



CLECAT Club

Exploring the technology that touches your life



Going Solar: Is It Now or Never?

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Have you been thinking about getting a solar electric system?

If so, the time to act may be now, because the rules for buying and selling electricity are about to change.

After looking at those changes, we'll learn how to see if solar makes sense for you, and how to get estimates for your system.

The payback on going solar will be much worse if you wait

- ▶ On December 15, 2022 the California Public Utility Commission (PUC) voted to replace the Net Energy Metering (NEM 2.0) rules with new Net Billing rules.
- ▶ The Net Billing rules will apply to all systems whose application for approval by the utility (e.g. Southern California Edison (SCE)) is dated *after April 13, 2023*.
- ▶ Under Net Billing the price the utility pays to purchase energy is wholesale (about 4¢ per kilowatt hour (kWh)) rather than retail (which is more like 35¢ per kWh).
- ▶ This change will stretch out the time for the system purchase cost to be recovered by many years.

This change is intended to encourage new systems to include battery storage

- ▶ If your system includes battery storage you can store the energy it makes beyond current consumption in the battery rather than selling it at a low price.
- ▶ After the sun goes down (and your system stops producing energy) you can draw the energy you need from the battery rather than buying it at a high price.
- ▶ All that is good, but including battery storage significantly increases the cost of a solar system, which therefore will take longer to pay for itself.

Here's how to see if solar makes sense for you:

- ▶ Look at a year's worth of bills from your utility (e.g. SCE)
- ▶ Add up how many dollars you spend per year for electricity
- ▶ Add up how many kilowatt hours (kWh) of energy you use per year—your “current consumption”.

Use the PVWatts tool to estimate a system size for your roof

- ▶ On your computer's web browser go to pvwatts.nrel.gov
- ▶ This is a free tool from the National Renewable Energy Laboratory to help you scale a PhotoVoltaic solar system for your rooftop to generate the amount of energy you need per year.
- ▶ You'll enter your address and take an initial guess of the needed system size in kiloWatts (Try 5 kiloWatts for starters). Enter the slope and the compass direction of your roof and a few other items.
- ▶ The calculator will show an estimated production in kWh per year (with a monthly breakdown).
- ▶ If the kWh/year is greater or less than your current consumption, repeat the process with a proportional change from the system size in kiloWatts you entered.

Here's a rough estimate of system cost for the size you need in kiloWatts:

- ▶ On average, a reputable installer in Southern California will sell a system using Tier 1 suppliers for about \$3000 per kiloWatt. (Your mileage may vary.)
- ▶ For example, my 3.65 kiloWatt system cost about \$11,000 in 2019.
- ▶ If you owe that much this year in federal taxes, you can get a thirty percent federal tax credit. That took my net cost down to about \$7,700.

How to estimate payback of system cost in years

- ▶ If you divide your annual electric utility spending (less about \$150 year you'll still have to pay the utility) into the net system cost, you get the estimated payback in years. (About 6.5 years in my example.)
- ▶ If the payback is too many years, just save your money and stick with the status quo.
- ▶ If the payback looks worthwhile to you, continue to the next slide.

How to get several quotes from local installers

- ▶ In your computer's web browser go to EnergySage: <https://www.energysage.com/>
- ▶ EnergySage is a no-cost-to-you government-funded tool to get quotes from several local solar system installers without the installers getting your contact info (and bothering you).
- ▶ You'll be asked to provide your name, address and other info and EnergySage will get quotes from several local vendors and pass them on to you.
- ▶ It's your choice to contact any of those vendors if their quote seems worth pursuing.

Remember, you need to get the application for approval done by **April 13, 2023!**

Don't sign a contract without getting a promise that this date will be met!

Questions and Comments?