SOLAR POWER

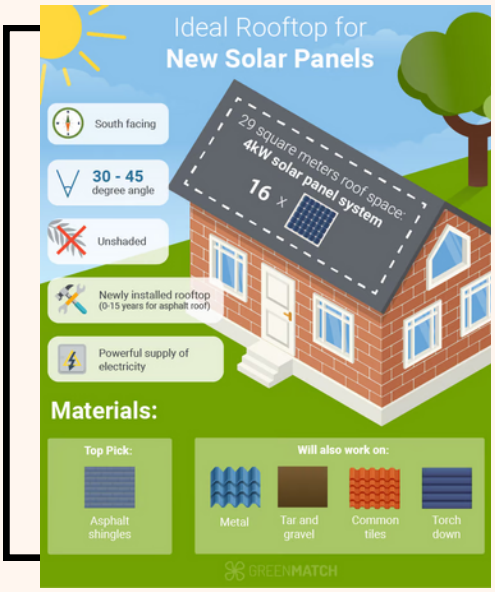
IS SOLAR POWER RIGHT FOR YOUR HOME?

By Luke Drummer

Solar power is growing in popularity, but there is a lot of uncertainty around it. Is your house suitable for solar panels? How long will they take to pay for themselves? Where can you get started with installation? This article will answer all these questions and more!

Funding

There are tax credits available for up to 30% of the cost of a solar system you install. That means if you spend $36,000 on a solar system, you would have an income tax reduction of up to $10,800 that year. Additionally, the monthly energy savings are often higher than the interest rate for a loan used to install solar panels, meaning that you can start saving money with no out-of-pocket costs.

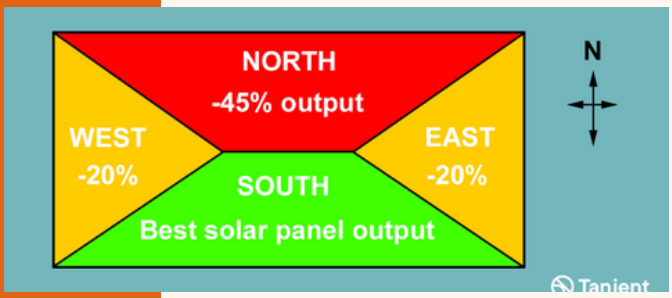


Determining if your roof is fit for solar

South facing roofs at a 30-45 degree angle are optimal for solar panels. If there are large trees shading your roof, consider pruning or removing them before installing solar panels. If your roof is older than 15 years old, get it inspected before installing solar panels to ensure it can support them for their entire lifetime (15-25 years).

How Much Money Can You Save

The average Minnesota household needs a 12 kW solar system to cover all their energy usage. A 12 kW system costs an average of $36,000 to buy and install. 30% of this would be refunded to you in the form of an income tax reduction that year. With average energy consumption, the panels would save you $200 per month, paying for themselves in 11 years and providing a net savings of $40,000 over their 25 year lifetime.



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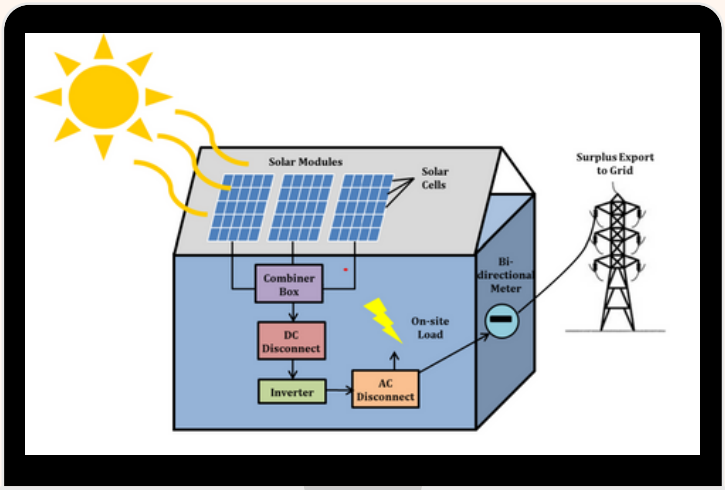
Solar panel maintenance

A common misconception about solar is that the systems requires costly maintenance once installed, but this is rarely the case. The vast majority of solar systems require very little maintenance, even in the winter. One might think that snow would accumulate on the panels and need to be cleaned off, but the slope of the panels allows the snow to slide off naturally and actually cleans the panels as it does so. The main maintenance homeowners report doing regularly is washing off the panels with water during the summer. In the event of a major breakage in things like the inverter or the roof, most solar companies include a 25 year inverter warranty and a 10-15 year leak penetration warranty for the roof. Most solar customers report having minimal maintenance costs.



How solar panels work

Solar panels work by using energy from the sun to create an electrical current that is harnessed and converted into usable electricity. Most solar systems are grid-tied, meaning that if you produce too much or too little energy, the grid will account for the difference. This ensures that you will have a constant supply of power, and that your savings are maximized.

Where to get started?

- Choose a solar installer- Get offers from multiple installlers to compare prices, and ensure your installer is licensed by a trusted organization such as the North American Board of Certified Energy Practitioners.
- Inspect your roof- Determine when your roof was last replaced and have your installer or another roof expert inspect it to ensure it can support solar panels
- Determine your solar potential - Factors like shade, roof tilt, and geographic location can affect your solar energy output. These online tools can help determine the potential output of your solar panels: https://www.energy.gov/eere/solar/solar-rooftop-potential
- Calculate your energy needs- Use your past energy bills to determine your monthly and annual energy needs. Use this to help calculate your potential savings as well as determine what size system to purchase. Typically, buying a system that produces slightly above your average energy use is the best choice as it will account for future increases in energy consumption.
- Evaluate your finance options- Buying your system outright will provide the highest long-term savings, but leasing your system is a great option for providing immediate savings with no up-front costs. Evaluate interest rates and determine the best option for you.
- Obtain permits and schedule inspections- Give your installer the information they need to get the proper permits and inspections required for installation. This step can take the longest, so start this process as soon as possible.