

Solar at St. Paul's

Approved by the Congregation of St. Paul's Lutheran Church

St. Paul's Lutheran Church is caring for God's creation through the installation of solar panels on several of our buildings. We installed solar panels to combat climate change, which is a threat multiplier, as extreme weather events, floods, drought, and changes in precipitation patterns destroy natural resources and human infrastructure, cause humanitarian crises, and create more hunger, migration, and conflict across the globe. St. Paul's has a long history and ongoing commitment to feeding the hungry and helping during times of crisis both locally and worldwide. By increasing the amount of renewable energy in the USA through these installations as well as other emission reduction measures, St. Paul's is reducing our contribution to climate change as part of our work to reduce hunger, provide aid in crises, and promote global stability.

What are the environmental benefits?

Reduces the church carbon footprint by 18,000 pounds of CO_{2eq}/year
Over a 30-year lifetime this is equivalent to*



*600,000 miles of
gas car emissions*



*9200 incandescent
lights changed to LED*



*Carbon sequestered
from 9.5 acres of forest
over 30 years*

What is the size and location of the installation?

70 solar panels with a total capacity of 25.55 kilowatts are installed on the roofs of two rental properties and maintenance building in the cemetery.

Why are there no installations on the main church building and parsonage?

Our church building and parsonage have slate roofs that are environmentally sustainable. However, installing solar on slate roofs is challenging and twice as expensive. We are exploring other types of emissions reduction measures as a more impactful use of our financial resources.

Will this installation save St. Paul's money?

Yes. At today's electricity rate and SREC[†] values the systems may save the church \$74,000 over 30 years. St. Paul's is in a unique position of owning three residential properties due to changes in housing of staff over the lifetime of the congregation that started in 1765. Solar installations on residential buildings offset electricity costs by almost twice as commercial buildings.

Can the electricity produced be used for other buildings?

Yes. The electricity produced is enough to power 100% of the parsonage, the three cemetery buildings and 13% of the main church building.

We are already buying renewable electricity, isn't that sufficient?

No, not if installing solar panels is a viable option. By installing solar, we directly increase the percentage of renewable electricity in PA and the USA. While buying renewable electricity supports the renewable electricity industry, new renewable installations are not necessarily built at an equal rate.

How did the church pay for the installations?

The solar systems were paid for out of the church endowment. The church was not eligible for the federal tax incentives available in 2022. However, in 2023, nonprofits WILL be eligible for 30-50% of the installation cost direct payment from the Federal Government. Third-party ownership options of solar systems can be useful for organizations that do not have the money to pay for the solar installation at the beginning.

How can I put solar on my home, house of worship or business?

Contact a local solar installer for a free quote and avoid the companies soliciting by phone. Solar States, is the local contractor who performed the St. Paul's installation. They are a B-corp who is dedicated to educating new solar installers from within Philly. Solarize Delco or Solarize Southeast PA are groups of volunteers that can answer your questions and walk you through the solar process. The Clean Energy Co-op helps nonprofits and community businesses finance solar installations.

* Considers the environmental cost of making the solar panels and the environmental mix of PECO sourced electricity. Calculations using the following sites: <https://www.epa.gov/egrid/power-profiler#/RFCE>, <https://www.nrel.gov/docs/fy13osti/56487.pdf>, <https://www.epa.gov/energy/greenhouse-gas-equivalencies-calculator>

[†] SREC = solar renewable energy certificates.