How to Figure Out Your Solar Panel Payback Period

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Topics covered in this post:

Solar panels for home systems are strong investments that deliver excellent rates of return. A home solar energy system provides energy cost savings while paying for the panels, then *free* energy after the panels are paid off. Solar panels even increase your property values, according to the U.S. Department of Energy (DOE). To understand your solar panel cost/benefit ratio and *when* you can expect to see a net return on investment (ROI) for your solar panel system, you need to know the length of your "payback period."

Average Solar Panel Payback Period

Your solar panel "payback period" is a key factor in determining which solar panel options fit your needs and budget best. The payback period is the length of time it will take for you to make back your investment in purchasing a solar energy system. Solar panel costs have dropped so much year after year over the past decade, while electricity costs have continued to rise, so the payback period to begin realizing ROI has become shorter.

Compare the estimated payback period as part of your research of various solar energy system installations. Use this key information to help clarify the investment merits of the various systems you compare and how long it will take for each to make your solar energy investment begin earning money for you.

So, your solar *payback period* is the amount of time it will take to break even on the cost of your investment in your solar energy system. The usual payback period for residential solar in the United States is a little over 8 years. (An NREL report estimates payback in only 4 to 5 years.)

CASE SCENARIO: In a typical case, the cost of purchasing and installing solar panels and the rest of the equipment for a solar energy system can be around $17,000. Such a system might save you around $2,000 per year on electricity bills. So, your payback period is going to be ($20,000 ÷ $2,000 = 8.5 years).

How To Calculate Your Solar Panel Payback Period

There are multiple factors that must be included to achieve an accurate calculation of your solar energy system payback period. For a true accounting, you'll need to determine the total combined financial benefits and total combined costs of owning your solar equipment:

- *Purchase Cost of Solar Equipment:* The gross cost of buying and installing your solar energy system is based on the size of the system you choose and all the components of the system.
- *Average Electricity Use Per Month:* Your monthly electricity consumption determines the size of the solar energy system you need for your home and how much electricity you can stop buying from your utility company each month. This means that higher electricity bills shorten your payback period because you can reduce (or possibly eliminate) that bill as soon as your solar panels start producing power for you.
- *Projected Electricity Production from Solar:* Your solar energy system installer will identify the best system to accommodate your home electricity consumption. However, your roof size and changes in weather conditions throughout the year can affect the amount of solar power you can generate.
- *Solar Financial Incentives:* Potential up-front cost savings include the federal Investment Tax Credit (ITC), state and local tax credits and/or rebates, and even incentives from your utility company. Combined, these benefits can reduce the cost of going solar by thousands of dollars. The ITC alone is currently *26% of the cost of your solar energy system. Plus, Solar Renewable Energy Certificates (SRECs) and utility company programs that grant credits per kilowatt-hour for solar energy generated by solar panels can total significant financial benefits.

**The ITC percentage will be incrementally reduced over the next three years to a permanent low of a 10% federal tax credit in 2024.*

3 Steps to Calculate Your Solar Panel System Payback Period

1. *Calculate Combined Costs:* Subtract the total combined value of all the tax credits, rebates, and other incentives you receive from the gross cost of buying and installing your solar energy system.
2. *Calculate Combined Benefits*: Add your yearly total of financial benefits from your solar investment. Include electricity costs savings, plus any new incentives or other financial benefits received due to your solar energy investment.

3. *Calculate Net ROI:* First, divide your *combined upfront costs* of acquiring your solar panel system investment by the *combined upfront and monthly financial benefits* of having your system working for you. Next, divide the net outcome by the total number of years it will take for you to pay off the system *or* to realize a total of energy savings and incentives that have exceeded the total cost of owning the system — even including any payments remaining to pay off the system. This is the payback point. Each month beyond that point, your savings of electricity costs are all full financial benefits.

3 Key Tips For Solar Panel Shopping

Getting Multiple Solar Quotes Can Save You a Lot of Money

Do your research and thoroughly, as you would for any other major purchase, to identify the best providers in your area. The U.S. Department of Energy's National Renewable Energy Laboratory (NREL) advises consumers to compare options for solar panels for home installation for possible savings. Comparing is the best approach to avoiding paying higher solar panel costs than necessary to installers with inflated prices.

Include All Your Solar Equipment in Your Cost Comparison

Large solar panel companies may sometimes charge more but offer fewer solar equipment options. Choosing from insufficient options can significantly reduce your system's power generating capacity. Gather as many bids as possible for your solar panel cost comparison. Some types of solar panels have higher efficiency ratings, while others cost less. Evaluate pricing and efficiency ratings on the various equipment and financing offers you receive. Then, determine which combination of competitive quality *and* cost achieves the right balance for your needs and budget.

The Largest Solar Installers Don't Always Offer the Best Value

Throughout the industry, you can find solar panel installation contractors that offer more competitive prices and deliver higher value. So, again, it pays to get multiple *free* estimates from well-established installers in your local area.

In fact, getting multiple quotes can save you thousands of dollars on your solar panel installation. Large solar panel companies with higher overhead may charge more than a smaller solar energy systems provider. So, again, be sure to compare, in order to avoid overpaying. (Check references for any solar installer you're considering working with.)

Why Go Solar?

- Save money on monthly electricity bills.
- Own your solar energy system with payments normally less than utility bills.
- Earn a monthly return on your solar investment.
- Get large tax credits, rebates, and other incentives that are still available.
- Achieve energy independence and protection from utility rate hikes.

- Increase your property value.
- Live free from power outages due to public grid issues.
- Help save the environment by reducing fossil fuel burning.

Solarise Solar, Colorado Springs Colorado

Solarise Solar has helped many homeowners and businesses throughout Colorado get the region's very best value for their investment in residential and commercial solar energy systems. Our solar energy experts will custom design the most efficient solar panel system to fit your energy needs and budget. We provide a 30-year warranty, to ensure your peace of mind throughout the expected life of your solar energy system.

We offer solar panel installation with zero down payment and low-interest financing, to make going solar very affordable. Our highly experienced installation specialists are committed to providing our customers with our industry's highest standard of workmanship. Our System Monitoring makes it easy for you to monitor your system with the Solarise mobile and desktop apps, so you can track how much energy your system is producing for you in real-time!

Call Solarise Solar, Colorado Springs CO for more information or to schedule for your free Energy Cost Analysis and estimate, with absolutely no obligation, or use our online contact form anytime.