

Oil and Gas Industry Attack on Rooftop Solar Programs

Solar panels are sprouting from the rooftops of homes, businesses and government buildings all across the United States. This small-scale, distributed investment in solar power helps wean the nation from fossil fuels and deliver energy independence to individual families, communities and businesses. Innovative public policies have accelerated the spread of rooftop solar — tax credits and policies that compensate homeowners for pumping excess power back into the electricity grid. But the oil and gas industry is trying to overturn state policies that encourage rooftop solar in order to keep America dependent on climate-destroying fossil fuels.

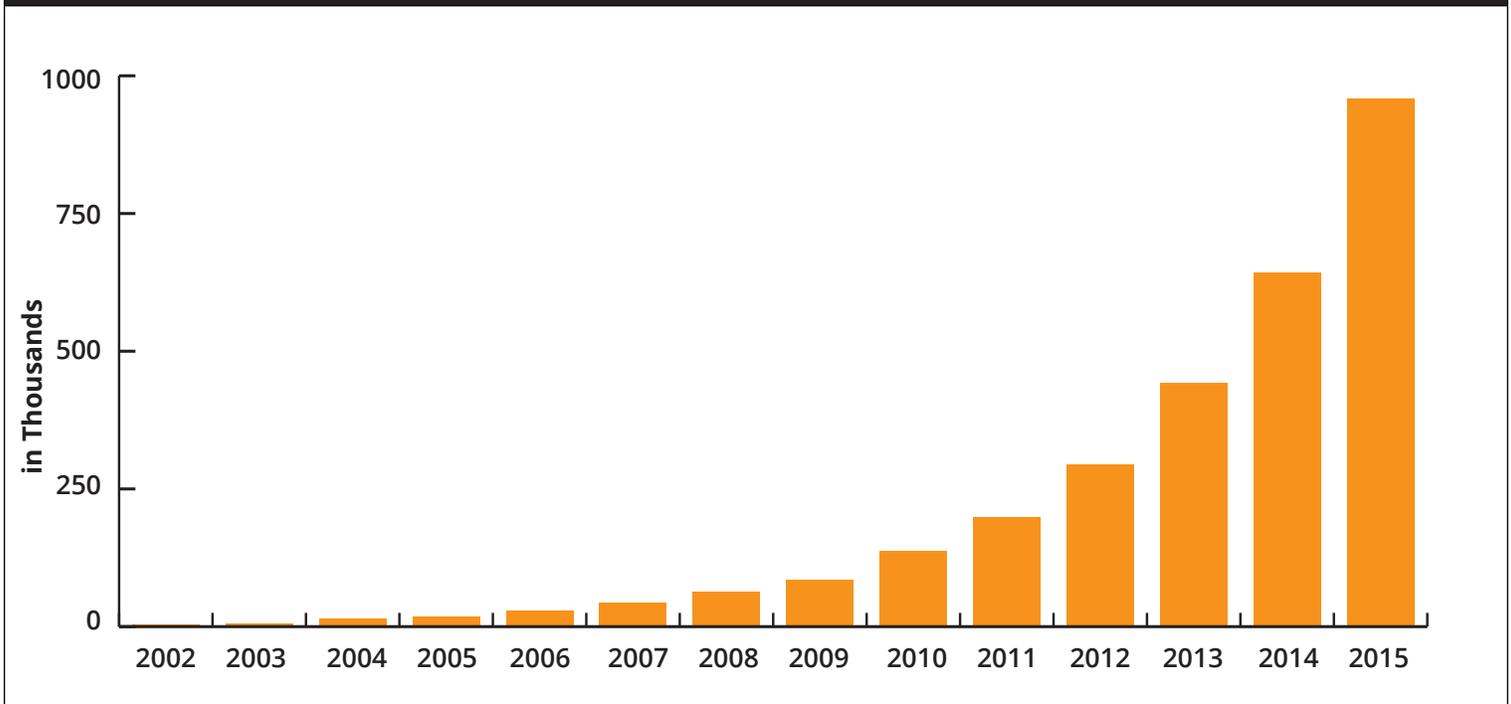


Genuine renewable energy from wind and solar power represents a realistic and attainable future for electricity generation.¹ Solar power can generate electricity without threatening the climate or spewing pollutants. Americans overwhelmingly favor expanding solar energy to deliver the clean energy future we all deserve. A 2016 Pew Research Center poll found that 9 out of 10 Americans supported expanding solar energy production — with strong bi-partisan support.²

Rooftop Solar Revolution

Many people have joined the solar revolution themselves by installing solar panels on their own homes. Almost every family with a big enough roof and enough sun can generate enough solar energy to power all their household electricity needs.³ Already nearly 1 million homes have rooftop solar panels, and some people project that there could be millions more solar homes by 2020 (see Figure 1).⁴ The top reasons that people give for considering installing solar panels are to save money and to protect the environment.⁵

Rooftop solar converts electricity consumers into energy producers, democratizing the electricity system itself to create a powerful political force to demand clean energy policies.⁶ The rise of distributed solar (many smaller arrays located near where the power is consumed, such as rooftop solar instead of large, utility-scale solar power plants) can also “significantly

FIGURE 1: Residential Rooftop Solar With Net Metering

SOURCE: EIA

increase the resiliency of the electricity system,” according to the U.S. Department of Energy.⁷ Rooftop solar provides reliable power during the late-afternoon, peak-demand periods in summer when utilities need it most, reducing the need for costly capacity upgrades and for reliance on dirtier fossil fuel “peaker” power plants.⁸

The rapid expansion of solar has been fueled by declining prices and increased efficiency of solar panels — more energy per square foot and at a lower cost.⁹ Prices have fallen as manufacturing has ramped up to meet demand. By late 2016, the average price for rooftop solar fell to below \$3 per watt — under one-third the cost in 1998.¹⁰ As more people see solar panels in their neighborhoods and learn about the economic benefits, they may be more likely to get panels installed, driving up demand and driving down costs.¹¹

Public Policies Such as “Net Metering” Foster Greener, Cleaner Power

Commonsense government policies to encourage and leverage green energy investments has made

solar panels accessible for homeowners and has driven the decline in prices. The federal government provides a 30 percent tax credit for rooftop solar construction until 2019, when the tax credit is phased down to 10 percent after 2022.¹² Many states and localities also have programs to support the purchase of rooftop solar.¹³

One innovative state policy that is essential to the success of rooftop solar is called “net metering,” which essentially allows homeowners to sell any solar electricity that they do not use back to the electricity grid. Utilities bill rooftop solar owners for their “net” utility consumption (what they draw from the grid minus the power they put into the grid).¹⁴ When solar homes are delivering power to the grid, their electric meter runs backward, and that excess is typically credited to future utility bills on a one-for-one basis for each kilowatt-hour of surplus solar electricity.¹⁵

As of July 2016, 41 states and Washington, D.C. had some form of mandatory net metering rules that generally required utilities to purchase excess solar power at the same prices they charge homeowners for electricity (the retail price).¹⁶ Net metering

has supported the expansion of distributed solar by reducing the costs to homeowners.

While costs of solar panels have declined, solar installation still requires significant upfront costs that many homeowners cannot afford. More than half the costs of rooftop solar are not the panel itself but installation, permitting, financing and other business costs.¹⁷ Today, a typical rooftop solar array can cost about \$20,000 to install — and still around \$14,000 after federal tax rebates.¹⁸ Purchasing rooftop solar may make the most financial sense (most buyers take out loans, and there are new options to make this more affordable), but solar companies also offer to finance rooftop panels that homeowners either lease back or pay a monthly fee to receive lower-cost solar power.¹⁹ The potentially heavy-handed sales pitches for these long-term solar company contracts can leave homeowners vulnerable to escalating prices, make it hard to resell a home, and can compound a homeowner's financial burden and add to their debt.²⁰

The prices to buy rooftop solar are nonetheless steep and economically inaccessible for many lower-income households.²¹ Nationally, families earning under \$40,000 annually (about two-fifths of all households) make up less than 5 percent of existing rooftop solar installations.²² However, in some areas — including in Arizona, Missouri and New Jersey — the majority of rooftop solar panels are installed in modest, median-income neighborhoods.²³ But more innovative and targeted policies are needed to ensure that all homeowners can access rooftop solar; California, Minnesota and others already have policies to make rooftop solar accessible for lower-income families.²⁴

Rooftop solar is not an option for about half of all families because of cost or other reasons. Renters, condominium dwellers and those with shady, small or low-sun-exposure roofs cannot deploy their own rooftop solar systems.²⁵ Community solar allows these households to share the benefits of solar installations on a church, school or other location in their community.²⁶ By 2016, 17 states had policies that allowed neighbors to join together to form community solar projects.²⁷



Net metering for community-based solar provides a mechanism for multiple households and institutions to join together and own or subscribe to a larger, local, community solar array and receive a credit toward their electric bill, tax benefits and other incentives.²⁸ Each investor receives a share of the community solar credits to use toward their own household energy bill.²⁹

Oil and Gas Industry Counterattack to Destroy Net Metering

Public policies are essential to build a genuinely clean energy future. Net metering has made it economically possible for homeowners and communities to invest in a more robust solar energy system.³⁰ The utility industry, threatened by lost revenues from residential solar energy, is fighting back against rooftop solar.³¹

The industry contends that since rooftop solar customers pay lower or no electricity bills, they “avoid paying their appropriate share of the utility’s fixed costs.”³² The industry also contends that net metering programs can force power companies to pay higher, retail prices for rooftop solar energy rather than less-expensive wholesale prices that they would pay for other (dirtier) electricity.³³ But the energy from rooftop solar — especially because it surges during peak demand periods of the late afternoon — can reduce costs to a utility’s transmission and distribution system that can generate savings for all ratepayers.³⁴ That does not even include the environmental and public health benefits from reducing pollution from fossil fuel power plants.³⁵

The power industry trade association admitted that the real problem is that net metering could put “a squeeze on profitability” and that unless it is rolled back “it may be too late to repair the utility business model.”³⁶ The electric utilities are getting powerful support from the conservative funding icons Charles and David Koch.³⁷ The Koch brothers-funded American Legislative Exchange Council (ALEC) has pushed legislation to unravel net metering.³⁸

The attacks on net metering can include surcharges on net metering households, reducing the amount that homeowners are paid for surplus solar power or placing a moratorium or cap on new net metering connections.³⁹ The majority of homeowners oppose the attacks on net metering — including more than two-thirds of Republicans and rural residents.⁴⁰ As of 2015, energy companies in over 20 states had pushed to recover alleged lost revenue from rooftop solar through regulatory changes to net metering.⁴¹

Fees or charges for rooftop solar have been a favorite anti-solar tactic. In 2013, the largest Arizona utility implemented a monthly surcharge on the electricity bills of households with rooftop solar, averaging \$5 a

month.⁴² The Arizona utility behind the bill allied with “secret donors and operatives with ties to ALEC and the Kochs,” according to the *Washington Post*, initially to push for a \$50 to \$100 monthly surcharge.⁴³ The utility appeared to funnel money through a known Koch brothers financier to help fund two front groups that supported the surcharge.⁴⁴ In 2015, a smaller Arizona utility approved a \$50 monthly surcharge on rooftop solar.⁴⁵

In 2014, Oklahoma enacted a rooftop solar surcharge that allowed power companies to charge a fixed fee for new net metering customers.⁴⁶ Wisconsin utilities also imposed similar fees in 2014.⁴⁷ More than half of homeowners view additional fees to connect solar panels to the electricity grid as a “tax on solar power.”⁴⁸

The Nevada Public Utility Commission (PUC) allowed utilities to modify net metering rules to charge nearly \$40 a month in fees and also cut the price paid to homeowners for surplus electricity by two-thirds — from 11¢ per kilowatt hour to 2.6¢ by 2020.⁴⁹ Nevada applied the changes not just to new solar panels; the state refused to grandfather existing rooftop solar from the changes.⁵⁰ Major solar companies like SolarCity and Vivint Solar promptly stopped doing business in Nevada.⁵¹ The public outcry and the loss of solar jobs led to a quick reversal of the attack on rooftop solar. In late 2016, the PUC reversed the net metering changes for hundreds of homeowners in northern Nevada, provided an exemption for existing and pending rooftop solar installations in southern Nevada and promised further review.⁵²

Stop the Attack on Rooftop Solar

Well-structured net metering policies are essential to the continued growth of rooftop and community solar. If the anti-net metering juggernaut succeeds, it will take longer for rooftop solar systems to be economically viable.⁵³ The consulting firm PwC observed that “the overall growth of the residential solar market is highly dependent on net metering policies.”⁵⁴ Tell your governor to oppose the industry attacks on rooftop solar and to support the transition to 100 percent renewables here: fwwat.ch/2p2Zk1P



Endnotes

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Oil and Gas Industry Attack on Rooftop Solar Programs

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