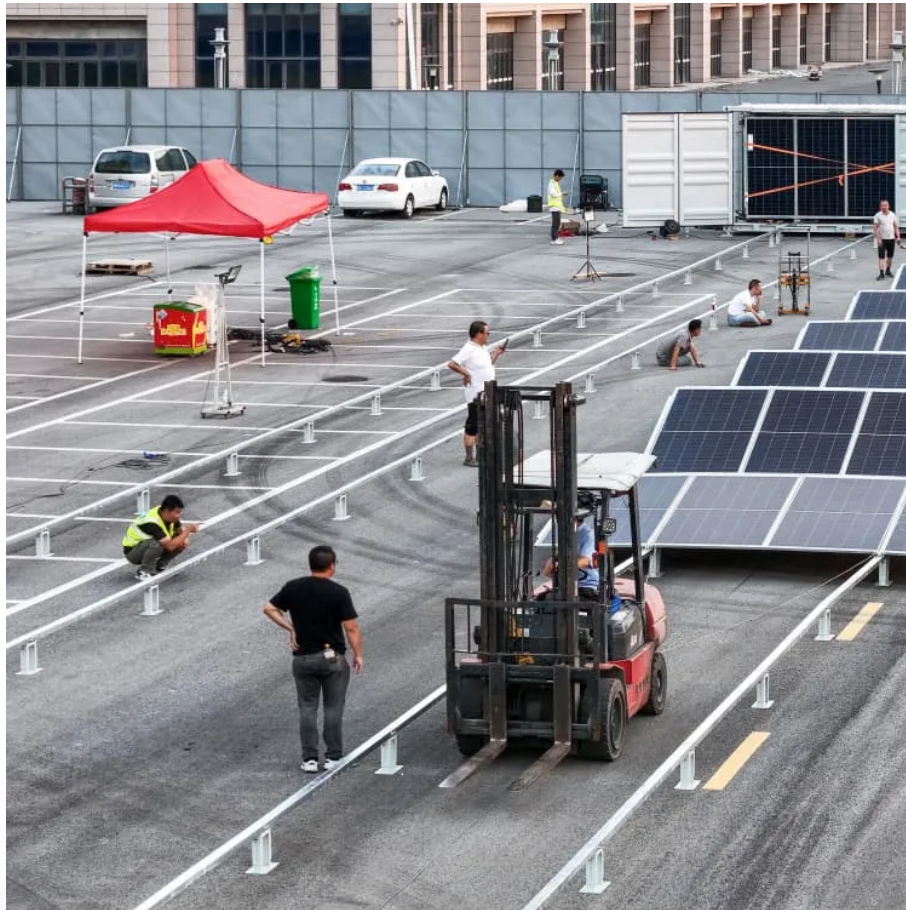


PDEOZE PowerContainer

Is there a big price difference for solar modules



Overview

The price of solar panels changes depending on where you live, but the average for installation is just under \$29,000 or \$2.75 per watt. On the high end, we talked to a solar customer in Hawaii who spent \$100,000 going solar.

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Solar panels generate “free” electricity, but installing a system still costs money. A typical American household needs a 10-kilowatt (kW) system to adequately power their home, which costs \$28,241 in 2025. That price effectively drops to \$19,873 after considering the full federal solar tax credit.

In 2025, solar panels are cheaper and more efficient than ever! Solar panels becoming more affordable will be a key player in the expansion of residential solar, contributing to the combat against climate change - and higher efficiency ratings can help keep costs down and guarantee customers will.

How much do solar panels cost on average?

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.

The average cost of installing an average-size home solar system in 2025 is \$29,360 before federal tax credits and incentives [0]. The federal solar tax credit may reduce the net cost to \$20,552, and local incentives can further lower the cost. You can determine whether solar panels are worth it.

Martin Schachinger, founder of pvXchange.com, said PV module prices will depend on national and international demand trends in the coming months, with outcomes ranging from increases to stagnation or further declines. Almost anything is possible, but nothing is certain. First, the good news: Early.

Solar panels cost about \$30,000 on average—but often pay for themselves several times over through 25-30 years of electricity savings. Why trust EnergySage?

As subject matter experts, we provide only objective information. We design every article to provide you with deeply-researched, factual. How much do solar panels cost?

The price of solar panels changes depending on where you live, but the average for installation is just under \$29,000 or \$2.75 per watt. On the high end, we talked to a solar customer in Hawaii who spent \$100,000 going solar. Dion in Nevada said their 10-kW system cost about \$20,000, which is about the national average price for a 7-kW system.

How have solar panels cost and efficiency changed over time?

Let's take a look at how solar panel cost and efficiency have changed over time. Solar panels are about 60% cheaper and 40% more efficient than they were in 2010. Solar panels in 2010 cost about \$8.70 per watt and were about 15% efficient. Today, solar panels cost about \$3.00 per watt on average and are between 19% and 22% efficient.

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. $\text{Net cost of the system} / \text{lifetime output} = \text{cost per kilowatt hour}$.

Are solar panels worth it?

The federal solar tax credit may reduce the net cost to \$20,552, and local incentives can further lower the cost. You can determine whether solar panels are worth it for your home by considering various factors, such as local incentives and policies, your electric bill, and how you finance the system.

Why are solar panels so expensive?

Since 2010, the cost to install solar panels on a home has fallen by roughly 50%. Costs rose slightly from 2020-2023 largely due to supply chain tangles from the pandemic, and then fell again in 2024. Prices have ticked upward slightly in 2025 due to tariffs and a rush for solar before the 30% consumer

solar tax credit expires on December 31, 2025.

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 typically 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.

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The average solar panel cost has declined dramatically over the last decade, and solar systems now offer more value to homeowners than they ever have before

There was no cap to the installation cost, either -- whether you paid \$10,000 or \$100,000 for your solar project, you'd get the full value of the credit. But Congress has drastically curtailed the

First, the good news: Early this year, module prices have remained stable across high-efficiency products and other typologies. Even modules with a fully black appearance, ...

In 2025, residential and commercial solar panels are more affordable and effective than ever, enabling homeowners and businesses to harness the sun's energy with substantial ...

Today, solar panels cost about \$3.00 per watt on average and are between 19% and 22% efficient. The price of solar panels could continue to drop, but it can depend on technology, ...

All costs reported are represented two ways: Minimum Sustainable Price (MSP) and Modeled Market Price (MMP).

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The average cost of a home solar panel system is about \$30,000. Tax credits and incentives may reduce net cost of solar panels to about \$21,000.

A study by the Department of Energy's Lawrence Berkeley Laboratory found homes with solar panels sold for an average cost of around \$15,000 more than comparable homes ...

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The average cost of a home solar panel system is about \$30,000. Tax credits and incentives may reduce net cost of solar panels to about \$21,000.

You'll typically save anywhere from \$37,000 to \$148,000 over 25 years by installing solar panels. Solar panels are just 12% of the total cost of a solar panel installation. State and ...

Based on current marketplace data, you're looking at around \$21,000 to \$23,000 before incentives for a typical 7-8 kW system, or up to \$29,000 for larger 12 kW installations. ...

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