

Smart Solar Design Construction LLC

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Solar Photovoltaic System Installer Scams

**White Paper by
SmartSolarDesign™**

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White Paper: Solar PV System Installer Scams

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Unfortunately, these scams are common in the Solar PV Installation Market. Every year we run across more of these underhanded approaches. Often the largest companies in the industry exhibit these techniques. This is not a comprehensive list but inclusive of the more common issues. These are in addition to the scams associated with general home improvement projects. Solar PV can be a great investment, and the risks are minimal if you are informed. Call 858.243.4059 for more information or email dr.lloyd@SmartSolarDesign.com.

Not providing you with the cost per watt value.

1. Example: A \$17,000 system that is 5.68KW equals \$2.99 per watt. A system that costs \$10,000 in comparison seems cheaper but you must also know the system DC size. If it is only 2.0KW you just paid \$5.00 per watt! Make sure the cost-per-watt value is compared with or without tax credits, incentives, and using equivalent technology (Never use Solar Edge String Inverters for example). This apples-to-apples comparison is important.

[We help you to compare the correct cost per watt.](#)

Equipment related scams

2. The less reputable solar installer will not specify in the agreement the exact equipment being installed. This leaves the door open for the bait and switch, or installing equipment that you do not want. Always request that all equipment be listed by model number in the agreement.
 3. Some solar providers will use outdated technology because it is cheaper for them, but still charge you the new-technology rates. This tactic is prevalent in the use of string inverters, **and string-optimized inverter systems** compared to micro-inverter technology. **Scammers will even tell you that their string inverter system is the same as a micro-inverter system.** This is false. There are seven reasons why micro-inverter technology is the preferred technology.
 4. Beware the solar provider that tells you “Their solar panels are the best”. (Usually THE QUALITY AND WARRANTIES ARE RELATIVELY THE SAME for all tier-one manufacturers.)
 5. Solar providers may “Undersize” your system, while telling you that all or most of your consumption is covered. When you are still getting a larger than expected utility bill months later, they blame weather which is beyond their control. If you do want to upgrade your system it is very costly. Compare the system size to your usage before buying the system to avoid this and it is recommended that you slightly over design the system by a small percentage to avoid the unknown.

6. They will tell you they get a better price on panels because they buy in bulk. Usually this means they bought a bunch of panels that now have outdated technology. Panel technology improves almost monthly.
7. Solar providers may not provide you with a list of the individual model numbers of all equipment upon request, after the install. This enables you to communicate directly with the manufacturer if necessary and is a good idea.

We make sure that our installers check the panel and inverter manufacturer that they listed in the agreement. We also only work with installers that only use micro-inverter technology and are solar panel independent. They install the solar panel that is best for you, not the one they have sitting in their warehouse and must get rid of.

Claiming that using a Roofing or Air Conditioning company is the best contractor to install your Solar

8. The California State License Board (CSLB) is the governing agency that authorizes whom may install solar in the state. The Business and Professionals Code located here: http://www.cslb.ca.gov/Media_Room/Industry_Bulletins/2010/June_30.aspx only authorizes license classifications "A", "B", "C-10" and "C-46". Per state law Roofing (C39) and Air-Conditioning (C-20) contractors may not legally perform solar installation. The CSLB indicates that only these contractors are the four that are approved.

We typically recommend a Class-B contractor since they are approved for all the aspects of construction related to solar. Electrical, plumbing, framing, and roofing

Trying to sell you a Leased or a Power Purchase (PPA) system without clearly describing the pros and cons.

9. If you buy your system outright you may qualify for the tax credit and if applicable other rebates. You also get to enjoy 100% of the benefit of the reduced or eliminated energy bill. If you lease a system you do not get the tax credits or rebates. Scammers don't share this information.
10. If you sell your house the potential new owner may have to qualify and agree to assume the lease. It may be quite difficult to convince a home buyer to do this. If you do stay in your home for the next 20 years, you typically will have paid two to three times the amount in lease payments compared to the purchase price. Typically, it is not financially beneficial to lease a vehicle or your home. It is the same with solar.
11. There are other scams associated with Lease and PPA agreements including built-in rate increases, liens on the property, high interest start rates, poor buy-out clauses etc. It may be good to do the lease or PPA if you don't pay income tax or if you are a non-profit organization but when companies act like the lease or PPA is your best solution without describing the alternatives it is a scam.

Misrepresenting the warranty

12. Most of the String-Inverter (Including Solar Edge Optimizer) technology has only a 10-12 year warranty on the inverter. If the solar installer describes that it is 25 years, beware. Even with the optimizer technology, the inverter itself is still only 10-12 years. You must pay extra to get the 25 year warranty if they even offer that.
13. Scammers will lead you to believe that they will warranty all roof leaks. Generally, you would need to prove that the installed system is causing the leak which may not be easy to do. If the language in the agreement describes anything other than leaks due to roof penetrations made by the solar provider, or doesn't mention roof leaks at all, then you may want to consider another solar provider.
14. Roofers that try to install solar will lead you to believe that unless you hire them to install your solar it will void the installation warranty or the roofing material manufacturer's warranty. We have no evidence that it would void the manufacturer's warranty and it is simply the roofer's choice if they want to honor their installation. The scam here is that you must hire them or your roof will automatically not be warranted.

[Hire the solar installer that does not play games with the warranty.](#)

Guaranteeing Solar production volume

15. Giving you a guarantee on solar PV production volume sounds like a great idea right? You will then have peace of mind that it will work. Not so fast. Less than reputable solar companies will only guarantee a small portion of the real production volume or only guarantee the first years volume and not describe these details to you. They also typically have so many agreement loop-holes that they end up not having to honor their promise or it is very difficult to get a claim approved. Why purchase solar from a company that acts like they are protecting you when they really aren't. Each piece of equipment has a performance warranty. There are no gimmicks or tricks with the equipment warranty.
16. Hire a solar installer that doesn't try to pretend that a meaningless production warranty will protect you.

Offering a very low solar price

17. Have you seen the advertisements that depict a complete system for a very small price? Wonder how they do it? Usually the system is so small that it won't be sufficient to cover your needs and when you want the real system size that you need, it is much more expensive than everyone else.

[Always hire an installer that meets your needs, is not undersized, and comes with a real warranty.](#)

Using unrealistic future values to justify or make the solar system look more financially attractive

18. Some solar providers will forecast very high increases to utility rates that result in a highly attractive return-on-investment (ROI). Look at the history of your local utility rate increases to see if the forecasted rate is reasonable.
19. If you plan on using more electricity in the future it is ok to estimate for this increased volume, but once again make sure the increase is reasonable. If you justify a system based on doubling your usage and your usage only goes up 10% you might be disappointed in your ROI.
20. Sometimes the scammer will include grants and rebates that are no longer available or never existed in the first place. Always check what credits, grants, or rebates are being used in the ROI calculation.
21. If an installer describes solar as a guaranteed investment, beware. While the solar system is likely to be less risky than the stock market for example, there are no guarantees. There is a high probability that the solar investment will yield the expected return but if a solar provider describes it as guaranteed then it is better to pick a new provider.

Always ask the solar provider to show you the math of the financial calculation.

That the utility will pay you back for your excess energy to justify the solar investment

22. Depending on where you live you may be the recipient of the local utility paying you for your excess power. Scammers will inflate these values, describe them as guaranteed, or even as a way to make money.

We do not work with installers that do this tactic. It is better to not include any excess power payments from the utility in your calculations. The amount of payment is currently very small and there are no guarantees that they will continue. If you get one, consider it a surprise bonus for the year.

Not mentioning real-time monitoring until you have already signed the agreement

23. You may get an attractive price from a solar provider and while they are on your roof they mention that they can sell you system monitoring. They typically will charge you a few thousand dollars extra for this service.

24. It is pretty important to know how your panels are performing.

Always ask your solar provider to include lifetime monitoring in the quote. There are even options for you to monitor your own panels from any computer on the internet.

That it is better to select a big-name solar company instead of a local installer

25. The scammers often justify a higher cost system by indicating that you have better security by going with a larger company. This often is not the case and in fact likely just the opposite. Large solar providers are trying to handle many customers at once and they rarely have time to address the concerns of a single home owner. They also have long delays because they over-sell their capacity and often service commercial accounts. Larger companies also sub-contract the installation to a third party which you have never met. Surprise! You are not really doing business with the company that you thought you were.
26. The large company will also tell you that they have less of a chance of going out of business so that you should hire them to avoid problems in the future. This is also illogical because many of the big companies are over-leveraged due to their big sales force, marketing budgets, and massive infrastructure, which places them at more risk. If your solar provider happens to go out of business whether they are large or small, the result is the same. You just contact another solar provider and they service your system. The equipment warranties are still transferrable.
27. We believe that a local medium size business may provide you with (1) better service, (2) a better technology package since they don't have massive amounts of inventory to use up first, (3) better pricing due to low-overhead, and (4) with a contact that is right-around the corner instead of a third party from another state.

That there is a sense of critical urgency to get solar

28. Some urgency is justified due to the possibility of incentives and regulations changing. However, these facts do not justify avoiding becoming informed. High pressure sales and demeaning sales techniques always are a sign of some type of scam.

The facts are that the sooner you can evaluate if solar is the right investment for you the better, since you then can make decisions based on accurate information. It is unnecessary to make decisions under pressure.

That including the appreciation in property value will justify the system cost

29. No one has determined without a doubt if installing a solar system will improve the value of a home. There is some data that suggests that the actual initial purchase cost of the system may be recouped when you sell your home by increasing the home's sales price but this is not guaranteed. (In our opinion Leases and PPA's will likely not improve the sale price of your home)

It is better to consider property appreciation as a risk reducer if you do have to move from your home quickly. You likely can recoup the cost of the system at a minimum, but there are no guarantees. Any other intrinsic value that you get from the sale of your home due to solar is a bonus, and should not be used to justify the solar ROI.

Only doing the roof measure after you sign the contract

30. Great solar installers will measure your roof for free. If a sales person wants you to sign a contract first then do the measure that seems to be placing the cart before the horse. Would you buy a car and then have the dealer tell you if the car will turn on? Reputable companies will do a free roof measure and let you know if your system design will fit before you sign a contract.

[Smart Solar will work for you and measure your roof without making you sign a solar installation agreement first.](#)

Only giving you references after you sign the contract

31. Great solar installers will provide you with references before you sign an agreement. They give you their references without you having to ask. They are confident in their performance and aren't afraid to stand behind their work.

[Smart Solar Design has BBB registration with A+ rating, great online reviews, actual references from installed jobs and works hard to please the client.](#)

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