

# SOLAR & STORAGE QUICK FACTS

## Installing Solar

The first step is to find a qualified solar installation company. The best companies have at least one installer with the “Photovoltaic (PV) Installation Professional” certification from the North American Board of Certified Energy Practitioners (NABCEP). Check the NABCEP website at [nabcep.org/certified-installer-locator](http://nabcep.org/certified-installer-locator) for updates.

Ask two or more installers for a free assessment. They will check your address on a satellite map to see if your site is suitable for solar (south-, east-, or west-facing expanse of roof with minimal obstructions or shading). You can also ask about ground-mounted solar options. If your site is good, they will do an on-site visit and ask to see your last 12 months’ electric bills. They will use this information to produce a free proposal designed specifically for your needs.

The going price for solar is between \$2,500 and \$3,500 per kilowatt and the average home needs around 5-8 kilowatts. You can get a rough idea how many kilowatts you need using Google’s Project Sunroof ([google.com/get/sunroof](http://google.com/get/sunroof)), but this is no substitute for professional expertise.

## Paying for It

One of the main solar financing mechanisms – a third-party power purchase agreement (PPA) – is not allowed in North Carolina. Here, your options are:

- Pay the entire cost upfront.
- Take out a loan. A home equity loan is one option, Self-Help Credit Union has some solar-specific loans, and your installer can tell you about others.
- Sign a solar lease. The NC Utilities Commission maintains a list of companies approved by the Commission to offer solar leases in North Carolina (see [ncuc.net/Industries/eleclessor.aspx](http://ncuc.net/Industries/eleclessor.aspx)). Most do not offer leases to residential customers, only to commercial, industrial and nonprofit customers that tend to need larger systems.

## Other Important Pricing Information

**Tax credit.** If you pay taxes, you can get a 30% credit on your Federal taxes. This is a credit, not a deduction. In other words, if your solar panels cost \$10,000, you will pay \$3,000 less taxes. Starting in 2023, if you do not owe enough taxes to take advantage of the full credit, you can sell part or all of it to another taxpayer. Consult a tax accountant for details.

**Rebate.** Duke Energy offers solar rebates, but only through 2022. If you want to take advantage of the rebate, consult your solar installer for details today!

**Net metering.** Although the idea of being off-grid and getting all your power from the sun is attractive, it usually makes more sense to interconnect your solar system to the grid and participate in Duke Energy's net metering program. That means excess solar power you produce will flow to the grid and Duke will credit you for it at the retail rate. It's called net metering because you pay for the power you buy from the grid minus the power you deliver to the grid. Credits can be rolled over from month to month but are zeroed out at the end of May each year. The NC Utilities Commission is currently considering a proposal by Duke Energy to revise residential net metering rules. Learn more at [SaveNCSolar.org](https://www.savencsolar.org). No changes have been proposed for commercial customers.

**Non-Duke customers.** If your electric provider is a municipal utility or electric membership cooperative rather than Duke Energy, check with them to see if they offer net metering or rebates.

## Battery Storage

Several manufacturers now offer batteries for home, commercial and utility use. These are often paired with solar but can sometimes be beneficial even as stand-alone systems.

On a purely economic basis, batteries do not make sense at this time for most residential solar customers of Duke Energy. This is because, under net metering (see above), the grid acts as your battery, "storing" your excess power for use later. However, if net metering rules change, storage may become more attractive. Residential customers on time-of-use rates may benefit from storage since they can charge a battery when rates are low and use the stored power when rates are high.

Commercial and industrial customers and local governments that pay a high monthly demand charge (an extra fee based on peak usage during the month) may benefit from battery storage on its own or paired with solar, as they can use battery power at peak times to reduce demand. Customers with demand charges of \$15 per kilowatt or higher benefit most from storage. As storage prices drop, that threshold will drop, too.

To explore storage, ask your solar installer to give you a quote or refer you to a battery provider.

## Community Solar

In many states, electric customers whose properties are not suitable for solar can participate in community solar projects, paying for one or more panels in a community array and receiving credit for the power those panels produce. Some of NC's electric coops offer community solar (more at [bit.ly/3RqEGBm](https://bit.ly/3RqEGBm)). Duke Energy's limited community solar program was approved by the NC Utilities Commission in April 2019 but has serious shortcomings.

Questions about solar or battery storage? Call 919-416-5077 or email [sally@ncwarn.org](mailto:sally@ncwarn.org).