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Energy efficiency is good for the planet and your wallet. But behind the scenes, industry forces want consumers to foot the bill for lost revenue.

way from that evening in February 1977 when President Jimmy Carter put on a cardigan and told Americans to turn down their thermostats. Thanks to more energy-efficient practices and products, ranging from refrigerators to lightbulbs to central air conditioning, the average American spent \$2,500 less on energy in 2014 (adjusted for inflation) than he or she would have if no improvements had been made, according to a June 2015 report by the American Council for an Energy-Efficient Economy.

But every dollar saved by consumers is one less in revenue for power companies. That has prompted industry leaders to warn of a "death spiral," a scenario in which sinking profits from efficiency will force utilities to raise their rates, causing more consumers to migrate to rooftop solar. Many utilities are using that argument to propose steep rate increases that penalize the public for doing the right thing. "Where's the incentive to insulate your attic or install a solar water heater if it's not going to lead to lower energy bills?" says Kateri Callahan, president of the Alliance to Save Energy, an advocacy group in Washington, D.C.

Raising the stakes even more is the fact that the Clean Power Plan, released in August by the Environmental Protection Agency, would require U.S. power plants to cut carbon dioxide emissions 32 percent below their 2005 levels by 2030. The industry claims that this could lead to yet more rate increases, but the EPA analysis says the investments in efficiency could actually lower consumers' bills.

The Rising Rates for Energy

Currently, utilities can't just jack up the cost of electricity when it suits their bottom line. State laws require them to make a formal proposal through their public utility commission. Wisconsin's Madison Gas and Electric, for example, proposed to increase fixed charges (the part of the bill customers pay no matter how much energy they use) from \$10 in 2014 to \$68 by 2017. Kansas City Power & Light requested a fixed-charge increase from \$9 to \$25. "This is clearly the industry's playbook," says Rick Gilliam, regulatory policy director for Vote Solar, a nonprofit. "We've never seen utilities in so many states making the same proposals based on all the same talking points." (See our petition on page 43 opposing fixed-charge increases.)

Even when an increase in fixed charges is accompanied by a drop in the rate per kilowatt-hour, it's the energy hogs who end up paying less. For example, an analysis of Kansas City's proposed fixed-charge increase found that only customers who used at least 1,500 kilowatt-hours per month would see a decrease in their monthly bill. Those who used less than the national average of 909 kWh per month would see their bills go up anywhere from 5 to 35 percent.

In Hawaii, where 12 percent of homes have solar, Hawaiian Electric delayed some homeowners from installing solar panels until system upgrades could be made to handle the flow of power back into the grid. The utility also proposed charging new solar customers an extra \$16 per month. And it wants to end its "net metering" program, which credits solar customers for electricity that's fed back into the grid when they're generating more power than they need. Under its plan, new customers would get back roughly 50 percent less per kWh from the utility than current customers receive. That could significantly extend the payback period for new solar customers.

Edison Electric Institute, the utility industry's main trade group, points out that utilities have made and continue to make massive investments to build and maintain the nation's power grid, and that all electricity customers should share in the costs. "Rooftop solar customers still rely on the grid and its services around the clock," says executive vice president David Owens.

But fixed-charge increases are "too blunt an instrument for covering those costs," says Samantha Williams, staff attorney and policy advocate with the Natural Resources Defense Council (NRDC), "Instead of falling back on arcane rate designs or blaming solar, utilities should work with regulators

and their local communities to come up with innovative solutions."

Thinking Outside the Grid

Some utilities are doing just that, building customer loyalty by marketing their expertise alongside their product. Green Mountain Power in Vermont is reinventing itself as a full-service energy provider—for example, by leasing high-efficiency heat pumps. Later this year it will also offer the Tesla Powerwall, a home battery that allows for the storage of power generated by a rooftop solar system. "Our philosophy is that you don't resist where the customer wants to go," says the company's president and CEO, Mary Powell. "You figure out how to enter into new relationships with them."

Another approach is the adoption of time-of-use (TOU) rates, which help utilities manage demand by making energy more expensive during periods of peak use. Consumers stand to benefit through behavior modification, such as setting the dishwasher to run at night, when rates are cheapest.

Certain consumer groups, such as the AARP, argue that people who are home during the day, like many retirees, will be stuck with higher daytime rates. To help encourage adoption, more utilities have made their TOU plans opt-in. During a recent Sacramento Municipal Utility District pilot program, customers who opted in reduced their energy use between 9 and 12 percent during peak afternoon hours.

Those measures show what's possible when the power industry sees energy efficiency as an opportunity rather than a threat. "Utilities that resort to piling on costs in ways that deter clean energy investments will restrict their options and alienate their customers," says the NRDC's Williams. "And that will only hasten the death spiral they're so afraid of."