

# What if We Used the Sun's Energy to Provide Electricity for Our Church?

May 2025



## Why install solar on our church

- \* It gives concrete expression to our commitment to care for creation
- \* It will decrease our annual electricity bill by 50%, making financial resources available for other church needs
- \* It will reduce the church's carbon footprint by eliminating 45 tons annual production of CO2 greenhouse gases
- \* It will be a visual demonstration to the community of our beliefs and values
- \* It is an opportune time to take advantage of several grants available to churches for solar installations

# System Specifications



<b>The Solar Array</b>	Approximately 144 panels, 580 watts each
<b>Location</b>	Roofs above the sanctuary, community room, chapel, & offices
<b>Estimated Maximum Cost of Project</b>	\$206,000 (Solar Array) + \$25,000 (Electrical) + \$19,000 (Contingencies)
<b>Production per year estimated</b>	97,000 kWh (Covers 100% of Annual Electric Use)



## PROJECT FINANCING

### Capital Campaign

- If approved on June 22, 2025, a capital campaign will be initiated. The campaign's goal is \$250,000, and includes a \$25,000 electrical upgrade.

### Grants

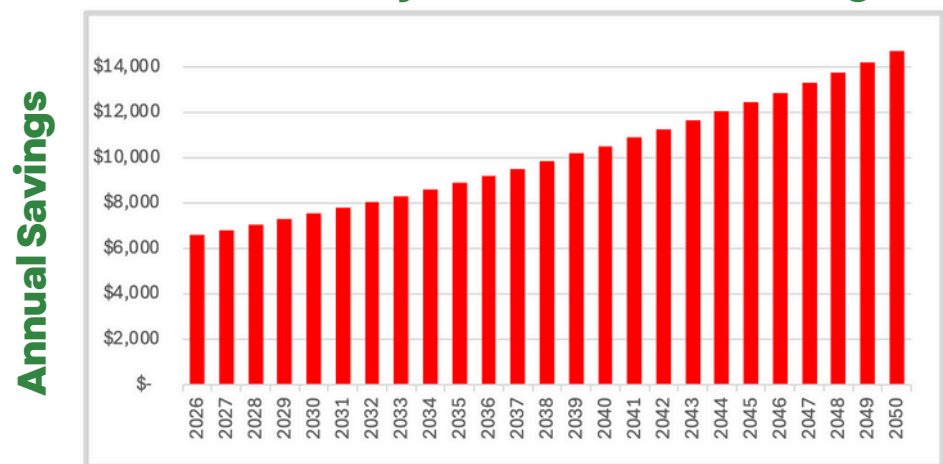
- An award covering half of the panels has already been received. We will apply for several other grants: Focus on Energy, Faith in Place, and Solar Moonshot. Grants received will reduce the amount needed in gifts from congregants.

## SAVINGS



### Powering Down Costs: Inflation-Adjusted Electrical Savings

The amount the church spends on electricity will go down immediately. Because of the likely inflation in the cost of electricity, the amount of the savings will increase annually.



**Year**

**Assuming a 3.4% escalation rate in cost of electricity**

# FREQUENTLY *Asked* QUESTIONS

1

What will be the effect on the roof?

Structural engineering calculations indicate the roof is able to handle the weight of panels. The panels sit on racks weighted down. There will be no holes in the roof. Roof replacement at earliest in 2036 at which time panels can be disconnected and removed. The panels can be moved temporarily to other roof locations while work is being done.

2

Do solar panels require maintenance?

There will be no need for cleaning. Snow will melt off. Panels undergo tests for extreme weather such as hail and wind. The incidents of damage by hail are extremely rare.

3

Why won't the solar panels pay for all of the church's annual electricity expense?

When Church demand for electricity exceeds 25kW we are charged a higher rate. One way to reduce the rate is to install a battery system which would store the excess we produce during the days of most light that we could draw on during times of higher demand. However, a battery system would cost at least \$40,000 more, which is felt to be beyond the reach of the congregation at this time.

4

Does the use of "payback" analysis apply to this project?

Businesses often use a calculation of payback to determine the time required to recoup the funds expended in an investment made in a project. This project will not use any existing finances of the church nor a loan that needs to be paid back. Using gifts from members, and grants from a variety of sources to meet an estimated cost of the project (\$250,000), there is no one to be paid back, no funds to be recouped.

5

Don't solar panels also generate their own carbon footprint?

They do not produce emissions when generating electricity. Their manufacture causes a fraction of the emissions from the burning of fossil fuels to produce electricity.

6

Do solar panels degrade over time?

Life expectancy of the panels is 25-30 years. However they can continue to produce electricity for decades more at lower rates of efficiency – for example at 87% efficiency.

# More QUESTIONS

7

Will this project negatively impact annual giving to support the operating budget?

Not likely. The Wisconsin Conference of UCC states that annual giving typically increases following a capital campaign.

8

What changes will need to be made to our current electrical system?

Xcel is requiring that electrical meters currently located in the boiler room be relocated outside. The estimated cost of this work is included in the projected cost of the whole project, which is \$250,000.

9

Will our building insurance increase?

The church's insurer estimates that rates will increase approximately \$160 per year.

## NEXT STEPS



- June 22, 2025
- July-August 2025
- August 2025
- September 2025
- Winter 2025-2026

Vote of congregation  
Capital campaign  
Requests for Proposals (RFP) sent to 3 solar installation companies  
Review results of capital campaign & RFPs.  
Council decides how to proceed.  
Installation of panels

## MORE QUESTIONS?



Engage with an Alternative Energy Working Group Member or Creation Care Team Member

Working Group: Allan Beatty, Kristi Koch, Beth Moore\*, Rob Tyser\*, Rick Waniger, Maury Weiland\*, Pastor Laura Wright (\*also a Creation Care member)

Creation Care: Elizabeth Janvrin, Dawn Kay, Sue McBride, Carlene Roberts