



Cool Davis Solar Campaign FAQs

Updated Sept 2020

Basics

What's PV? Photovoltaic (PV) array is the technical term for a set of solar panels, generally installed on rooftops, that generate electricity. In this documentation, we use the words solar, solar system, and solar array interchangeably with the initials PV.

What's a kilowatt hour? Both electricity production and usage are measured in kilowatt hours (kWh). Energy rates per kilowatt hour have risen dramatically recently. Read your energy bill closely to determine the current rates.

What are the goals of the Cool Davis solar campaign?

Cool Davis set a goal in partnership with the City of Davis in May of 2016 to work towards 4,500 single family residential solar systems by the end of 2020. The total megawatt capacity goal is 21MW. When the campaign launched in 2016, Davis produced 20% of the power it consumed.

What is the current status of the campaign?

As of April 30, 2020, 3,980 solar systems were in service. That's 88% of the goal!

How can I help our community reach its solar goals?

- Talk about solar with your friends and neighbors!
- Make a solar pledge <https://www.cooldavis.org/solarpledge/>
- Become a Solar Champion and help spread the word! Email volunteer@cooldavis.org.

Why should Davis residents install a solar system on their home?

- Solar is a good return on investment
- The cost has been decreasing dramatically over the past decade
- Tax credits and exclusions are still available
- Local and regional solar providers are experienced and knowledgeable

- There are payment options for every budget
- Pairing a solar system with battery storage can move your home towards energy independence
- Solar reduces greenhouse gas emissions and protects future generations

How can I learn more from neighbors who have solar on their homes?

Ask your neighbors about their experiences! Most people are willing to share and give recommendations. The Cool Davis solar web page (www.cooldavis.org/solar) has excerpts from solar stories from local Davis residents near the bottom of the page. To read the full solar stories, search our site by clicking the magnifying glass at top right and entering *solar*. NextDoor is another online resource where many people share stories and contractor relationships.

Are solar households eligible customers with Valley Clean Energy (VCE)?

Yes, VCE is our locally governed, non-profit electricity provider dedicated to securing reliable, renewably generated energy for customers in Davis, Woodland, and unincorporated Yolo County.

Should solar customers go UltraGreen with Valley Clean Energy?

If you end up owing money at the end of your true-up period, opting up to UltraGreen can ensure that extra bit and 100% of your energy is generated from a renewable source. To opt-up today, visit: www.valleycleanenergy.org/opt-up. UltraGreen costs 1.5 cents more per kWh than VCE's standard service, so your additional cost will typically be in the \$3 to \$10 per month range for residential service, depending on how much electricity you use.

Is Solar Right for Me?

Should I make my home energy efficient before I install solar?

Yes! Energy efficiency measures can lower your energy use and the size and cost of a new solar system. Consider re-insulating your attic, installing attic and whole house fans, investing in energy efficient windows, switching to LED lighting, and always buying energy efficient appliances such as refrigerators, dishwashers, heating and cooling equipment, and washing machines. Incentives can be found on the DSIRE database: www.dsireusa.org/ or visit the PG&E website.

What if I'm a renter or otherwise cannot install a solar system?

Renters may be able to persuade property owners to engage in a Power Purchase Agreement (PPA) as part of a leased system. If you cannot install a solar system at your

home, you can still choose to consume 100% renewable energy with VCE's UltraGreen rate. If you are not a VCE customer, you can select the Solar Choice rate plan with PG&E.

What kind of roof type and orientation is ideal for solar?

The ideal rooftop faces south or west and has a 7/12 pitch (7 inches rise for every 12 inches run). East facing roofs, flat roofs, carports, detached garages, window awnings, and covered patios may also have potential.

What if my roof is super old and needs replacing?

Perfect! Solar photovoltaic (PV) systems last about as long as a new roof, so it's advisable to start with the roof then follow soon after with a solar system. This helps you avoid system remove and replace fees. Sometimes, it's possible to replace smaller portions of roof where panels will be sited to reduce overall costs.

Does a solar photovoltaic array on my rooftop actually power my home?

Rooftop solar systems are generally connected to the electrical grid: you "borrow" electricity when your solar panels are not producing (for instance, at night) and send electricity to the grid when you are over producing. This system is called Net Energy Metering (NEM).

Can I power an electric vehicle with solar?

Yes! Tell your solar contractor that you plan to charge an electric vehicle because it has a big impact on the size of your solar system. Being up front about plans for additional appliances, pools, and spas is also critical to install the right size system.

Do battery systems allow my solar system to work in a power outage?

If your solar system has a battery storage system, then you should still have power during an outage. Batteries are expensive, so many battery storage systems are designed to power only "essential" loads, for example, refrigerators and charging outlets. Backup battery systems also allow you to avoid peak energy usage and pricing on a daily basis, which is one way to offset the upfront costs.

Ways to Save (and Pay)

Is a solar system a good investment?

Depending on the financing you choose and your electricity usage, your system could pay for itself in as little as three years. After the initial payback period, which may be as

long as five to eight years, you may pay only a few dollars a month for electricity or even make a bit of profit. So, yes!

How will a solar system impact my monthly energy bill?

After your solar system is installed, you will be enrolled as a Net Energy Metering (NEM) customer. Your monthly electric bill will be immediately reduced to a minimum connection charge (about \$10). Once a year, on your installation month, the utility company will "true-up" your bill. If you produced more than you consumed, you will get a refund. If you used more than you produced, you will receive a bill. Visit the Valley Clean Energy website for more information about NEM: valleycleanenergy.org/rates-billing/vce-solar/.

What kind of incentives are available?

The current federal tax credit is 26% of your total installation costs. That rate will decrease to 22% in January of 2021. A federal tax credit is subtracted directly from your tax liability. IRS Form 5695 is used to claim the credit when you file your taxes. The state of California also provides a property tax exclusion up to 100% through 2024. Incentives for all 50 states can be found on the DSIRE database: www.dsireusa.org/

What kind of financing is available?

Check local credit unions for special loan rates for energy efficiency upgrades. Yolo County-approved Property Assessed Clean Energy (PACE) programs (namely, California First, HERO, and Ygrene) are loans repaid through property taxes with plans up to 20 years. Be aware that many companies make significantly more money from certain financing options, so do your homework, find someone you trust for unbiased guidance, and make sure you select the financing option that best meets your needs.

Can I have a solar system installed for free without owning it with a lease?

Power purchase agreements (PPAs), also known as leases, have certain advantages: no out of pocket costs, no responsibility for monitoring or maintenance, a set monthly bill amount for those on fixed incomes, and indirect tax credit benefit for those without tax liability. Contracts define what you pay for electricity and what happens if you move. Disadvantages are that you might end up paying more for your power in the long run.

Hire the Right Solar Contractor

What are some tips for hiring a solar system contractor?

- Get a thorough roof assessment first

- Get at least three bids!
- Check out their license with the state
- Ask about experience and recommendations from past clients
- Look for reviews online
- Ask if system monitoring is included

How long do solar systems last?

Solar systems last about as long as a roof, so it's a good idea to assess your roof's condition first or consider installing solar when you replace your roof. If you anticipate roof work after the panels are installed, ask your installer about re-roof service which would include having the panels removed, stored, and replaced if you need reroofing.

How big a system do I need?

The size of your system depends on current and future electricity use, the "amenable" rooftop area (appropriate for locating system components), your production goals, and your budget. Residential rooftop systems generally range from 4 to 8 kilowatts but can run smaller or larger. Your contractor should recommend a size that fits you and your needs appropriately. Solar systems are generally sized based on your existing annual electricity demand, but try to take into account large future energy demands.

How can I tell if a bid is fair?

Get three similar bids and compare them. Asking for a specific set of system parameters in advance from all three contractors makes the final bids more comparable. Compare the average cost per system capacity (in kilowatts), and ask why a bid varies. Consider checking with experienced friends or neighbors to understand your bids better.

What kind of warranties should I expect?

At minimum, get a 5-year warranty for workmanship, so you're covered if your roof leaks. Typically, warranties cover panel production for 25 years (keep in mind that output usually drops by 20% by end of life). Warranties for module construction and integrity are usually 10 to 12 years. Since the usual lifespan of a string inverter is about 10 to 15 years, you might consider paying a bit extra for an extended warranty (15 to 25 years) if your unit comes with the fairly standard 10-year base warranty.