

Utilities strive to fetter solar industry's growth

By **Joby Warrick** March 7 at 8:01 PM

Three years ago, the nation's top utility executives gathered at a Colorado resort to hear warnings about a grave new threat to operators of America's electric grid: not superstorms or cyberattacks, but rooftop solar panels.

If demand for residential solar [continued to soar](#), traditional utilities could soon face serious problems, from "declining retail sales" and a "loss of customers" to "potential obsolescence," according to a presentation prepared for the group. "Industry must prepare an action plan to address the challenges," it said.

The warning, delivered to a private meeting of the utility industry's main trade association, became a call to arms for electricity providers in nearly every corner of the nation. Three years later, the industry and its fossil-fuel supporters are waging a determined campaign to stop a home-solar insurgency that is rattling the boardrooms of the country's government-regulated electric monopolies.

The campaign's first phase—an industry push for state laws raising prices for solar customers—failed spectacularly in legislatures around the country, due in part to surprisingly strong support for solar energy from conservatives and evangelicals in traditionally "red states." But more recently, the battle has shifted to public utility commissions, where industry backers have mounted a more successful push for fee hikes that could put solar panels out of reach for many potential customers.

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In a closely watched case last month, an Arizona utility [voted to impose a monthly surcharge](#) of about \$50 for "[net metering](#)," a common practice that allows solar customers to earn credit for the surplus electricity they provide to the electric grid. Net metering makes home solar affordable by sharply lowering electric bills to offset the \$10,000 to \$30,000 cost of rooftop panels.

A Wisconsin utilities commission approved a similar surcharge for solar users last year, and a New Mexico regulator also is considering raising fees. In some states, industry officials have [enlisted the help of minority groups](#) in arguing that solar panels hurt the poor by driving up electricity rates for everyone else.

"The utilities are fighting tooth and nail," said Scott Peterson, director of the [Checks and Balances Project](#), a Virginia nonprofit that investigates lobbyists' ties to regulatory agencies. Peterson, who has tracked the industry's two-year legislative fight, said the pivot to public utility commissions moves the battle to friendlier terrain for utilities. The commissions, usually made up of

political appointees, “have enormous power, and no one really watches them,” Peterson said.

Industry officials say they support their customers’ right to generate electricity on their own property, but they say rooftop solar’s new popularity is creating a serious cost imbalance. While homeowners with solar panels usually see dramatic reductions in their electric bills, they still rely on the grid for electricity at night and on cloudy days. The utility collects less revenue, even though the infrastructure costs — from expensive power plants to transmission lines and maintenance crews — remain the same.

Ultimately, someone pays those costs, said [David K. Owens](#), an executive vice president for [Edison Electric Institute](#), the trade association that represents the nation’s investor-owned utilities.

“It’s not about profits; it’s about protecting customers,” said Owens, said. “There are unreasonable cost shifts that do occur [with solar]. There is a grid that everyone relies on, and you have to pay for that grid and pay for that infrastructure.”

Whether home-solar systems add significant costs to electric grids is the subject of intense debate. A [Louisiana study](#) last month concluded that solar roofs had resulted in cost shifts of more than \$2 million that must be borne by Louisiana customers who lack solar panels. That study was [immediately disputed](#) by clean energy groups that pointed to extensive ties between the report’s authors and the fossil-fuel lobby.

Other studies commissioned by state regulators in Nevada and Mississippi found that any costs are generally outweighed by benefits. For one thing, researchers found, the excess energy generated by solar panels helps reduce the strain on electric grids on summer days when demand soars and utilities are forced to buy additional power at high rates. Other experts note that the shift to solar energy is helping states meet new federal requirements to reduce greenhouse gas emissions while also producing thousands of new jobs. The residential solar industry currently employs about 174,000 people nationwide, or twice as many as the number of coal miners.

“Independent studies show that distributed solar benefits all ratepayers by preventing the need to build new, expensive power plants or transmission lines,” said Matthew Kasper, a fellow at the [Energy & Policy Institute](#), a pro-solar think tank. “Utilities make their money by building big, new infrastructure projects and then sending ratepayers the bill, which is exactly why utilities want to eliminate solar.”

Solar-panel costs plunge

Residential solar panels have been widely available since the 1970s, but advances in the past decade have transformed home solar energy in many areas from an expensive novelty to a [cost-competitive alternative](#) to traditional power.

The average price of photovoltaic cells has plummeted 60 percent since 2010, thanks to lower production costs and more-efficient designs. Solar’s share of global energy production is climbing steadily, and a [study last week](#) by researchers from Cambridge University concluded that photovoltaics will soon be able to out-compete fossil fuels, even if oil prices drop to as low as \$10 a barrel.

In the United States, utilities have embraced solar projects of their own making, building large solar farms that produce nearly 60

percent of the electricity that comes from the sun's rays.

“We are pro-solar,” said Edison's Owens. “We are putting in more solar than any other industry.”

But the arrival of cheaper solar technology has also brought an unexpected challenge to the industry's bottom line: As millions of residential and business customers opt for solar, revenue for utilities is beginning to decline. Industry-sponsored studies have warned the trend could eventually lead to a radical restructure of energy markets, similar to earlier upheavals with phone-company monopolies.

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“One can imagine a day when battery-storage technology or micro turbines could allow customers to be electric grid independent,” said a [2013 Edison study](#). “To put this into perspective, who would have believed 10 years ago that traditional wire line telephone customers could economically ‘cut the cord’?”

Support from conservatives

The utility industry's playbook for slowing the growth of residential solar is laid out in a few frames of the computer slide show presented at an Edison-sponsored retreat in September 2012, in a lakeside resort hotel in Colorado Springs, Colo. Despite a bland title—“Facing the Challenges of a Distribution System in Transition”—the Edison document portrays solar systems as a serious, long-term threat to the survival of traditional electricity providers.

Throughout the country, it noted, lawmakers and regulatory agencies were “promoting policies that are accelerating this transition — subsidies are growing.” The document, provided to The Washington Post by the Energy & Policy Institute, called for a campaign of “focused outreach” targeting key groups that could influence the debate: state legislatures, regulatory agencies and sympathetic consumer-advocacy groups.

Two-and-a-half years later, evidence of the “action plan” envisioned by Edison officials can be seen in states across the country. Legislation to make net metering illegal or more costly has been introduced in nearly two dozen state houses since 2013. Some of the proposals were virtual copies of model legislation drafted two years ago by the [American Legislative Exchange Council](#), or ALEC, a nonprofit organization with financial ties to billionaire industrialists Charles and David Koch.

Most of the bills that have been considered so far have been either rejected or vetoed, with the most-striking defeats coming in Republican strongholds, such as Indiana and Utah. There, anti-solar legislation came under a surprisingly fierce attack from free-market conservatives and even evangelical groups, many of which have installed solar panels on their churches.

“Conservatives support solar — they support it even more than progressives do,” said Bryan Miller, co-chairman of [Sunrun](#), a California solar provider. “It's about competition in its most basic form. The idea that you should be forced to buy power from a state-sponsored monopoly and not have an option is about the least conservative thing you can imagine.”

Where legislatures failed to deliver, power companies have sought help from regulatory agencies, chiefly the public utility commissions that set rates and fees that can be charged by electricity providers. Here, the results have been more encouraging for power companies.

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Last month's decision to slap monthly surcharges on solar customers in south-central Arizona was hailed as a breakthrough for the utilities in a state that has turned back several similar attempts in the past two years. The Tempe, Ariz., [Salt River Project](#), one of Arizona's largest utilities, approved the new fee despite furious opposition from solar users, including about 500 people who packed the commission's hearing room for the Feb. 26 vote.

Solar companies already have filed suit to stop a similar fee increase approved last year by Wisconsin commissioners, and others are watching closely to see if New Mexico's Public Service Co. will adopt a proposal to impose a monthly surcharge of up to \$35 on solar customers there.

Regulators in each of the three states have cited fairness as the reason for the proposed increases. But solar advocates say the real injustice is the ability of electric monopolies to destroy a competitor that offers potential benefits both to consumers and to society.

"It's really about utilities' fear that solar customers are taking away demand," said Angela Navarro, an energy expert with the [Southern Environmental Law Center](#). "These customers are installing solar at their own cost and providing a valuable resource: additional electricity for the grid at the times when the utilities need it most. And it's all carbon-free."

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