

Questions to Ask

When Considering a Solar Power System for Your Home



1. What **energy efficient improvements** should be made to my home before investing in a solar energy system?
2. What renewable energy **alternatives** are available such as community solar or utility renewable energy programs?
3. How much electricity did my home use last year? How much is it likely to use in the next year (considering energy efficiency and household changes)? What is my **average kilowatt-hour use per month** (estimate for next year)?
4. What is the current rate I pay for electricity (cents per kilowatt-hour) from my utility company? What is my **average monthly electricity cost** (estimate for next year)?
5. What is the history of electricity price changes for my utility company? What **annual electricity inflation rate** trend is predicted by my utility company, state regulators, U.S. Department of Energy, local university or other reliable source?
6. Would my home be eligible for **net metering**? If so, are there system size limits to qualify? Could it change or expire for me in the future? How does the program treat energy I produce in excess of my use? If I'm not eligible, what is the rate (cents per kilowatt-hour) the utility will credit or pay for surplus power I generate? Is the rate higher at peak demand times (usually late afternoon)?
7. How much **solar power (kilowatt-hours per month)** would I like to generate? Should my home solar PV system be sized to avoid producing more power than I use (surplus)?
8. What **incentive tax credits, exclusions and rebates** are available that would reduce the cost of buying a home PV system? What are their limits and requirements? When does each expire?
9. What is my area's **solar resource** (average amount of sunshine per day)?
10. Does my community have any restrictions on placing solar panels? How much **unshaded roof area** facing south, southwest or southeast is available? How much faces west? What is the roof slope?
11. Should my **roofing** be replaced before installing a solar system? Will installing a PV system void my roofing warranty?
12. Would I prefer a thin film system that blends into my roofing or a crystalline **type of photovoltaic technology** for higher efficiency in less area? Can it withstand hail and my area's wind risk? What is the expected service life? What are common problems with each type of system? What is the reputation of the manufacturer?
13. Do I need **batteries** for an off-grid or hybrid backup power system? What are the associated costs, hazards, space requirements, maintenance and service life of the batteries and other components?
14. Does the system use one **central inverter or micro-inverters** on each module? What is the expected life and what will it cost to replace it?
15. What **monitoring systems** are available? What information do they provide? What do they require and what do they cost?
16. What **solar power capacity (kilowatts)** will fit on my available roof area (of the type I want)? How much electricity (kilowatt-hours) is it expected to generate (**energy output**) in the first year? How was that determined? What is the expected annual **degradation rate** (reduction in electricity produced)?
17. What is the **total installed cost** of the PV systems I'm considering? What is the typical cost per watt in my area? How much will the available tax credits, exclusions and rebate **solar incentives** reduce my cost?
18. Are there any low cost **solar loan programs** available to me? If not, do I qualify for a VA, FHA, USDA or HUD home improvement loan? Or could I qualify for a home equity or second mortgage loan? What are the available interest rates, down payment requirements, closing costs, other terms and tax advantages?
19. What is the **monthly payment to finance** the net purchase cost (after incentives), with and without a down payment? How does that compare to predicted monthly utility bill savings – both initially and as electric rates rise?
20. How many years will it take to recoup my net purchase cost (**payback period**)? What will my annual utility bill savings be after payback? What is the equipment's expected service life? What is my estimated **total return on investment**? (Use an online calculator.) Does the return on investment factor in general inflation?



21. How will a rooftop solar system affect my home's **market value**? Do I need to inform my **homeowners insurance** company? How will a solar system or batteries (off-grid) affect my premiums? Will my **property taxes** change?
22. Will the firm providing a quote on the system install it or hire installers? What are the **qualifications, certifications and licenses of the installers**? Are they bonded and have liability and workmen's compensation insurance? How long have they been installing PV systems on homes? How long have they been in business?
23. Have any **complaints** been filed against the vendor, manufacturer or installer with the state licensing board, consumer protection agency or the Better Business Bureau? Are their customers satisfied with their work quality and follow-up service?
24. What does the **warranty** cover (solar panels, inverter, mounting rack, labor, etc.) and how long? Who is responsible to make warranty repairs? What maintenance does the warranty require?
25. Does the **contract state in detail** the system components, timeline for completion, payment schedule, a lien waiver and who is responsible for any damages, injuries and permitting? What are my rights if my roof, home or contents are damaged, the installation is poor or someone is hurt by the installation? Who will be responsible for repairs?

