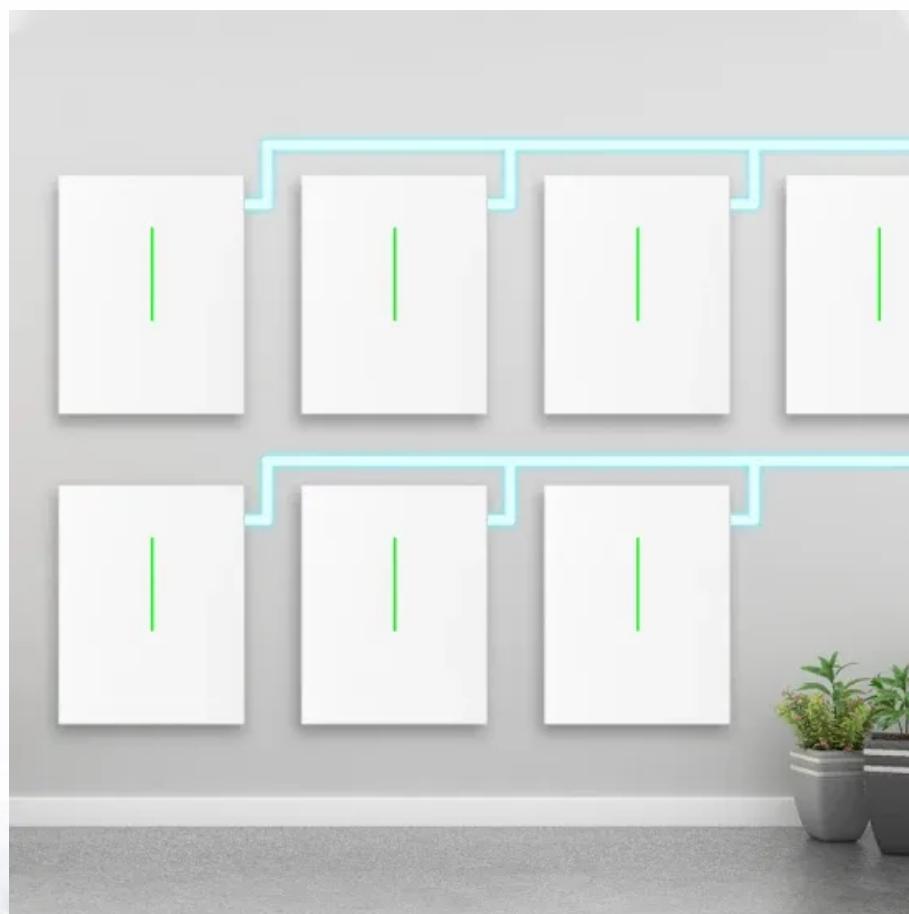


Solar panel electricity generation cost per kilowatt-hour



Overview

How much does solar cost per watt?

The national average cost per watt of solar PV is currently \$2.76 per watt. This is the historic minimum price. According to the National Renewable Energy Laboratory (NREL), a typical U.S. household installs a 5kW solar system. The solar panel cost is a portion of the total price you have to pay for installing solar panels.

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 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 solar power plant cost?

By comparison, new-build natural gas peaker plants cost \$0.138 to \$0.262 per kWh, even before factoring in volatile fuel prices. With current federal subsidies still in place, solar can be as low as \$0.02 per kWh and wind \$0.015 per kWh, making them much cheaper than even the most efficient existing power plants relying on dirty energy.

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Is The Price of Solar Panels Falling?How Much Does A Solar Panel Cost?Price Per Watt vs Cost Per KwhHow Do I Calculate The Cost of Solar Panels?How Much Do Solar Panels Cost Per Square foot?Do You Really Save Money with Solar Panels?How Much Does Solar Panel Installation Cost?How Much Does One Solar Panel Cost?How Can I Lower The Cost of Solar Panels?RecapAlthough home solar is already more affordable than paying for utility electricity, there are a few ways to reduce the cost of your system and maximize your energy cost savings.See more on solar Department of Energy

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