

Choosing a Solar Installer

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- Questions to ask a potential solar contractor
- New Services & Trends
- Resources for Finding a Solar Contractor
- Things to Know
- Solar Incentives & Financing

Questions to Ask a Potential Solar Contractor

How many years of experience does your company have with solar installation?

Request a list of past customers whose installations resembled the one you are considering and who can provide references. One strategy is to ask for two customer contacts from the vendors' latest completed jobs.

Is your company licensed?

You can confirm licensing by contacting the California Contractors State Licensing Board, <http://www.cslb.ca.gov/>

For you to obtain certain rebates, your contractor may have to demonstrate special knowledge about solar installations through one or more of the following:

- Possession of a solar contractor specialty license issued by a local building jurisdiction.
- Certification in PV or solar thermal systems by a program such as the North American Board of Certified Energy Practitioners (NACEP).
- A letter from the solar electric or solar heating manufacturer that indicates that the installer has the necessary experience and training to install their equipment.

Remember to be sure that your contractor's license and certifications are sufficient for solar incentive requirements. These requirements are expected to shift over time.

Does your bid include the cost of all required permits or inspections?

The bid should include having the system installed and running, as well as the cost of hardware, permits, sales tax, and engineering reports (if needed.) Be clear about whether you will be paying the full price, and receiving rebates later—or paying the after-incentive price, with your installer receiving the rebate directly. It is usually a good idea to get more than one bid for installation of your solar equipment. To make sure that all the bids you receive are based on the same information and requirements, be sure that each bid specifies system type and size, energy output, maintenance requirements, and cost.

What kind of warranty and maintenance agreement do you offer?

A system warranty is crucial in comparing bids. Make sure your contractor agreement is explicit about what issues the contractor will handle, and what service to expect should something go wrong.

California requires ten-year warranty from the installer in order to access financial incentives. The modules are usually warranted for 20+ years, and the inverter generally for five years plus extended coverage for some specific failures.

For solar hot water systems the company may offer longer warranties, particularly on collectors. However, active solar hot water systems also include electronic components, pumps, valves, and wiring. Find out exactly what is covered.

In choosing a solar installer, competing project bids will typically vary less than 5 percent. Price is not as important a factor as trust. You want to have confidence that this person or this company will stand behind their installation for at least five, and hopefully for the next twenty years.

Does your company offer a variety of products?

You want access to the best components for your particular site (e.g. thin film modules may work best on lower-light applications). Some contractors may only offer one brand of inverter or module—which is fine, if that’s the best type of equipment for your application.

What kind of maintenance will I need to provide and at what intervals?

Reduce worry and help avoid system failure and costly replacement of parts in the years ahead by requesting or creating a simple maintenance sheet and checklist, laminating it, and keeping it in a prominent location near your inverter.

Does your company have any pending or active judgments or liens against it?

The California Contractors State Licensing Board can tell you about any complaints against state licensed contractors. The Better Business Bureau is another good source for such information.

New Services & Trends

As solar becomes more popular, installers and equipment manufacturers are adding service options to differentiate their company from the competition. Extended service warranties (beyond the required five years), and annual maintenance services (panel cleaning, production assessment, inverter testing, etc.) might be available.

Equipment manufacturers are also raising the bar for customer service. Check out your equipment manufacturer website and/or call them directly as if you already own the system to assess how you will be treated after purchase. A hint of how the manufacturer treats customers is whether their website has a “Customers Only” section and whether an actual person answers their customer service line.

Resources for Finding Solar Contractors

- Diamond Certified: diamondcertified.com
- Contractors State License Board: cslb.ca.gov

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California Energy Commission (CEC) list: www.consumerenergycenter.org/erprebate/database

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California Solar Energy Industries Association (CalSEIA) list: http://www.calseia.org/find_contractor.htm

- NorCal Solar Business Members

- FindSolar.com: findsolar.com

- Your local phone book under Solar Installers or Energy Contractors

- Instructors at the Solar Living Institute: solarliving.org

- Instructors at Solar Energy International: solarenergy.org

- The annual National Solar Tour is a great way to meet installers and investigate their products directly. This event happens every year on the first weekend in October. Visit <http://www.nationalsolartour.org> for details.

Things to Know

Cost: \$7-\$12 per watt (DC) is a ballpark range for an installed solar electric (PV) system before incentives. The state solar rebate is \$1.90 per watt (as of September 2008), and there is a federal tax credit for up to \$2,000. These incentives should cover approximately 25% of your retail cost. Plan on at least \$15,000 (after incentives) for a standard 2,500 (2.5kW) watt system, which produces approximately 325-375 kWh per month. A 2.5kW system produces 40-80% of the electricity needed for a 1,800 square foot home.

Space: An average PV system consists of modules that produce approximately 1,000 watts (1k) per one-hundred square feet of space. So a standard 2k system needs 200 square feet of unshaded, south or south-west facing space. The direction the system faces and angle at which it tilts can be adjusted with minor losses in productivity.

Weight: Figure on 4-6lbs per square foot of PV panels for standard multi-crystalline modules.

Timing: Due to module supply shortages plan on at least 12 weeks from the day you sign a contract to the system installation. This can be faster if your vendor has modules on hand, or slower if modules are in short supply or your local permitting authority is slow to grant permits. It helps to be flexible about the exact equipment you'll install.

First Steps:

- Estimate how much electricity you use, on average, per month. Of the kWh you purchase, how many are billed at Tier 2, Tier 3, Tier 4 rates by your utility? Those are the kWh you are trying to offset with your PV system (if you're focused on the economics).

- Do you have the unshaded south facing space on a relatively new roof or other structure? If you have an old roof,

consider installing the PV system in conjunction with a new roof.

- Once you know your average kWh use per month, and have confirmed you have an installation location (pole mounted, shade structures, carports, roofs, etc.), its time to call an installer for a quote. The CEC website can direct you to local vendors. We suggest getting at least two quotes and checking the installers figures against the Clean Power Estimator. Also, since you will have a long-standing relationship with this vendor (PV systems last 30+ years) your comfort level with the person/company is more important than minor price differences.

Solar Incentives & Financing

- GoSolarCalifornia.ca.gov
- Comprehensive solar incentives database (DSIRE)
- Resnet (Financing)
- SAFE-BIDCO (Low interest loans for business, landlords or non-profits investing in energy savings)