



THE SKINNY ON: Selecting a Solar Contractor

By Rob Hall

Selecting a contractor to install a solar energy system on your home doesn't have to be difficult – as long as you ask the right questions, provide them with the right information, and compare bids based on similar system parameters.

How do I choose among solar providers?

Start with a list of prospective solar contractors. The Center for ReSource Conservation provides a list of Boulder and Denver area solar thermal and electric contractors on line at www.conservacioncenter.org/e_contractors.htm and the Colorado Solar Energy Industries Association (COSEIA) provides an extensive list of contractors throughout Colorado at www.coseia.org.

The CRC recommends getting more than one bid, making sure the bids are based on the same set of system parameters to ensure practical comparison. A good solar contractor will be able to give you an estimate (or range) of what size solar thermal or electric system is appropriate for your home and the energy savings and environmental benefits you can expect. Request that bids include

the total installed cost with an itemized breakdown for equipment, labor, permits, taxes and other costs as well as deducting any available financial incentives (rebates and/or tax credits). After reviewing the bid it should be very clear what is – and is not – included. Bids should clearly state the quantity, make and model of the equipment, warranty information, where it will be installed, its maximum generating capacity and an estimate of annual energy production.

For solar electric (PV), production capacity is measured in watts or kilowatts and energy production is measured in kilowatt-hours (kWh). Provide your contractor with a year's worth of utility bills to help them estimate your energy needs.

For solar thermal (hot water/heat), production capacity is measured by the number and size of collectors

(panels), the size of the solar-heated water storage tank, and the percentage of residential hot water demand to be supplied by the system. Some contractors may also estimate energy production in terms of MMBtu or therms saved. To help your contractor estimate your system size, provide them with a year's worth of water and energy bills.

How do I choose among competing bids?

You can evaluate bids in a number of ways – costs, service warranties, customer service, handling of rebates, availability, years of experience or other qualifications. Price should not be your only consideration and the lowest cost bid is not necessarily the best one. You should also ask your potential contractors for references.

The following questions can help you decide between solar contractors.

Q: Why should I choose to work with the company, what are the company's qualifications?

Q: How many years of experience does the contractor have installing solar energy systems?

Q: Can the company provide references from previous customers?

Q: Is the company properly insured?

Q: What are the company's warranty and after-sales service policies?

Q: What are the payment schedule, terms and conditions?

Q: Can I see a project portfolio and references?

Q: How long are the prices valid and what happens if equipment prices increase before my system is installed?

Q: Can the company reassure me that it will be around for the long-run (to honor the long warranties) and won't go out of business?

The Center for ReSource Conservation helps homeowners and businesses understand different alternative energy technologies and provides help selecting contractors. You can call with questions (303-441-3278) or visit our website, www.conservationcenter.org, for resources and information on efficiency, alternative energy options and the CRC's homeowner programs and workshops.



What type of solar power system I should get?

If you're not sure which solar technology is right for you, here are some things to consider. Solar thermal technologies provide home heating and/or domestic hot water, and usually offset natural gas use. Solar electric technologies (photovoltaics or "PV") convert the sun's energy directly into electricity. Each of these technologies is mature and reliable with tens of thousands of installations in the U.S. But each has different costs and incentives available as well different economic and environmental benefits.

Comparing the two technologies is, in many ways, comparing apples to oranges. Below are some considerations to help you decide:

- What is your budget? Do you have payback or savings requirements?
- Is your primary objective economic or environmental?
- Is your preference to reduce electricity or natural gas demand?
- Have you made all cost-effective energy efficiency improvements in your home first?
- If you're considering a roof mounted system, is the roof better suited for PV (fairly large, unshaded south-facing roof) or solar thermal (structurally able to accommodate heavier panels)?