

PDEOZE PowerContainer

Unit price of finished solar panels



Overview

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).

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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.

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.

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.

Note: Data is expressed in constant 2024 US\$ per watt.

OurWorldinData.org/energy | CC BY 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.

How much does it cost to install and manage solar panels?

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. 1,2,12 This figure includes the solar panels, the installation, and other expenses. Using

these numbers.

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. 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 much does a home solar system cost?

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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.

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

How much does a solar system cost in 2025?

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.

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Average U.S. solar cost per square foot in 2025: \$6 - \$12 after the 30% federal tax credit. Cost per square foot varies by system size, energy use, location, and panel efficiency. The most accurate pricing ...

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, ...

Solar panels cost about \$21,816 on average when purchased with cash or \$26,004 when purchased with a loan for a 7.2 kW system. While that price tag seems steep, the electricity bill ...

The U.S. Department of Energy's solar office and its national laboratory partners analyze cost data for U.S. solar photovoltaic systems to develop cost benchmarks to measure progress towards goals and guide research ...

While panels themselves cost \$0.70 to \$1.50 per watt, the price to install solar panels costs \$3.20 per watt. This includes operational costs and permits in addition to parts ...

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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 ...

The average 6-kW residential solar panel installation is \$17,852 before incentives. Learn about cost factors, financing options, tax breaks and more.

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Find out the cost of solar panels, including installation and maintenance. Get insights into pricing and savings for switching to solar energy.

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