

## **QUESTIONS FOR SOLAR DEALERS**

Most solar dealers are going to try to tell you that their system is the best. But how do you tell the difference between those that ARE the best and those that may be (shall we say) somewhat sub-par?

The information that follows will be helpful in arming you with the facts and the questions you need to ask any dealer or consultant before making a purchase. After all, wouldn't you rather get it done right the first time?

Get solid answers to the questions we've listed below and you will be able to make an educated decision on which system really is the best investment for your money...

**When purchasing a solar system for your home or office, asking these 14 questions can save you thousands of dollars and a lot of heartache and stress over the long run:**

**1. Does the dealer/installer you're working with keep any inventory on hand?** We're not talking about just a few solar panels and some inverters here. What you're looking for is this: Does this person or business have a significant financial investment in the solar industry he or she is doing business in? Some popular scams that are out there of late are dealers mentioning things like "We have them in stock today!" or "Items ready to ship" – causing some unwary consumers to falsely assume that the dealer has the stock at their actual location.

You need to be ready with questions for them like, "In stock WHERE exactly?" and "Ready to ship from WHERE?" A sure give-away to this problem is evident in you never actually seeing the dealer state anywhere in their advertisements (or in what they say): "We have this in stock at our location."

With this said, you can't also expect every dealer to have everything in stock and on-hand or ready to go, either. But, the dealer shouldn't have to drop-ship everything in for your setup. If they do, then who files the claim if something is damaged in shipping – you or the dealer? Or does the distributor pick up the damage tab?

Meanwhile, the dealer may have your money and the entire operation is at a standstill. So be sure of who you're dealing with and how they operate before proceeding.

## **2. Does this dealer work out of a commercial location or facility?**

What you're looking for here is this: Does he or she work in an office with a possible warehouse area next to it? Or does this dealer work out of a home or apartment? Are there directions to his location on his site? If you'd like to test this, ask the dealer for directions and tell them you'd like to come by his facility to take a look at some of the products or to actually pick up your order. In many instances, you'll start hearing some pretty good excuses as to why they aren't able to see you at that time or meet you there.

**\*\*WARNING\*\*** Some dealers are becoming aware of this warning, so asking for directions may not be enough, as they are calling your bluff by giving directions to potential customers assuming the customer is bluffing and won't actually make the trip to these out of the way locations. To get around this, you need to demand a shipping tracking number within 24 hours of having your credit card charged or cancel the order. If dealers cannot provide a tracking number for you, they probably don't have the item(s) in stock.

**Tip #1** – Contact the City Hall where the dealer's address is listed or located, and ask them whether the address is in a commercial or residential district. You can search for the number to a City Hall for any city using any search engine. Just type in "Dallas city hall" (or whatever city you're looking in).

**Tip #2** – For dealers that do the actual installation, always ask them for a copy of an installing dealer's contractor's license. After you receive a copy, verify the legitimacy of the license by contacting your state's Contractor Licensing Board. Again, you can type in your state name following by "contractor's licensing board" in any major search engine to get some good numbers to call for this.

If a dealer is an actual contractor, the name of the dealer's business should be listed with the state. NEVER let anyone perform work on your home without first seeing evidence that he is an employee or subcontractor of the contractor you're working with and is covered under the contractor's or subcontractor's insurance. If someone has no insurance and they're injured while working on your property, you could wind up with a lawsuit on your hands, so be careful! Always demand a copy of the list of contractor's employees and his/her insurance before letting them on your property (especially on your roof or installing a tall windmill, for example).

## **3. Does the dealer offer free technical or follow-up support?**

Make sure this is offered before and after the sale. What background and training do they have? Some people will tell you, "Sure! We offer tech support." But are they qualified to actually give you the information and technical support you'll need? If they claim they're an "engineer" (which is a term loosely thrown around in the industry), ask them where they received their engineering degree. Some people will call themselves "solar engineers" or use other terminology. What

university did they attend to receive this degree? Also, be aware of getting the response, "I'll have to get back to you with an answer on that." when you ask simple technical questions. This could be an indication that they may not know everything they need to know to set up your system correctly, and that could cause damage to your system and extensive cost to you. So, make sure the dealer you are working with is qualified.

**Tip** – Make sure if technical support is offered to you, that they aren't just doing it to make the sale. You don't want to end up with product lying around your house and have no idea where to start with no further technical support provided. Make sure they can continue helping you AFTER the sale.

Some dealers don't offer any technical support at all! This is not something you need to struggle with. Without qualified technical support, you could seriously damage the equipment that you just purchased, void your warranty, or even worse injure or kill yourself or someone else or potentially start a fire. In our opinion, stay clear of dealers that have no live technical support – plain and simple. After all, you are working with electricity and electrical components with alternative energy, so these dealers need to provide you the technical support you need to fall back on when you need it.

#### **4. What is the minimum power capability (provided under warranty) of the solar panel, wind generator, or system component the dealer/installer is trying to sell you?**

You could be buying a solar panel (for instance) that is rated at 200 watts, but that only produces 170-180 watts. This difference in power ratings (rated and actual output) is known as "peak tolerance rating." It may also be referred to as "minimum power max", "minimum warranted power" or "negative tolerance rating." What you're looking for when shopping for components and power outputs is this: What is the highest minimum warranted power rating? What is the lowest negative tolerance rating? What is the lowest peak negative tolerance rating?

Claims some make on the high efficiency rating of some solar panels or wind generators can be worthless if these components have poor minimum warranted power ratings.

Sometimes, this negative tolerance rating is listed as a percentage. For instance, if a solar panel is listed with 10% negative tolerance rating, it means that a 200 watt rated panel may only actually capable of producing 180 watts out of the box. Again, just be aware of this.

**Tip** – If you only ask 1 question of your solar dealer/installer, it needs to be THIS question! The ONLY power that you're guaranteed to get out of a solar panel is the "minimum warranted power rating." Ask the dealer for the solar panel's specification sheet and look for the minimum warranted power rating on this specification sheet.

**5. What is the “Per Watt” (or PTC) rating of the solar panels the dealer wants to sell you?** For most states in the U.S., to qualify for cash rebates from the state on renewable energy setups, the PTC ratings are the basis for the rebates (not the Standard Test Conditions rating). For solar panels, an independent laboratory known as PVUSA compares real world performance to specifications listed on the panels before they are approved for state programs. PVUSA uses more stringent and strict testing conditions than most manufacturers use – and PVUSA will assign a PTC rating (PVUSA Test Conditions rating) to them. The PTC rating along with the efficiency rating of the inverter(s) is the determining/rating factor most states use to determine the cash rebate. Therefore, the higher the PTC rating, the higher the cash rebate – in not so long-winded terms.

**Tip** - It’s also a good idea to see what the manufacturer is guaranteeing on the panels and compare this to a high PTC rating.

**6. Each solar panel will have a power production warranty listed for it. What is the power production warranty on the solar panel your dealer is trying to sell you?** Most solar panels today have the standard monocrystalline and polycrystalline components. These have proven track records and we now know they can last up to or exceed 40 years. As a result of this, manufacturers can now offer warranties on these proven technologies of 25 years or more.

Some new technologies have recently been developed that haven’t yet been on the market long enough to establish a record of performance or reliability. As a result, you will sometimes see solar panels with warranties of less than 25 years. Why would you want to be one of the first people to invest in and use a new technology that hasn’t proven itself yet? Innovation is good, but customers (you) shouldn’t be used as guinea pigs for testing them.

Lately, there are a lot of manufacturers that are making some lofty claims about performance (based on lab results – not real-life results). Just remember, you are investing a lot of money in these systems and components, so you need technologies that will handle hot blistering sun, potentially high winds, and pouring rain for the next 30-40 years.

**Tip #1** – We’re not trying to put the new guys out of business here, but since you’re investing in something that you will hopefully use the next 30-40 years, you may not want to purchase from a business/dealer that’s only been in business for (or just appeared out of nowhere in) the last 2-3 years.

**Tip #2** – Also be aware of dealers that offer warranties far beyond the manufacturer’s warranty. Do you honestly expect this dealer/business to be around for another 30-40 years? The possibility exists – but when investing in something like this, we really need to add a dose of reality check and look at them objectively.

**7. For the solar panels your dealer or installer is selling you, what is the efficiency rating of the panels?** Every solar panel produces a certain amount of power per square inch – this is the panel’s overall efficiency. Obviously, the more power per square inch that a panel produces, the less space you will need to use on your roof or solar panel location to produce the same amount of power. The most efficient solar panels are those cut out of solid ingots of silicon. There are some manufacturers out there that don’t use the more expensive technologies for cutting solar cells from solid ingots, but this is still done at the cost of the efficiency of the panel.

If a manufacturer avoids using solar cells cut from solid ingots of silicon, they are trying to save on manufacturing costs. That’s fine. The typical problem with this is that they don’t pass the savings on to the customers, but rather make more profits. The lesson to take from that is this: Why would you want to pay the same amount of money for a less efficient system when you could get a better, MORE efficient system for the same investment?

**Tip** - Ask the dealer/installer to provide you with a factory-printed specification sheet listing the solar panel’s efficiency.

**8. What if the efficiency rating of the inverter(s) your dealer or installer is trying to sell you?** Same as for solar panels, you will always want to buy the highest efficiency inverter you can get! This will mean more rebate money for you from the state (as the higher the efficiency rating, the higher the rebate) and (we shouldn’t even have to say it) more power production over the lifespan of your system.

**9. What type of inverter is being installed/offered?** What you want to look for here is this: Will the dealer/installer be using a high frequency transformer or the 60Hz copper-wound transformer? This is important and (inverter repair centers will all agree) you will do better choosing the dealer that uses the heavy duty copper-wound output transformer. You can tell if the inverter has copper in it by simply asking to feel how heavy it is. The heavy ones use copper. It’s more expensive, but much better for reliability and performance. Dealers like to brag about lower cost inverters, but ask to see the factory specification sheet on the inverters too. You’ll be glad you did.

**10. What type of mounting racks (or tracks) is the dealer trying to sell you? Are they manufactured with medium to heavy duty materials, or is the dealer trying to use homemade or light duty racks?**

This is important to you because of the weathering of the materials on your roof or setup (more than any other reason). Sometimes dealers/installers will quote a specific brand of engineered aluminum mounting rack, but the installer will show up with a batch of inexpensive steel galvanized u-channel pieces and a saw for cutting them. These will work just fine until years down the road when they start to corrode. You don't want something flimsy on your roof securing tens of thousands of dollars worth of panels do you? We don't either. Get the specifics on this from your dealer.

**11. Has this dealer been in business since before 2009?**

The ITC (Investment Tax Credit) was amended to be extended beyond the original expiration date of December 31, 2008. You may want to find out if your dealer or the company you're dealing with has other sources of income beyond income from Federal Tax Credits for installations. This may be an indicator of how stable the company is as a business (and how reliable they may be for future assistance). Just like the dot-coms and the tech industries, the solar industry is on the rise right now, but there will be a "crash" in this market too (as with any market/industry) where the solar market adjusts to actual supply and demand and falls out of the trend phase. You simply need to make sure the company you are dealing with can weather this light "industry crash" before the market adjusts to a more normal supply/demand climate.

**12. Is the company you are dealing with a real business or are they trying to scam you?**

We know how this must sound, but as with any new industry that everyone takes an interest in, the solar industry is no different. There have already been numerous unwary consumers that have been ripped off by people claiming they represent what turn out to be fake solar companies. It cannot be emphasized enough: Always research the solar company's background! Never write a check to or give out a credit card number to someone before doing your homework on them.

**Tip #1** – If you're look at a company online that makes claims on their website like "The #1 Solar Dealer Since 1997" look up the company's domain name (website address) registration to confirm they have had this URL/domain name since 1997. You can go to [www.WhoIs.com](http://www.WhoIs.com) and click on "WhoIs Lookup" – then type in the company's domain/website name and see when it was registered with "Record created on:" If this is a different or later date than what they claim, you may be dealing with a scammer.

**Tip #2** – Check with the Better Business Bureau on a company. Most companies (online or bricks & mortar) are registered with the BBB. Now, of course no company

is going to be perfect and you may see a few complaints about them. You want to look not at the FACT that there are complaints about them, but at the number of complaints and in what time period (all at a specific time and a lot of them at that time, for instance). Also check on the number of and type of complaints they received within the last 36 months – as these are the most important and show that the company tried to be better in their service and ethics. Were those complaints resolved?

**Tip #3** – Check out the “Wayback Machine”! You can take a journey back in time for just about any website by going to <http://www.archive.org/web/web.php> and typing in the name of the company’s website to see what their website looked like or contained in years past. Click on the ‘Take me Back’ button, then select the year you want to see. This may reveal things to you that you didn’t know existed.

**Tip #4** – There are multiple companies calling themselves Corporations to try to appear more established than they really are. You will see them using the “Inc.” next to their company name. If you are dealing with someone using the “Inc.” designation next to their company name, check with the Department of Corporations on the Internet in the state where that business is located or addressed.

**13. What is your dealer’s return policy?** Look to see if your dealer/installer posts a return policy and read through it or get it explained in full to completely understand it. Return policies can vary, but it’s not unusual to see a re-stocking fee of 15%-20% and a return period of 20-30 days (even on large component systems like solar). This fee should be reasonable and should only cover the dealer’s actual losses (not be a source of additional profit).

**Tip** – Re-stocking fees should typically be waived if a product is found to be defective right out of the box (and especially if the dealer is replacing it with another product, or upgraded to another equally valued item). The return period should allow ample time to return it via shipping.

**14. What is your dealer’s privacy policy?** Some dealers on the Internet are only currently making money by selling your personal information because they’ve marked their products down “so low” that it’s the only way for them to make profits. This is the day and age of identity theft, so again just be careful.

You as the consumer have the right to check out these companies as much as you feel you need to. After all, you’re not buying minor landscaping or even decorative molding for your home. You’re buying high-energy devices that can potentially be dangerous if not installed properly, and you’re investing a good amount up-front. Get your questions answered.

---