PDEOZE PowerContainer

Solar module price per watt

Overview

As of 2025, the average solar panel installation cost per watt ranges from $2.50 to $3.50, including equipment, labor, and permitting. While larger systems require a bigger upfront investment, they typically offer a lower cost per watt and better long-term value.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 much do solar panels cost?

As of 2025, the average cost of residential solar panels in the U.S. is between $15,000 and $25,000 before incentives. This typically translates to about $2.50 to $3.50 per watt of installed capacity (more on price per watt below). The total price depends on your system size, location, roof type, and installer.

How much does a 12 kW solar panel cost?

The average cost of an 12 kW solar panel installation on EnergySage is $29,649 before available incentives. You'll typocally save anywhere from $27,000 to $110,000 over 25 years by going solar. Solar panels are just 12% of the total cost of a solar panel installation.

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.

What is the relative cost of solar energy?

Another measure of the relative cost of solar energy is its price per kilowatt-

hour (kWh). Whereas the price per watt considers the solar system’s size, the price per kWh shows the price of the solar system per unit of energy it produces over a given period of time. Net cost of the system / lifetime output = cost per kilowatt hour.

How much does a monocrystalline solar system cost?

Monocrystalline panels are highly energy efficient and, as such, cost the most at $1 to $1.50 per watt. Outfitting a 6 kW solar system costs $6,000 to $9,000. Polycrystalline panels cost $0.90 to $1 per watt. You can tell them apart from other panels because they’re blue.

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Ultimately, many factors figure into the price per watt of a solar system, but the average cost is typically as low as $2.75 per watt. This price will vary if a project requires ...

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HomeAdvisor's Solar Panel Price Guide gives the average home solar system and panel prices. Explore solar panel pricing per watt or square foot.

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Solar panel installation costs a national average of $18,180 for a 6kW solar panel system

for a 1,500 square ft. home. The price per watt for solar panels can range from $2.50 to $3.50 and largely depends on the ...

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)'. ...

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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.

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