

# **Average cost of home solar**





## Overview

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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. NOTE: Under the “One Big Beautiful Bill Act” signed in July 2025, the federal 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.

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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. As a general trend, we expect U.S. solar prices to continue falling as local manufacturing plants.

Solar panels cost \$3.00 to \$4.50 per watt installed on average, with homeowners spending about \$3.75 per watt before factoring in available solar incentives. A 6- to 10-kW solar panel installation costs \$12,600 to \$31,500 after the 30% federal tax credit. Solar panel prices depend on the size.



The average cost of installing an average-size home solar system in 2025 is \$29,360 before federal tax credits and incentives. 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. How much does a home solar system cost?

According to studies by the U.S. Department of Energy, the all-in cost of a home solar panel system is between \$2.74 to \$3.30 per watt. <sup>1,2,12</sup> This figure includes the solar panels, the installation, and other expenses. Using these numbers, an average-sized 8-kilowatt residential solar system would cost between \$21,900 – \$26,400.

How much does a solar panel cost?

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 panel also depends on how you buy it.

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 it cost to install and manage solar panels?

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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 does it cost to clean solar panels?

Solar panels require very little upkeep. If you're able to clean the solar panels



yourself, the only maintenance cost will be the water used to hose them down. If you hire a professional to clean your solar panels, it will cost around \$100 to \$350, on average.



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### [How Much Do Solar Panels Cost for Your Home?](#)

As solar energy continues to become more accessible and cost-effective in the United States, many homeowners are considering installing a home solar system. Before making the switch, the first question many people ...

### [Solar Panel Cost in 2025: Everything You Need to ...](#)

6 ???· Average Cost of Solar Panel Installation by Location Residential solar panel installation costs vary widely from state to state, in large part because different climates come with varying electricity rates and demand, and ...



### [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 Calculator

See how much solar can reduce your electricity costs. Why use a solar cost calculator? We find that understanding the average cost of solar panels empowers homeowners to make better



decisions when they get serious about ...



### **Solar Panel Cost in 2025: How to Estimate The Cost of Solar , Solar...**

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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