

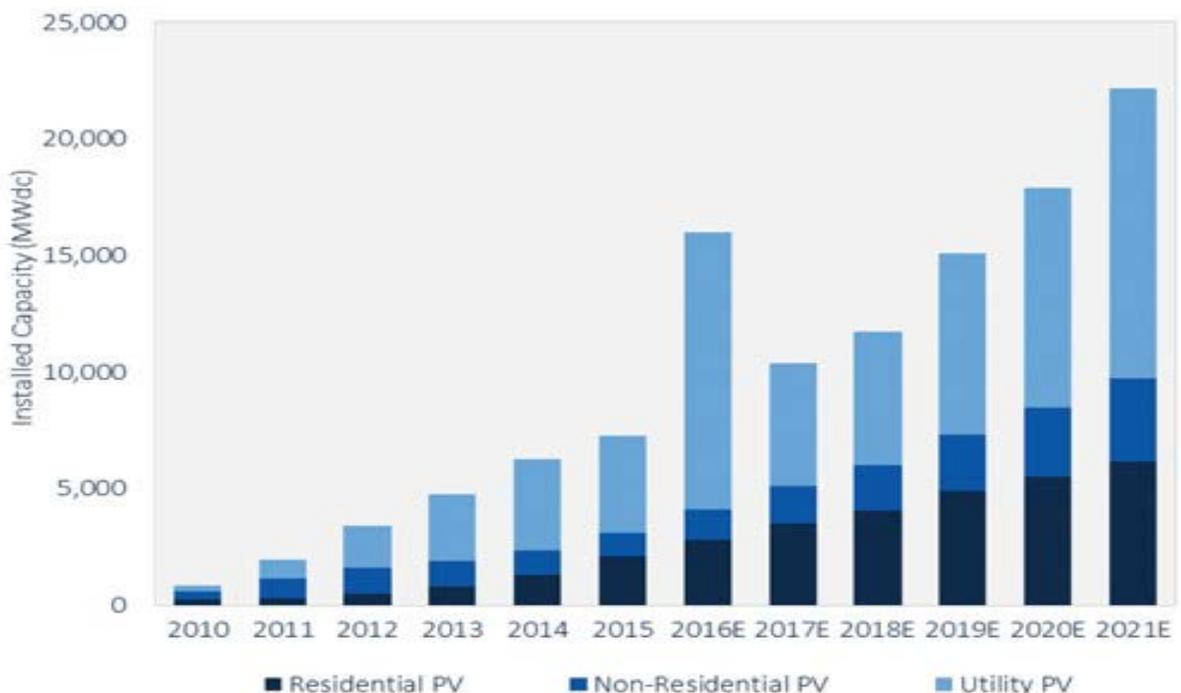
Consumer issues with residential solar power

Don't get Stranded by Solar!

Explosive growth in home solar electricity

- The U.S. solar market is set to grow a staggering 119 percent in 2016 says GTM Research in its latest U.S. Solar Market Insight Report 2015 Year in Review,
- More and more consumers are investigating and investing in roof top photovoltaic systems.
- Many see solar power as a way to 'go green' or move 'off the grid' plus the potential for reduced energy bills.
- Consumers may be motivated by the 30% federal tax credit on solar system purchases and by local incentives.

FIGURE: U.S. PV Installation Forecast, 2010-2021E



Solar generating system growth fueled by zero-down leases

- Estimated 60 -- 90% of the new residential solar installations are/will be leased.
- The attraction of leasing (as distinguished from the upfront costs of purchasing) is that customers can 'go solar' and possibly reduce their electric bills **with no out-of-pocket costs**.
- Some solar generating system salespeople may promise \$50,000 or more in savings over the 20 year term of the lease.
- Such claims assume that utility rates will rise much faster than they have in the past.
- They also assume that the local electric utility regulator will **not** change electric price structures in a way that would reduce the benefits promised.
- Many customers do not realize that by leasing the federal tax credit goes to the finance company and that they will be locked into a long term obligation to pay for a piece of rapidly depreciating technology

What questions should Solar electricity generation system Consumers ask???

- *What are the current electric costs?*
 - Many electric customers are confused about their payment plans. They can be misled into thinking that their costs for power are much higher than they are. This makes the 'savings' claimed for the new solar system look much greater than it actually will be.
 - It is critical that potential solar customers know how much their electricity costs per kilowatt.
- *What are the savings from a new solar electric generation system?*
 - Promises that the customer would enjoy tens of thousands of dollars in "savings" may be enough to get a lease signed even when claims about the local utility's future rate increases are highly inflated.
 - The average utility rate increase over the past 20 years has been in the range of 2-4% a year.
 - But, some solar salespeople claim that it was over 10%. Such claims make even an inefficient solar system look great!

Important questions for Solar (cont)

- *If someone leases a solar electric generation system, can they purchase it at the end of the lease term?*
 - Customers are often given the false belief that they will have the option to purchase the solar asset for "pennies on the dollar" at the end of the lease.
 - Most solar leases give no such option, but can only "roll" the lease over with new, sometimes higher rate lease.
- *What happens to the solar lease if a consumer sells their home?*
 - Solar lease customers are sometimes told that if they sell the home before the end of the lease, transferring the lease to the buyer will be easy.
 - Unfortunately for the consumer, leasing companies often place a lien on the system, which makes selling the home more difficult. The buyer must qualify to assume the lease payment.
 - If the buyer does not want to assume the lease, the seller must either pay to remove the system and continue paying on the lease or prepay the current value of the lease, a *very expensive undertaking*.

Why leasing solar panels may not be a good idea, if you're selling your home

- Where We Live. Washington Post
 - By Jill Chodorov November 17, 2015
 - The Washington region is at the bottom of a steep learning curve regarding solar panels on homes. And some local homeowners have learned the hard way that it pays to read the fine print.
 - According to Marcus Beal, media relations manager of Pepco Holdings, the Pepco region has about 7,200 customers who have completed the application process, installation and are fully integrated with the company's electric system. That number is rapidly growing at an estimated rate of 100 percent per year.
 - As these solar-powered homes come on the market for sale, unexpected issues are bubbling to the surface. What's more, almost all of the issues are happening to homeowners who lease rather than own the solar panels, which comprise an estimated range of 60 to 90 percent of the market

Washington Post article (cont)

- “My seller couldn’t believe what I was telling him,” said Yolanda Muckle, a real estate agent in Mitchellville, Md. “The solar panel company wanted \$32,000 to buy out the lease if a buyer did not agree to sign the transfer agreement.”
- Muckle said her clients had just signed a 20-year lease agreement prior to listing the house for sale. They had more than 19 years left on the lease.
- “I received three offers on the house and all three buyers walked,” said Muckle. “I honestly don’t think my clients read the lease agreement. They just believed what the salesperson told them, that it would increase the value of their home.”
- Muckle’s clients are saving about \$50 per month on their electric bills with the solar panels.
- “With a savings of \$50 per month, that means that my clients would save \$600 per year. Over 20 years, that is a \$12,000 savings. Yet the company wants \$32,000 to buy out the lease,” Muckle said.
- **Explaining solar panels and lease agreements is a new issue for local real estate agents.**

More Solar questions

- *Could there be an additional property tax liability because of the new solar equipment?*
 - Consumers report that they have been told by the sales people for solar systems that they will not be liable for any property tax levy assessed on the solar system,
 - However, the terms of the lease make it clear that any tax increases will be passed on to the system owner.

- *Does the zero down lease have a lower initial or "teaser" rate?*
 - Similar to some subprime home mortgages, the payments on many zero down solar electric generating system leases are very low at the beginning
 - They go up automatically every year thereafter.
 - The customer has impressive savings at the beginning of the lease, but as lease payments raise, the savings disappear,
 - Leases often result in the lessee being 'underwater' -- paying more for the lease plus other electricity charges than if they would if paying the meter price for electricity.

More Solar questions (cont)

- ***Could changes in utility regulation affect the affordability of residential solar?***
 - Of course. But solar salesmen seldom if ever mention the dynamic nature of utility rates.
 - Nevada solar customers were unpleasantly surprised when the regulatory commission abolished a favorable rate without grandfathering in the existing solar users.
- ***Beware of High Pressure sales tactics!***
 - Rooftop photovoltaic systems are a major homeowner expense and an important investment.
 - However, Solar customers often report being rushed to sign a lease agreement before even seeing a system design, supposedly in order to "lock in your rate and activate your homeowners insurance".
 - Consumers should get all the facts and then decide.
- **Be alert to the signs of misrepresentations**
 - Misrepresentations concerning rooftop solar may violate your state's fraud statute. State AGs are alert to financial misrepresentations because of the subprime melt down.
 - If you hear about or are the target of extravagant claims or factual misrepresentation, report them to the Consumer Fraud Section of your state Attorney General's Office.

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State of Arizona



Mark Brnovich
Attorney General

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State of Mississippi



Jim Hood
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October 23, 2015

Dear Fellow Attorneys General:

The NAAG Summer Meeting in San Diego was filled with valuable information. We would like to particularly follow up on the Panel discussion entitled "Solar Energy Systems". The residential solar market is booming with technologies that most people are unfamiliar with, and providers are currently ahead of regulators. Discussion participants warned of some bad actors in the marketplace and expressed concern that consumers could be victimized in the absence of accurate information.

We want to emphasize that we are not opposed to the use of solar energy for residential dwellings. Solar generating units are very trendy, especially with people wishing to pursue renewable power. Unfortunately, as with many popular market entries, there are also opportunities for perpetrators of fraud to ply their trade.

Residential solar systems constitute a considerable investment – from \$15,000 to \$20,000 or more. Many companies are marketing these systems for sale, lease or as part of Power Purchase Agreements that can last as long as 20 years.

complexity of these agreements, a failure to disclose relevant information can be as deceptive as a misstatement.

Many unethical providers mislead potential customers by overstating expected increases in the price of electricity. They also fail to disclose how various subsidies, government programs and rate making practices may affect the cost of energy in the future. This includes the likelihood that some government policies regarding solar energy may change during the course of a long term contract.

Solar providers are rarely regulated by public utility commissions. Their activities are however, subject to consumer protection and truth in advertising laws enforced by state Attorneys General. That is why we have launched efforts to raise awareness and promote more informed decisions with regard to residential solar power systems.

Beginning in January 2016, the State of Arizona will require those choosing to buy or lease a solar system to sign a disclosure to confirm that they understand the actual costs. Arizona has also taken some of the worst providers to court and entered consent judgments that you may find insightful in understanding how consumers can be hurt. We are attaching that information, along with consumer advice from Iowa and Louisiana, two other states on the forefront of raising awareness. Finally, we are enclosing a set of questions that might come in handy for communications with the public and consumer information web sites.

We hope that you find this information to be helpful and that together, we can reduce the number of well-meaning consumers who fall victim to the dark side of solar energy.

Sincerely,



Mark Brnovich
Attorney General of Arizona



Jim Hood
Attorney General of Mississippi

Advice for solar electric generating system consumers

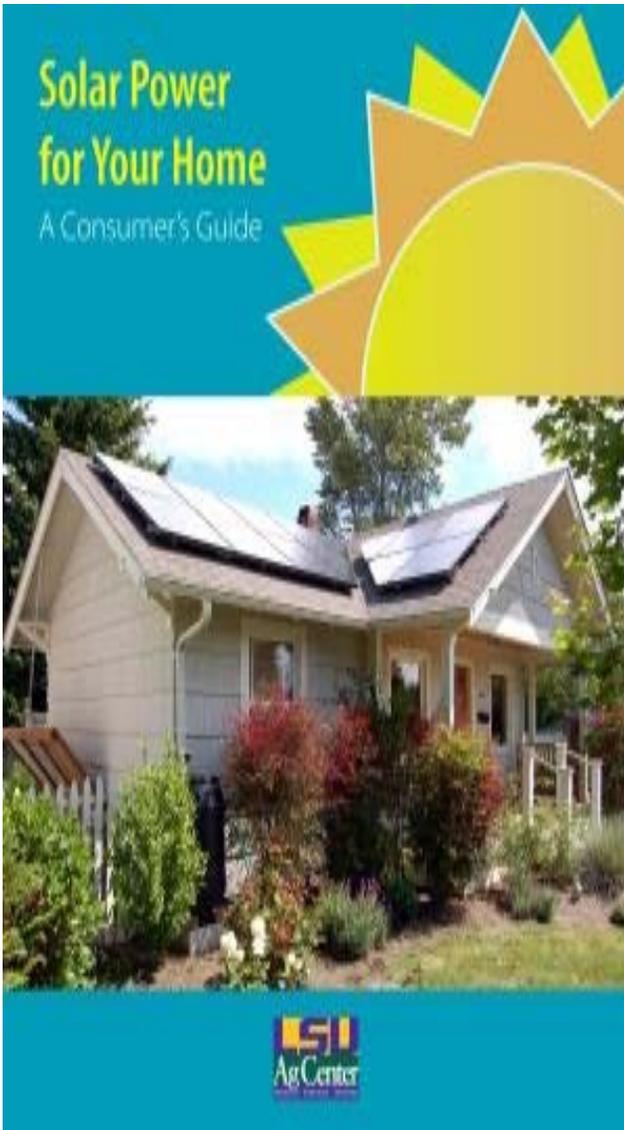
Good advice about what questions to ask when considering a solar electric generating system have been limited, there are now resources available.

- Consumer Reports issued a short article on how to avoid problems. <http://www.consumerreports.org/cro/news/2015/02/when-going-solar-should-you-lease-or-buy/index.htm>
- The Iowa Utilities Board put out an Informational Guide for what to watch out in purchasing or leasing solar power generating systems. https://iub.iowa.gov/sites/default/files/files/misc/IUB_Informational_Guide_Distributed_Generation.pdf
- As did the Arizona Corporation Commission. https://ruco.az.gov/sites/default/files/files/Consumer%20Guide%201%201_1.pdf
- As did the Connecticut AG: <http://www.ct.gov/ag/cwp/view.asp?Q=564516&A=2341>

Important consumer resources

The most comprehensive advice is by LSU Agricultural Center

www.lsuagcenter.com/lahouse

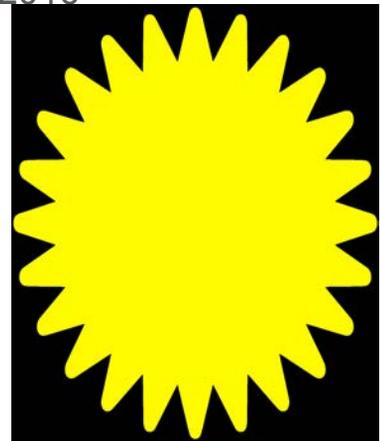


Another excellent and more up to date resource for consumers:

SOLAR POWER ON THE ROOF AND IN THE NEIGHBORHOOD:

RECOMMENDATIONS FOR CONSUMER PROTECTION POLICIES

Barbara R. Alexander, Consumer Affairs Consultant with the Assistance of Janee Briesemeister, Consultant March 2016



<http://www.opc.state.md.us/Portals/0/Publications/BAlexander.FINAL%20Solar%20Power%20Consumer%20Protection%20Report.March2016.pdf>

Additional resources for consumers

- American Solar Energy Society www.ases.org
- Building America Solution Center (USDOE) <https://basic.pnnl.gov>
- Database of State Incentives for Renewables and Efficiency www.dsireusa.org
- Energy Star (USEPA) www.energystar.gov
- eXtension Learning Network's Home Energy Section www.extension.org/home_energy
- Florida Solar Energy Center www.fsec.ncf.edu
- National Renewable Energy Laboratory www.nrel.gov
- North American Board of Certified Energy Practitioners www.nabcep.org
- PVWatts® Calculator <http://pvwatts.nrel.gov>
- Solar Energy Industries Association www.seia.org
- US Dept of Energy www.energy.gov or www.solarenergy.gov
- US Dept of Energy/Energy Savers www.energysavers.gov
- US Energy Information Administration www.eia.gov

Thank you!!!

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