



How Big Utilities are Impeding Clean Energy, and What We Can Do About It

By John Farrell, January 2021

Monopoly power in the U.S. has reached catastrophic levels, affecting every corner of our economy and society. While this crisis is gaining more attention, particularly in the tech industry, there is much more to understand about how it affects our lives. In this report, we describe the less understood problem of concentrated corporate power in the electricity sector.

Corporate utilities dominate how electricity is generated, transmitted, and distributed or sold to the customer – resulting in both a lack of safety measures as well as costly, short-sided, and dirty energy investments. This affects all of us as we confront our climate crisis and disproportionately harms the communities of color and low-income households that live near dirty power plants and within warmer inner cities.

The solution to concentration lies in embracing decentralized ownership and generation. Acting individually or collectively, we have a new opportunity to bypass concentrated power and build wealth by using local solar energy to power our lives. This report describes how state and local policy solutions can foster those community-based clean energy solutions.

This report is part of an ILSR series on [Fighting Monopoly Power](#) throughout our economy, coedited by Stacy Mitchell and Susan R. Holmberg. Go to our website to find even more antimonopoly analyses and tools on a wide range of sectors, including Banking, Broadband, Food and Farming, Pharmacy, Small Business, and Waste.

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- [Mergers and Monopoly: How Concentration Changes the Electricity Business](#)
- [An Alternative to Electricity Monopolies Enables Communities to Center People and Planet](#)
- [Reverse Power Flow: How Solar+Batteries Shift Electric Grid Decision Making from Utilities to Consumers](#)

About ILSR

The Institute for Local Self-Reliance (ILSR) is a national nonprofit research and educational organization founded in 1974. ILSR has a vision of thriving, diverse, equitable communities. To reach this vision, we build local power to fight corporate control. We believe that democracy can only thrive when economic and political power is widely dispersed. Whether it's fighting back against the outsize power of monopolies like Amazon or advocating to keep local renewable energy in the community that produced it, ILSR advocates for solutions that harness the power of citizens and communities. More at www.ilsr.org.

As the U.S. faces intersecting crises – particularly climate change and racial and economic inequality – concentrated power in the electricity sector obstructs progress in providing Americans with clean, safe, and cost-effective electricity. While this can be true of any type of electric utility, including public and cooperatives, corporate utilities provide a particular brand of problems. For two decades, mergers in the corporate electricity sector have concentrated economic and political power in the hands of fewer companies that favor bloated returns for their shareholders over delivering for their customers and communities. Corporate utilities increasingly control how electricity is generated, transmitted, and distributed or sold to the customer – resulting in both a lack of safety measures as well as costly, short-sided, and dirty energy investments. This affects all of us as we confront our climate crisis and disproportionately harms the communities of color and low-income households that live near dirty power plants and within warmer inner cities.¹

The solution to concentration lies in embracing the decentralized ownership and generation of electricity. Even as utilities have concentrated their power, the means to generate electric power has dispersed. Acting individually or collectively, Americans have a new opportunity to bypass concentrated power and build wealth by using local solar energy to power our lives.

The Economic Power of Electric Power

Understanding how economic and political power functions in the electricity sector first requires understanding the market's basic makeup. Three types of utilities serve U.S. electricity customers: investor-owned utilities, public power, and cooperatives. About one in seven Americans get power from a government-owned utility, like a municipal department. One in eight receive power from a rural electric cooperative, serving primarily rural areas, as the name suggests. Approximately two-thirds receive service from an investor-owned utility in an urban or suburban setting.²

Despite different ownership structures, customers of public and cooperative utilities often suffer from similar profit-incentive and concentrated power issues that structure corporate utilities and raise electricity prices. Over the last several decades, few utilities of any form developed cost-saving efficiency programs until compelled to by state



government. Investor-owned utilities see reducing energy sales as a conflict for shareholders, but cooperative and publicly owned utilities aren't immune to these types of incentive issues. Cooperatives are often reluctant to deliver energy efficiency because it reduces revenue. Municipally owned utilities provide revenue to their city's general fund, so energy efficiency can threaten their support for city budgets.

The financial incentives of cooperatives and municipal utilities also distort clean energy markets. In the mid-1900s, many local utilities banded together to form giant power agencies to build and operate big power plants or even coal mines. To finance these investments, the new conglomerated power agencies locked their smaller member utilities into long-term contracts – some as long as 70 years – limiting local flexibility in accessing clean energy market. In Western states, the big electricity generation and transmission cooperative, Tri State, has limited the ability of smaller co-ops to procure cheap, clean energy as an alternative to Tri State's increasingly expensive coal-fired energy. In the Southeast, the Tennessee Valley Authority has pushed new 20-year contracts on its members after it privately studied the market and found its own power was no longer competitive. In Minnesota, rural electric cooperatives used their local political connections to prevent state clean energy laws from applying to cooperatives.³

While the movement toward concentrated power and ownership in the electricity sector has affected all three types of utilities, the effect on consumer costs and innovation is

most dramatic in the investor-owned utility business. In the past twenty years, several large utilities have become giants by acquiring captive utility customers from other regulated utilities as well as skirting energy regulations.⁴ The customer base and revenue of American Electric Power, Duke Energy, and Exelon have grown by 50 percent or more since 2002.⁵ This market growth drives up prices for customers and makes utilities less flexible in developing clean energy innovation.

For example, one of the country's largest investor-owned utilities, Exelon, has nearly doubled in size in the past two decades, and now serves almost 9 million customers across five states. Using its market power, Exelon withheld power plants from a power auction in order to inflate prices consumers would pay for electricity from its nuclear power plants. On the East Coast, the company gobbled up the electric utility serving customers in Washington, D.C., earning a \$1.1 billion payday for shareholders while promising just \$100 million in customer benefits. The utility cleared its last barrier to this merger in front of the D.C. Public Service Commission shortly after making a \$25 million contribution to a local soccer stadium, a pet project of the D.C. mayor.⁶

Exelon is not alone in stiffing customers to reward shareholders – or leveraging its political might. Monopoly utilities across the country, but particularly in the Midwest, have used their captive customers (and often captive regulators) to manipulate wholesale energy markets. The Union of Concerned Scientists reports that utility customers pay as much as \$1 billion per year more for electricity because monopoly utilities are allowed to “self schedule” their power plants, essentially cutting in line in front of competitors.⁷ They lose money in this move in the competitive market, but they recover the difference (and a profit) from their captive customers.

In Kansas, Westar customers have had to absorb rising electricity prices even as the utility builds low-cost wind turbines that lift shareholder profits. In Minnesota, Xcel Energy used its lobbying muscle to win legislation approving an expensive gas plant, evading oversight from public regulators. In Virginia, the lobbying might of Dominion Energy won legislation that allowed its shareholders to double-dip, collecting profits twice on the same dollar spent on the grid and making it harder for regulators to require the monopoly utility to return excess profits to customers.⁸

Corporate monopoly power also diminishes public safety. The concentrated power of all forms of utilities – investor-

owned, public, and cooperative – gives them enormous political influence that can undermine measures put in place to protect the public interest. However, publicly owned and cooperative utilities have built-in safeguards, such as elected government or boards allowing customers to change the utility's direction. Customers are particularly at risk from investor-owned utilities that can use their captive market and growing size to fend off oversight and to increase shareholder profits at the public's expense. The most notorious example is PG&E's culpability in some of California's recent wildfires. After raising customer rates, PG&E failed to improve powerline safety, instead opting to pay off shareholders.

If regulators were to effectively curtail excessive corporate power in the electricity business, we could democratize the electricity system, and structure it to prioritize local, clean energy sources owned and operated by communities.

Investor-owned utilities also lack incentives to invest in wind and solar energy. Since the first power plants came online, utilities had been given free rein to dump the pollution from power generation into the air and water. Utilities that weren't compelled by law to adopt clean energy did not, because the health costs of pollution didn't show up on the utility balance sheet. When utilities were compelled to buy clean energy resources, they signed agreements to buy power from third parties to avoid the risk of the newer technologies. In recent years, however, investor-owned utilities have changed their attitude toward clean energy – though they haven't changed their minds about using their market power to unfairly garner profits. MidAmerican Energy, in the Midwest, succeeded in getting its state regulators to okay building wind energy projects that would produce more energy than its own customers needed. Independent power producers sued, claiming that MidAmerican used its captive customers to finance power generation that would be sold into competitive markets.⁹ They were right, but the Iowa Supreme Court failed to stop the project and MidAmerican would earn a nearly 12 percent return on its investment.¹⁰



The power of electric utility companies is even more transparent in a market where small-scale options to generate power – also known as “distributed energy” – have fundamentally upended the relationship between utilities and customers. Rooftop solar, batteries, electric vehicles, and many other technologies have miniaturized the functions of the grid system, allowing customers to produce their own power or to buy directly from third parties. But the wires that could allow customers to transact with each other for power remain in monopoly hands. In California alone, over 700,000 customers produce solar electricity from their rooftops, enough to meet nearly 15 percent of the grid’s peak energy needs.¹¹ But the only way they can bring this power to market is to sell back the power to the monopoly utility, typically an investor-owned company whose financial interest is in opposition to customer-owned power generation.

If regulators were to effectively curtail excessive corporate power in the electricity business, we could democratize the electricity system, and structure it to prioritize local, clean energy sources owned and operated by communities. The community solar array on the Monadnock Food Co-op is a perfect example. State laws allow the solar project (on the co-op’s roof) to sell power directly to this local, cooperative institution while generating revenue for local investors.¹² It could also include solar on individual home rooftops, on schools and community centers, on hardware stores and libraries, perhaps combined with energy storage to operate when the grid goes down.

How Grid Policy Created and Protects Electricity Monopolies

The problems of today’s electricity market power structure have their roots in the electricity grid’s development. In the early twentieth century, electricity production and distribution was a Wild West. Cities might be served by multiple competing electric light companies, stringing multiple sets of wires to the same building. The leading companies sensed an opportunity to sell elected officials on a more orderly process for electrifying America. In exchange for monopolies with public oversight, these utilities promised to deliver affordable electricity.

This is the key issue: states granted utilities an exemption from competition on the assumption that electricity was delivered most efficiently by a single entity, a “natural monopoly.” Thus, states expressly gave up an interest in maintaining competitive markets. As a result, monopoly electric utilities have been protected from antitrust scrutiny under the “State Action Doctrine.”¹³ As long as states have taken express action to allow markets without competition, federal antitrust authorities cannot intervene.

Utilities have also lobbied for laws to undercut competition from their own customers.

Until the 1960s, the policies worked as designed. While pollution remained unaccounted for, and communities of color often felt the worst impacts of extracting and combusting coal, uranium, or other power plant fuel, utilities were profitable and electricity costs fell.

The cozy monopoly system, however, blew up in the face of two major changes. First, technical and engineering limits meant utilities were no longer able to extract cheaper electricity from ever-larger power plants. At the same time, the energy crisis of the 1970s ushered in high inflation, exploding utility balance sheets during a period of massive capital investment in coal and nuclear power plants.

The government’s response to these changes was a missed opportunity to fundamentally reevaluate monopoly market structure in the electricity industry. While the federal

government passed the first electricity market competition legislation, the Public Utilities Regulatory Policy Act of 1978, state legislatures failed to fully implement the law even as they strengthened public oversight over power plant construction. These limited changes bought another two decades of relative stability in electricity markets but they failed to address the underlying tension: that the financial interests of monopoly utilities had diverged from the public interest.

In recent years, states have withdrawn many monopoly protections in the electricity sector, yet the patchwork approach has often exacerbated monopoly power. Policy changes in the 1990s opened wholesale electricity markets to competition, requiring utilities to open their transmission infrastructure to competitive access at fair prices. Retail markets were also opened in some states. But this has allowed conglomerates to operate power plants in competitive markets and enjoy monopoly protections in others, with problematic results. In Ohio, for example, the financial strength of subsidiaries with captive customers helped investor-owned utilities underwrite a political campaign to bail out unprofitable power plants in supposedly competitive markets.¹⁴

Utilities have also lobbied for laws to undercut competition from their own customers. A number of utilities have shifted how they bill for electricity, increasing unavoidable fixed charges, and, by doing so, lessening the incentive for customers to install solar or energy efficiency improvements. In Kentucky and Louisiana, utilities recently succeeded in ending net metering, the most widespread and effective policy to encourage rooftop solar. Utility lobbying in Nevada and Maine also succeeded in undoing net metering and sharply curtailing the rooftop solar market, but in both states public outcry led to at least partial reinstatement. In Minnesota, cooperative and municipal utilities succeeded in passing a law to add fees to the bills of customers with solar energy, severely limiting the financial benefits for customers installing solar.¹⁵

The Broader Impacts

Americans collectively spend \$360 billion per year on electricity. For a century, this money has flowed out of our communities to support fossil fuel extraction and utility shareholders while the pollution impacts have been unequally distributed onto communities of color and low-income people. This money has also supported a system

that underinvests in energy efficiency, renewable energy, and resilient energy systems. Meanwhile, deconcentrating economic and political power in the electricity sector could address economic, resilience, environmental, and equity needs long overlooked.

First, democratized, community-based electricity systems can build local wealth by transferring money currently spent paying electricity companies into local pockets. For example, every megawatt of solar owned locally generates \$3 million in electricity savings for the owner or participant. These projects also generate economic activity, supporting electricians and installers. Local solar companies, in turn, support other local businesses, keeping dollars circulating in the local economy.

Community-based electricity systems provide an opportunity to address historical inequality in electricity markets. People of color disproportionately live near coal plants and other polluting grid infrastructure.

Community-based electricity systems also reduce grid electricity costs by offsetting demand otherwise fulfilled by large, centralized (and often polluting power plants). In Minnesota, for example, state policy officially recognizes eight types of cost savings provided by distributed solar projects. At least two of these categories stem from community-based projects.¹⁶

In addition, these decentralized systems make the electricity system more resilient to natural and human disasters. In Puerto Rico, for example, the aftermath of Hurricane Maria has led to thousands of community-based solar energy projects with battery storage, allowing networks of homes and community centers to remain online should the island suffer another of its frequent blackouts.¹⁷

Decentralized systems also reduce pollution because communities tend to favor power production that doesn't subject them to health and environmental harm. When the

cooperative utility serving the small community of Kodiak, Alaska needed to expand power generation, it switched from diesel generators to wind and solar, backed up with hydro power and batteries. This new system has lowered their pollution and electricity costs.¹⁸

Finally, community-based electricity systems provide an opportunity to address historical inequality in electricity markets. People of color disproportionately live near coal plants and other polluting grid infrastructure. Due to historical and explicit discrimination, they also have less wealth and income than other communities. Community-based electricity systems, like the Shiloh Temple community solar project in Minnesota, can provide clean power in communities of color, provide electricity bill savings to participants, and can provide a pathway into the clean energy workforce for members of the community.¹⁹

Building Local Power

Stopping the power grab of electric utilities to build a cleaner, more efficient, and affordable system should rely on three key principles:

- Democratize control of the electricity system by giving individuals and communities more power to produce their own energy.
- Free the grid from the grip of monopoly utilities so the wires can act as a common market for entrepreneurs to provide services to meet the grid's needs more efficiently.
- Shrink the economic and political power of investor-owned utility companies, so that people and planet come before shareholder returns.



Stronger state policy and increased oversight by state regulators and enforcement officers, including public utility commissioners and state attorneys general, are needed to check the political power of these companies. Breaking up and reining in the influence of massive, monopoly electric utilities – and returning decision-making power back to the local level – would level the playing field for decentralized energy systems that produce myriad economic, social, and environmental benefits.

Collect Data and Define Marginalized Communities

State legislatures can more effectively address the economic and environmental impact of concentration and monopoly if the state has an official measure, such as CalEnviroScreen in California, to define marginalized communities. These databases (and maps) examine racial, economic, and financial data in combination with environmental impacts to identify communities most harmed by fossil fuel companies and markets. They also provide states a method for addressing these harms by defining the most burdened communities, to be targets of state programs to alleviate these burdens.

Publicly Oppose Mergers or Lobbying Efforts

States can play a significant role in reducing the market power of utility companies by opposing utility mergers. Governors, state attorneys general, and state regulators can all use their platform to oppose mergers that don't match customer benefits with shareholder benefits. In addition, all public officials can and should call out utility lobbying efforts that circumvent established regulatory compacts, such as when Xcel Energy lobbied for a law circumventing Public Utilities Commission oversight of their proposed gas plant in 2017.²⁰

The Federal Energy Regulatory Commission should adopt a stance of opposing utility mergers by default, unless:

- The merger provides greater benefits for customers than for utility shareholders.
- It sets conditions to mitigate the increased ability of the merged utility to legislatively secure favorable treatment for its shareholders at the expense of its captive customers.
- It draws bright lines between affiliates and subsidiaries of merging utilities to avoid favorable treatment at the expense of captive customers, including purchasing power from affiliate-owned power plants, using hedges or other financial instruments offered by affiliates, or any other financial relationship that could disproportionately benefit the merging companies compared to customers.

Prevent Conflicts of Interest

State legislators and city officials can prevent conflicts of interest by refusing campaign contributions from utility executives or political action committees. For example, in Virginia, numerous legislative candidates won state house races on a pledge to refuse money from monopoly regulated utility Dominion Energy. In 2019, the Democratic Party of Virginia also took the pledge. Additionally, to prevent a cozy relationship, states should adopt policies to prohibit the “revolving door” by prohibiting utility employees to serve on regulatory commissions that oversee their former employer.²¹

Elect or Appoint Public Champions to Utility Commissions

Utility commissioners play a fundamental role in monitoring competition in electricity markets. Governors and voters should ensure that utility commission candidates both understand their role protecting the public interest and will address issues related to the concentrated power of investor-owned utilities in the energy sector.

Enable Fair Access to Renewable Energy Financing

State regulators or legislators should require utilities to offer inclusive energy financing using the Pay As You Save model. These policies allow utilities or banks to issue upfront payments for on-site energy efficiency and renewable energy improvements (everything from insulation to rooftop solar), as done by the Ouachita Electric in Arkansas, that customers can repay over time through the utility bill using the money saved from lower energy bills.²² Because repayment is collected via the utility bill and, therefore, tied to a meter rather than an individual customer, it allows those with poor credit or minimal savings to reduce their energy costs and reduce demand on the electric and gas systems.

Ensure and Enforce Fair Compensation and Rate-Making Standards

Utilities typically want to minimize competition to their market share by providing the lowest possible compensation for customer-sited or -owned energy generation. Often, they suggest paying wholesale energy price, even for energy delivered to retail customers. With numerous transformative technologies giving customers more choice in how they use or generate electricity, state regulatory commissioners should ensure that the prices and pricing schedules for community solar, electric vehicles, and other distributed energy resources are fair for customers. Good examples include Minnesota’s “value of solar” and community solar programs.²³

Further, state legislatures and state regulatory commissions must ensure fair compensation and interconnection rules for distributed energy. For example, states should use net metering or a fair value of solar payment for on-site renewable energy generation, or allow customers to transact with one another. Minnesota’s value of solar, for example, includes calculations of how distributed energy avoids fuel costs, operations and maintenance, offsets other power capacity, and pollutes less.²⁴

Broaden Data Access and Ensure and Enforce Transparency

Customer usage data are an important tool for fostering transparency of utilities and encouraging more entrepreneurial solutions to grid needs. However, there are currently several loopholes that allow publicly regulated monopoly utilities to keep data used in energy decision-making from customers and the public. States can eliminate these loopholes by requiring utilities to comply with the Green Button Standard, a federally approved standardized energy use format that provides simple access to customers and third parties they choose to work with. Lawmakers can also require utilities to publicly disclose anonymized, distribution-level energy use data to encourage more innovative solutions to grid needs, as community-choice entities have provided in California.²⁵

Increase Scrutiny of High-Voltage Transmission Line Development and Require “Non-Wires” Alternatives Analysis

Congress or the Federal Energy Regulatory Commission (FERC) should amend FERC Order 1000 to require an independent analysis of all feasible non-transmission alternatives to proposed regional transmission lines, prohibit cost recovery for transmission projects where no reasonable investigation of alternatives took place, and develop a regional cost-sharing approach for non-transmission solutions that aligns with cost-sharing allocations for transmission projects.

High-voltage transmission lines cost millions per mile of line, involve the taking of private property, and can cost far more than alternatives to deliver similar capacity and energy. As a prerequisite to approving any segment of a multi-state electric transmission project, state laws should require an independent analysis of non-wires alternatives – including conservation, energy efficiency, distributed energy, energy storage, etc. – to deliver the same energy, capacity, and reliability benefits.²⁶

One approach for states would be to create an independent agency to review infrastructure projects costlier than \$2 million, including transmission, power plants, substation upgrades, etc. The proposed Distributed Energy Resources Authority in Washington, D.C., would prevent conflicts of interest in grid infrastructure decisions (where utilities that decide also profit by favoring capital expenditures) by creating an independent authority to review them.²⁷ When used to evaluate transmission projects, the same geographic bounds should be used for “non-wires” projects.

Give Customers, Individually and Collectively, More Choices

Consolidation in the electricity sector has left consumers with limited options for choosing cost-effective and clean electricity sources. State legislatures can provide more choices in a few ways.

They can create community renewable energy programs by enacting laws that allow customers to buy into wind and solar projects that are not on their property and can be owned by non-utility entities. In Minnesota, community solar projects produce electricity enough to power over 100,000 homes each year, provide \$1.2 billion in financial benefits to subscribers over 20 years, and save all customers money.²⁸

States can also enact a community-choice aggregation policy. Adopted in nine states, this law allows communities to take over electricity purchase decision making and adopt cost-effective renewable energy, advance energy efficiency, and encourage local energy generation and economic development. The East Bay Community Energy program has set aside over \$5 million in its first year for a Local Development Business Plan to target clean energy resources and jobs to communities of color and low-income residents.²⁹

Directly Support Distributed Renewable Energy

Without policy intervention, utilities will default to building large-scale wind and solar projects that primarily benefit shareholders rather than constructing community-based renewable energy projects that broaden economic and financial benefits to all. States can and have adopted renewable energy laws that require specific investments in distributed energy. In Maryland, the state requirement for 50 percent renewable energy standard also requires about one-third of the energy procured (14.5 percent) to come from solar. In a useful twist, compliance payments for utilities missing the targets will specifically support solar projects that directly benefit or are owned by low-income residents.³⁰

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Direct Energy-Related Public Resources Toward Distributed Energy

When states spend public money to encourage clean energy, they should focus on public goods underserved by existing markets, such as customer and community ownership, power generation located close to demand and with storage to provide disaster resiliency and prioritize investments in communities of color and low-income communities. ■

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