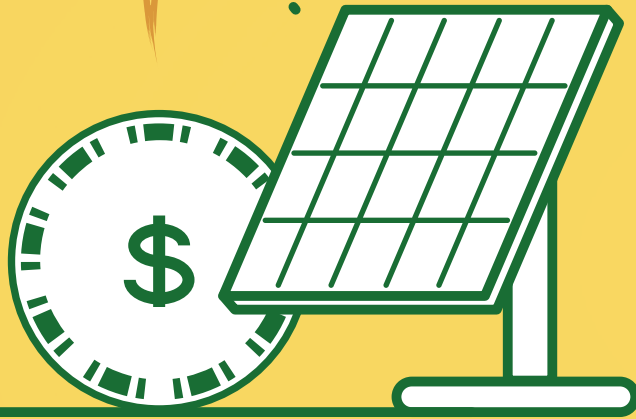


# How to Go Solar

1



Introduction guide to going solar in Carnegie Borough, saving on energy bills and lowering emissions

## What is rooftop solar?

2

“Rooftop solar uses solar photovoltaic (PV) panels to turn sunlight into electricity. PV panels can be installed on your roof or even in your yard. When sunlight shines onto a PV panel – even on a cloudy day – your solar system will generate clean, renewable energy. **Rooftop solar provides zero-carbon, no-cost electricity** once it’s installed and paid for. Depending on your situation, it might make sense to buy your rooftop solar outright or finance your purchase over a number of years” (1). “It will be easiest to go solar if you live in a single-family house that



### Rooftop solar (2)

you own. If you live in a condo, you may need approval from your HOA before installing solar on your property unless you have explicit roof rights. Similarly, your landlord must provide authorization before you go solar in an apartment” (3).

### Other solar options:



Solar tiles (2)



Ground Mounted Solar (2)

## How can it save me money?

3

“The higher your electricity bills, the more you'll save with solar” (3). “Depending on how it’s purchased or financed, rooftop solar can save you hundreds of dollars a year. That’s because the electricity produced by rooftop solar is completely free! As you electrify your home and your electricity needs grow, rooftop solar may deliver even bigger savings... Rooftop solar produces no carbon emissions! In many cases, this carbon-free electricity will flow back into the utility grid, where it will directly decrease the amount of fossil fuels burned by your utility company” (1). Solar energy can even be sold as Solar Renewable Energy Credits (SRECs) in PA.

## Battery storage

“A battery storage system lets you store energy from the power grid or from rooftop solar. Battery storage systems are most effective when paired with rooftop solar, because the pairing enables households to store no-cost solar electricity generated during the day for use around the clock” (1).

## What is a solar co-op?

“A solar co-op is a group of property owners who use their combined buying power to save money going solar” (4).



Join: SolarUnit edNeighbors.org

In partnership with:



(1) "Howing America Go Electric Digital Guide." Howing America. [www.howingamerica.org/DigitalGuide](http://www.howingamerica.org/DigitalGuide). Accessed 14 Nov. 2023.  
(2) <https://www.enidigitalhome.com/>  
(3) <https://www.energyrags.com/solar/how-to-go-solar/>  
(4) <https://www.solarunitneighbors.org/the-ultimate-solar-co-op-guide/energy-panels-what-a-solar-co-op/>  
(5) <https://ratepower.com/blog/lifecycle-analysis-pv-panels/>  
(6) <https://www.attorneygeneral.gov/resource/home-improvement-contractor-registration/contractor-frequently-asked-questions/>

# How do I go solar in Carnegie Borough?

## **(1) Find a contractor**

Contractors can be found on websites such as [www.energysage.com](http://www.energysage.com), [www.solarreviews.com](http://www.solarreviews.com), or searching online (ex. Yelp) for local installers. When searching for a contractor, look for the following:

- Price - How does the price compare to other installers? ([www.energysage.com](http://www.energysage.com) offers quote comparisons). Be aware of hidden costs such as “panel upgrades,” or “steep roof fees.”
- Payment schedule - What are the payment terms by deposit, delivery, and inspection? Note that PA law limits deposits over \$5,000 for home improvement projects.
- Installation timeline - How does this compare across contractors? Is this a reasonable timeline for your area?
- Familiarity with local codes
- Technology and performance
- Reviews - Look for trusted companies with good reviews and customer service. [www.solarreviews.com](http://www.solarreviews.com) lists company reviews by county under their PA guide.

## **(2) Fill out the General Building Permit**



[https://carnegieborough.com/documents/bldgpermitapps\\_000.pdf](https://carnegieborough.com/documents/bldgpermitapps_000.pdf)

**(3) Carnegie Borough also requires a full set of stamped plans from engineers for each installation**

## Join G.E.T. Solar Communities – Carnegie Borough

Join G.E.T. Solar: Carnegie, a local group formed by community leaders and nonprofit Pennsylvania Solar Center for free information for businesses and nonprofits who want to learn more about going solar.

Learn more about the following: Tax credits ~ Grant programs ~ CPACE ~ Technical assistance ~ USDA REAP program grants & loans

Visit for more information on how to join:



<https://pasolarcenter.org/get-solar/communities/carnegie/>

The PA Solar Center will also issue RFPs on behalf of interested businesses and nonprofits to solicit bids for the projects from qualified solar developers. Contact Pete Mullins at [pmullins.carnegieborough@gmail.com](mailto:pmullins.carnegieborough@gmail.com) for more information.

# Solar Fact Sheet

## **(1) How long do solar panels last?**

“As a general rule, the life expectancy of solar panels is about 25-30 years... [After], energy production has declined by what manufacturers consider to be a significant amount” (3)

## **(2) How much do solar panels cost?**

On average, solar costs \$3.01/W before incentives, or around \$22,027 for a 10.5 kW system. The 30% IRA tax credit for solar will become a 30% rebate when incentives roll out. Note that solar is not eligible for the HOMES efficiency rebates.

## **(3) How long will it take to break even with solar?**

It typically takes around 8-9 years to break even on the initial investment. Solar can save a household \$20,000-\$97,000 over the course of the panels’ lifetime (3).

## **(4) How must solar be disposed of?**

Depending on the manufacturer, solar can be recycled, although solar recycling infrastructure still needs significant development. Localities may be contacted for disposal instructions if your panels are considered “hazardous waste.”

## **(5) What are net emissions during the life cycle of solar?**

“Even when the full life cycle... is taken into account, the total CO2 emissions produced by renewable and nuclear generation technologies are much lower than those produced by oil, coal, and gas plants. Among renewable technologies, solar PV panels have a slightly larger carbon footprint than nuclear plants or wind turbines” (5).