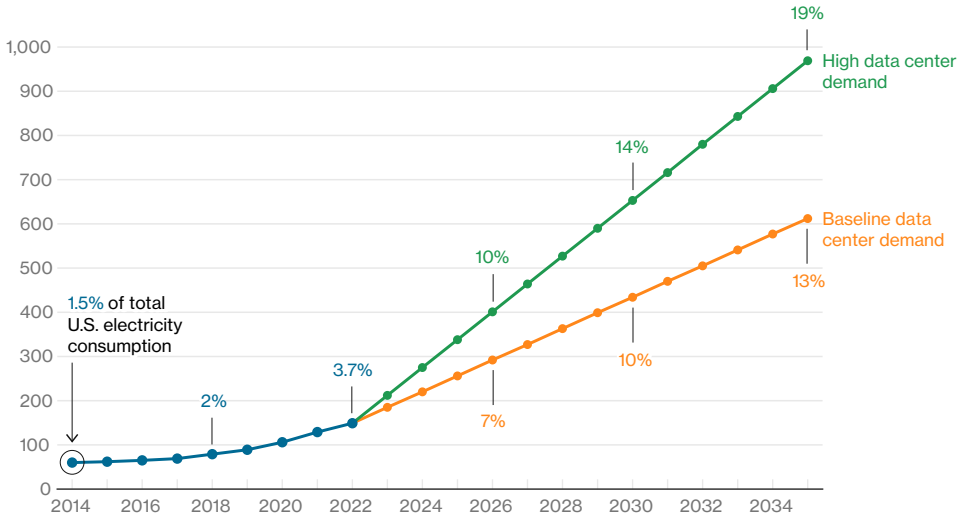
For the first time in a decade, energy demand is rising and expected to keep growing through 2030, significantly accelerated by data centers with artificial intelligence representing a larger share of the data center load.¹²³ Data centers consume large amounts of energy—as much electricity as 100,000 households, or even up to 20 times that in the case of the largest data centers.¹²⁴ The Rhodium Group finds that data centers will consume up to 969 terawatt hours, or up to 19 percent of U.S. electricity consumption in 2035, up from an estimated 3.7 percent of consumption in 2022.¹²⁵ (see Figure 5) This is akin to adding the power demand of 16 additional cities the size of New York over 13 years.¹²⁶

While CAP's plan focuses on energy affordability issues tied to data centers, the rapid growth and potential broad impact of AI development and adoption merits a comprehensive set of policies that are outside the scope of this report, but remain the subject of ongoing work by CAP.

FIGURE 5

Energy demand from data centers is projected to significantly increase over the next decade

Historical and projected data center electricity consumption, 2014–2035 (in terawatt-hours)



Source: Data are from Rhodium Group, which surveyed other estimates in determining this range. Rhodium Group, “The Impacts of Rising Electricity Demand from Data Centers on US Energy and Emissions,” April 7, 2026; U.S. Energy Information Administration, “Table 7.1 Electricity Overview” (last accessed April 2026); Ben King, Rhodium Group, email correspondence with authors, January 12, 2025 through April 20, 2026, on file with authors.

Under current policy, the growth of AI data centers can come at a cost to other ratepayers through their electric bills. The effect has been clearest in the mid-Atlantic region, where actual and forecasted demand from new data centers drove up the costs of the grid operator’s auction for capacity for 2025–2026 by more than \$9 billion; the auction itself increased retail electricity bills for PJM customers by up to 29 percent.¹²⁷ The 2026/2027 PJM auction resulted in data centers driving up the costs of capacity by more than \$7 billion, which will likely result in up to an additional 5 percent increase in ratepayer bills.¹²⁸ Similar pressures will apply anywhere massive data center growth is forecasted, as utilities will race to prepare the grid infrastructure and new generating capacity needed to provide reliable service.

Ratepayers can be left paying higher electricity rates in multiple ways when data centers are built and need access to electricity. First, traditional cost-recovery mechanisms can potentially result in certain classes of ratepayers, such as residential customers, subsidizing rates for others, such as data centers.¹²⁹ Second, the developers of large projects can negotiate for utility rates that do not cover their full costs using nonstandardized cost calculations with little or no public proceedings or transparency, which can leave other electricity customers paying higher rates to make up the difference.¹³⁰ Third, the mere expectation of a new data center can require grid operators to procure more power, even if those projects never materialize, as is happening now in Georgia, where the public service commission’s public interest advocacy staff are raising concerns that ratepayers will be saddled with costs for projects that never come to be.¹³¹ Fourth, even data centers that run their own power plants instead of connecting to the grid can still drive up costs for others by putting upward pressure on equipment and fuel prices (more details below).¹³²

However, if data centers pay their fair share of the electricity costs they impose, they need not mean higher costs for consumers. In fact, with smart policy, the addition of so much new power demand could actually lower average costs by spreading out the fixed costs of operating, maintaining, and amortizing the electricity system over a larger base of customers, particularly where grid infrastructure is successful in building enough capacity to accommodate the new load and have spare infrastructure.¹³³

Achieving this outcome will take new policies, and the landscape is shifting quickly as government and corporate leaders respond to the ratepayer impacts of data center development. For example:

- Some states, including New Jersey and Oregon, have passed or proposed legislation requiring utilities to treat data centers or all similarly large energy users as a separate customer class and to standardize the terms and conditions of electricity service.¹³⁴

- Some utilities in states such as Ohio and Pennsylvania require or propose to require data centers to sign commitments to pay for large parts of the electricity and transmission they estimate to need even if it becomes a stranded asset.¹³⁵
- Minnesota has also proposed an annual fee to be paid by data center customers toward weatherization and energy conservation assistance for low-income households, which could help offset impacts from the data centers for some households.¹³⁶
- In Wisconsin, OpenAI, Oracle, and Vantage Data Centers announced plans to cover 100 percent of the cost of power infrastructure investment for their Lighthouse data center campus through a separate customer rate class and by building clean energy that will be made available for other customers.¹³⁷
- In Pennsylvania, Microsoft is planning with Constellation Energy to restart the Three Mile Island nuclear power plant and use its carbon-free electricity to power its data centers.¹³⁸
- Google recently announced it would build the largest energy storage project in the world to pair with 1.6 GW of wind and solar to power a new data center in Minnesota.¹³⁹
- Under Nevada’s Clean Transition Tariff program, Google, in partnership with NV Energy and Fervo Energy, will add 115 megawatts of enhanced geothermal power to Nevada’s grid and pay all costs needed for grid upgrades to support Google’s data centers in the region.¹⁴⁰
- Sen. Chris Van Hollen (D-MD) recently introduced the Power for the People Act, which pushes data centers to pay their fair share and would speed interconnection for data centers that have strong labor standards and use clean energy.¹⁴¹
- Sen. Mark Kelly (D-AZ) has called for tech companies to pay not only for their own energy infrastructure but also to contribute to a fund that would invest in infrastructure and workforce development.¹⁴²

However, other proposals offer much less protection for ratepayers. The Trump administration asked major technology companies to pledge voluntarily to use their own power plants or pay for their electricity system costs.¹⁴³ Unfortunately, not all companies have agreed to participate, and a voluntary pledge is not binding. The Trump administration’s subsequent “National AI Legislative Framework”

asks Congress to codify this pledge, but it places an emphasis on data centers building off-grid using their own power plants.¹⁴⁴ Recently introduced legislation from Sen. Josh Hawley (R-MO) and Sen. Richard Blumenthal (D-CT) similarly pushes for data centers to be built off-grid but goes beyond President Trump’s proposal by establishing reporting requirements for data centers to increase transparency on utility usage.¹⁴⁵

CAP estimates that just this development alone could consume around 18 percent as much natural gas as the entire power sector consumed in 2025.

Pushing data centers to rely on their own power plants instead of connecting to the grid does not solve affordability concerns. First, about one-third of data centers are currently being developed off-grid, largely relying on natural gas turbines to power them.¹⁴⁶ CAP estimates that just this development alone could consume around 18 percent as much natural gas as the entire power sector consumed in 2025.¹⁴⁷ Despite being off-grid and not directly increasing ratepayers’ costs through shared electricity infrastructure investments, off-grid data centers powered by natural gas would drive up fuel prices for home heating and cooking, industry, and on-grid natural gas power plants due to the sheer magnitude of energy that data centers require that would ultimately show up in the bills of other ratepayers.¹⁴⁸ Second, having off-grid data centers misses the opportunity to spread the cost of improving grid infrastructure over a larger customer base, especially if AI data centers are paying their fair share, and would fail to make available that added electricity generation for all users. Near Memphis, Tennessee, for example, xAI installed 35 “temporary” natural gas turbines to power its data center off-grid. These gas turbines produce more electricity than all the households in the city use but provide no cost or resiliency benefits to households and other businesses that are on-grid.¹⁴⁹ Finally, there are real negative externalities created by natural gas-powered data centers that nearby communities will have to face. For example, natural gas combustion releases pollutants such as nitrogen oxides (NO_x), which leads to smog and can exacerbate asthma, among other health concerns. Some off-grid data centers are even using natural gas turbines that are not only inefficient but are more polluting; according to a lawsuit initiated by the NAACP against xAI, it is alleged that the xAI facility in Memphis did not obtain a single Clean Air Act permit and quickly became one of the county’s largest emitters of NO_x pollution, raising health concerns for nearby communities.¹⁵⁰

As Big AI companies, some valued at more than the gross domestic product of entire countries,¹⁵¹ plan to invest trillions of dollars in data center development,¹⁵² states may feel pressure to compete with each other to offer the most favorable

terms, as has already happened with property and sales tax exemptions.¹⁵³ A nationwide fair share policy would ensure that no one is made to pay higher electricity rates in order to subsidize the investments of Big AI.

Big AI companies need access to electricity as they compete with China and other countries for AI supremacy.¹⁵⁴ New policies are needed to ensure households and small businesses will not foot the electric bill of some of the wealthiest companies in the world. A system where AI companies bear the full cost of the electricity they need will not only allocate costs fairly, but it will also avoid one of the frictions that engenders community opposition and provide developers with greater clarity about interconnection processes.

Policy proposal: A nationwide fair share policy

The electricity system has become essential to all interstate commerce and is increasingly interconnected across state lines and boundaries, unlike the grid of the past. The United States needs standard rules so that artificial intelligence data centers pay their fair share for energy and grid infrastructure and do not ask households to foot the bill. CAP proposes a nationwide “fair share” policy that requires all data centers to pay 1) a full-cost connection fee that covers the upfront capital costs of any required electricity system upgrades; 2) a full-cost electricity rate for data centers as a class to cover their portion of ongoing systemwide costs; and 3) an electricity consumption tax that preferences grid-supplied power.¹⁵⁵

Full-cost connection fee

The first part of the nationwide fair share proposal is a federal requirement that utilities charge a transparent full-cost connection fee to cover all upfront capital costs of the grid infrastructure improvements and electricity generation capacity additions that a new data center may need or induce. This requirement serves as a floor for interconnection fee policies, not a ceiling; a state remains free to make other customers also pay a full-cost grid connection fee, for example, or to include additional costs in the fee. States and grid operators would not be free, however, to force existing ratepayers to pay for the capital expenditures necessitated by a new data center.

The grid connection fee would include a structural incentive for clean firm power and demand flexibility, encouraging innovation and deployment of approaches that lower costs broadly; that is, a developer would be allowed to spend a portion of the grid connection fee on the direct procurement of new clean power, and the portion allowed to be spent would increase if the new generation is projected to meet the data center’s demand on a seasonal, monthly, daily, or hourly basis.

The full-cost connection fee solves several problems at once. Existing customers are not asked to support the upfront capital costs of new projects that are in some cases larger than an entire city. The risk that states may race to the bottom in competition for data center investment is limited by a nationwide approach. Data center developers benefit from transparency across utility jurisdictions about how their interconnection fee will be determined. And innovations that will lower costs for everyone are incentivized.

Full-cost electricity rate

The second part of the nationwide fair share proposal is a federal requirement for states to create a separate customer class for data centers. Rates for this class would be set transparently such that the class as a whole pays for a share of the electricity system's total costs that is no less than its share of total energy consumption. For customers in the class, rates would be standardized using facility-specific demand and energy charges based on time of use. States would be permitted to include any other customers in this class that have a similar magnitude of energy consumption, a similar inflexibility of power demand, and that similarly do not substitute electricity demand for fuel demand.

By creating a separate customer class that includes data centers but not households or businesses, states can ensure that other customers are not footing the bill for someone else's electricity consumption. Setting rates based on time of use creates incentives for innovations in demand flexibility and clean firm power that can lower overall system costs. Standardized and transparent rate setting, together with nationwide applicability, provides data centers with a level playing field that is easier to navigate and protects people throughout the country by making sure that no state can make its other customers subsidize electricity for data centers.

Grid connectivity preference

The third part of the nationwide fair share proposal is a tax on the electricity consumption of data centers, with a preference for grid connection. This should be levied as a tax in two parts: The first is a tax on the facility's consumption of electricity from the grid, and the second is a tax at a higher rate on the facility's behind-the-meter electricity generation from fuel combustion sources. Congress should set the two tax rates such that amounts paid by a typical grid-connected facility through the full-cost connection fee, the full-cost electricity rate, and the grid-connected power demand tax together are less than the amounts that would be paid by a comparable off-grid facility through the off-grid energy consumption tax alone.

In addition to raising revenue (the benefits of which CAP will discuss further in future publications), this tax structure serves two important purposes. First, the tax preference for grid connection avoids creating an incentive for data centers to be built off-grid and discourages excessive fuel consumption by those that are already off-grid. This is beneficial because the on-site fuel-combustion power plants that must then supply those facilities pollute communities and raise the costs of fuel across the economy, while failing to lower average grid infrastructure costs through a larger customer base. Second, the tax on grid-supplied power reinforces the incentive for on-site energy storage and demand flexibility innovations that would reduce a facility's peak demand, and therefore lower grid infrastructure costs and fuel costs across the economy.

Congress should entrust oversight of several of the fair share policy provisions to the Federal Energy Regulatory Commission (FERC), which need not conduct an open-ended review using the same just and reasonable test used in wholesale transmission rate cases, but can instead narrowly assess whether the states' methodology satisfies four criteria: whether the customer class includes data centers and excludes residences, whether that class is paying its share of total system costs on an aggregate energy consumption basis, whether facility-specific rates are standardized based on energy and demand charges, and whether the methodology for grid connection fees requires typical new customers of the class to pay the upfront costs of necessary electricity system upgrades. The Department of Energy would be directed to provide technical assistance to public utility commissions in developing their methodologies, drawing upon lessons about best practices from across the country.

Based on the Rhodium Group's preliminary analysis, CAP estimates that total annual system costs nationwide could increase by \$100 billion over the next decade if the AI build continues at the pace of the highest-growth projections.¹⁵⁶ That amounts to a growth of 15 percent higher total system costs than a scenario with lower data center demand, which should be paid by the data center developers themselves through a nationwide fair share policy—not by existing businesses and households through higher electricity bills.

The proposed rate relief fund would protect households from any data center-related increases for its duration, but if data centers do not pay their fair share, the rate relief fund will cost the federal government more than estimated in this report, and households would face increased costs after the relief fund ends.

AI data centers should be good neighbors

The nationwide fair share proposal resolves the affordability implications of data centers, but there are other public concerns that should be addressed as data centers are sited and connected to the grid, including disruptive noise, water usage in drought-stricken areas, the use of nondisclosure agreements to withhold information from the public, land use, and local air pollution.¹⁵⁷ Data centers should bring communities benefits – not detriment. By being good neighbors, data centers can achieve community acceptance and meet their own goals as well. For example, one recent poll found that 60 percent of voters support holding data centers to binding community benefit agreements for local hiring, infrastructure improvements, and environmental protections.¹⁵⁸ Some of these commitments could include:

- **Using clean energy.** Unlike fuel consumption, clean energy does not produce harmful pollution. One study found that by 2028, emissions from the maintenance and operation of backup generators and from fossil fuel combustion for electricity generators to power data centers could cause 600,000 asthma cases and 1,300 premature deaths as well as \$20 billion in public health costs.¹⁵⁹ And communities support clean energy: A recent Climate Power poll found that support for AI data centers can swing based on how they are being powered, with support for data center construction if powered by clean energy sources and strong opposition to data center construction if powered by fossil fuels.¹⁶⁰ In addition to health benefits, clean energy makes sense for data centers, as clean energy is the most readily available energy source to deploy, it is affordable, and one study found that data centers that utilize flexible grid connections and bring their own clean energy can connect to the grid three to five years faster than through standard interconnection processes.¹⁶¹
- **Providing transparency.** AI data centers must not rely on nondisclosure agreements or secret utility incentives to negotiate their electricity rates. The rates that data centers negotiate must be public and follow the fair share policy framework that all AI data centers pay for the full costs of electricity generation and infrastructure without passing the costs of stranded assets on to communities. In addition to the energy, data centers should increase transparency as a whole in other areas such as water usage, infrastructure commitments, and other agreements with state and local governments, among others.

- **Committing to the creation of good-paying jobs.** Data centers should work with their communities to bring permanent, high-quality, good-paying jobs and commit to strong labor standards. Part of this vision includes training local communities on AI and providing educational pathways for those interested. For example, Microsoft’s promise for “Building Community-First AI Infrastructure” includes working with North America’s Building Trades Unions to strengthen apprenticeship and training programs.¹⁶² In addition, by committing to clean energy requirements and utilizing domestically sourced materials for any AI data center infrastructure requirement, AI data center companies can create good-paying jobs throughout the country.

- **Funding local investments.** Local communities are always in need of more revenue to invest in their communities. Extremely well-capitalized tech companies should invest in the communities that host their data centers, including supporting home energy upgrades that can create more energy capacity and even help power the data centers themselves.¹⁶³ This type of investment is especially important in places where a state has otherwise exempted data centers from property and sales taxes, which stress local budgets and services.

- **Continuing to research and develop new ways to help ratepayers.** As AI data centers are on the frontier of American innovation, these companies should continue to look for ways to help lower costs to other ratepayers, including investing in emerging technologies that reduce electricity demand such as thermal batteries that store energy from the waste heat to maintain data center temperatures.¹⁶⁴

Build a better, bigger power system

At a time when demand on the electricity system is growing quickly and grid infrastructure is under stress from climate disasters and growing demand, the United States needs to build more grid infrastructure and more sources of electricity. A better, bigger power system will be more affordable, more resilient, and more independent of fuel price volatility. Building a better, bigger grid requires reforms to remove barriers that slow construction; align incentives for lowering costs; and make strategic investments with public, private, and ratepayer funding.

The most immediate barrier to deploying the cheapest and fastest sources of energy is the Trump administration's capricious campaign to block wind and solar projects. Congress must step in to stop the executive branch from abusing the federal government's permitting powers to pursue the president's apparent vendetta against the wind and solar industries.

In addition to breaking this administration's blockade on affordable clean energy, other barriers must be removed to speed up building a bigger and more resilient power grid at an affordable cost. CAP recommends three areas of federal policy reform: 1) make quick, clear, and reliable decisions on permitting and connecting new sources to the grid, 2) make utilities work to lower costs, and 3) invest in both new energy sources and grid improvements.

Policy proposal: A program of breaking down barriers to build the power system

The United States will not be able to build the power system it needs unless Congress enacts meaningful reforms to lower costs and improve how the electricity sector is built. Utilities, energy developers, and businesses throughout the electricity supply chain need greater certainty to make investments efficiently. Among other reforms, key policies include the following.

Make quick, clear, and reliable decisions on permitting and connecting to the grid

Federal permitting for interstate transmission takes nearly three times as long as for interstate natural gas pipelines, with transmission taking 52 months and pipelines taking 18 months on average.¹⁶⁵ Delays can compound, and insufficient transmission is contributing to slow resolution of an already unnecessarily complex interconnection process. At the end of 2024, there were roughly 2,300 GW of new energy and storage projects—enough energy to nearly double the size of the current power system—waiting to connect to the grid.¹⁶⁶ Slow decision-making, lengthy litigation, and capricious reversals in permitting policy add up to more project development costs and delays in the construction of the very projects that are key to lowering total system costs.¹⁶⁷

Comprehensive reform must directly address the underlying causes of slow permitting decisions and project uncertainty, including a lack of capacity and resources, lack of ownership over decision-making, and lack of adequate planning. Reforms should help ensure that new electricity sector projects address the needs of the power grid and local communities not only because this minimizes harms, but because it also speeds the delivery of good projects. Among other approaches, specific reforms should include the following:

- Congress should grant FERC exclusive approval authority over interstate transmission lines and create a coordinated process for siting and permitting those projects with FERC as the lead agency, as is already the law for pipelines.¹⁶⁸ Similar policies have been proposed by Sen. Sheldon Whitehouse (D-RI) and Rep. Mike Quigley (D-IL) and are included in the Energy Bills Relief Act from Rep. Sean Casten (D-IL) and Rep. Mike Levin (D-CA).¹⁶⁹ Until this reform is made, Congress should allocate additional resources to DOE to ensure the National Interest Electric Transmission Corridors process is comprehensive, utilizes automatic and standardized tools for transparency, and includes robust community engagement from the onset so that it meaningfully accelerates approvals under the current regulatory framework.
- Congress should direct FERC to issue a rulemaking establishing 1) a unified process for long-term planning and 2) clear cost-allocation method requirements for interregional and interstate transmission lines. This order should be in the similar style of FERC's regional planning and cost allocation rule, Order No. 1920.¹⁷⁰ Congress should also require FERC to hold all utilities and transmission organizations accountable for following regional and interregional planning and cost-allocation requirements, including utilities in non-RTO/ISO regions. Finally, FERC should release an annual “report card” to show which areas are successfully building these lines and which are falling behind.

- Congress should require timely and coordinated federal planning, siting, and permitting decisions for electricity sector projects. In general, Congress should allocate additional funding and resources to agencies responsible for these processes and ensure they are staffed with personnel who have the capacity and expertise to ensure community input on environmental documents and reviews. Congress should also continue to adopt standardized interagency digital tools, including a “one stop shop” for project applications (similar to grant applications at [Grants.gov](https://www.grants.gov) or for jobs at [USAJobs.gov](https://www.usajobs.gov)) to collect permit applications from project sponsors and facilitate data exchange across all stakeholders.¹⁷¹
- Project sponsors should get their permit fees refunded if, through no fault of their own, any agency decisions or court challenges exceed reasonable timelines established at the outset of the permit application.
- Developers that complete comprehensive community engagement prior to going through the federal permit process should receive a more streamlined judicial review process. This could involve shortening the statute of limitations for the National Environmental Policy Act (NEPA) and/or making these projects a priority of appellate courts so those cases get resolved within a year.
- Congress and the relevant federal agencies should favor standardized approaches to permitting and review for the projects that have a low impact on the surrounding communities and the environment. This approach makes particular sense for new transmission projects within existing rights of way, advanced transmission technologies, and battery energy storage installations co-located with existing generation assets. It could also make sense for energy projects on certain brownfield sites or already distributed land. This could be through categorical exclusions from review under NEPA, tiered programmatic reviews for vital transmission projects, and nationwide permits under the Clean Water Act.
- Congress should authorize and direct the DOE to work with states and scrutinize the local moratoria on siting renewable energy projects that 20 percent of counties have now adopted and challenge any that impair the reliability of the power grid and risk higher electricity prices.¹⁷² At the same time, Congress should fund technical assistance for states seeking to adopt best-practice siting policies (learning from reforms recently adopted in Illinois and Michigan, for example).¹⁷³
- To minimize the amount of time it takes to approve new power sources for connection to the grid, Congress should direct FERC to evaluate and review its Order No. 2023, which sought to standardize the transmission interconnection process for new utility-scale generators, considering three changes.¹⁷⁴ First,

encouraging similar reforms to smaller distributed energy resources, such as rooftop solar, could streamline their connection to the grid. Second, FERC should continuously strengthen automation standards, evaluate the effectiveness of readiness requirements and withdrawal accountability measures to keep phantom projects out of the queue, and align the data analysis practices between the interconnection and transmission planning processes.¹⁷⁵ Third, Congress should direct FERC to consider alternatives to interconnection studies, such as the “connect and manage” process that has worked well in Texas to connect new resources to the grid at greater numbers and speed than other markets, provided they agree to curtail generation at times of surplus and curtail load in times of critical peak demand.¹⁷⁶

Make utilities work to lower costs

Investor-owned utilities earn returns based on total capital expenditures which create no financial incentive for them to prefer the most cost-effective approaches.¹⁷⁷ Households are too often on the hook to pay for energy or grid investments made in unnecessarily expensive ways. In 2024, investor-owned utilities spent nearly \$353 billion and took in \$62 billion in profit.¹⁷⁸ One of the clearest examples of misaligned incentives is that regulators allow utilities in vertically integrated markets to earn a return on shareholder equity for building a power plant while fuel costs, however volatile, are directly passed on to ratepayers. This is an example of moral hazard: The utility is responsible for the decision of whether to build a gas power plant and is rewarded with a rate of return on its capital expenditures but bears no risk of increasing operating costs. Instead, it is passed on to ratepayers who pay more when gas prices rise. This was the case in Virginia when Dominion Energy requested to increase the fuel cost charge, which increased typical household bills by \$8.95 per month starting in 2026 to cover rising gas prices and higher demand from a January 2025 cold snap.¹⁷⁹ This also happened in Georgia, where increases in fuel costs accounted for \$15.94, or 37 percent, of the increase in average monthly bills since 2023.¹⁸⁰

States have traditionally held primary jurisdiction over reviewing and approving electric utility rates within their territory. However, there is a lack of coordination and oversight among states to hold utilities accountable for investing in the best available energy sources.¹⁸¹ The federal government could help fill these gaps and allow for better coordination between jurisdictions that may otherwise not be incentivized to work together. While a shift toward a greater federal role in electric utility regulation should not be taken lightly, the electric grid is increasingly interconnected, and utility investment, capacity planning, and cost allocation decisions by one jurisdiction deeply affect ratepayers in other jurisdictions. Key reforms that would require a stronger federal oversight role include the following:

- Congress should require utilities that build or own generation to internalize and average out the foreseeable risks of fuel price spikes by carrying insurance against price volatility instead of sending ratepayers the bill after the fuel price spikes have occurred.
- Congress should direct FERC to scrutinize the rate of return on investment that investor-owned utilities may recover from retail customers, make nationwide comparisons to improve transparency, and inform the relevant governor and state public utility commission when it finds a proposed or approved rate of return to be excessive compared with other states.¹⁸² Transparency and standardized evaluation methodologies can help to reduce the opportunities for regulatory capture at the state level.
- Congress should direct FERC to implement a series of reforms to affirm and bolster its authority to ensure that power grid infrastructure is built in a cost-effective, efficient, and equitable manner. FERC should build off of Order No. 1920 and require utilities and transmission organizations to use advanced transmission technologies such as dynamic line ratings, advanced power flow controls, topology optimization, and reconductoring to maximize the capacity of existing infrastructure and reduce the amount of new infrastructure needed.¹⁸³ FERC should also modernize and standardize the way that utilities and transmission organizations report grid data and analytics, which should include costs and economic justifications around a project, asset, or system. Many of these reforms are included in the Casten-Levin Energy Bills Relief Act.¹⁸⁴
- Congress should also consider more extensive reforms to utility compensation. For example, performance-based ratemaking rewards utility shareholders based on outcomes (affordable rates and reliable service), rather than guaranteeing a rate of return based on the amount of capital invested.¹⁸⁵ Such reforms would address the moral hazard risk identified above, where utilities are rewarded for inefficient investments that help them turn a profit while handing consumers the bill.

Invest in new energy sources

As it becomes easier and faster to build, and utility incentives are aligned to build the right types of projects, Congress should also support investment in lowering the costs of new clean energy projects, which is the longer-term solution for ensuring costs remain affordable for households. Key reforms should include the following:

- Congress should restore and expand the federal technology-neutral clean electricity investment and production tax incentives, including the job quality and domestic content requirements, which provided credits for any zero-emission power source, regardless of technology, including solar, wind, geothermal, nuclear fission, nuclear fusion, closed-loop carbon capture, and energy storage.¹⁸⁶ Even without incentives, new wind and solar projects are still generally less expensive than new gas or coal power plants, but the repeal of these incentives means ratepayers will have to pay at least \$110 more for electricity in 2026, and even more in the years leading up to 2035.¹⁸⁷ The OBBBA wiped away more than half of the energy (and nearly three-quarters of the clean energy) that would have been added to the grid by 2035.¹⁸⁸ The rapid growth of electricity demand requires more new generating capacity, not less.
- There is an emerging category of new energy sources that provide not only clean energy but also firm power that is available around the clock without intermittency, including enhanced geothermal, long-duration energy storage, advanced nuclear fission, and potentially nuclear fusion.¹⁸⁹ Such technologies can significantly reduce the amount of short-duration batteries, demand-response programs, peaking power plants, and transmission needed to firm the power from wind and solar. The upfront costs of these new technologies are relatively high, but technological development and deployment at scale offers the opportunity to drive costs down, much as the cost of solar has fallen by more than 80 percent since 2009.¹⁹⁰ Once built, the operating, maintenance, and fuel costs of these technologies are likely to beat those of baseload coal or gas power plants, given that even current nuclear and geothermal plants are already on average less expensive once their capital expenses are fully depreciated. This is in part due to the lack of fuel costs for geothermal, and relatively low fuel costs for nuclear.¹⁹¹ Congress should support aggressive scientific research, technology development, and commercial deployment of emerging technologies that could provide clean firm power at significantly lower cost.

Invest in grid improvements

Congress should also make catalytic investments that lower the cost of grid components so that ratepayers alone do not need to pay for grid improvements and modernization. Key reforms should include the following:

- Electricity does not flow freely throughout the country, which results in a geographic mismatch between power generators and consumers.¹⁹² While regional transmission organizations and independent system operators are able to distribute power from where it is produced to where it is needed more

efficiently over larger areas than individual utilities, they still face bottlenecks and losses.¹⁹³ This is particularly evident at the “seam” between the Eastern and Western interconnections, where only a small amount of energy is able to flow between the two grids.¹⁹⁴ The Inflation Reduction Act did not invest in power grid infrastructure at the levels needed to increase transmission and distribution capacity. Congress should establish new investment tax credits, grants, and loans to lower the cost of grid infrastructure.¹⁹⁵ An investment tax credit for building new transmission lines or upgrading existing capacity would lower the costs of projects in regions with competition among transmission developers, lowering rates. Federal investment in high-priority grid infrastructure, such as high-voltage direct current ties at the seams of the Eastern and Western interconnections, would lower total system costs throughout the whole country and reduce the overall amount of new transmission capacity needed to manage growing loads.¹⁹⁶ Investments in hardening the grid and improving resilience to increasing extreme weather would help lower the costs of rebuilding grid infrastructure, and investing in well-planned transmission lines would save residential customers across the country up to \$33 billion in annual electricity costs.¹⁹⁷

- The current supply of power transformers—a major component of the power grid—falls short of demand by roughly 30 percent.¹⁹⁸ Before the pandemic, utilities might have waited a few months to receive an ordered transformer; now they have to wait two to four years, and the Trump administration’s tariffs on steel and copper could further snarl supply chains for years to come.¹⁹⁹ Domestic production of power transformers accounts for only 20 percent of domestic demand, and most of the transformers are imported primarily from Mexico, Europe, and South Korea, with Trump’s tariff policies making these supply chains much tighter and the supplies even more expensive.²⁰⁰ And various utilities use different, nonstandardized designs that make mass production of transformers difficult.²⁰¹ Congress should incentivize increased domestic manufacturing of key grid components and the necessary materials and encourage standardized design practices to bring down costs.
- Lastly, households should also have the opportunity to invest in reliable technologies that can substantially reduce energy bills. Congress should restore and expand the rebates and credits that will make it more affordable for households to add their own rooftop solar, home batteries, and bidirectional electric vehicle chargers.²⁰² Combined, these technologies reduce electricity bills by maximizing solar, increase resiliency during power outages, and increase energy independence.²⁰³ Rewiring America recently found that “[w]ith the right policies, whole-home electrification, rooftop solar, and battery storage” could

deliver “about \$26,000 in lifetime savings per home and \$1.5 trillion in total savings nationwide.”²⁰⁴ Congress should make efforts to increase adoption and affordability of these solutions.²⁰⁵

Building a better, bigger power system will lower costs, reduce the economy’s exposure to overseas fuel disruptions, reduce the difficulty of rebuilding after extreme weather disasters, lower pollution, and create good-paying jobs. However, it will take reform to get the government agencies and utilities that are responsible for these decisions to invest responsibly and create the affordable power system America needs.

Construction will take time and investment. This program of reforms will shorten the timelines, improve cost effectiveness, and shift many costs from ratepayers onto private investors and the federal government. However, consumers also need immediate relief from rising electricity prices, as proposed above, through a federal rate relief fund and a national fair share policy. As recent polls show, Americans understand that we need more energy and increased investment in grid infrastructure.²⁰⁶ Together, these three proposals will meet rising energy needs, control electricity rates, and lower total costs while building the reliable grid that American businesses and families need to thrive.

Estimated impacts of CAP's recommendations

Based on the recommendations outlined in this report, CAP's American Electricity Affordability Plan will bring immediate relief for households in participating states, lower costs in the long run, and provide billions of dollars in savings in the coming decades. In 2025, residential electricity bills increased by at least \$3.09 billion.²⁰⁷ If rates were frozen at today's levels, residential consumers would avoid at least \$10.32 billion in rate increases that have already been proposed through 2028.²⁰⁸

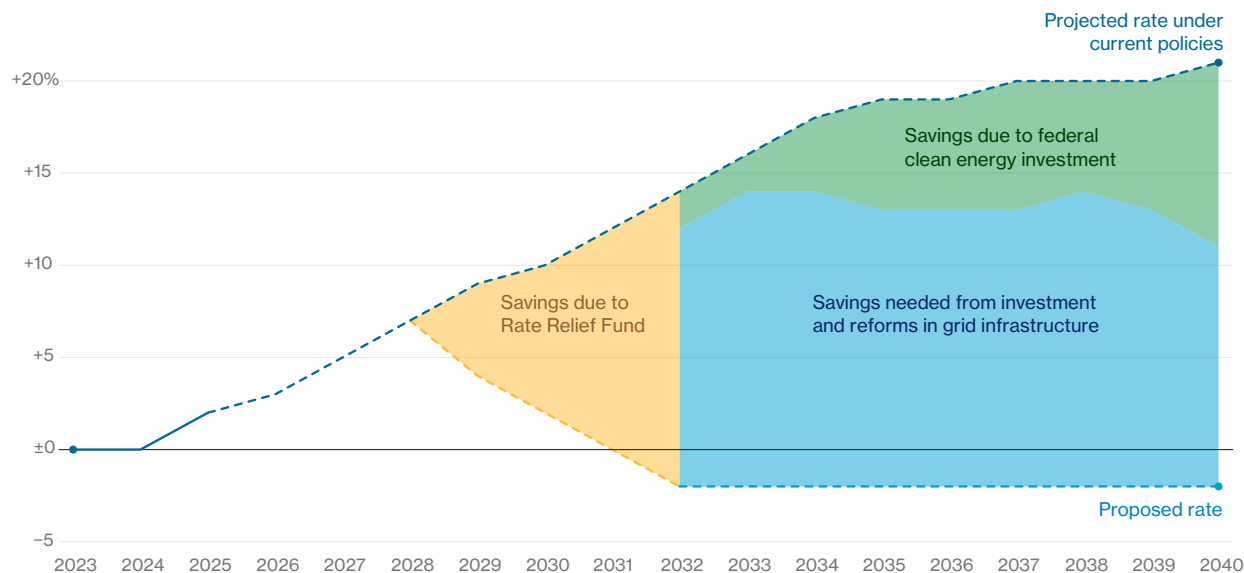
However, electricity rates are expected to continue to rise under current policy. If implemented in 2029, a rate relief fund would save consumers an estimated \$129 billion in rate increases by 2032, based on the Rhodium Group's initial forecasting of electric utility revenues. That is a projected average savings of about \$921 per household over the proposed four-year period, though savings will be highest in the states that are most exposed to rising electricity rates.

The forecasted demand for AI data centers is a significant part of these utility cost increases. Preliminary estimates from Rhodium Group show that the largest projections for AI data center growth would increase total electricity system costs by roughly 15 percent over the next decade compared with a scenario with lower data center demand.²⁰⁹ If AI data centers pay their fair share, none of those costs will be passed on to other customers or contribute to the costs of the rate relief fund.

FIGURE 6

The Rate Relief Fund, in addition to clean energy and grid investments, will lower real residential electricity rates

Projected percentage change from 2024 electricity rates, 2023–2040 (adjusted for inflation, in 2024 dollars)



Note: The projected rate under current policies assumes a mid-emissions scenario with high demand growth from data centers, using modeling from Rhodium Group. The proposed Rate Relief Fund would freeze rates nominally at 2028 levels, which equates to a reduction in real electricity rates after adjusting for inflation. From 2032 to 2040, the reduction in rates from “federal clean energy investments” represents modeling from Rhodium Group for the restoration of the energy and climate policy environment as it stood at the end of 2024, as well as high demand growth from data centers. The proposed rate line shows rates keeping pace with inflation and assumes federal clean energy investment and reforms in grid infrastructure will sufficiently maintain rates at that level.

Source: Authors’ interpretation of preliminary modeling results from the Rhodium Group, on file with the authors.

Holding rates constant would provide important relief to consumers and allow time for the reforms and increased investments in infrastructure and electricity supply to begin lowering total system costs. To ensure that total electricity system costs have come down before the end of the rate relief fund, the combined savings of improvements must lower annual costs in 2033 by roughly \$51 billion below the current projected trajectory in nominal terms. One scenario of continued investment in new capacity, without the disinvestment or permitting obstacles pursued by the current administration, forecasts inflation-adjusted residential rates that stabilize and begin declining in the 2030s, as seen above in Figure 6. Additional savings would be needed from grid infrastructure improvements. By making investments across the full spectrum of electricity system improvements, increasing the speed of getting it all built, and aligning utility incentives, the federal government—in coordination with utilities, industry, and other stakeholders—will have more than enough pathways to ensure that total system costs decline by the necessary amount. For example:

- Investments in high-capacity transmission could save the average household more than \$100 per year on their electric bill or \$14 billion to \$33 billion in national annual net savings once built after accounting for the cost of the build-out.²¹⁰
- Building out high-priority grid infrastructure, such as high-voltage direct current transmission lines at the seams of the Eastern and Western grid interconnections, could lower total system costs throughout the country by nearly \$29 billion over 35 years due to diversity in load and generation and increased operating flexibility.²¹¹
- Demand response programs that trim peak demand by as little as 5 percent could save more than \$3 billion annually.²¹²
- Increases in the electrical grid system efficiency from grid-enhancing technologies could have saved more than \$5 billion annually from 2021 to 2025, recouping upfront investment within six months.²¹³
- There will also be opportunities for savings specific to a region’s geography, availability of energy sources, and utility setup. For example, getting clean energy that has been waiting in the interconnection queue online faster could have saved PJM ratepayers \$3.5 billion during the 2026–2027 delivery year, while deploying at least 10 GW of battery storage within the Midcontinent Independent System Operator region could deliver \$4.5 billion in electricity cost savings, and deploying at least 3 GW of battery storage within the Southwest Power Pool region could deliver \$2.2 billion in electricity cost savings over the next decade.²¹⁴

Combined, the alignment of balanced public, private, and ratepayer investment to increase energy supply and improve infrastructure will significantly lower costs for ratepayers and enable American families and businesses to thrive.

Conclusion

Electricity bills are rising, and the current federal government is making the problem worse, not better. CAP proposes a new federal model that includes increasing electricity supply and breaking down barriers to build the power system faster, creating a rate relief fund for states that freeze or lower rates for households, and requiring AI data centers to pay their fair share of costs. Together, these reforms would provide immediate relief to ratepayers and build a resilient, capable, flexible, clean, and affordable electricity system for the United States.

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