Making Wise Decisions as You Install Your Solar Power System

Green Energy Ohio

You've made the decision to build a solar home or install a solar system. Now, what do you do? You may know little about solar energy. How do you make wise decisions along the way?

To be as prepared as possible, you should become informed about solar products, solar design and building practices. Take advantage of opportunities to visit and investigate as many operating solar systems and solar homes as you can. And, review the tips below to help you avoid many of the painful mistakes of those who have gone before you. A happy solar homeowner is one whose house or solar system operates smoothly and efficiently. This is an achievable goal if you are willing to prepare yourself for the process that lies ahead. Don't let unfamiliar terms and equipment scare you. Take your time and do your research.

Selecting a Contractor

The most basic question facing any consumer is how to choose a reputable and reliable firm or product. There may be claims of expertise and efficiency in solar energy, but it is important that these claims be verified.

To obtain a list of contractors engaged in providing solar products or services in Ohio, contact Green Energy Ohio. We do not, however, attest to the quality of service or products by any of the firms on the list--it is merely a resource to help you in the initial stages of your research. Green Energy Ohio does not endorse or recommend any firm or products provided on these lists.

Another way to identify firms operating in your area is to check the "yellow pages" in telephone directories of surrounding communities. Once again, this will not give you any gauge of the quality or dependability of the firm, but it will help you form an initial list to consider in your search. Consult several builders, architects or contractors before making a final selection.

The most time-honored method of finding dependable firms and products, however, is through referral and information from clients who have used the services or a specific product. Ordinarily, you should check with at least three former clients or consumers who have previously used a firm or a product for information from first-hand experience. If you have friends or neighbors who have installed a system or built a house, check with them or ask the contractor for references. Check on customer satisfaction with the installation, the amount of service that has been required and the promptness of response to requests for service. If possible, inspect some of the buildings or installations personally and talk to the owners. It is also advisable to identify several firms and/or products, obtain prices or bids, and comparatively evaluate them. Such steps are time-consuming, but essential in receiving quality work at a fair price.

It is important to assess the contractor's solar qualifications. How many solar homes have they designed or built? Or, how many solar systems have they installed? In the case of solar equipment, does the contractor have support from the manufacturer of the equipment, such as a certificate of training or supervision/inspection of the job by a representative of the manufacturer?

Asking the Tough Questions

Don't ever be afraid to ask questions. It is essential to get through the marketing pitch to determine how the house or system will perform. Some questions to ask are:

- Who is qualified in my area to design and/or build solar homes? Who is qualified to install solar systems?
- How long has the firm been in business?
- Who will actually be doing the work--preparing the design, building the house, or installing the solar system? What subcontractors will be used?
- Will the solar features be covered by my home insurance policy?
- Who is responsible for obtaining and paying for any necessary local permits?
- How do I determine whether or not my present or future home is a good candidate to use solar energy?
- What modifications need to be done to my house to use this system?
- What information do I use to determine which solar features are best for me?
- Will the solar features (e.g. windows, collectors, thermal mass, etc.) have an obstructed view of the sun? Will they face true south? If not, how many degrees off south, in which direction, will they be?
- Will the house have sufficient thermal mass to keep the house from overheating and provide for cloudy weather?
- Is there sufficient room to accommodate the collectors and storage for an active solar system?
- Do the materials meet industry standards? If you are putting in a solar system, has the system been tested and received a rating from an independent industry or governmental authority (e.g. Solar Rating and Certification Corporation, Florida Solar Energy Center)?
- Will the performance of the house or system be monitored? What equipment or techniques will be used for the monitoring?
- Will the system operate without interfering with the operation, replacement, and maintenance of existing equipment?
- How much will the solar features cost me? What will be the expected energy cost savings? What assumptions about inflation in energy prices are incorporated into these estimates?
- How long will the system last? How long do most

solar systems last?
- Are there any tasks that I must perform to make the solar features operate properly?
- Who is responsible for maintaining the system? What are my responsibilities? Are parts easily available?

Signing a Contract

A written contract is a must for your protection. Some guidelines to consider include:

- Read and study the written contract to get a clear understanding of its contents before signing it.
- Never sign a contract unless all blanks have been filled in completely.
- Keep a copy of the contract for your own records.
- Obtain a written cost quote on the complete job. Consider the cost along with other factors, such as including specifications with the brand names and size of the materials and the method of payment.
- Learn what the different types of contracts are and what they mean.
- Don't be pressured into signing a contract--take your time to consider what responsibilities and liabilities you will assume if you sign.
- Never sign a contract that has not been signed by the other party.

During and After Installation

Understanding the materials and equipment that are to be installed in your house will be helpful to you in operating and maintaining your house or solar system so that it is efficient. Some tips to guide you during this period include:

- Before and during installation, check to be sure the materials are exactly as you ordered or specified them. Do not accept them otherwise.
- Check to see that all indoor and outdoor solar system piping is insulated.
- When the installation of a solar system is complete, have the installer test the system for leaks or malfunctions.
- With regard to solar systems, HVAC equipment, and other equipment, have the installer review the system so that you understand its operation and what, if anything, is required by you for its operation and maintenance.
- Be sure the builder, contractor or installer supplies you with manuals for the operations of all equipment, such as a solar system. Have them review the manual with you. For active solar hot water or space heating systems, thermometers should be placed on the pipes of ducts going to and from the collector to monitor the system's heat gain; another thermometer can be placed in the storage area to measure how much heat is retained.
- Check to see if all moving parts and switches are functioning in a solar system.
- For solar systems, get a system tune-up with the installation: this consists of adjusting pressure and removing air from pipelines to ensure proper water flow.
- Ask for instructions on how to correct problems. This way you can make sure you understand how the equipment or system is supposed to operate.
- For solar systems, the installed equipment should operate normally for at least a week and then be inspected by the installer.
- Be sure the collectors of a solar system face as true south as possible and are unshaded.
- Be sure you know specifically who will service the system or equipment.

Warranties: What Do They Mean?

Warranties are very important in ensuring that your home and solar system will be repaired if something should malfunction during the period of the warranty. Different items will be warranted for varying amounts of time. For example, most new homes are warranted for at least one year and warranties can often be purchased to cover parts of the house for up to ten years. For active solar systems used for space or hot water heating, the collectors, heat exchanger, and storage units, as well as their installation, should be covered for no less than two years. The remaining components of the system should be warranted for no less than one year.

Examine your warranties carefully. What are their limitations? Remember that a warranty and a guarantee are the same thing: a promise by manufacturers or sellers to stand behind their products. Federal legislation requires that they live up to these written promises.

Be sure you know who is responsible for honoring the warranty - the installer, the dealer, the builder, or the manufacturer. The seller should disclose the warranty responsibility of each party. Know the financial arrangements, such as contractor's bonds, to assure that the warranty will be honored. Remember, a warranty does not guarantee that the company will remain in business. Get a clear understanding of whom you should contact if there is a problem.

Finally, we hope we haven't scared you away from building a house or installing a solar system. The tips and guidelines listed above are intended to help you become a better educated consumer. Such preparation will help you obtain quality products and services at a fair price, while also preparing you for the maintenance and operating requirements that will be necessary to ensure your home and equipment run efficiently.

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