



## 5 Questions To Ask Before Installing Solar Panels

*How to determine whether or not rooftop solar panels are right for your home*

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15 years ago, solar panels were largely seen as a costly amenity reserved for wealthy homeowners and corporations who could afford the steep upfront costs in order to reap long-term savings on large-scale energy usage while also publicly demonstrating a commitment to climate conservation.

Today, that's all changed. While solar panels are still far from ubiquitous, they have become a common and cost-effective energy choice even for smaller residential homes. But most homes were not built in the past 15 years, and while more and more new homes are being built with solar panels, many homeowners are weighing the costs and benefits of retrofitting their older home with solar panels.

Though the average price of solar panels has dropped precipitously in recent years — and the

cost of traditional energy has climbed — any home renovation project can prove a costly endeavor. Here are five questions every homeowner should ask to determine whether or not solar panels will be worth the cost of entry.

### Can your roof support solar panels?

First things first, you'll need to know whether you can even add solar panels to your home without building an entirely new roof. Most residential solar-panel systems require roughly 500 square feet of space and assuming you live in the U.S., you'll want your panels facing south if possible. Most contractors will only add solar panels on strong roofing materials such as asphalt, concrete and composite shingle.

Keep in mind, too, that solar installations typically come with warranties ranging from 20 to 40 years, so if your roof is near the end of its life, it may be a good idea to do any structural renovations before or while adding solar panels so that you don't need to remove or re-install them later.

### How much are you spending on energy?

In order to estimate your return on investment, you'll need to have a good idea of how much you are currently spending on energy without solar panels. Electricity rates vary drastically by state, ranging from around eight to 20 cents per kilowatt-hour. Homeowners in states with the highest electricity rates stand to see the biggest savings from solar energy.

This solar calculator from solar-energy broker EnergySage can give you a general idea of your potential savings based on your location, home type and average monthly electricity bill.

### Will your climate accommodate solar panels?

Though solar panels are most productive with prolonged exposure to direct sunlight, they can be effective energy-savers even in indirect sunlight. Homeowners in rainy or wintry climates should not rule out solar panels, but they should be aware of the amount of sunlight their panels are likely to receive throughout the year when estimating savings. Panels that are covered in snow or shade for long periods will not be as productive as those in dry, sunny climates.

### What incentives are available?

The federal government offers a tax credit for solar-panel owners that can pay for up to 30 percent of the cost of the system. On top of that, many states offer additional rebates, which can go a long way toward mitigating the costs of purchase and installation. Some states will even buy back any excess energy your home generates.

Some power companies are also required by the state to generate a certain portion of their energy from renewable sources and will offer incentives to homeowners with solar panels to help them meet that quota.

## Should you buy or lease?

A number of states will allow homeowners to lease solar panels from private providers. The reason your local government even has a say in the matter is that, in exchange for mitigating or eliminating the upfront costs of solar-panel installation, the provider will collect the available government incentives, and that's on top of the monthly fee paid by the homeowner.

For those who can afford it, purchasing panels outright is the most cost-effective option in the long-run, but if the upfront costs of panels and installation are prohibitive, leasing can be practical, if less lucrative solution.