



Considering Solar?

A Guide for U.S. Churches





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CREATION CARE
NETWORK

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About Mennonite Creation Care Network

Mennonite Creation Care Network is a nonprofit affiliated with Mennonite Church USA, Mennonite Church Canada, Everence and Merry Lea Environmental Learning Center of Goshen College. Our mission is to help people who are seeking to live at peace with creation to connect with each other and with the faith resources they need to develop their calling.

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Sometimes I feel trapped, frustrated, and angry about our country's inadequate response to the massive threat of climate change. Our peace, our livelihoods, the beauty that comes with a diverse biosphere and our kids'—my kids'—futures are at stake.

We have the tools we need to meet this challenge many times over; we just lack the collective will. I care about many issues, but this one keeps me up at night the most. I need an outlet for all this pent-up, negative energy, and that is what first made me think about solar at FMC."

—Sam Carpenter
Church blog, First Mennonite Church Indianapolis, IN

TIP

If installing solar panels isn't possible for you, see the [Other Ways to Respond](#).

Introduction

Welcome to Mennonite Creation Care Network's step-by-step guide for congregations who are considering installing solar panels. The churches in our network who have already done this tell us it is a time-consuming process that requires overcoming a number of hurdles. But all of them are glad they persevered. In this booklet, we share their stories and tips. We also break down the process into bite-sized tasks that can be spread among multiple people.

God's sun shines on everyone; not just Mennonites. So why write a guide focused on one faith community? It is not because Mennonite churches are the only entities that are going solar. Far from it! Rather, we are taking a communal approach because we know that the best predictor of who installs solar panels is not politics or income—it is whether or not the neighbors have solar panels. This is the story that the "faith neighbors" in our network have to tell, and many of them are bursting to tell it.

Mennonite Creation Care Network first began working with solar congregations in 2016 when Russell De Young, then a NASA scientist, offered to fund an annual grant in honor of his late first wife, Pam. Since that year, we have helped fourteen congregations working on solar projects with amounts ranging from \$4000 to \$10,000. For this booklet, freelance writer Karla Kauffman, interviewed many of those churches, as well as others who did not receive our grant or never applied. She tracked down Anabaptist solar installers and interviewed them as well. Please read our acknowledgements to see the list of congregations, businesses and other organizations who generously volunteered the time to speak with her.

Due to the differences between the U.S. and Canadian governments, it did not seem feasible to create a bi-national solar guide. We regret that we could not represent our Canadian members. While parts of this booklet apply anywhere, some details will be different in Canada.

We created this booklet because we believe a transition to renewable energy is urgent and important. Ignoring the effects of climate change when we can already see the devastation of droughts, fires and flooding that come with warming temperatures is immoral. But solar panels are just one way to respond. There are many. We wish you clear thinking, careful discernment and Spirit-inspired energy as you seek the best path for your group.

—Jennifer Schrock
Director, Mennonite Creation Care Network
mccn@goshen.edu

1 "Spatial Patterns of Solar Photovoltaic System Adoption..." Journal of Economic Geography, July 2015.

Acknowledgements

This project is a gift from the people listed below. We thank them for sharing their time, talents, and experiences.

Booklet Team

About the researcher/writer: Karla Kauffman



Karla Kauffman, West Liberty, OH, spent countless hours researching, interviewing,

organizing and writing this document. Karla has a longstanding interest in sustainable lifestyles. She is also a therapist who is developing expertise in climate grief work. Karla is a member of Jubilee Mennonite Church in Bellefontaine, OH, where she recently led a children's day camp focused on endangered species.

About the donor: Russell De Young



Russell De Young, Yorktown, VA, is the donor whose vision and generosity has enabled us to invite

solar grant applications for the past seven years. He also funded the writer for this booklet. Russell believes in you: he believes that if little Mennonite churches prove they can attain net zero energy, the rest of the world will follow! May it be so.

About the editor: Jennifer Schrock



Jennifer Schrock edited this project and supplied some of the text. Jennifer has worked with Mennonite

Creation Care Network since its inception in 2005 and has led the organization since 2016. She is employed by Merry Lea Environmental Learning Center of Goshen College—MCCN's sponsoring organization.

Graphic Design

by Hannah Gerig Meyer

Graphic design and fine arts

Churches Interviewed

- **Akron Mennonite Church**
Akron, PA
- **Albuquerque Mennonite Church,**
Albuquerque, NM
- **Benton Mennonite Church,**
Benton, IN
- **Bethany Mennonite Church,**
Bridgewater Corners, VT
- **First Mennonite Church,**
Indianapolis, IN
- **Germantown Mennonite Church,**
Philadelphia, PA
- **Hyattsville Mennonite Church**
Hyattsville, MD
- **Houston Mennonite Church,**
Houston, TX
- **Landisville Mennonite Church,**
Landisville, PA
- **Lombard Mennonite Church,**
Lombard, IL

- **Lower Deer Creek Mennonite Church,** Kalona, IA
- **Millersburg Mennonite Church,** Millersburg, OH
- **Mennonite Church of Normal,** Normal, IL
Metamora Mennonite Church, Metamora, IL
- **Mountain Community Mennonite Church,** Palmer Lake, CO
- **Paoli Mennonite Church,** Paoli, PA
- **Park View Mennonite Church,** Harrisonburg, VA
- **Rainbow Mennonite Church,** Kansas City, KS
- **Southern Hills Mennonite Church,** Topeka, KS
- **Sunnyside Mennonite Church,** Dunlap IN
- **Taftsville Chapel Mennonite Fellowship,** Taftsville, VT
- **Zion Mennonite Church** Broadway, VA

Solar Installers

See the [resource section](#) for a list of those we consulted. It includes contact information and brief blurbs.

Others Consulted

- **Everence Financial,** Goshen, IN
- **Faith in Place,** IP&L ILL, Chicago, IL
- **Farmers Electric Co-op,** Frytown, IA
- **Give Solar,** Harrisonburg, VA
- **Hillcrest Academy,** Kalona, IA
- **Kindred Credit Union,** Waterloo, ON



Biblical perspectives on energy use

Since ancient times, obtaining energy has been a priority for humans—as well as for all life. We need energy to stay alive and even more to thrive. Energy for heating, cooling, growing, or moving is an unending challenge.

The Bible has many stories dealing with heat and cold, and it even discusses cooking fuel. Temperatures in ancient Israel ranged from 110+ degrees F at the Dead Sea and Jericho, to cold enough for brief snows in mountainous areas. People worked in the scorching heat and shivered in the cold nights. Jacob, for example, complains that he has suffered while in his father-in-law's employment, saying, "...by day the heat consumed me, and the cold by night, and my sleep fled from my eyes." (Genesis 31:40, NRSV) Judges 3:20 alludes to the fact that people slept on the roof for relief in hot seasons.

Animals provided energy in many ways. During cold weather, animals were often sheltered on the ground floor of houses,

while the humans on the second floor benefited from their heat—and the rich scents which wafted upward. Women socialized at the village dung heap, making patties for cooking fuel out of animal waste. And of course, animals provided transportation and protein.

Wealthy people had winter and summer houses, of which the prophet Amos disapproved. "I will tear down the winter house as well as the summer house," God says in Amos 3:15. One wonders what Amos would have thought of air conditioning if he had been transported to the 21st century and someone had explained climate change to him.

All the same, God is portrayed as having compassion for humanity's need for winter warmth and summer comfort. During the Hebrews' desert travels, Moses instructed the people:

If you take your neighbor's cloak in pawn, you shall restore it before the sun goes down for it may be your neighbor's only clothing to use as cover; in what

else shall that person sleep? And if your neighbor cries out to me, I will listen, for I am compassionate."

(Exodus 22:26 NRSV)

Isaiah 25:4 is a moving description of God as a shelter from the elements:

For you have been refuge to the poor, a refuge to the needy in their distress, a shelter from the rainstorm and a shade from the heat. When the blast of the ruthless was like a winter rainstorm, the noise of aliens like heat in a dry place, you subdued the heat with the shade of clouds..." (NRSV)

Access to comfortable temperatures is still an indicator of the disparity between the rich and the poor. Metaphors for God that are based on shelter from rain and heat are not a common theme in North American churches. It would be interesting to know if texts such as these are preached on more frequently in countries where staying warm or cool is beyond many people's means.

Why Churches Go Solar

To many people, installing solar panels seems complicated and expensive. Why would people bother?

You may not need this many reasons to go solar, but most congregations contain a diversity of people who have differing priorities. What faces in your congregation come to mind as you read each rationale?

Financial Stewardship

Practical people of all stripes go solar for financial reasons. Every solar-powered congregation interviewed for this booklet has lowered its utility costs. They describe going solar as good stewardship, freeing up utility expenses for other faith-based projects. Whether or not you are concerned about the environment, going solar will enable more of your money to go to the causes you care about.

Most congregations interviewed expected to recoup their installation expenses in under 20 years, often in less than ten. That will give them five to 25-plus years of low utility costs until the panels need replacement. When a congregation looks at its 20-year energy costs, not simply the current budget, the financial advantages become clear. Comparisons of the return on investment (ROI) for solar panels compared to the stock market show rates as good or better with less risk. A recent [Solar Reviews blog](#) calculates a ROI for solar panels has high as 18% per year, while 8% is considered a solid return for the stock market.

Not one church that we spoke to regrets the move to solar. To the question “What would you recommend to congregations exploring this?” Jim Leaman of Park View Mennonite Church, Harrisonburg, VA, says, “Do it. Number 1, it’s going to save you money.”

Thinking beyond our own financial well-being, solar energy creates jobs and spurs economic growth. As of 2018, there were twice as many jobs in clean energy technologies as there were in fossil fuels, while fossil fuel jobs are declining due to mechanization. The solar sector continues to grow rapidly.

Solar energy is also less of a burden on taxpayers. Indirect costs related to fossil fuel energy include the expense of cleaning up environmental damage from spills and the need to address the health consequences of air and water pollution. Less obvious costs to society include oil and gas subsidies for exploration, transportation and refining; and the military commitments that protect fossil fuel resources. See [“The Hidden Cost of Fossil Fuels”](#) from the Union of Concerned Scientists.

Important Changes due to the IRA

MCCN’s booklet was near completion when the Inflation Reduction Act passed. The financial case for going solar is now stronger than ever. We have noted updates in the margins. In short:

- The 30% Investment Tax Credit that was due to expire in 2024 has been extended through 2032.
- Nonprofits can now receive a 30% direct payout for installing solar. This parallels the 30% tax credit which entities with tax liability could use.
- Additional subsidies are available in low-income communities, in “energy communities” (a coal mining area is one example) and on indigenous territories.
- Also look for new energy efficiency incentives for nonprofits in the IRA.
- This change enables you to install a larger system than you need at present to prepare for future electrical needs as fossil fuels are phased out.
- For more detail, see the nonprofits section of this article from the [Environmental and Energy Study Institute](#). Watch for updates as some IRA details remain in flux.

MCCN booklet last updated September 26, 2022.

TIP

Your solar installer will share return on investment projections with you. Meanwhile, the National Renewable Energy Laboratory has been analyzing solar system costs for the past decade. See their [cost per watt analyses here](#).

Jim Leaman is a professor of business and economics who has researched the financial benefits of solar. He argues that it makes sense to go solar first and then take care of other energy-saving strategies. [See the research](#)



Being connected with God and each other means being connected with the wider creation. God's love for the whole world means that we love it too."

—Doug Kaufman, pastor, Benton Mennonite Church, Goshen, IN

A Financial Approach

Park View Mennonite Church
Harrisonburg, VA
Year of Installation: 2012

Just as most congregations leave decisions about a new furnace in the hands of a facilities committee, Park View did not see the need to have congregational conversations about their energy source. The solar decision passed directly from the Creation Care Council to the Finance Committee.

Solar advocates at Parkview pitched their panel proposal on the basis of economics alone. They had the benefit of in-house expertise that enabled them to build their own financial model, so they argued that solar panels would save money that could be better spent on missions.

Living within the Earth's Limits

Converting to renewable energy as soon as possible will reduce the most brutal effects of climate change and give the Earth a chance to absorb excess carbon. The level of carbon emissions pumped out by the industrial age is the scariest science experiment ever conducted. The geologic record has no precedent for such a rapid rise in carbon dioxide in the atmosphere.

Geologists tell us that during the most recent period in Earth's history when the planet was a lot warmer than it is now, the earth warmed five to seven degrees Celsius. This was due to increased emissions from natural phenomena that took place over thousands of years and resulted in a climate that enabled crocodiles and palm trees to live at the poles.

One painful reminder of the way whole ecosystems are changing took place in July 2022 when the monarch butterfly was placed on the endangered species list. Habitat destruction and pesticide use also contributed to this, but climate change multiplies these threats through droughts, storms and interference with the monarch's life cycle.

Many species and ecosystems will perish if we continue business as usual. For Christians, this violates the role God gives us in Genesis: to tend and keep the creation.

Concern for Future Generations

If climate change has a face, it is the face of our favorite toddler. Most of us have already experienced unusual droughts, heat waves and weird weather. Even if we are only affected in minor ways at present, we are very worried about what the future will bring—especially for younger people. As Sam Carpenter points out on page 4, doing something concrete in response to the threat is therapeutic. Love for children, grandchildren and other young friends moves us to do all we can.

Young People Demand Action

A number of our interviewees cited the role of young adults or the desire to attract them as a factor in their going solar.

Climate justice is a priority for this demographic. According to a 2021 study of 10,000 people in the U.S. and nine other countries between the ages of 16 and 25, nearly 60% of respondents reported being “very” or “extremely” worried about climate change. They described feeling afraid, sad, anxious, angry, guilty and powerless. The young people surveyed also described being ignored when they tried to discuss climate change, and 65% felt their government had failed them in this area.

The large and tech-savvy millennial generation, born between 1980 and 1998, are our youth’s best allies when it comes to solar. A Save on Energy survey of 655 homeowners in 2022 found that millennials were six times more likely than baby boomers to own solar panels and three times more likely than generation X households. This is despite the fact that older people usually have more money to invest.

People under 25 who may be reading this should not doubt their power to bring about change. This demographic is dwindling in many churches, and older people are eager to please them.

Neighbors Around the World

Most congregations who install solar panels are motivated by their faith and desire to help others. Pastor Steve McCloskey of Taftsville Chapel Mennonite Fellowship links the decision to go solar with the parable of the Good Samaritan. “Who is our neighbor? Who isn’t?” he asks, citing the well-known story where Jesus describes religious people walking by an unknown stranger whose needs are invisible to them—or simply not a priority.

While the cost of a solar installation is sometimes pitted against “feeding starving children,” the two are connected. Our carbon emissions affect people across the world, and the cruel injustice of climate change is that those who contribute least to the problem are most likely to suffer effects. They also have the fewest resources to enable them to adapt. Accompanying marginalized communities harmed by climate change is named as a top priority in Mennonite Central Committee’s 2019 strategic plan. The nonprofit has been addressing environmental catastrophes around the world for some time and has installed solar panels at various locations as a result.

In the U.S., power plants are the leading emitters of mercury, acid gases and toxic metals. Oil refineries, coal mining and fracking all produce environmental hazards. Nearby poor and minority communities are the ones most likely to suffer from this air and water pollution, which can lead to childhood asthma, heart attacks, and cancer. These conditions incur significant health care costs for both individuals and society. Transitioning to renewable energy protects the most vulnerable in our communities from these pollutants.



Our youth are deeply distressed about climate change and angry that adults don't seem to be doing anything about it.

—Sarah Werner, youth minister,
Columbus Mennonite Church

Hillcrest Academy

With the help of their physics teacher, students at Hillcrest Academy, Kalona, IA, conceived, designed, and constructed a 50-kilowatt solar field at the school.



We think renewable energy is consistent with our commitment to a just peace for all our neighbors. We are the wealthy. We need to respond with carefully planned approaches to how we build, how we live and how we work. Without this innovative development, the needle will not start to move toward environmental health for our world.

—Rick Cober Bauman,
MCC Ontario, 2016



All our youth know we're in trouble and climate change is real. [We felt] that if the high schoolers are excited and involved in this, the church needed to be responsive.

If the church ignores this, it doesn't have much to say outside its doors. "

—Landisville Mennonite Church, PA



Young folks are into collective action and protest related to climate justice. Most would say there is a gap between the theology we profess and the fact that our lights and heat come from fossil fuels."

—Germantown Mennonite Church

Lastly, investing in renewable energy helps low-income communities by providing power not subject to the shocks of coal or gas price spikes. Energy costs make up a disproportionate part of low-income household budgets. Unexpected circumstances—such as the 2022 war in Ukraine—can raise fossil fuel prices. Again, this is hardest for poor families.

Communal Endeavors Have Advantages

Larger solar projects are more cost-effective than individual household projects and more efficient in terms of labor. Picture what is required to install one set of solar panels: decision-making, calculations, installation of inverters, navigating regulations, trucking, becoming familiar with management software, etc. If your church roof can hold three or five times as many panels as an individual home, imagine multiplying that labor by three or five for the same number of green kilowatts. Likewise, the installer has more work at one location and can order panels in bulk at a lower cost.

At worst, solar panels can be seen as a kind of status symbol that flaunts eco-purity and access to capital. Poor people cannot hope to buy this level of moral righteousness. While panels purchased as a group cannot completely avoid this dynamic, at least the panels model a community working together on a shared goal. Putting on solar panels collectively enables people of all income levels to contribute to the project in different ways and at the level they are able.

Frustration and conflict can be part of a church process, but group solar projects can also be rewarding. Unlike much of the work that churches do, there is a clearly defined goal and a visible result. You know what you are trying to accomplish and you know when you are done.

Witness

When faith communities install solar on their facilities, they inspire their members and the larger community to think sustainably about their energy use. Congregations can provide hope to the community, spur others to make sustainable choices, and help ensure we will have a safe, healthy, and inhabitable planet for future generations. Some churches we interviewed passed on their experience by serving as consultants and cheerleaders for other people who later installed solar.

Other churches found that solar installations attracted families to their congregation. Taftsville Chapel Mennonite Fellowship reports that installing solar panels created more connections to their community than any other recent endeavor they've done. This included the addition of a new couple who were intrigued by the church's take on what it means to be faithful Christians in the 21st century.

A Rural Example

Metamora Mennonite Church, Metamora, IL

Metamora Mennonite Church is in the heart of Illinois farming country. In 2020, the church installed a 35-panel ground-mounted array that covers most of their electricity needs.

For Metamora, installing solar panels was an act of stewardship motivated by the fact that God created the earth and called it good. Ron Sears, a member of the creation care team, connects the decision to caring for the land in other ways:

“[Even though we are] not explicitly hugging trees, there is a...desire to care for God’s creation embedded in us...Farmers are very conscientious about this: Even the ones who don’t farm organically have always engaged in conservation practices: erosion control, how you leave [the land] in the winter...not trying to do the max on the herbicides...”

In 2018, an adult Sunday School class explored creation care. They started by hearing people’s stories. One farmer explained how he mitigates erosion; another who farms organically spoke about this choice, and there were other stories as well. Solar power came up while they were working through MCCN’s **Greener Congregation Scoresheet** together. The pastor supported the idea, and so they began to “walk down the path to solar.”

A creation care committee was formed and they created a timeline toward installation. The group got three estimates and presented proposals—first to the church leadership and then to the congregation via mailboxes and a Sunday announcement. When they presented the project at a congregational meeting, the questions



Metamora Mennonite Church’s ground-mounted solar array.

that people asked were mostly financial. Written responses to members’ questions were placed in mailboxes after the meeting as well. The proposal passed at the second meeting.

Metamora’s project faced challenges. On the technical side, installing panels required an \$8,000 electrical upgrade. Committee members considered putting the panels on the roof, but the roof was 20 years old and had a roofline that made it difficult to mount enough panels. Exploring a ground mount option brought its own challenges: the state highway needed a 150-foot variance, and the church had only 110 feet to work with. Fortunately, the county eventually approved a 100-foot variance.

Financially, the church was able to cover the \$32,000 they needed for

their panels. A \$5,000 MCCN grant was significant in the presentation for congregational approval. Illinois has an excellent SREC program, so Metamora received a one-time \$16,000 payback. The remainder came from an endowment the church had from the sale of a parsonage.

Metamora chose an installer who was local, had a good reputation, and had a personal relationship with some members. The panels were installed in July, but did not begin functioning until November due to inspections and other logistics. The solar array is by the highway, and is easy for folks to see as they drive by.

“If you’ve got a building you’ll be in for a while, solar is an asset,” Ron concludes. The congregation expects to recoup its investment in nine years.



How Does Solar Work?

Life on Earth depends on the sun, our very own star. Enough sunlight strikes the Earth's surface in an hour and a half to provide energy for all of Earth's people for a full year. For most of human history, we have used the sun's long-term products for our fuel—namely wood, coal and oil.

Recently we are learning to harness the sun's energy more directly than by burning fossil fuels. In 1839, Edmond Becquerel, a young physicist in France, discovered the photovoltaic effect—a process that produces an electric current when a material that conducts electricity is exposed to light. A hundred years later, scientists at Bell Labs got the solar cell into workable form, making it possible to use solar energy to produce electricity.

The costs of translating light into energy could not compete with fossil fuels until recent years, but now solar cells are efficient and cost-effective enough for widespread use. As each year passes, researchers develop more efficient cells. If you install solar panels this year, by the time you replace them in 35 years or so, your new roof could incorporate solar technology, or the majority of the energy grid may be fueled by renewables!

We are more familiar with photovoltaic cell panels (PV) on roofs or in large open-space arrays. Eight minutes after light leaves the sun, it arrives at a solar panel. Its energy is absorbed by the PV cells in the panel. An individual PV cell is made of various semiconductor materials and is thinner than four human hairs. It has an electrical field which responds to the light, creating electrical charges. Zing! Electricity is flowing. Each cell produces up to six watts of power. To withstand the weather long-term, cells are sandwiched in a silicone layer between protective glass and plastic materials. To produce more power, cells are connected in chains to form panels. The panels can be connected to the electrical grid or used to power nearby homes. Panels only send energy when the sun is shining on them. Any shade reduces what they can transmit.

Solar PV produces direct current (DC) energy. Since most buildings use alternating current (AC), the energy needs to be converted. PV systems will include inverters to convert DC energy to AC. Batteries are an optional element, which can store energy to use when the sun isn't shining.

The future of solar power

Who knows how the sun will provide us energy in the years to come? **Roofing materials** that incorporate PV cells...**solar blinds...paper-thin solar cells** printed with an inkjet printer...All of these products are already being developed.

Even glass windows can hold solar cells and generate electricity. The **Cathedral of the Holy Family** in Saskatoon, Sask., is the first cathedral to feature solar cells in its windows. Its three south-facing windows are composed of 545 panels of art glass with over a thousand solar cells embedded in them. Architectural glass artist Sarah Hall designed the windows to serve the community's energy needs as well as its need for beauty.

A solar installation underway at First Mennonite Church, Indianapolis, IN.

Agrovoltaics is a growing field. This includes using the same land for both crops or livestock and solar panels. Crops in some areas benefit from partial shading, and the array can be designed to shade livestock as well. Another approach is to serve crops in nearby fields by paring the array with pollinator strips.

As each year goes by, solar energy is becoming more efficient, more affordable, more innovative, and more pleasing to the eye.

Environmental questions about solar

All forms of energy come with environmental costs and some level of pollution. Here are three areas of concern for solar:

Ethical labor practices: As with all of our technology, the solar supply chain is complex and it is difficult to make sure the panels are made ethically. The majority are manufactured in other countries that are not subject to U.S. environmental or labor laws.

Mining: Manufacturing solar panels requires mining of rare metals, including gold and silver. Like mining of fossil fuels, this has consequences for the surrounding landscape. It can lead to international conflict and violation of Indigenous land rights.

Recycling of old panels and hazardous waste: Eventually, solar cells become less efficient at translating sunlight. Solar scientists are exploring how to recycle old panels into new panels and other uses, but a comprehensive system is not in place yet. The aluminum frames are easy to recycle, but the panels themselves contain silicon and rare metals which are difficult to extract and potentially hazardous. For example, they may contain lead because it allows panel construction at lower temperatures than other metals do. The good news is that the world's first modern solar panel is still producing electricity at the age of 60!

On the other hand, solar energy has unique virtues: Other than the manufacturing process, it does not produce air pollution, carbon emissions or nuclear waste. Secondly, it only takes a year or two for solar panels to “pay back” the amount of energy it took to manufacture them. Third, solar energy can be produced close to where it is used. About 5-6% of the energy power plants produce is lost in transmission. Lastly, while there are still “not in my backyard issues,” they do not affect the quality of life of neighbors to the degree that other energy forms do. All things considered, solar energy is the best choice for the common good.

Solar panel life spans

Here are several articles:

[How Long Do Solar Panels Last?](#)

[Solar Panel Recycling, EPA](#)

Carbon per Kilowatt?

See [Life Cycle Green House Gas Emissions from Solar Photovoltaics](#) from the National Renewable Energy Laboratory. The article includes a chart on page 1 that summarizes a life cycle assessment of coal versus solar energy, from resource extraction to final disposal. It shows solar producing only about 4% as much carbon as coal per kilowatt of energy produced.

INSTALLING SOLAR PANELS

Where Do We Start?

TIP

This guide breaks installing solar panels into many pieces. Print out the relevant pages and read them with a highlighter in hand.

Highlight all the things *you* could do. Then jot names in the margins of people in your congregation who you can picture doing other tasks. They are more likely to respond to a call to serve if they know the job description you have in mind and it fits them.

About regional climates

Your climate may not be ideal for solar, but most regions have both **pros and cons**. A solar contractor can give you local specifics.

Hours of peak sunlight per state

Over and over, solar congregations advise others to ‘just do it.’ They offer unanimous affirmation for their solar installations. That said, choosing, funding and installing solar panels is an intense commitment for a year or more before it can be turned over to the church treasurer and building trustees for long-term maintenance. This work requires a tenacious leader and a team of supportive enthusiasts with a mix of skills. We’ll walk you through the steps needed to avoid mistakes and encourage buy-in.

The churches interviewed achieved their goals using a variety of approaches. Here is an outline of a typical process:

1. The most essential ingredient

A *tenacious leader* has been essential for every congregation interviewed that had succeeded in installing solar panels. This visionary raises the issue, does initial research and then pulls in others. One considers himself a Solar Evangelist. Another, a Solar Champion. Tenacious leaders are both men and women. A few congregations had committees who shared the tenacity, and no one person was identified as the one without whom the project would not have happened.

What did these tenacious leaders do? They did not necessarily have technical or financial expertise, but they were committed to getting the installation completed. Tenacious leaders took initiative, handled early research, dealt with details, contacted people, had organizational skills, persisted in hard moments, and kept things rolling along. One also approached members for funding.

2. Are solar panels practical at your building?

Here’s how the tenacious leader might begin:

Read about solar.

See the Resources section for places to start. Then look into the following:

How long do you intend to use this building?

Are there any circumstances that would suggest a move? Our landscape is littered with buildings that have lost their reason to exist. Solar panels can be moved, but it’s a shame to need to do that.

Hours of sunlight:

Your solar output will depend on access to daily sunlight. You will need a south, east or west-facing roof that is shade-free from about 9 a.m. to 5 p.m. most of the year. Walk around your building and imagine what the sun’s angle will be in each season. Alternately, you will need space for a ground mount system. Solar contractors have tools that enable them to assess your space in more depth, but you can get an idea if it is worth pursuing.

Roof and building condition:

If you are considering rooftop solar, how old is your roof? Asphalt shingle roofs need replacement in 15 to 30 years, and removing and reinstalling solar panels costs thousands of dollars. It is more cost-effective if your panels go on a roof that will last as long as they do, and that may be 25 years or more. A relatively new standing-seam metal roof is ideal.

Solar panels are not heavy, but you do need a building sound enough to hold the number of panels you hope to install. A general contractor should be able to assess this.

Occupying a historic building is a special circumstance that can rule out solar panels.

Electrical equipment:

Will your building's equipment meet current code and solar requirements? Is there more than one electric meter on your property? You may need a professional to assess this for you later, but it is an important question to keep in mind from the outset.

Usage:

What was the electric usage for the most recent 12 months and is that typical? How much does your church spend on electricity each year? Will this change in the future due to growth or additional carbon emissions reduction measures?

If you found no red flags above, move forward.

3. Assembling a Solar Committee

It is easiest for the tenacious leader to have teammates. Convening people who are interested early builds critical mass before going to leadership, who may take the idea more seriously if it is presented by more than one person. Having a group also helps to gauge congregational interest and concerns.

The solar team will need to shepherd your leadership and congregation through their own learning process, so that they have all the information they need to make an informed decision. Ultimately, they will bring recommendations to the congregation and oversee the installation and follow up.

A solar project utilizes gifts that may not normally have an outlet in a church context. You do not have to sing, enjoy public speaking or be good with children to install solar panels. A skeptic with a bent for investigative research and asking hard questions will be right at home on your committee. A newcomer with little knowledge of church process might have valuable ties in the business community or be good at writing grants. Young adults in your midst may have interest in this project and technical gifts older folks lack.

TIP

Not everyone does all the steps listed.

For example, a few congregations have had 'non-committees' sharing the work. Individuals did not want to commit to a committee but were willing to do specific tasks. This approach works if you have a point person for communications.

What is the expected life span of your roof?



TIP

Youth and young adults have much to contribute to a solar project.

Ways they might be involved:

- A youth group could calculate the congregation's carbon footprint.
- A passionate young adult could give a presentation about how 20-somethings feel about climate change.
- A high schooler could serve on the solar committee as a youth representative.



Nick Buckwalter of Akron Mennonite Church, Akron, PA, took this photo at the 2017 Mennonite Church USA convention. He used it to motivate his church.

Here are some of the skills solar congregations found most valuable for their projects:

Interest in creation care

People attentive to sustainability often supply the initial energy for the project. They may have useful prior knowledge about renewable energy, climate change, or local environmental resources. If you have a household that has already gone solar, these folks can be valuable consultants. They can share their experiences and demonstrate how their system works.

Good communication:

This project requires many forms of communication, from articulating a compelling initial vision to listening carefully to concerns. Even crafting and keeping up with frequent announcements is a skill not everyone has. One tenacious leader suffered from a fear of public speaking that could have been alleviated by a teammate who didn't mind it.

Solar committees have deployed blogs, photos, bulletin boards, electronic displays and door-to-door visits to make their points.

Financial experience:

Your numbers person will need to understand the financial modeling across time and communicate this effectively to others.

Fundraising:

This may take the form of approaching people within the congregation, writing grants or seeking partner organizations. It can be as simple as putting two announcements in the bulletin or as complicated as forming an LLC.

Knowledge of the building:

While your solar installer will provide you with technical and mechanical skills, it is helpful to have someone in house who understands building management, electrical systems and other infrastructure. If this person has a long-term interest in overseeing and explaining your system to others, so much the better.

Your building geek will probably be the person who stays in contact with the solar installers. They prefer not to deal with a different member of the committee every time you call.

Other assets for this project include creative thinking, open hearts, and conflict resolution skills.

INSTALLING SOLAR PANELS

Research in the Congregation

Your solar committee will research current building strengths and challenges; they will assess companies and types of installation; they will keep the congregation informed, and join the treasurer or other designated people in designing workable funding.

1. Discuss your team's reasons for exploring solar panels.

They may expand as you continue, but it's good to recognize your core motivations. Scan the **"Why go solar?"** section of this document. Which motivations speak to each of you most deeply? Are there stories, names, faces attached to your motivations?

Any of the motives listed—or something else—could be the primary driver for an individual. Maybe it just sounds like fun! Whether your motivations are noble or not, it is best to be honest about them. You can be more effective that way.

2. Research what motivates leaders and the congregation

This can happen either through a formal survey or a series of informal conversations with key leaders. Discuss how your committee's motivations match up with what motivates your church's leadership and the congregation as a whole. What are their primary hesitations?

The vast majority of solar congregations agree that caring for the Earth is a part of their faith. Your congregation's values related to creation care are worth exploring in more depth. Is it mentioned in your mission statement or assumed to be part of ministry if it isn't? What kind of education and inspiration would be needed to help the congregation see solar panels as a faithful practice?

Pay attention to the way your congregation defines stewardship and whether this involves saving money in the short term or longer term. Values related to finances also make a difference. Is stewardship defined as saving money in the short run? Longer term? How far out does your congregation think? The answers to these questions produce different approaches to solar funding.

NOTE

Timewise, your research within the congregation will overlap with the sections on outside research and funding.

TIP

Energy sources are a long-term decision. It is hard for most of us to think beyond three to five years. This exercise might help stretch people's horizons.

In a context where you have several generations represented, ask each person to find a partner who is at least ten years older or younger.

Discuss:

- In what year was the older person the younger person's age? In what year will the younger reach the elder's age?
- What decisions did the elder make when they were around the younger person's age? What effect did they have on the present?
- What would the younger person like life to be like when they reach their partner's age?

TIPS

Check your utility company's website to see if they provide free home energy audits and if this audit applies to churches.

Electricity usage monitors such as the Kill-o-Watt meter are readily available. You can plug appliances such as refrigerators into them to see how much electricity they use and how much that is costing you.

TIP

Make a list of everything your church uses that runs on fossil fuels.

- Might you install heat pumps and water heaters that run on electric?
- Switch to electric stoves?
- Add electric vehicle chargers?

Changes Due to the Inflation Reduction Act

- Battery storage now qualifies for the 30% federal tax credit.
- The big push for electric vehicles means that solar installers are beginning to offer car charging wiring options as part of a solar installation.

Hesitations are usually relate to money, but people may have other problems supporting a solar project. For example:

- Concern that obtaining and financing solar panels will compete with another ministry that is dear to them.
- Fear of looking like "liberal tree huggers."
- Concern about reliability and maintaining new technology they do not know how to fix.
- Concern about the mining of rare metals, recycling spent panels, etc.
- A conviction that there are other, more effective ways to support renewable energy or address the climate crisis.

Each of these concerns requires a different conversation; any of them could help you refine your thinking and make the best decisions possible.

4. Understand current and future energy use

Installing solar panels is ideally part of a larger plan to power all or as much of your total energy use as possible from renewable sources. It is easiest to achieve this goal if you have a well-timed plan for replacing fossil-fueled equipment of all kinds with electrical units, and if you size your solar project to meet foreseeable renewable energy demand. Keep in mind that we are in the middle of an energy transition!

Knowing as much as possible about both current and future energy consumption will provide helpful information for the design of your solar installation. Get a reliable estimate of how the potential changes would increase on-site electrical energy usage and size your solar project with these changes taken into account.

Getting an Energy Audit

An energy audit is a review of your heating and cooling systems, insulation levels and other factors that can save or waste energy. It often includes a blower door test for airtightness. You can hire a professional to do this, find free programs or do it yourself.

- Faith and the Common Good offers a detailed guide for a [Do-it-Yourself energy audit](#).
- Interfaith Power and Light state affiliates offer this kind of information, too. [This guide](#) for do-it yourself energy audits is from Kansas.

Carbon Footprint Software

A carbon footprint is the total amount of greenhouse gases generated by our lifestyles in a given period of time. This includes emissions from heating and cooling buildings, transportation, production of the goods and services we consume and the carbon it takes to grow the food we eat. Inputting your information into a carbon calculator can give you an idea of your church's overall emissions and in what areas it might do better. You can use it to set goals and monitor your progress from year to year. Many of the ways you could cut your emissions are less glamorous than solar panels, so packaging them with a solar project can make them easier to fund. Carbon footprint calculators are readily available online and some are especially designed for churches.



A solar committee at work at Albuquerque Mennonite Church, Albuquerque, NM.

Carbon Footprint Calculators

- **Cool Congregations:** Interfaith Power and Light's version measures many factors: building, transportation, waste, food usage and other purchases.
- **The Nature Conservatory's calculator**
- **US Environmental Protection Agency's calculator**

The average carbon footprint in the U.S. is around 16 tons per person, while globally, the average is four tons per person. You will not be able to match the global figure no matter what you do because national choices—like maintaining a military and roads—are figured in.

A Multi-Step Net Zero Energy Plan

In 2015, Huntington Mennonite Church, Newport News, VA, resolved to reach net zero energy use in ten years.

First, they replaced the lighting to LED's then replaced the heating and air conditioning system with an electric heat pump that cut energy consumption by about 30%. Next, they installed four charging stations for electric cars in the front parking lot where they would be visible to the community. Guests are welcome to charge their cars during daylight hours.

Conversations on mounting solar panels are in the early stages.

4. Learn about your church's finances

Funding is addressed [here](#). Meanwhile, review your church's financial situation and available resources. You will need to answer many questions about money because 99% percent of the time, people's first question is about costs. Here are a few questions to look into if you don't already know the answers to them:

- What is your church budget and how difficult has it been to meet it recently? Are there any outstanding debts?
- Does the church hold funds in various accounts that could be borrowed and repaid as money is saved on electricity?
- What is the church's track record with fund-raising for special projects?

5. Learn the church's decision-making process

Review your church structure as a committee so that everyone understands how it works. Ask questions when you don't know.

- How does your church make Christian education and prayer a part of discernment?
- What budgetary decisions are committees empowered to make? Or does everything go through the pastor?
- How should the stewardship committee, the trustees or the building committee be involved? If they approve the idea, it is more likely to be approved by the congregation.

INSTALLING SOLAR PANELS

Research in the Community

Interconnection agreement:

A contract between a utility and a facility with solar panels.

Net metering:

Policies on this determine how utilities compensate solar producers for excess energy they produce beyond their own needs.

B Corporation:

A company that has obtained certification from **B Corporation**, a non-profit that measures a company's entire social and environmental impact and holds it to the highest standards.

Secure Futures, a solar installation company in Staunton, VA, is one example.

1. Talk with local solar owners

This is highly recommended. Learning from the experiences of other congregations and businesses will save you a lot of time. They may have advice on financial options, utility support, building issues, state, local, federal laws and incentives and experiences with installers.

Local and regional solar system owners are your best bet for the specifics of your area, but also note the list of solar coaches in the resource section.

2. Explore your utility's policies about solar

Utility companies vary widely, even within the same state. Here are questions you will want to ask:

- Do they allow for interconnection agreements?
- Does your utility work with net metering?
- Do you have agreements which would impede any savings you could get from producing your own solar? An energy contract which would require a payment to break?
- Does your utility know of incentives for installing solar? Some have grants. More of them enable customers to pay extra for solar energy that the utility is producing itself.

Note that unless you are up for installing battery systems, you will still be part of the grid and still receive a monthly bill for fees and electricity usage beyond what you produced. Your electricity will still go out when the grid is down. This safety feature prevents solar panels from energizing lines that a worker may be repairing.

3. Look for partner organizations

Look for nonprofits in your region whose mission is to help people go solar. Some B Corporations may have similar goals. Either of these could be a source of information on energy audits, funding options, state and local policies, permitting processes, and other aspects of going solar. With affiliates in 40 states, Interfaith Power and Light is probably the most well-known non-profit committed to renewable energy.

4. Interview installers

You need an installation company you can trust: one with stability, integrity and know-how. Congregations recommended prioritizing values such as high-quality work, fairness and honesty in every phase of this project. When possible, they sought out solar installers who were locally owned, treated their employees well, and had a trustworthy reputation. In fact, local reputation is the quality people mentioned most often as important in their choices. You do not want a company that claims you will save thousands and then disappears with your money. It is also an inconvenience down the road if you need a repair and your solar company has gone out of business.

Don't make your decision simply on cost; consider the overall picture and the value of what you are buying. The following sources can help you find installers with the experience and qualities you want.

- Homeowners, business owners and other churches can provide a wealth of information. "If you see solar somewhere, stop in and ask," one solar installer advises. Were the electrical system and hardware well done? Was the work timely?
- Ask the company: Could they share the names of customers willing to provide references? If you receive a list, make sure you follow through and call the references.
- Your jurisdiction that does the inspections may have names of solar companies who have done a good job according to their inspections. See your city or county website for electrical permits.
- Solar nonprofits in your state will know about companies and may have developed relationships with them. Solarize Indiana, for example, teamed up with an Amish-owned contractor to do workshops. Try your state's Interfaith Power and Light. The Solar Reviews site provides a solar nonprofit directory by state listing some of the solar nonprofits. These organizations can also help with state regulatory issues.

TIP

You'll find a list of **Questions to ask Potential Installers** in the Resources section of this guide.

TIP

Get more than one quote.

Multiple quotes will give you more ideas about design and pricing. A second or third company may offer different approaches on placement, slope, size of systems and so forth.

That said, some congregations did well just going with someone who came highly recommended.

TIP

Find a visual way to keep your congregation up on what's happening. Examples:

- A repeating icon in the church newsletter with a new sentence each week.
- A checklist posted in the fellowship hall.
- A graphic such as a series of puzzle pieces labeled with different tasks as they are completed.



Wildwood Mennonite Church, Saskatoon, SK, installed a 20-panel, 10-kilowatt system in 2018.



Listening to Our Neighbors

Taftsville Chapel Mennonite Fellowship, Taftsville, Vermont Installed panels 2016

“We advertised a community meeting to share our proposal for going solar. We got the word out via a community listserv and a community liaison.”

“Around five community people turned out and were 100% supportive of the project.

“We also went door-to-door to neighbors who would be visibly impacted by the project. One, who runs a bed and breakfast, expressed concerns about both the visual impact of panels and the return on investment (ROI).

“We listened to her concerns and gathered photos and ROI data to share with her. We then had a second sit-down talk in her home over tea and looked at our roof from her point of view—literally. Our neighbor remained skeptical but not oppositional. She said she might plant trees at the border to block the panels from view.

“Her concerns were alleviated once the project was complete. She reached out a year later expressing interest in doing solar herself.

“We found that listening and taking folks’ concerns seriously ended up building relationships and interest in solar.”

—Heather Wolfe
Creation Care Liaison

5. Obtaining quotes from solar installers

This is a circular process. Your church may want specifics before seriously considering solar, but a good quote takes time and effort. If you have not yet committed to proceed, installers can do a quick assessment for a baseline estimate. Later, they can come out and give a more exact quote. Quotes are only good for a limited time.

Early inquiries

Here are the items solar installers would like to know early on:

- Your role in the congregation. Are you a single member seeking early information, or has a committee delegated you to get a quote? Your congregation’s values and goals regarding solar. Are you primarily concerned about reducing expenses? Or is reducing your carbon footprint your priority? Is setting an example visible to the community important to you?
- Monthly utility usage from the past 12 months.
- The directions your roof faces and its approximate size, age, and elevation angle. Is a ground mount a possibility or putting panels over the parking lot?
- Has a committed leader been identified? Who is the congregation’s point person for communicating with the installer?

Soon after:

- Explain your congregation’s decision-making process. How and when will you commit? Give your installer a budget range and estimate of the time it will take to assemble funding. Some installers like to have one meeting with the church’s leadership group to make sure everyone hears the same questions and answers.
- Appoint a project manager to relate to the installer. It is easier for the contractor to relate to one person than several. They need someone they can count on to relay accurate information and to understand the estimating process. The essential skills are patience, listening, and accurate and timely communication. Financial and technical skills are helpful, but others can cover these areas when needed.

6. Consider the neighbors

Solar is an aspect of congregational outreach and witness, and can alienate or engage the folks nearby. If your neighbors can see the panels, they may have opinions about your plan. This is more likely if it is large or a ground mount. Take this opportunity to reach out to your neighbors, get publicity, and share why you believe solar is important.



Mountain Community Mennonite Church, Palmer Lake, CO, installed solar panels in 2022.

INSTALLING SOLAR PANELS

Funding Options

Solar installations have high upfront costs. Each panel costs around \$500. Costs for the congregations interviewed ranged from \$15,000 with do-it-yourself labor to \$138,000. Most churches interviewed are expecting payback periods between 7 and 15 years

Ask your solar installer, regional solar nonprofits and local solar owners what is available in your area. State-specific nonprofits who will know your regional options are a great place to start. [RENEW Wisconsin](#) is one example.

Below, we sketch out different types of funding so you can ask more intelligent questions.

1. Internal fundraising

We are including specific cases and amounts here, not to make you feel badly if your circumstances are less fortunate, but to illustrate a refrain we hear repeatedly: churches are surprised by how quickly and easily they were able to raise money for solar panels. If you can communicate both the moral and the financial case for going solar and the church leadership is on board, people chip in. For those who have money to invest in an LLC arrangement (see below) it is at least as good as the stock market.

Use or borrow from existing funds

A number of churches we talked with drew on endowment money, capital improvement funds, or money overseen by various committees. Solar panels will enable you to recoup your investment over time, so borrowing from funds you are holding anyway is a good strategy. Some churches used surpluses due to pastoral transitions or the COVID-19 hiatus.

Passionate major donors

Sometimes, people of means were enthusiastic about the project and moved it forward with significant contributions or offers of matching funds. In one

TIP

Before reading this section, review the important note in the blue column on page 7. The update to the Solar Investment Tax Credit in the Inflation Reduction Act has made your task easier.

TIP

Use internal funds whenever possible. Unlike many homeowners, congregations often have capital held in special funds. This enables them to borrow from themselves internally and repay the money through a monthly rebate.

Go Fund Me

Harrisonburg Virginia's Gift and Thrift store broadened their pool of donors with a Go Fund Me campaign. Their success inspired the founding of **Give Solar**, a nonprofit that assists low income people.



People leave money to church when they die, but I want some control over mine. Let's reap the benefits from day one."

—Southern Hills Mennonite Church

TIP

Use engaging visual aids

Akron Mennonite Church, Akron, PA, invited individuals and small groups to contribute the cost of a single solar panel, which was \$510 in their case.

They then created a picture of the church roof with solar panels outlined. Every week, the coordinator would shade in the number of panels that had been purchased and invite additional contributions. In six weeks, they raised enough money to buy 229 panels.

case, the pastor saw information about MCCN's solar grants and initiated conversation. This inspired two individuals—one from inside the congregation and one from outside—to offer to donate \$5,000 to \$10,000 each if the congregation would install solar panels. Their challenge provided the impetus to move ahead.

Design a giving pyramid

With the help of a professional consultant, First Mennonite Church Indianapolis raised \$101,000 in five months--\$3000 more than the original goal. They designed a giving pyramid and held personal meetings to ask for specific amounts depending on the giver's income. Each committee member pledged contributions that were significant for their circumstances. While they also had a general "ask," via church mailboxes, the personal conversations were more fruitful.

Pledge forms and announcements

These simple measures worked well for some congregations.

The plan that Sunnyside Mennonite Church, Elkhart, IN, designed required them to raise at least \$20,000 from their membership before they could sign a contract. They invited people to contribute during the next few weeks or to pledge longer term and followed up with updates on amounts received. In six to eight weeks, they had received \$24,000.

Landisville Mennonite Church, Landisville, PA, raised \$75,000 this way. After 70% of the estimate was raised and their board approved an agreement with the installer, the solar committee put forms into mailboxes and made announcements on Sunday mornings and in the church's weekly email. They had the money in about a month.

Church Budget

Another strategy is to build a small percentage of the installer's estimate (5%, for example) into the general budget after larger funding is secured.

Creation care funds and voluntary gas taxes

Some congregations have developed a creation care fund that enables people to designate contributions or bequests to creation care projects. East Chestnut Mennonite Church, Lancaster, PA, has been collecting voluntary gas taxes in such a fund for over 15 years. Individuals who are able tax themselves on their energy usage and donate this amount. The money has paid for projects such as efficiency upgrades and local and international tree-planting. Another voluntary gas tax group in Harrisonburg, VA, has existed since 2000 and has supported solar projects in that area. While this approach doesn't raise money quickly in the same way a capital campaign does, it could be tapped as one among multiple funding sources.

Important Update

Due to the recent passage of the Inflation Reduction Act (see page 7) you no longer need to use the methods described under #2 to benefit from the solar tax credit. We hope you still find the stories from Albuquerque Mennonite and Park View inspirational. Be grateful you don't need to work that hard!

2. Buying the panels through entities that benefit from the federal tax credit

Form an LLC – Limited Liability Company

This is a frequently used strategy that enables nonprofits to take advantage of the federal tax credits which don't apply to them since they don't pay taxes. Members of the congregation form an LLC as individuals. This group takes financial responsibility for the installation and owns it. The congregation pays the LLC back over time and takes ownership when the amount is fully repaid—usually in under 10 years.

Use LLCs that exist for this purpose

Creating your own LLC is complicated. You can also use LLCs that are already set up.

Collective Sun (CS) is one example. This is a group of investors with passive income who form LLCs to help nonprofits go solar. They form a Solar Power Agreement with churches similar to an equipment lease. It reduces solar installer bids by 12% (lower as the federal tax credit reduces) by monetizing tax credits normally denied to tax exempt organizations. There is an administrative fee. Collective Sun operates nationwide.

Financing through your solar installer

Larger solar installers may have in-house financing options, usually a Power Purchase Agreement (PPA). Again, these are based on the federal tax credit strategy. It's important to get outside opinions on PPAs. Many PPAs have an escalator (annual interest rate increase) pre-set in the contract. The escalator is not tied to utility rates or inflation. *Always ask, "Is there an escalator in my PPA rate?"*

Paradise Energy Solutions has a PPA named Sunstream for projects over 25 Kw. Sunstream owns the panels installed at the church. The church pays Sunstream for the kilowatts that the panels produce. The cost is fixed for 25 years.

Local businesses

Local businesses may be willing to serve as the owners of your panels and benefit from the tax credit. See the Park View example, at right.

Forming a Limited Liability Company

Albuquerque Mennonite Church, NM

Albuquerque Mennonite Church (AMC) formed its own Limited Liability Corporation in 2016. Another church in their town helped them.

AMC took individual pledges for LLC shares at units of \$500 and \$1000, and the available shares—totalling \$24,000—were “gone in an hour or two.” Most people invested \$1,000 to \$3,000, but some invested significantly more. Shareholders received the 30% federal tax credit, and the money saved on electricity costs is being returned to them over an eight-year period.

AMC also received a grant from Mennonite Creation Care Network and used volunteer labor. Nick King, a solar installer from Carlsbad Mennonite Church, oversaw the 45-panel do-it-yourself installation.

Park View Mennonite Church

Harrisonburg, VA

“We built the financial model ourselves at the church. We went to local businesses, and asked if they were willing to be the legal owners of the system...”

...We set it up on a PPA basis. We paid 20 years of energy up front to the business, who then paid the installer and was made whole by the tax credits.”

Solar grants from MCCN

Fourteen congregations have received solar grants from MCCN since 2016. They ranged from \$4000 to \$10,000, depending on number of applicants.

Paoli Mennonite Fellowship

Paoli Mennonite Fellowship, Paoli, IN, received a grant from Faith in Place in 2022.

Akron Mennonite Church

Akron, PA

This church teamed up with Collective Sun. They paid 85% of the project to CS and CS paid the installers for the full amount. CS will own the system for six years and then turn it over to the church. The arrangement included a ten-year warranty for both labor and supplies. Akron is happy with the collaboration.

3. Grants from Nonprofits

Pam De Young Net Zero Energy Fund

MCCN assists Mennonite Church USA congregations with solar panels or car charging stations. Two grants of \$5,000, are awarded per year. Occasionally, a single church receives up to \$10,000. Grants for car charging stations are limited to \$1800. The annual deadline is June 30. [More info](#)

Interfaith Power and Light

Some IPL affiliates offer grants. Check yours. Faith in Place, which recently merged with the Illinois/Indiana/Wisconsin affiliate of IP & L, has a Green Energy Assistance Fund. It provides grants of up to \$10,000 to enable houses of worship in the Midwest to install solar panels or solar or geothermal heating and cooling technology.

4. What your utility might have to offer

Grants

[Here's an example](#) involving Tacoma Power in Washington and a Baptist church that received a \$50,000 grant.

Net metering

Net metering is a billing mechanism that credits customers who have solar panels for the energy that their system produces. Customers are only billed for their 'net' energy use, which may reduce their costs to only the monthly connection fee. Not all states have mandated net metering or other incentives for renewables. Your utility can tell you whether the state mandates it, and whether they offer it or other incentives. Utilities may offer net metering at the retail rate you pay per kWh or a much lower wholesale rate.

Leasing options

Some utilities may offer an arrangement that enables churches to lease panels installed at your church for a number of years.

Feed-in-Tariffs

This long-term plan (some are 15 years) pays congregations about \$5,000 a year. It is a renewable energy incentive that pays the customer more than their normal energy cost. The utility then sells carbon credits to companies who need to buy them. Your bill remains constant throughout the agreement. Many states have phased out feed-in tariffs, but it's worth asking – if for nothing more than to alert utilities that you are aware this option used to exist.

Solar Renewable Energy Credits (SRECs)

Some states offer Solar Renewable Energy Credits (SRECs), a trading system which allows customers to earn a small amount of money for each 1000 kilowatt-hours (kWh) produced. Utilities in these states are required by state regulations to get a percentage of their power from renewable sources. To show that they've done this, they buy Renewable Energy Credits from energy brokers. [Energy Sage](#) describes SRECs as “most beneficial yet complicated to understand.”

City, State and Federal Programs

City

Your city may offer grants to install solar. Madison, WI, is one example. In 2007, Madison was named one of 25 Solar America Cities. The city's solar program, [MadiSUN](#), facilitates solar power installation for residents, businesses, and nonprofits.

State Energy Grants

Your state's energy webpage may periodically announce grants. Congregations who have looked into state grants find them difficult. We are not aware of any churches who succeeded in earning one, or who recommend this avenue.

Tax exemptions for solar equipment

Search online for “[your state] solar tax exemption” to see if your state has this, but make sure the information is current because these change frequently. If your state doesn't have one, let your legislator know it would be a great idea.

Community approaches

Community-owned Solar

Here, members of the community pool their resources to jointly own solar panels off-site. These are also called “group buy” initiatives. Solarize and Solar United Neighbors assist with this approach. [Pros and cons of community solar.](#)

Solar Cooperatives

A solar co-op is made up of individuals, businesses, or both, partnering to install solar panels. Each entity owns its own panels, but has the benefit of bulk pricing and support from experts and neighbors.

Loans

Ask your banking institution what rates, terms and fees are. Try national banks and see if local credit unions will match their offer.

We did not find much in the way of solar loans for congregations, but here's what we did find that may be of interest:

States with SRECS

District of Columbia
Delaware
Illinois
Maryland
New Jersey
Pennsylvania
Ohio

We know of Mennonite congregations in Illinois and Pennsylvania who have taken advantage of SRECs.

Mennonite Church of Normal

Mennonite Church of Normal, Normal, IL, installed 180 solar panels in 2019. They benefitted from a crackerjack research team, living in a state with SRECs and good luck. Illinois held a lottery for the limited SRECs available and they were chosen.

The church also set up an LLC. A member researched third-party investors but found that the church could gain ownership of the panels and enjoy free electricity five years earlier if they created their own LLC. This involved a lot of research, but was inexpensive.

One issue to be aware of is that creating an LLC sets up some dual roles, with members entering into a financial relationship with the church board. Therefore, Mennonite Church of Normal did not permit board members and the financial stewardship committee to invest in the LLC.

SAN Investing Collective

The Sustainability Alumni Network Investing Collective is a group of Mennonite individuals working to make sustainability projects—specifically solar—more affordable and approachable for non-profits. It was born when its members were looking for sustainable alternative investments.

SAN funds solar panel projects with the intent of offering affordable interest rates on loans to purchase the panels. This way, all parties can benefit—SAN, the organization, and the earth.

As of October 2022, SAN is looking for both new investors and new projects. For investors, this is a direct way to invest in a sustainable future and know how your money is used. Potential investors and churches looking for financing options can contact austin.sachs@gmail.com.

TIP

More ways to keep your congregation up on what's happening. Examples:

- A repeating icon in the church newsletter with a new sentence each week.
- A checklist posted in the fellowship hall.
- A graphic such as a series of puzzle pieces labeled with different tasks as they are completed.

- **Clean Energy Federal Credit Union, Denver CO**

This is a financial institution focused solely on providing loans that help people afford clean energy products and services. Institutions can invest, but only individuals can borrow.

- **Everence FCU** has a .5% discount for homeowners' home equity loans (not for congregations) if the project is at least 75% focused on energy efficiency.

- **Kindred Credit Union, ON**, offers creation care loans for Ontario congregations. Creation Care Loans are renewable fixed rate loans that come with a 0.5% environmental discount.



A Utility-owned Solar Garden

Lower Deer Creek Mennonite Church, Kalona, Iowa Panel purchase 2013

Solar farms or gardens enable even renters to use solar energy by purchasing panels in an array owned by a utility or business. In this case, the “crop” is electricity.

Farmers Electric Cooperative is nationally known as a solar energy leader despite their small size. They produce 20% of the kilowatt hours their customers use through local solar panels. Farmers does not offer customers net metering, but participates in Iowa's Solar Renewable Energy Credit and offers other incentives for renewables. The utility has a Solar Farm (9 acres) and a Solar Garden (1 acre, 50 kW) on its property.

In 2013, Lower Deer Creek Mennonite Church, a church in the Evana Network in Kalona, Iowa, received an invitation to buy solar panels in Farmers' solar garden. Pastor Steve Nelson says, “We jumped all over it; it was a win-win. I could not see us going the route of putting up our own solar panels, but as a church, I think we are all called to be stewards of the earth. Maybe that isn't at the forefront of our conversations as a church, but it is at the heart of our people.” He sees parallels between being intentional about energy use and members' use of cover crops to care for their soil.

The church council had the authority to approve a project of this size and purchased 10 solar panels at \$375 each, totalling \$3,750. Annual production from the 10 panels is approximately 3,000 kilowatt hours. Lower Deer Creek receives a monthly credit of around \$35, taken off their bill. Deer Creek is one of five local congregations that have bought panels in the solar garden.



A do-it-yourself solar installation team from Berkey Avenue Mennonite Fellowship, Goshen, IN.

Final Pieces

Once you have carefully prepared your congregation, chosen a good solar installer and assembled your funding, the puzzle is almost complete. You can follow your church's approval process and trust your solar installer from here on out. A typical installation takes less than a week.

That said, churches sometimes encounter hang-ups in the permitting process. Permits are required before the installation. Afterwards, you will need an inspection and permission to connect to the grid and operate. Specifics are different in every location, but be prepared for permitting issues to take longer than you think they should. The good news is that these are things your solar installer should handle.

Solar owners report very little in the way of maintenance issues. Kerry Goodrich, property supervisor at Merry Lea Environmental Learning Center of Goshen College, has overseen buildings with solar energy for 16 years. Occasionally, solar production will dip because an individual panel will burn out and need to be replaced. This is not a big job, but since it involves climbing on a roof, he hires a solar company to handle the replacement. The biggest challenge he has faced is Merry Lea's location in a rural area where the solar market has been unstable. Solar companies he has used have gone out of business or employ new technicians with little experience. Hopefully, this will change as more and more solar panels are installed.

Solar Barn Raisings

Some people are able to install their own panels because they have in-house expertise or a solar installer willing to supervise volunteer labor.

"Solar barn raising" is one name for this approach. Secure Futures, a solar certified B corporation in Virginia advertises solar barn raisings on its website and lists five examples:

- **Daniels Run Peace Church**
Fairfax, Virginia
- **Mennonite Central Committee**
Office, Akron, PA
- **Eastern Mennonite University**
Harrisonburg, VA
- **Gift and Thrift resale store**
Harrisonburg, VA
- **Eastern Mennonite School**
Harrisonburg, VA

At the Gift and Thrift, community members with carpentry skills volunteered their time to install over 300 solar panels on the store. Thanks to volunteer labor, the cost of this installation was about a dollar per watt lower than the national average.

Forms of Closure

First Mennonite of Indianapolis held a solar celebration the spring after installation featuring speakers and music. In the midst of congregational transitions, this event gave people a sense of cooperative success.

Park View Mennonite Church in Harrisonburg added a TV display in the fellowship hall that displays real time data every Sunday.

Landisville Mennonite Church, PA, made a video about their installation. [See it here.](#)

Akron Mennonite Church, PA, sent its members a link that enabled everyone to monitor their panels' production.

First Mennonite Church of Normal, IL, did not manage to celebrate their solar installation in public ways due to COVID-19. They still regret the lost opportunity.



Shalom Mennonite Fellowship, Tucson, AZ, gathered for a celebratory photo after their panels were installed.

Celebrate!

“Preach the Gospel at all times. If necessary, use words.”

–Attributed to St. Francis

For those who understand the gravity of climate change, a solar array is a silent witness and a sign of hope. If your church installed solar out of a desire to serve the broader community, this is an opportunity to model God’s love for all people and inspire others. There are many ways to give your silent solar panels a voice. If your solar committee is exhausted by now, ask other folks to take over. You don’t need to be a solar geek to plan a party.

Hold a commissioning service or recognition within a worship service:

Many of the things churches accomplish are hard to see. Solar panels are not. Your church deserves to celebrate this morale-booster. The service could include other actions that highlight the gift of solar energy, such as tree planting or a children’s time involving garden plants. Or it could be broadened to show other ways people apply faith to practical decision-making.

Have a solar celebration for the community:

Don’t miss this opportunity to invite the neighbors and explain how and why you installed solar panels. Show them your system and explain how it works. Most people are not opposed to solar solutions; they are simply ignorant about the possibilities and their own ability to pull it off. As stated before, the best predictor of whether a household has solar panels is not politics or income—it’s if the neighbors got them first.



Solar installers working on the roof of Taftsville Chapel Mennonite Fellowship, Woodstock, VT.

Portal Kiosk

Customers can monitor their panels through a portal supplied by their inverter brand or solar installer.

Example of a portal kiosk

Interior displays:

Bulletin boards, photo slide shows and other visual aids have been important vehicles for some groups. For a price, you can install a solar kiosk.

Exterior signage:

If the panels are not easily visible, you consider outdoor signage. Local partners may provide this.

Make ongoing information available to the congregation:

Your solar installer can help you find apps that will enable any one who is interested to see daily energy production and to translate that into dollars, carbon emissions saved or trees planted. Another way to share this information is through a monthly solar update in the church newsletter.

Don't forget your website and social media:

If you want newcomers to join your church, you need to let them know who you are and what's important to you. People who are seeking a church concerned about environmental issues will take notice.



Solar signage at Walnut Hill Mennonite Church, Goshen, IN.

Climate Reparations

Exodus 21:33

“If someone leaves a pit open...and an ox or donkey falls into it, the owner of the pit must make good on the loss...”

Park View Mennonite Church Harrisonburg, VA

Park View pays climate reparations on the fossil fuels they are still using. They assess the church budget \$6600 per year and put this in a Climate Justice Fund, which they then distribute to communities that have been affected by climate change. Keeping this commitment can be challenging. See their rationale and method [here](#).

West Philadelphia Mennonite Fellowship, PA

This urban church is a member of POWER, an interfaith nonprofit that pursues racial justice, including green energy benefits for all. For example, POWER advocated for their utility to buy solar power from low income neighborhoods in Philadelphia instead of elsewhere. Former pastor Lorie Hershey describes the initiative in [this](#)

Other Ways to Respond

There are many other ways to support climate justice and the transition to renewable energy. Here are a few:

- **Community solar options:** Check if any form of group solar—like the solar garden on page 28—is available in your area. If it isn't, how can you make it happen in your town?
- **Educate yourselves:** Talk to your utility to find out what energy sources power your community. What percentage of each? Can they tell you what areas of the country supply them? Then learn more about the environmental consequences in that area during a Christian education class.
- **Paying for damages:** Individuals or churches participating in voluntary gas tax groups “tax” themselves on all purchases at the pump as a way of remembering that their driving has consequences. They pool their tax money and give it away as an act of justice rather than charity.
- **Planting trees:** Trees absorb CO2 and have many other benefits. Mennonite Men's Join Trees program aims to plant a million trees by 2030. One of their projects planted 20,000 trees on the hillsides of Cubulco, a deforested mountainous region in Guatemala. Donate to [Join Trees](#).
- **Solar advocacy:** Learn about the solar policies of your utility company, city and state. How can consumers in your area advocate for policies that support renewable energy?
- **Walk with a community affected by mining** of fossil fuels or minerals used in renewable energy. One place to start is the [Dismantling the Doctrine of Discovery](#)'s network of Repair Congregations.
- **Support MCCN's solar grants:** We offer a grant for supporting churches going solar, but we cannot assist all of the qualified applicants. We'd also like to have a parallel grant for Canadian churches. Make sure you label your donation “De Young Net Zero Energy Fund.” [Donations](#)
- **Help others go solar:** Spread the word, share your story, share the resources you found helpful.

Resources

- 33 Solar Installers Consulted for this Project
- 34 Questions to Ask Solar Installers
- 36 Solar Coaches
- 38 Additional Sources

Solar Installers Consulted for this Project

The following solar installation companies offered input for this booklet, either through interviews or by reviewing a draft of this booklet. We thank them for their generosity!

Cromwell Solar

785-371-1429

cromwellsolar.com

Cromwell in Lawrence, KS, has been in existence for 40 years and is one of the oldest solar firms in the country. They have done over 3000 installations and use only their own certified installers.

Paradise Energy Solutions

General number: 877-851-9269

paradisepolarenergy.com

Paradise was begun in 2009 by brothers Tim, Marcus, Matthew, and Jason Beiler. It is still owned by this Beachy Amish family. Paradise is active in the following states: Pennsylvania, Delaware, New Jersey, New York, Ohio, Virginia and West Virginia.

Green Hill Solar

540-383-9741

greenhillsolar.org

This business is owned by Eric Beck, eric@greenhillsolar.org, and operates out of Harrisonburg, VA.

King Solar

kingsolar.net

King Solar has been in the business since 1982. The owners are Mark Horst (Kansas) and Nick King (Carlsbad.)

Hutchinson, KS

316-265-8568

mark@kingsolar.net

Carlsbad, NM

575-887-0606

nick@kingsolarnm.com

Solar Energy Systems

574-773-0546

sesindiana.com

This business installs systems on homes, nonprofits, commercial buildings and in agricultural settings. Since their county is known as the RV capital of the world, they also have expertise in solar for RVs. Brian Burkholder, brian@sesindiana.com, is the owner of the company, and it operates out of Nappanee, IN.

Technicians for Sustainability

312-523-9955

TFSsolar.com

This business operates out of Tucson, Arizona. Here, our contact was Duane Ediger, duaneediger@gmail.com.



Questions to Ask Solar Installers

When you interview potential solar installers, it's a good idea to ask about the company itself, the services provided, their experience with installations like yours and how they respond when things go wrong. Choose from the questions below:

About the company

1. Where are your headquarters located? This will tell you whether ownership is local, which can indicate commitment to the community and long-term accountability.
2. What are the names of the owners?
3. When was your first year of business? Longevity has little to do with the quality of their work or solar experience, but it does indicate stability. That's important when your purchase is supposed to last 25 years.
4. Is your company meeting state licensing requirements? Is your electrician licensed in this state? Most states require solar installers to have a contractor's license plus a licensed electrician to do the electric work. Some states require additional licenses for renewable installations. For example, Virginia requires an Alternative Energy Services License.
5. Do you use subcontractors or install in-house? Many installers contract with an electrician, but if the panel installers are subcontracted, that may be a warning sign that the company contracts out most of its tasks.

Relevant Experience

1. What's your experience working with small commercial systems?
You can also ask about experience with churches, but churches are considered commercial. The main differences are that the permitting process is less complex for churches, the financing is different, and churches tend to move more slowly.
2. What's your experience working with permitting in this city/county? What permitting and legal issues can the congregation count on you to take care of?
Most installers take care of building permits, authorization to connect from the Electrical Safety Authority, and renewable energy approval if required. The core issue is whether the company has done it often enough to be confident.
3. What's your experience working with the local utility?
4. How many of your workers are certified with the North American Board of Certified Energy Practitioners, or NABCEP?

This is the gold standard for quality solar installers. If the answer is none of them, this is not a deal breaker; non-certified installers can also do excellent work. But one advantage with NABCEP is that it provides a level of accountability. The customer can write a complaint and NABCEP will help resolve it. Note that NABCEP certifies individuals, not companies.

TIP

If you have several quotes that seem like apples-to-oranges, or all of them look the same to you, Mark Horst, co-owner of King Solar in Hutchinson KS, can review these for you in a few hours.

For details and fees, see: kingsolar.net, 316-265-8568.



Our congregation recognizes that our lifestyles are contributing to climate change and that these changes are impacting poor communities disproportionately. We want to limit our negative impact on our community, the environment, and destitute populations around the world.”

—Akron Mennonite Church

Services Provided

1. Do you visit the site for accurate panel placement and provide an estimate? If not, run away!
2. Do you use specialized shade-reading equipment?
These estimate how many kilowatt hours of energy the site will produce and make the proposal much more accurate.
3. What technical issues do you take care of?
4. In addition to the installation, what other services do you provide? What are the costs of these services?
5. What are the ongoing operating and maintenance costs we can expect?
Who will be responsible for them? The company or the church?
6. Do you provide a warranty for the life of the materials? For service?
The best warranties cover equipment and services over the life of the panels. Some manufacturers offer three-year warranties on panels; others offer 20-25 year warranties. Some installers offer service contracts in addition to the warranty to do annual system checks.
7. What kind of long-term monitoring do you offer to ensure the system is working properly, and to measure solar output?
 - If the system is not producing the amount of energy expected, whose responsibility is it to alert the customer? This is called “deviation in production.”
 - To initiate a warranty process and take responsibility for fixing things?
Some companies offer daily monitoring for an additional fee and respond to any alerts.
8. What is the title of the person we can continue to contact over the life of the system?
9. If I order from you today, when can I expect my project to be installed?

When things go wrong

1. Do you have any pending or active legal judgments against your company?
2. Could you give me the name of a job where you made a mistake? I would like to hear about how it was resolved. (An installer recommends asking this.)
3. What is your method of waterproofing when you penetrate a roof? What’s your track record: how many roof leaks have you had to deal with?
4. How many times per year have you replaced/repaired an installation?
5. What kind of failure rate have you seen with the inverters you use? What’s the expense when the inverters need to be replaced?

Solar Coaches by State

These solar champions are either licensed solar installers or have helped lead their congregation's solar project. They have agreed to share their knowledge with Mennonite congregations in their state who are exploring solar.

Consults depend on the coaches' availability at the time you contact them. If you are reading this more than a year after the date above, know that the coach may no longer be available. Coaches' knowledge of their state's regulations and funding resources varies, especially in light of recent changes involving the Inflation Reduction Act.

Last updated: September 2022

National

Mark Horst

316-265-8568

www.kingsolar.net

mark@kingsolar.net

Mark is an owner of King Solar, Hutchinson, KS, and is willing to take brief calls at no charge from any Mennonite congregation looking to install solar (5 to 20 minutes). He also offers consulting and analysis of contractor bids. Call him for fees and details.

Arizona

Duane Ediger

312-523-9955

duaneediger@gmail.com

www.TFSsolar.com

Duane is a solar installer in Tucson, employed by Technicians for Sustainability

Colorado

Rick Coen of Namaste Solar -

www.namastesolar.com

coenrw@gmail.com

Rick is based in Ft. Collins. Namaste Solar is based in Boulder.

Illinois

Brian Sauder

brian@faithinplace.org

217-649-1898

Brian is an ordained Mennonite minister and the executive director of Faith in Place, an environmental nonprofit that operates in Illinois and more recently, Indiana and Wisconsin. He is based in Chicago.

Indiana

Leah Thill, Solarize Indiana

leahthill24@gmail.com

solSMART.org/team/leah-thill

solarizeindiana@gmail.com

Leah was the 2021 board chair of this solar nonprofit which operates in Northern Indiana.

Brian Sauder

brian@faithinplace.org

217-649-1898

Brian is an ordained Mennonite minister and the executive director of Faith in Place, an environmental nonprofit that operates in Illinois and more recently, Indiana and Wisconsin. He is based in Chicago.

Sam Carpenter

317-625-0161

sam_carpen@hotmail.com

Sam Carpenter served as a "tenacious leader" for a 34-kilowatt solar installation at First Mennonite Church, Indianapolis.

Iowa

Dick Yoder-Short

319-683-2547

dyoder-short@hillcresttravens.org

Dick is a licensed electrician and solar installer from Kalona, IA. He also worked on solar projects with his high school physics students.

Kansas

Mark Horst

316-265-8568

www.kingsolar.net

mark@kingsolar.net

Mark is an owner of King Solar, Hutchinson, KS, and is willing to take brief calls at no charge from any Mennonite congregation looking to install solar (up to 20 minutes). He also offers consulting and analysis of contractor bids. Call him for fees and details.

Clyde Schwanke

785-207-6541

clydeschwanke@gmail.com

Clyde is an enthusiastic solar evangelist who helped with solar panels for Southern Hills Mennonite Church, Topeka, KS.

New Mexico

Sue Brown

505-515-1204

Susanne.Brown37@gmail.com

Sue Brown helped develop Albuquerque Mennonite Church's LLC and has assisted other congregations. She also wrote a successful MCCN grant.

Nick King

KingSolar LLC

575-887-0606

nick@kingsolarnm.com

Nick is a solar installer in Carlsbad, NM, and an owner of King Solar.

Ohio

Erin Gotwals

740-502-2656

elgotwals@gmail.com

Erin worked on Millersburg Mennonite Church's solar array, Millersburg, OH.

Sheldon Stutzman

330-401-4836

sheldon@paradisenergy.com

Sheldon is a NABCEP Certified Solar Energy Consultant with Paradise Energy Solutions and has helped hundreds of businesses, farmers, nonprofits and residential customers work through their specific goals to find the best solutions in their journey to solar energy. Sheldon is willing to answer questions and provide guidance in Ohio, Western PA and the panhandle of WV.

Pennsylvania

Nick Buckwalter

nickbuckwalter@gmail.com

717-492-6201

Nick led Akron Mennonite Church's solar process and has experience working with Collective Sun.

Jon Rudy

jonk3qf@gmail.com

717-333-6890

Jon was a leader for Landisville Mennonite Church's solar installation. He also has experience working with youth on this topic.

Sheldon Stutzman

See listing under Ohio.

Vermont

Heather Wolfe

heather.wolfe@hotmail.com

Heather was the "tenacious leader" for a solar installation at Taftsville Chapel Mennonite Fellowship in 2016. She is also a wealth of information on permaculture, sustainable food and the creation care liaison role.

Steve McCloskey

steve.mccloskey@gmail.com

In his role as pastor at Taftsville Chapel, Steve has supported the church's creation care efforts with pastoral and theological wisdom.

Virginia

Jim Leaman

james.leaman@emu.edu

540-432-4152

Jim Leaman is a business professor who has researched the economics of solar panels and green building. LINK to CSCS He was involved with Park View Mennonite Church's project in Harrisonburg, VA, designing financial model. He has also consulted with about ten other churches.

West Virginia

Sheldon Stutzman

See listing under Ohio.

Wisconsin

Brian Sauder

brian@faithinplace.org

217-649-1898

Brian is an ordained Mennonite minister and the executive director of Faith in Place, an environmental nonprofit that operates in Illinois and more recently, Indiana and Wisconsin. He is based in Chicago.

Additional Sources

A wealth of information on greening congregations and solar energy is readily available. Author Karla Kauffman found these sources particularly helpful.

Books

A Climate for Change: Global Warming Facts for Faith-Based Decisions. Andrew Farley, Katherine Hayhoe 2009

- This book is written by a husband-wife team from Lubbock, Texas. She's a climate scientist; he's an Evangelical pastor. They were inspired to write about climate change together after fielding questions from friends who wanted to hear from fellow Christians.

Greening Spaces for Worship and Ministry: Congregations, their Buildings and Creation Care. Mark Torgerson, Alban Institute, Herndon VA. 2012.

- Covers new construction and renovations. Case studies from a variety of faith traditions, including solar panels in newly installed stained-glass windows.

Anabaptist-Related

Resolutions

- The Church of the Brethren has issued a number of resolutions on creation care. See the [2018 resolution](#). Others can be accessed here.
- Mennonite Church USA passed a [creation care resolution](#) in 2013 that called for study and action. MCCN created the [Every Creature Singing](#) curriculum for this purpose.
- Mennonite Church Canada issued a 2022 statement on climate change with seven initiatives. Earlier resolutions are noted here.

Center for Sustainable Climate Solutions

Soon to be known as the Anabaptist Climate Collaborative, this nonprofit aims to inspire action on climate change. If you are looking for in-depth analysis of the economics of green building and going solar, don't miss Jim Leaman's research here: [Slash Climate Emissions with Accessible Choices in Housing](#).

Mennonite Creation Care Network

Faith-based resources and stories about congregations working on a wide range of creation care possibilities. MCCN offers an annual net zero energy grant for solar panels and car charging stations.

Solar Panels for Landisville Mennonite Church

[This 12-minute video](#) tells how and why the congregation installed solar panels. It was produced by Jon Rudy and the Landisville Mennonite youth group. Financial comments are relevant to Pennsylvania only.

Other Nonprofits

Catholic Energies

Catholic Energies provides expertise that can help design, implement and finance sustainable projects that reduce energy costs. While they only work with Catholic groups, there are helpful ideas here for others as well.

Episcopal Public Policy Network [Creation Care Series, Renewable Energy](#)

A 2019 series of articles on climate-related policy. Topics include carbon taxes, government infrastructure, environmental racism.

Greening Sacred Spaces - Toronto

Assists faith communities with both the educational and spiritual dimensions of greening as well as the "how to" side of audits, retrofits and reducing a faith community's footprint. Based in Toronto, Canada. Has a detailed "Practical Guide to Improving the Energy Efficiency of your Religious Building."

Interfaith Power and Light

A national organization with chapters in 40 states which provides spiritual and practical ecological resources for faith communities. Going Solar for Congregations, a guide from the D.C./Maryland/Northern Virginia affiliate, is just one example of the types of resources available here. Find your state affiliate

Sustainability Sanctuary Coalition

This nonprofit in the Kansas City area assists congregations with strategies, tools, and resources to "become powerful forces for the protection of the planet."

Focusing on non-Causasian congregations

In March 2022, the following organizations received funding and other support from the U.S. Department of Energy's National Renewable Energy Laboratory for the purpose of helping BIPOC houses of worship go solar.

- **Green The Church**
Supports community-driven solar projects and ensuring that such projects are accountable to and co-created with the communities most impacted.
- **RE-volv**
A climate justice nonprofit that helps community-serving nonprofits across the country go solar, raises awareness about the benefits of solar power, and trains the next generation of clean energy leaders.

Solar-Specific

Paradise Energy Solutions

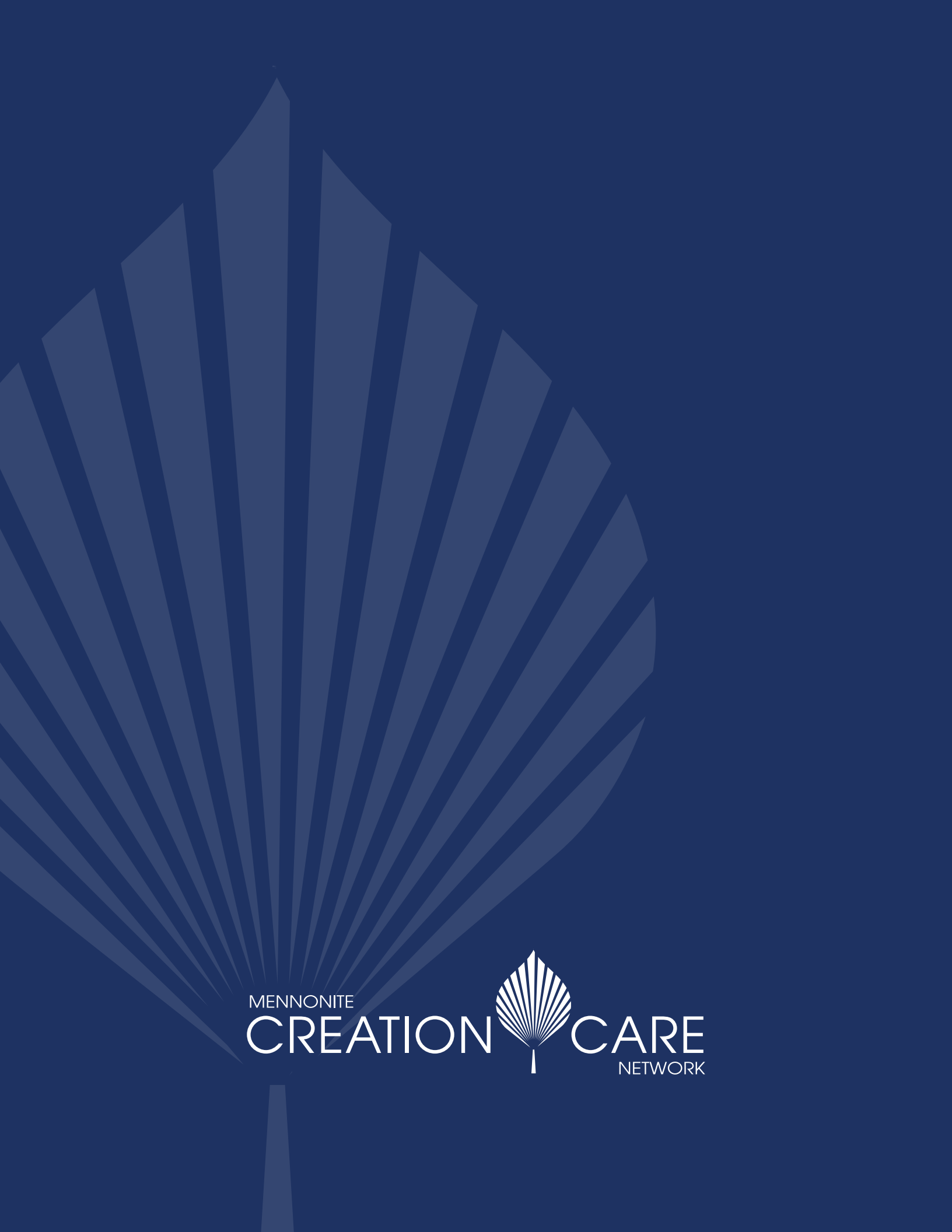
has information on many aspects of solar.

Solar to the People

Non-biased information on solar power. The site offers multiple competitive quotes from installers in your area. They also provide educational resources for many situations, including churches.

Solarize Indiana

This nonprofit was set up to help Hoosiers install before Indiana's net metering program expired. They have assisted numerous Mennonite congregations.



MENNONITE
CREATION  CARE
NETWORK