

# SOLAR DISCOUNT SECRETS

HOW TO BUY RENEWABLE ENERGY  
SYSTEMS AT DISCOUNTED PRICES



**4 Patriots**



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# SOLAR DISCOUNT SECRETS

## HOW TO BUY RENEWABLE ENERGY SYSTEMS AT DISCOUNTED PRICES



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### INTRODUCTION

We at 4Patriots understand that for many reasons, a full-fledged solar installation project may not be for you. This could be due to the time you have available, your health or merely your desire to spend your time in this fashion. But we still want you to be able to realize the benefits of generating your own power, and we don't want you to get taken advantage of by unscrupulous dealers if you choose to go that route.

So, we've decided to provide you with detailed guidelines for finding a reputable solar contractor and negotiating the best deal for your system. Regardless of which of the three options provided that you choose, you've made the right decision to become more self-reliant by producing your electrical power through solar and wind energy.

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### PURCHASING A MANUFACTURED SOLAR SYSTEM

There are three main choices available for the interested homeowner when it comes to solar components and installation.

1. Buy from a solar dealer.
2. Buy wholesale and have a contractor install.
3. Buy wholesale and install yourself.

The first option is more of a hands-free approach, typically yielding the most professional system, but at a premium. With the information you will find here, however, you should be able to secure discounts in the range of 12 to 20 percent by simply shopping around and negotiating the best deal.

The last two options involve a time investment from the homeowner but may yield the best price. Compared to someone buying full price retail, you could see discounts as high as 37 percent. The larger discounts will require more work by the homeowner, including managing or even doing some of the installation yourself.

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## 1. BUY FROM A SOLAR DEALER

The first option that we will examine in acquiring a solar system is the most popular route taken, which involves going through a reputable solar dealer and having him do all the work. While this will usually entail the least amount of work for you, it will usually end up costing you more in the long run. Of course, you tend to get what you pay for if you have selected a solar dealer properly.

A solar dealer with plenty of experience will yield you an installation that looks and performs the best, since he will be using the most up-to-date techniques and materials during the installation. This guide will lead you through the steps you should take to ensure that you get the best solar dealer for the best price.

There are three action steps you should take to make sure that you get the best solar dealer at the lowest price:

1. Find a solar dealer.
2. Screen the solar dealer.
3. Negotiate to maximize your discounts.

By following the ideas here, you will be able to structure a reasonable discount while still maintaining the quality. Most people who purchase a solar system pay full price without giving any thought as to how they can pay less. In addition, they often don't ask the right questions of the solar dealer to ensure that the solar system they purchase is installed properly.

## FINDING A SOLAR DEALER

The most important aspect of finding a solar dealer is to interview several different solar dealers in your area. At a very minimum, you should call and talk with four or five companies and then receive complete bids from at least two or three of them. This may sound like a lot of work, but the phone calls are usually pretty quick and even on-site consultations only take about 45 minutes.

The purpose of receiving multiple bids is threefold. First, it helps you become familiar with the solar industry, the jargon and the different aspects of buying a solar system. The level of your solar knowledge will be amazingly different from the first phone call compared to the third on-site visit.

Just think back to when you first purchased a car. The first car lot you walked on seemed confusing and intimidating, but at the last place you visited, you probably felt like a real pro and you knew exactly what questions to ask and exactly what you wanted.

The second purpose of receiving multiple solar bids is to find the best deal available. You may get the best deal possible from the first company you call, but that is unlikely. Furthermore, you will be able to use the information and pricing you receive from one company against others. This helps you spot inconsistencies in pricing, installation methods and warranties.

Third, you will get a good feel for whether your particular house is even suitable for a solar installation. Some houses just don't have a good location or are shaded most of the year, and installing a solar system isn't feasible. You may get one solar dealer telling you that your house is perfect, but with a few different opinions you'll be able to judge the difficulty of your particular installation and how efficient your system will be.



**NOTE:** Some solar dealers will set up an on-site visit, measure your roof and show you exactly where and how the installation will take place, while other solar dealers will be able to assess your needs over the telephone. With the help of Google satellite images, a professional should be able to give you a quote without performing an actual on-site visit.

Before the installation takes place, an actual measurement and engineering plan will be drawn up. Don't be turned off by these phone-only solar companies! They are usually larger companies that install systems throughout the country and do a large volume business. If they are doing large volume in solar panel purchases, then they are able to get the best pricing and can usually beat the prices of a local smaller company.

There are many online resources available for selecting a solar dealer in your area. Most of these websites will give you a better overview

of a company than you'd get by just looking them up in the Yellow Pages. They offer references and services provided, and some of them require the dealer to have certain certifications before being listed.

Among the websites are:

- [news.energysage.com/best-way-find-solar-panel-installers-near-me/](http://news.energysage.com/best-way-find-solar-panel-installers-near-me/)
- [goingsolar.com/solar-installer-you-can-trust/](http://goingsolar.com/solar-installer-you-can-trust/)
- [www.solar-estimate.org](http://www.solar-estimate.org)
- [www.nabcep.org/installer-locator](http://www.nabcep.org/installer-locator)

Get a feel for the dealers in your area through these websites and by asking others if they know of anyone who has had a solar system installed.

## HOW TO SCREEN THE SOLAR DEALER

### *What Certifications Do They Hold?*

The North American Board of Certified Energy Practitioners (NABCEP) provides the most stringent exam available to the solar dealer. It requires the most knowledge and field experience to pass. NABCEP has two certifications: the Entry Level Certificate of Knowledge and the Installer Certification.

Anyone can obtain the Entry Level Certificate of Knowledge by simply paying a fee, but to acquire the Installer's Certificate, you must have a significant amount of proven field experience. Also, ask if the actual installers hold this certificate. You'd be surprised by how many solar dealers advertise this certification, while no one who actually installs your system holds it!

Check to make sure the solar dealer does in fact have the NABCEP Installer Certification.

*Look for Professionalism*

The best solar dealers also tend to have the best sales staff. Knowledgeable sales staff can make the difference between a solar system that performs to expectations versus one that produces subpar power.

When talking with the solar dealer's sales staff, listen and watch for their knowledge level. If you feel they are new or can't answer your questions properly, then you should move on to another company.

Ask the solar consultant a few questions to gauge their knowledge. Read up on the recent solar happenings and ask the salesperson about their opinion. If they are good at what they do, they should be up on the current events, too. Don't be afraid to ask them directly how long they have been working for this company or how long they have been in the solar industry.

The top solar dealers tend to hire employees with experience in the field, while the smaller companies often hire inexperienced employees at a lower cost and then train them on the job – your job.

Experienced and knowledgeable sales staff can notice and address issues that someone without the experience may miss. For example, certain inverters match up better with certain PV panels, which in turn may match better with your roof layout. Certain panels do better with low light than others, or better in hotter temperatures.

There are options when addressing shade, just as there are options when the roof is not a suitable site for the panels and a ground mount or pole mount may be necessary. An experienced solar consultant will be able to satisfy your needs and get you the best

system considering your site's layout and your home's electrical needs.

*Are They Experienced in Your City/County?*

Experience is one of the biggest factors to consider in making your selection of a solar dealer. You wouldn't want your new solar system to be a part of someone else's learning curve!

If a solar dealer hasn't performed an installation in your particular city or county, then he may face some frustrations and time delays in the installation process.

Each city and county has its own unique set of codes and permitting requirements. When solar dealers have already worked with the city/county, they know what is required and can quickly breeze through the process.



One of the most frustrating things that can happen to a client is to have the panels on their roof ready to produce power (and start the savings), but the solar dealer has problems getting the system to pass the inspection, so you have to wait weeks or even months for your system to be turned on.

This doesn't mean that it is an absolute requirement that the solar dealer have previous experience in your city/county. You can probably move forward with a company without that experience and do just fine. But



when in doubt, it's better to have the local track record behind them.

### *Check With the BBB*

Most of the solar dealers, even the newer ones, represent reputable companies with good track records. The overwhelming majority of solar dealers have your best interests in mind. They are merely looking for the best way to maximize their profits while giving you a top of the line solar system at a great value.

As with any contractor, checking a solar dealer's standing with the Better Business Bureau (BBB) is a good idea. While having one or two "resolved complaints" might be okay, if you find numerous negative reports or "unresolved complaints" against a particular dealer, it should be a good indicator that you may want to look for another dealer. Also, look at the types of complaints that exist to gauge the seriousness of them and determine if the complaints pertain to your situation.

To find the company's BBB rating, it is helpful to know the city in which they are based. Ask them this question, as some companies are not based out of your home area even though they service it.

Go to the BBB main website and type in the zip code or city to start your search:  
<http://www.bbb.org/>

**NOTE:** Even if the company isn't a member of the BBB, if they have had complaints against them, it will show up in their listing.

### *Check References From Previous Clients*

A step that is often skipped by consumers is to call and check a company's client references. It does no good if you just ask for them for references but then don't take the time to

follow up with the clients to ask questions. You should call at least two references and ask detailed questions. Questions such as, "Was the installation done on time?" and "Were there any delays during the process?" will get you a better, more concise reply than, "How did everything go?"

Keep in mind that the list of references given by a solar dealer will typically include the most satisfied clients. Even if a dealer has a clean record with the BBB, it's always a good idea to find previous clients not provided by the solar dealer. Some homeowners have received less than perfect installations, but don't bother to report anything to the BBB.

A good way to find other clients from a solar dealer is to look for yard signs. Many solar dealer companies post signs in the yard after they have completed the installation as a means of advertising.

You can ask the solar consultant where they have done several installs recently in your city. If you happen to pass by these yard signs and see the homeowners in their yards, stop and ask them how the process is going. Since these people are not necessarily the clients who the solar dealer gives you, they may be able to provide more objective feedback.

### *Warranty Considerations*

Another big consideration when choosing a solar dealer is the company's warranty. You will want to choose a solar dealer who will stand by his work, and what better way to show this than to offer a good, solid warranty? A five-year warranty should be the minimum, while 10 or more years would be ideal.

Many of the major solar distributors actually reimburse solar dealers if one of their components fails. They are competing for the solar dealer's business just as much as

the solar dealers are competing for yours, so they often offer \$250 or more to replace a faulty solar panel or inverter. Solar dealers know this, and oftentimes will include free replacement of these components in their warranties.

When inquiring about the warranty, also ask about what portion of their installation they bid out to subcontractors. Many of the more established solar dealers have their own salaried engineers and electricians, while some of the upstarts may subcontract much of this work. This strengthens the warranty, as any faulty work must be accounted for by the solar dealer, and no finger pointing can occur.

Finally, read a copy of the solar dealer's contract before making your decision. If it is filled with legal jargon, have them explain it to you in layman's terms. Never sign a contract without reading it. A vast majority of the time you will not need to refer to the contract and no disputes will arise, but it is good practice to read it thoroughly.

The proposal for the system, or written bid, should be separate from the contract and will list the various costs associated with the scope of work. You should request that they supply you with a "not to exceed" proposal, as this will keep them from charging you during the installation for any extra costs.

A majority of solar installations are very straightforward, and a good solar dealer will recognize before the beginning of the installation if any major problems will arise. In the proposal, and in the contract itself, you will find the solar dealer's payment terms. Typically, the amount of money down that they require determines the company's cash flow.

If they require 50 percent down or more upon contract acceptance, they may be having a bit of a cash flow issue. Most of the solar

panel manufacturers and the other various distributors have 30-day terms, meaning that solar dealers have 30 days to pay from when they order the panels.

Some of the larger solar dealers don't require any money down until the project is completed. Many others only require a small down payment to cover the engineering and design expenses, and then will ask for the next payments once the installation has commenced.

Also ask whether the solar dealer will "carry the solar rebates." The paperwork and processing time for these rebates may take months to complete, but many solar dealers will carry this rebate for you. All you have to do is sign the rebate amount over to the solar company and they will do all of the paperwork for you and deduct the amount of the rebate from what you owe them. When the solar system is commissioned and the paperwork is done, the rebate check is then sent directly to the solar dealer. Many solar companies will offer this service free of charge, saving you substantial time in paperwork and keeping the solar system's capital costs as low as possible.

### *Ask About the Competition*

You can learn a lot about solar dealers by asking about their competition. Be sure to let them know that you are shopping around and that you will soon receive bids from their competitors. Even if you have already received a bid from a company, you may not want to reveal that. This helps stop them from using the information from the other quote and taking a shortcut on giving you a complete bid.

One solar dealer may mention something very important about the other company that would deter you from doing business with it. Make sure you always follow up to check the facts and confront the other company about

the dirt you dug up. There may be a good explanation and you may even learn that the first solar dealer was lying.

Always take what you hear with a grain of salt and don't trust it until you verify everything. You may listen to one solar dealer throw mud at the other one and it just doesn't sit right with you. The one talking may lose credibility with you by what he says. It's good to assess their character up front rather than midway through an installation.

## NEGOTIATING TIPS TO MAXIMIZE YOUR DISCOUNTS

Once you have checked around and found the best solar dealer, it's time to begin the bargaining process. Even the best solar dealer with the best intentions still needs to turn a profit. There are often certain things they don't want you to know and may not volunteer all of the information, but with the right knowledge of what to look for and what to ask, you can ensure that you have negotiated the best price.



If you and the solar dealer have decided that a roof-mounted PV system is the best option for your home, you may be able to get a discount by noting that your roof is easily accessible from a second story window, saving time in installation and thus lowering the cost. The same thing may be true if you have the architectural plans for your roof layout. This

could save time in engineering the system, and thus lower the cost. If you have an old-style ranch home with a low, long roof rather than a newer home with many different roof pitches and angles, the installation of the solar array will be much easier and you may be able to acquire a reduced price for this.

There are numerous ways to get the bid reduced, and being aware of what your site has going for it will help in your negotiations. You may also get a better price on your solar system if you are located close to the solar dealer, they can install your system simultaneously with one of your neighbor's, you are flexible on the installation schedule or you have easy access to the attic.

If certain annual tax credits require the system to be commissioned by December 31 and you are willing to carry the rebates until the next calendar year, this may also give you good leverage for negotiating a lower price. A solar dealer that you find to be the best may be too expensive. Just tell them. If they believe you are going to give your business to a competitor because of a few thousand dollars, they may drop the price to match or at least come closer. A small profit is better than no profit, so if they aren't too busy, they may be willing to build your system to keep the installers busy and cash flow steady, even with slightly reduced cost and profit margins.

If you tend to be the trendsetter in your neighborhood, ask if the dealer offers referral fees. By referring neighbors, friends, family or coworkers, you may be able to save a substantial amount in referral fees. Some companies offer \$250 or more if you refer someone who ends up purchasing a solar system with your solar dealer.

A good way to kick this off (and potentially save a bit up front) is to offer to host a solar kick-off barbecue at your home. Your

neighbors will be able to see your new system and how it works. A representative or two from the solar dealer will be on hand to answer any questions that arise and to schedule new site visits with your friends at their homes. Offer to do this if they will provide you with a bit of a discount up front. Not only can this save you money, but just imagine if five of your friends from the event sign on for a system, too, and you collect over \$1,000!

Purchasing a solar system is now a strong economic investment. By entering the process educated and informed, you put yourself in the driver's seat in terms of negotiations between yourself and the solar dealer. By knowing which questions to ask, what to look for in a solar dealer and how to get special dealer discounts, you can ensure that your payback time for your solar system is as short as possible and you begin to reap the benefits of the free and bountiful energy harvested from the sun that much earlier.

## 2. BUY WHOLESALE AND CONTRACTOR INSTALL

Now that you know what to look for and how to properly select a solar dealer, it's time to determine how much of your solar project you want this company to perform.

One of the things you'll need to decide is whether to purchase the solar components online and have a local contractor or even a solar dealer install them for you.

While it may seem easy to find the same panels and inverters that a solar dealer is quoting you for less than their bid, it's not always the case. This guide will look at the four steps necessary to source your wholesale solar components for the best price.

1. Overview of Options
2. What to Look for
3. Negotiation Tips With the Solar Dealer
4. Find Components Online

### OVERVIEW OF OPTIONS

Many solar dealers who have been in business for more than a few years will no doubt have good relationships with several distributors and possibly manufacturers, too. This allows them to purchase the exact same components for much less than the public can buy them at retail, because they get deals for buying in bulk and receive deeper discounts over time. While not common, some panel manufacturers will only sell their panels to solar dealers and not to distributors. This means that your only option for buying these panels is to let the installer purchase them for you. Again, this is the exception to the rule, and the only companies that employ this technique tend to come with inflated costs.



Also of note, margins in the solar industry are quite low right now, as there has been a major influx in the industry of upstart companies and everyone is competing for your business. Panel prices have dropped dramatically since 2001. Most solar dealers survive on the sheer volume of their jobs. Few individual contracts net them too much profit, but by signing on multiple jobs at lower costs they are able to



survive, profit and grow among the myriad of solar dealers out there right now.

With this in mind, most dealers will mark up their components 10 to 15 percent maximum, and many times less than that in order to secure your business. The most successful dealers have streamlined their installation process so well that they can profit enough from the labor side of the contract that they do not need to mark up the components too much. This ensures that they are offering the panels and inverters used for their installations at costs below what the average consumer can purchase them for. Most dealers will be forthright with what they are bidding you for the installation versus the materials, permits, engineers, etc. This allows you to compare their bids to prices online or from other retailers and determine which price is the best.

## WHAT TO LOOK FOR

There are always online distributors slashing their prices on their overstocked inventory. Solar panels are becoming more and more efficient, so when a big panel manufacturer comes out with a new line of more efficient solar panels, the distributors scramble to clear out their “old” panels to make room for the highly anticipated new, more efficient panels. Looking for these sales online may get you a deal on solar panels for less than what you may pay your solar dealer.

Don’t forget to factor in the shipping costs, as the freight costs to ship dozens of large, 30-pound-plus panels can add up fast. Timing is important, as you may have to stumble upon a great deal to find solar panels on your own for less than what an experienced solar company can offer them. Here are some online dealers that can offer discounted solar panels:

- [www.wholesalesolar.com](http://www.wholesalesolar.com)
- [www.solarelectricsupply.com](http://www.solarelectricsupply.com)
- [www.affordable-solar.com](http://www.affordable-solar.com)
- [www.mrsolar.com](http://www.mrsolar.com)

Checking with your local solar dealers to see which panels they offer and which mounting techniques they employ will make the panel and mounting decision easier. Again, many companies will offer a bid broken down in sections so that you can see what you pay for the panels, inverter(s), permit, engineering and labor, among other costs.

Ask for a breakdown if one is not offered up front. Also ask what they use for mounting the array and compare these numbers to what you have found online, using these numbers to make your final decision.

## NEGOTIATION TIPS WITH THE SOLAR DEALER

Always wait for the solar dealer to give you a full bid before alluding that you may be supplying the panels and inverters on your own. This will, in essence, lock them into their quoted installation costs. If you tell them up front that you will be supplying the panels and/or inverters, they may opt to charge you more for the installation because they won’t see any margins on the bulk of the components. Their bid will only be valid for the entire scope of the proposed work, so they will by no means be locked into the quoted price for just the installation. But this will give you the edge in the ensuing negotiations.

Dealers will almost always tell you that they can get the same components as you can for less, and most times they are correct. Don’t let this discourage you, however. If you have found a great deal on your choice of solar panels, then tell the solar dealer that if he won’t install your panels, then you will find

someone who will. While their warranty may not cover any issues with the panels themselves, the wiring and installation of the panels will still be covered.

## FIND COMPONENTS ONLINE

By choosing to buy the balance of system (BOS) components yourself, you must then engage in some Internet searching. There are numerous online solar BOS retailers available, and while some are very reputable, you may come across some who are only out to get your money.

Do thorough checking of the retailer. Check with the BBB for the area in which they are based to see if they have any negative marks against them. Check to see if they have been given reviews from customers who have bought their panels and, of course, make sure you are getting what you pay for. If you want new panels, then make sure that you are not buying used panels. While panels work just fine year after year, they do experience a little bit of degradation, although only about 1 percent annually. Check all documentation that is available through the website to ensure that you are getting what you desire.



If you are lucky enough to have a solar retailer in your area, go in person and talk to one of the floor sales reps. They should be knowledgeable about the pros and cons of the various panels they sell, and should be able to

point you in the right direction to find a solar dealer to install the system for you.

Almost all of the panel manufacturers list a power guarantee warranty of at least 25 years. This means that the panels themselves are guaranteed to produce at least a certain percentage of their power for a given time frame. A common warranty is 90 percent of the rated power for 10 years and 80 percent of the power for 25 years. Most of the leading panel manufacturers have good, strong warranties.

Another thing to look for is the power tolerance of a given panel. A 200-watt panel with a power tolerance of +/- 10 percent means that the panel, right out of the box, may produce 10 percent less than its nameplate rating of 200 watts. You may be buying a 200-watt panel that will only produce 180 watts during the peak sun hours. This is compounded by the fact that when you wire multiple solar panels together in series, the panel with the lowest output will reduce the output of the other panels. So, if you have wired ten 200-watt panels and one of them is producing only 180 watts, you will pull down the power output of all of the panels in that string!

Power tolerances and warranties are two very important considerations when choosing your panels. When in doubt, call the manufacturer, as even the smallest manufacturers have customer service representatives, technicians and engineers with whom you can speak. The intense competition exists not only between solar dealers, but also between manufacturers. Manufacturers want your business and will do almost anything to explain the benefits of their panels versus their competitors' panels.

Inverters are a bigger BOS component that can add up to substantial savings if you

can find a good deal. Larger inverters have become available in the last few years, so most residential systems will require only one central string inverter. Note the warranty, however, as most grid-tied inverters tend to fail between years 10 and 15. Although rare, finding a warranty that covers the inverter for 15 years may mean that you will never have to pay for a new inverter for the life of the system.

With the panels and inverters, always ask what the estimated shipping costs will be. Some inverters weigh more than 100 pounds. One inverter may seem like a better value than another, but shipping charges can sometimes negate that. Also, keep this in mind for the panels: while an individual panel may weigh only 30 to 40 pounds, if you need 20 of them, the weight will add up fast.

Most distributors and manufacturers will only ship ground freight, so check the costs on this and make sure that your location can handle having a large truck pull up with a few hundred pounds of components. If you source the components yourself, mark down all of the serial numbers of the panels and inverters, keeping this information in a safe place.

Some of the more popular resources for buying wholesale solar components online are:

- [www.wholesalesolar.com](http://www.wholesalesolar.com)
- [www.solarelectricsupply.com](http://www.solarelectricsupply.com)
- [www.affordable-solar.com](http://www.affordable-solar.com)
- [www.mrsolar.com](http://www.mrsolar.com)

A few top-selling solar PV panel manufacturers are:

- Sharp Solar
- Sanyo

- Kyocera
- SunPower
- Canadian Solar
- Suntech

A few top-selling solar PV inverter manufacturers are:

- SMA
- Fronius
- PV Powered
- Xantrex
- Enphase Energy
- Sollectria

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### 3. BUY WHOLESALE AND INSTALL YOURSELF

The third and last option is similar to the previous option in that you need to shop for the best prices in solar components, but there is more work involved if you are to learn how to install the solar system yourself.



The easiest way to accomplish this option is to purchase a "turn-key solar system," acquiring all of the components necessary to successfully install a fully functional solar system from one vendor. There are several places you can find turn-key systems that already have inverters and other components

that match the power produced from the solar panels, but remember that it is your responsibility to ensure that your system meets your local building codes.

## **DANGERS**

For adventurous and handy homeowners, the complete do-it-yourself option is very appealing. Keep in mind that wiring solar panels on a roof requires heavy lifting of panels up a tall ladder, working in an environment that can be hot and working for sustained periods in elevated spaces. There is always risk when doing work on a roof, but with a solar PV system, you add the extra element of working with high voltages. You must be aware of the potential risks when choosing to install your solar system.

That said, there are some substantial savings that you can realize by installing a system yourself, assuming you do it right the first time. While you may not be able to save much on the rail and the various hardware pieces needed to fasten the panels to the roof's substrate, you will save on labor costs.

When attempting to do the installation yourself, you should adhere to these four steps:

- Get educated.
- Check your local rebates.
- Check your local codes.
- Examine your roof (if applicable).

Due to the inherent dangers of installing a solar system, the insurance is quite high for a solar dealer. Couple this with the fact that solar system installation is demanding work.

## **GET EDUCATED**

There are several online sources you can tap into to receive proper training to install your solar system. In addition, more and more community colleges and universities are offering courses – and sometimes entire programs – designed around renewable energy systems. By enrolling in a few courses, you can gain some valuable insight into your solar system and save time during the self-installation.

## **CHECK YOUR LOCAL REBATES**

Some of the various rebate programs nationwide require you to select a solar dealer from their list of approved dealers. The savings seen by installing a system yourself in some cases are wiped away by the loss of rebates.

Also, a federal tax credit is currently available for U.S. filers who have recently installed a solar system. This is referred to as the federal investment tax credit, or ITC. The credit is applied to the total cost of the system, installation included. That means that whatever you are quoted by your solar dealer for the installation, you will get a percentage of that back when you do your taxes.

## **CHECK YOUR LOCAL CODES**

One of the more popular options for the complete do-it-yourselfers is to buy what is known as a full “turn-key” solar system. These systems are available at many of the websites listed for solar panels and inverters. A turn-key system is one that can be bought with all of the various components needed, right down to the nuts and bolts, to install your solar system. All you need to do is determine what size system you desire based upon your electrical usage; they will bundle everything together for you. This includes the panels, inverters, rail, wire, etc. This is typically a little more expensive



than buying all of the components separately, but it can save you time by simplifying the process.

One thing these turn-key kits can't account for, however, is the local codes that must be addressed. Some jurisdictions are stricter than others and may require more disconnect switches, thicker gauged wire, etc. Checking with your local inspectors is a great way to ensure that you will have everything up to code when they are called. More often than not, you will still have to subcontract the service of a master electrician. If you are planning to tie into the local power grid, even if you are very knowledgeable regarding electricity, most jurisdictions require you, by law, to retain the service of a master electrician when dealing with the AC distribution panel.

### **EXAMINE ROOF (IF APPLICABLE)**

If you plan on doing the installation yourself, you shouldn't have any problems climbing onto your roof to check the shape of the shingles and roof. A visual inspection from the inside of the attic is a good idea, if possible. Check for the structural integrity of the rafters or trusses, as these will be your support for dead weight and uplift from the panels.



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## **CONCLUSION**

In all, you have several options when deciding how to get your solar system installed. You may choose to let the solar dealer do all of the work and sit back and wait for the sun to shine.

Another option is to take a more hands-on approach and buy some of the solar components yourself, then choose a local contractor to install them for you. Or, you may opt to do everything yourself, buying all of the solar components and installing the system yourself.

The old saying, "time is money," comes to mind here. You may save 20 percent on your solar system by buying the components yourself at a discounted rate and having a local contractor install them for you, but it will require time spent online searching for the best buy.

Likewise, you may save 35 percent or more on your solar system's total cost by installing the system yourself, but it will require you to take a bit of risk in the installation and will require you to spend your own time researching, building and installing your solar system.

The next step is to determine just how much your savings would be worth to you if you're spending your free time on the work. While it is possible that you may save 35 percent or more on your solar system with the DIY option, you will end up spending a significant number of hours working on the project.

While the answer may not be apparent at first, with a little digging you should be able to find the best solution for yourself.

Check the local rebates available first, as this may make your decision easy. If the available rebates require that you work with an

approved solar dealer, then you may want to avoid climbing on your roof altogether.

If no strings are attached to this, then you might want to have some of the top solar dealers come out to your home to begin the bidding process. Even if you choose to do everything yourself, their expertise and recommendations will end up saving you time and money during the course of the installation.

Whichever direction you take to achieve your path toward energy independence, knowing where to go and what to look for will keep you one step ahead of the pack.

By leveraging the advice here and examining your local solar climate, such as the various rebates and availability of solar dealers, you can rest assured that you will get the best solar system available at the best price. By asking the right questions along the way, and arming yourself with the appropriate knowledge, your completed solar system will leave you completely satisfied and with the best value.



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