

Solar panel cost per watt chart





Overview

Solar panels cost \$0.70 to \$1.50 per watt on average but can run from \$0.30 to \$2.20 per watt. A typical 250 watt panel costs \$175 to \$375 on average. For an entire solar system, the average homeowner pays \$3,910 to \$6,490. Panels can cost as low as \$1,890 and as high as \$13,600.

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IRENA presents solar photovoltaic module prices for a number of different technologies. Here we use the average yearly price for technologies 'Thin film a-Si/u-Si or Global Price Index (from Q4 2013)'. This data is expressed in US dollars per watt, adjusted for inflation. IRENA (2025); Nemet.

A 7.2 kW solar panel system costs \$21,816 before incentives or \$3.03 per watt of solar installed. The federal solar tax credit lowers solar system costs by \$6,544, bringing the price down to \$15,271. Using a solar loan makes solar panels more expensive! When you finance solar panels using a loan.

If you just need a few panels for a small do-it-yourself solar project, expect to pay around \$200 to \$350 per panel (between \$0.80 and \$1.40 per watt). Note: The table below doesn't include the cost of a solar storage battery, which can add anywhere from \$7,000 to \$18,000 to your total solar system.

Today's premium monocrystalline solar panels typically cost between 30 and 50 cents per Watt, putting the price of a single 400-watt solar panel between \$120 to \$200, depending on how you buy it. Less efficient polycrystalline panels are typically cheaper at \$0.25 per Watt. The cost of a solar.

Solar panel costs range from \$16,600 to \$20,500 for the average 6.5 kW system, but prices can vary from as little as \$7,700 for smaller solar systems to upward of \$34,700 for larger systems. To find the most up-to-date solar panel costs in 2025, we compared research from the U.S. Department of.



Each year, the U.S. Department of Energy (DOE) Solar Energy Technologies Office (SETO) and its national laboratory partners analyze cost data for U.S. solar photovoltaic (PV) systems to develop cost benchmarks. These benchmarks help measure progress toward goals for reducing solar electricity costs. How much does it cost to install solar panels?

Find a solar panel installer near you to get an estimate for your home. An average 1,500 square foot home will likely need 16 panels to cover its electric usage. If your home is shaded or faces east/west, you might need more than 16 panels. While panels themselves cost \$0.70 to \$1.50 per watt, the price to install solar panels costs \$3.20 per watt.

How much does a solar system cost per watt?

As of publishing, the average cost per watt is \$2.84. Most solar companies set the price according to the solar system's wattage. A solar installation's "cost per watt" is a little like the "price per square foot" when you buy a house. It helps compare the value of solar energy systems in different sizes.

How do you calculate solar cost per watt?

Calculating solar price per watt is pretty simple. Simply divide the cost of the system (in dollars) by the size of the system (in watts). $PPW = \text{System cost} / \text{System wattage}$ Now, solar systems are typically sized in kilowatts (kW), so you'll have to multiply by 1,000 to convert to watts.

How much do solar panels cost per kWh?

This typically ranges from 6-8 cents per kWh, compared to current grid electricity averaging 16.44 cents per kWh nationally. Most homes need between 7-12 kilowatts (kW) of solar capacity to offset their electricity usage. A typical American household consuming 10,632 kWh annually requires approximately 8-9 kW of solar panels.

How much does a commercial solar system cost?

Commercial solar installations are a great way for companies to lower energy costs. Generally, installing solar panels on businesses costs a bit less per watt because the systems are larger, but the total costs will be higher. In 2025, the average cost for commercial solar panels is just about \$2.00 per watt.

How much does a 6 kW solar system cost?



You'll pay \$4,200 to \$6,000 to set up a 6 kW system. Concentrated photovoltaic (CPV) panels are \$0.80 to \$1.10 per watt. While not as well-known as other types of panels, CPV panels are highly efficient and may grow in popularity. A 6 kW solar system would cost \$4,800 to \$6,600.



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[The Cost of Going Solar . SaveOnEnergy](#)



Key Points The average cost of residential solar has decreased by about 69% since 2003. The Residential Clean Energy Credit is a 30% tax credit off the cost of a solar system through 2034. In 2004, solar panels cost ...

[3-In-1 Solar Calculators: kWh Needs, Size, Savings....](#)

Adequate solar panel planning always starts with solar calculations. Solar power calculators can be quite confusing. That's why we simplified them and created an all-in-one solar panel calculator. Using this solar size kWh calculator, together ...



[Solar Installed System Cost Analysis . Solar Market ...](#)

Solar Installed System Cost Analysis NREL analyzes the total costs associated with installing photovoltaic (PV) systems for residential rooftop, commercial rooftop, and utility-scale ground-mount systems. This work has ...

[Solar Panel Cost In 2025: It May Be Lower Than You ...](#)

We often reference the cost-per-watt (\$/W) of solar to compare the value of a quote against the national average. According to the most recent



data from the EnergySage Marketplace, the average cost-per-watt across the ...



[Home Solar Panel Cost Savings Calculator , Solar ...](#)

Our solar power calculator is designed to help you determine how much money you can save with solar power for your home or small business. The tool provides a rough estimate of daily solar power generation (in kilowatts per hour) and ...

[Solar Panel Cost Calculator: Find Your 7-10 Year ...](#)

Solar Panel Cost Calculator: Find Your 7-10 Year Breakeven Point Calculate solar panel cost by multiplying the system size in kilowatts (kW) by the average cost per watt. In the U.S., residential solar panels cost about \$2.50 to \$3.50 ...



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