

# Average cost of home solar installation





## Overview

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The average solar power installation price ranges from \$2.74 to \$3.30 per watt in 2024, with most residential systems costing between \$16,500 and \$30,000 before incentives. After applying the 30% federal tax credit, homeowners typically pay between \$12,600 and \$21,000 for a complete.

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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.

While the national average cost ranges from \$15,000 to \$25,000 for a typical residential system, your actual investment will depend on several key factors that can significantly impact the bottom line. Understanding these costs upfront helps you make an informed decision about going solar.

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 savings you get from solar panels make them a worthwhile investment for most Americans. Our team of solar experts.

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 U.S. solar shopper needs about 11 kilowatts (kW) of home solar to cover their electricity usage. Based on thousands of quotes in the EnergySage Marketplace, you'll pay about \$20,754 to install a system around that size in 2025 after applying the federal tax credit — but that incentive.



The average cost of installing a 7.6kW solar system on your roof is \$23,100 before any incentives or tax credits, and most homeowners pay somewhere between \$19,100 and \$23,800. Prices vary widely based on factors like the size of the system you need, the quality of the equipment you choose, how you. How much does it cost to install solar panels?

It costs around \$28,000 to install solar panels. That's a big number, but incentives usually lower it significantly. Why trust EnergySage?

The average U.S. solar shopper needs about 11 kilowatts (kW) of home solar to cover their electricity usage.

How much do commercial solar panels cost?

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. There is a lot to consider when figuring out how much you'll spend on a solar installation.

How much does a solar system cost?

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 costs.

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.

How much does solar cost per watt?

Cost per watt is the standard measurement used to compare solar panel system prices, making it easier to understand what you're paying for regardless of system size. Currently, residential solar installations typically range from \$2.50 to \$3.50 per watt before incentives.

How much does a solar panel upgrade cost?



Depending on the project, an electrical panel upgrade for solar could cost between \$2,000 and \$3,000. If your solar system uses a string inverter, it may need to be replaced. String inverters generally last between 10 and 12 years, while solar panels last for 25 years or more. Getting a new string inverter could cost about \$1,500.



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### [Home Solar Panel System Installation Cost in India](#)

Homes with maximum solar access can recoup their solar system installation cost in 6-8 years. This payback period for solar energy systems depends on electricity costs, the home's size, and the payment method. Average Cost of Solar Panel ...

### **The Real Cost of Going Solar in California in 2025 , CEC**

But residential solar panels are still an investment, and your costs can vary depending on many factors. Here's what you need to know about solar panel costs in California and what you can do to save. Average Cost of ...



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

5 ???· The average solar panel installation cost is \$23,100, and since the average home size in the U.S. is just under 2,000 square feet, the cost of solar panel installation for homes that are 2,000 square feet will be around the ...

### [How much do solar panels cost? , Choose Energy](#)

The average cost of home solar panels is approximately \$31,558 before tax credits, based on data from the Lawrence Berkeley National Laboratory (LBNL). A typical residential solar



system is 8.6 kilowatts (kW), ...



### [How Much Do Solar Panels Cost? , Sunrun](#)

How much do solar panels cost in 2025? Updated 3/6/2025 Over the last ten years, the cost of installing solar panels has decreased by over 40% 1, fueling growth across new markets and deploying thousands of systems across the ...

### [Homeowner's Guide to Going Solar , Department of ...](#)

Costs associated with purchasing and installing a solar energy system are divided among all of the participants, who are able to buy into the shared system at a level that best fits their budget. Learn more about community solar. Those ...



### [Solar Panels For Home: A Beginners Guide to ...](#)

Key takeaways Homeowners can run their homes using solar power instead of taking energy from the grid, which lowers energy bills and carbon footprints. A home solar energy system costs between \$18,000 and \$20,000 before any ...



### [How Much Does It Cost to Install Solar Panels? \[2025 ...](#)

Highlights Solar panel installation costs an average of \$27,173. Most homeowners spend between \$3,500 at the low end and a maximum of \$55,000 on a complete system. Where you live, the number of panels you ...



### **Solar Panel Installation Costs**

Residential solar panels are usually sized between 3 kW and 8 kW and can cost anywhere from \$7,500 to \$28,000 in total installation costs. See average solar panel system costs by size (before tax credits or discounts). ...

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