



Solar Photovoltaic System Installer Scams

White Paper by

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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. This is not a comprehensive list but inclusive of the more common issues. These techniques 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 mills@SmartSolarSocal.com.

- **Not providing you with the cost per watt value.**
 - Example: A \$10,000 system that is 6.0KW equals \$1.67 per watt. A system that costs \$5,000 in comparison seems cheaper but you must also know the system size. If it is only 2.0KW you just paid \$2.50 per watt. Make sure the cost-per-watt value is compared with or without tax credits, incentives or rebates between providers. This apples-to-apples comparison is important.
 - **Always compare the cost per watt.**
- **Trying to sell you a Leased or a Power Purchase (PPA) system**
 - 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. If you sell your house the potential new owner may have to qualify and agree to assume the lease. 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.
 - There are many 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.
 - **Try to find the funds to buy solar or get a loan from a bank, credit union, family member, or friend. Sometimes these can be built into your property taxes so you can write the interest off your taxes as well.**
- **Using unrealistic future values to justify or make the solar system look more financially attractive**
 - Some solar providers will forecast very high increases to utility rates that result in a highly attractive return-on-investment. Look at the history or utility rate increases to see if the forecasted rate is reasonable.
 - 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.
 - Sometimes the scammer will include grants and rebates that are no longer available or never existed in the first place.
 - The system is described as a guaranteed investment. 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.

● Equipment related scams

- Often the less reputable solar provider will not specify in the agreement the exact equipment being installed. This leaves the door open for the bait and switch.
- Some solar providers will use outdated technology because it is cheaper for them, but still charge you the new-technology rates.
- Beware the solar provider that tells you “Their panels are the best”. (THE QUALITY AND WARRANTIES ARE RELATIVELY THE SAME for tier-one manufacturers.)
- 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 shading 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.
- 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.
- ETL is the organization for safety approval of equipment. Scammers will use equipment that has not been approved at the “system” ETL level, equipment that is only approved at the individual component level, or equipment that is not approved at all. This may void equipment warranties.
- Solar providers may not provide you with a list of the individual model numbers of all equipment. This enables you to communicate with the manufacturer if necessary.
- Check the panel and inverter manufacturer that they listed in the agreement. You can easily determine if they are a tier-one provider. If your solar provider is not using micro-inverters with the option for life time monitoring, ask them why they are not using the latest technology. Have your solar provider certify in the agreement that all equipment is ETL certified.

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

- 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
- 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

- 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.
- It is pretty important to know how your panels are performing. This reduces the chances of a surprise at the end of the month when you get a bill from your utility indicating that you owe them money.

- Always ask your solar provider to include lifetime monitoring in the quote. If you want further piece of mind ask them to include giving you the ability 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**
 - The scammers often justify a higher price per watt system compared to other bidders 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. They also typically 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.
 - 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.
 - A local small business may provide you with better service, a better technology package since they don't have massive amounts of inventory to use up first, better pricing due to low-overhead, and 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**
 - Some urgency is justified due to incentives and regulations constantly 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. Solar providers will even describe that equipment is in short supply and if you don't lock in your order now you may have to wait a long time to get your system.
 - 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. There are plenty of tier-one panel manufactures for example and knowing the real time periods of market changes is important. (mid-2015-and mid-2016 and 2017 are the primary date considerations)
- **That including the appreciation in property value will justify the system cost**
 - No one has determined if installing a solar system will improve the value of a home other than the actual initial purchase cost of the system (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 purchase price.
- **Misrepresenting the warranty**

- Sometimes solar providers will describe that they provide a warranty for 25 years as if that is somehow special or that it includes labor
- In reality if the equipment manufacturers are not providing a 25 year warranty on the panels, inverters, and racking then you may want to ask your solar provider to use a different manufacturer.
- 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.
- If the solar provider is not providing at least a 12-24 month warranty on labor that is separate from the equipment warranty, then pick a new solar provider.

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