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). A list as of July 2018 is at bit.ly/2UUZkNf, indicating which companies NC WARN or our Clean Path members have direct experience with. Check the NABCEP website at nabcep.org/certified-installer-locator for updates.

Ask one 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 $2,000 and $3,000 per kilowatt, depending on the size. 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), 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. As of this writing, there are three companies approved to do solar leasing in North Carolina and none of them are offering leases to residential customers, only to commercial, industrial and nonprofit customers that tend to need larger systems. See list of approved lessors as of December 2019 at the end of this fact sheet.

Other Important Pricing Information

Tax credit. If you pay taxes, you can get a substantial solar credit on your Federal taxes: 26% of your purchase price if you install in 2020 and 22% in 2021. After that, unless extended by Congress, the credit expires for residential customers and drops to 10% for commercial installations.

Rebate. Duke Energy offers solar rebates through 2022. Residential customers receive $600 per kilowatt, commercial customers $500, and nonprofit customers $750. However, the amount of rebate is capped each year, and the residential and commercial caps are reached very quickly. IMPORTANT:

if you intend to claim the rebate on a residential or commercial system, make sure your installer times your installation carefully and instructs you how to claim your rebate *immediately* when the program opens in January. Otherwise, you could end up on the waiting list and potentially miss out on the rebate altogether. The nonprofit set-aside has not been used up, so there is plenty of money left for nonprofit rebates, which could pay back as much as 30% of the purchase price.

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. Duke Energy is expected to propose revised net metering rules to the NC Utilities Commission soon.

Non-Duke customers. If your electric provider is a municipal utility or electric membership cooperative rather than Duke Energy, check 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 who 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 can 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. Keep in mind that, if you are trying to go completely off-grid, you might need two or more batteries.

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 ncelectriccooperatives.com/innovation/community-solar). Duke Energy's limited community solar program was approved by the NC Utilities Commission in April 2019 but has yet to take effect and has major shortcomings.

NC Solar Lessors

information is from the website of the NC Utilities Commission (NCUC), up to date as of 12/23/19

Eagle Solar & Light (certified by NCUC; 9 leases reported to NCUC)
https://eaglesolarandlight.com/
Scott Alexander
salexander@eaglesolarandlight.com
205-223-1639

Duke Energy Clean Energy Resources, LLC (certified by NCUC; no leases reported to NCUC)
550 South Tryon Street, Charlotte, NC 28202
Michael Kilpatrick
michael.kilpatrick@duke-energy.com
(980) 373-8728

Secure Futures (certified by NCUC; no leases reported to NCUC)
https://securefutures.solar/
11 E. Beverley St Ste 19, Staunton VA 24401
Anthony E. Smith, PhD. CEO/President/Manager
tony@securefutures.solar
540-255-1404

Questions about solar or battery storage? Call 919-416-5077 or email sally@ncwarn.org.

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Check for updates of this document at ncwarn.org/cp25

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NC WARN
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