

Solar power generation system cost





Overview

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.

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 per watt?

Pro tip: It can be helpful to know your solar price per watt before and after claiming the 30% tax credit. 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.

How much does solar cost per MWh?

Here's a detailed breakdown of current costs by major renewable technology. Utility-scale solar photovoltaic installations now achieve LCOE ranges of \$28-117 per MWh, with the best projects in high-irradiance regions reaching the lower end of this range.



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