

## Residential Solar FAQs

### Will I benefit financially from going solar?

Installing solar on your property saves you money on your current and future electric needs. Each property and situation is unique, but the average system will pay for itself with energy cost savings within 8-14 years. After this, your energy cost savings become energy profits. Given that your system will be warranted for 25 years, and will continue to generate power for even longer, you can expect your system to provide you with at least 10-20 years of free energy. Generating your own energy also insulates you from rising utility rates. What will the utility company charge for electricity 10 years from now? And in 20 years? No one can answer that, but if you invest in solar now, you know that the cost of your system is NOT going to increase over time. In fact, the higher utility rates go, the more money your system will save you.

### How much do I currently pay the utility company for my electricity?

Your electricity bill will tell you your 12-month usage history in kilowatt hours (kWh). You can determine how much you pay per kWh by dividing the amount owed by the kWh used in the month. If you know your 12-month usage history and amount paid each month, you will get an even more accurate all-in cost per kWh. Electric rates vary widely, by region and utility company, but an average would be \$0.10 to \$0.15 per kWh.

### How do I compare this to what going solar will cost me?

Investing in solar is like pre-purchasing 25-35 years' worth of electricity at a rate that is cheaper than your current rate. We refer to this rate as the levelized cost of energy. An average levelized cost of energy for a solar system is \$0.06 to \$0.09 per kWh.

### What is net metering?

Net metering is a system that ensures you get full credit for every kWh that your solar system produces – even when you are producing more than you can use, and even if you do not have batteries to store the excess energy. So, how does this work?

First, the energy produced by your system gets used in your home. At the times when your system is producing more energy than your home needs, the excess energy goes back to the utility grid. We sometimes call that your “banked” energy. Then, when your home is using more than it is producing, like at night, you get to withdraw that banked energy back from the grid for free. You only pay for additional energy once you have expended your banked energy.

To be able to track the energy that is going in both directions – from the grid and to the grid – the electric company will replace your conventional electric meter with a “bi-directional” meter. Net metering policies differ from state to state. Pennsylvania currently allows net metering, whereas not all states do.

### What happens when my solar panels get covered in snow?

Since most panels are tilted at an angle, the snow will eventually slide off. You can clean off ground-mounted panels arrays with a “snow rake”. We do not recommend trying to clean snow off roof-mounted panels (unless you can reach them from the ground). Envinity's solar production models take into consideration our climate, which includes snow cover for a small percent of the year.

### What happens when the utility grid goes down?

If your solar panel system is connected to the grid (as 99% are), it will shut off when the utility grid goes down. This is an electric code requirement, so your home is not sending energy back to the grid while people are working to restore the power. This prevents workers from being injured or killed from a surge of energy from your home. The only way to ensure that you will have power in the case of a blackout, is to install battery back-up as part of your system. If you have battery backup, your home will be able to safely use that stored energy when the grid goes down.

### What solar energy rebates and incentives are available?

As of 2021, the federal government provides a 26% investment tax credit for new solar systems. This means that if your solar system costs \$30,000, you would earn a tax credit of 26% of that amount – \$7,800. The amount of federal income taxes you owe for 2021 would be reduced by \$7,800. If you do not owe this much, you can use the remaining amount the following years until you have used your full tax credit. The federal tax credit does not apply to leased systems. The tax credit is scheduled to stay at 26% through the end of 2022, then reduce to 22% through 2023, then expire residentially and reduce to 10% for commercial projects. Businesses can also take bonus depreciation on solar projects, accelerating the return on investment even more. IRS tax guidance suggests that battery storage systems are eligible for this credit when the battery system is charged by a solar electric generation system.

### What do fishy solar ads and companies look like?

There are many predatory lead-generating companies and solar companies that offer “free solar panels”, a “\$2,000 stimulus to go solar”, “no cost solar”, “get paid to go solar”, or “special solar programs”. **Other than the federal income tax credit, and the sale of SRECs, there are no government or utility programs for residential solar.** These companies use high-pressure sales tactics to offer discounts for customers who make a quick decision. They will also inflate numbers to make it look like a solar system will generate more than it will, or they will say that you will have no electric bill after you go solar, when the solar will only cover a portion of your bill. They also use unrealistic electricity rates. Ultimately, you should not be pressured into making this big of a decision. Take your time, read reviews, ensure that the solar installer will provide you with the best long-term value.

### What are SRECs?

SREC stands for Solar Renewable Energy Credit. You earn SRECs based on the amount of solar energy that your system produces. Each 1,000 kWh of energy produced will earn you 1 SREC. You will earn a modest supplemental income from the sale of your SRECs, which will be sold on an open market, similar to the stock market. SRECs are purchased by companies that are mandated by the state to use a certain amount of power generated from renewable sources. SREC rates fluctuate over time and vary from state to state, based on demand and state policies. [This Link](#) has the current PA SREC value. Most residential customers earn supplemental income of several hundred dollars per year. Envinity will set you up with a broker, SRECTrade, to sell your SRECs for you. All you must do is watch the funds get deposited into your bank account. When shopping for a solar system, make sure to find out if your potential installer allows you to keep your credits, sets you up with a broker, and allows you to monitor your system production. If PA begins to require more of our energy to be generated by solar, the value of the SREC could increase significantly. New Jersey, Massachusetts and Washington, D.C. have SREC values of over \$200 per credit.

### Can I go off-grid with solar panels?

When you install solar panels on your property, you will still be connected to the grid. This allows you to draw from the grid when your system is not producing all the power that you need and send power back to the grid when you produce more than you use. It is possible to go off the grid with a solar energy system that includes battery storage, but it will cost significantly more and not contribute to payback.

### What is an expected payback for residential solar projects?

The typical system has an 8 to 14-year payback, with a 25-year warranty, and a longer useful life. Here are several factors to consider:

- the solar potential of the home,
- how much electricity the solar system will produce,
- the cost of electricity,
- the electricity rate inflation,
- the value of the SREC,
- your net system cost,
- and loan interest amounts.

### What are my solar financing options?

Envinity recommends:

- **Talk to your bank or credit union.** Many of our customers have used a home equity line of credit to fund their system. Others have refinanced their mortgage to include the cost of the system (since interest rates are currently at an all-time low, some customers have even paid for their solar system with what they will save in interest on a home refinance).
- **Reach out to the Clean Energy Credit Union,** a non-profit lender that specializes in funding clean energy projects. They have 12-, 15-, and 20-year loans that vary from 5.25%-6%, based on your credit score. There is no finance fee, no requirement for down payment, and no prepayment penalty. Their option is divided into two loans: the first loan covers 26% of the system cost and is expected to be paid back in 12-18 months (by which time you should have received your solar federal income tax credit to cover it). The second loan covers the remaining 74% of the system cost and is paid monthly for the loan term.
- **Talk to Envinity about the financing we offer through Mosaic.** We have 3 loan options:
  - 10-year - 3.99%
  - 15-year - 4.99%
  - 20-year - 5.49%

All of the loans are \$0 down payment. You also have the option to defer payments for up to 12 months through Mosaic's PowerSwitch ZERO loan program. You can pay down 26% of your loan amount at month 18 after receiving your tax credit. The loan will amortize, and you will have a lower monthly payment for the remaining term.