# Inverter price per watt

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You won"t be able to use the electricity generated by your solar panels without a solar inverter. A solar inverter costs $2,000 on average, with prices ranging from $800 to $5,000--though the overall price is wrapped up in your solar panel installation. The size of your system, the type of inverter, and the efficiency rating affect your final cost.

Solar inverters, also known as solar power inverters, are a key component in almost all solar energy systems. When sunlight hits your panels, it"s converted into direct current (DC) electricity. Your home, however, uses alternating current (AC) electricity. The solar inverter converts DC power to AC power, so you can use the electricity from the panels inside your home.

Solar inverters don"t just work alongside your panels. The current can travel through different components before it reaches the inverter. For example, it can run from the solar panel to a charge controller (which conditions the electricity) to the inverter and into your home. Some solar battery systems have a built-in solar inverter.

You can expect to spend $0.15 to 0.24 per watt on a solar inverter, excluding installation costs. Smaller inverters for DIY systems cost less than $500, while large inverters can cost more than $3,000. Use a solar panel inverter size calculator to determine the right size for your system.

String inverters cost $800 to $2,500 on average. Most homes only require a single inverter, but you could need up to three if you have a larger-than-average residential solar energy system. String inverters work by connecting several solar panels, which send their electricity to a central point where the inverter converts the power.

String inverters are the most affordable option. Unfortunately, they have a short life span and can struggle if part of a solar panel dips into a shady area. Each string of panels is limited by the poorest performing panel, but you can help mitigate this issue by installing a power optimizer.

Microinverters cost an average of $150 to $300 each, but you"ll need one for each solar panel in your system. They"re installed on the underside of each panel and immediately convert electricity as soon as it"s generated, helping increase efficiency by limiting energy loss.

Microinverters are popular because they perform well in areas with shade. In the event one microinverter fails, there are several more to keep your system running. You will, however, spend 15% to 25% more on microinverters than a single-string inverter. They can also be difficult to repair and replace.

Hybrid inverters cost $1,000 to $5,000 on average, but most homes only need one unless they have a larger

system. A hybrid inverter combines a solar inverter and a battery in a single unit. It doesn"t just convert your electricity from DC to AC electricity--it also stores the excess power, increasing efficiency and helping you avoid losses during power outages.

Hybrid inverters are a great solution for an off-grid solar energy system, but they also work well with grid-tiered systems. They can feed excess energy back into the power grid, and in turn, your power company might give you a credit on your utility bill.

Since solar energy systems are priced by wattage, labor costs might also be quoted in watts. For the installation of the entire system, expect to spend around $0.50 per watt on labor. If you"re only installing the inverter, labor costs range from $200 to $500 in total.

The more efficient the model, the more you"ll pay for a solar inverter. A good rule of thumb is to look for efficiency above 95%. The highest-efficiency models can achieve up to 99% peak efficiency but come with the highest price tag.

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