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FAITH
IN SOLAR



Iowa Interfaith Power & Light's Solar Guide

Solar Financing Models, Resources, and Success Stories for Congregations and Faith Communities



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Introduction

Iowa Interfaith Power & Light works to inspire and equip people of faith to become leaders finding solutions to climate change. We do this by helping congregations become models of energy efficiency, utilize renewable energy, and lead by showing strong examples of stewardship of creation. We are currently putting our faith in solar. By installing and supporting solar on congregational facilities, people of faith are reducing their carbon emissions and relying on safe, clean, and renewable energy, all while saving money on their energy bills—money they can invest in their community and in their mission.

The United States has installed the solar capacity to power more than 2.2 million homes. According to a publication by the Iowa Environmental Council, Iowa has the potential to build enough solar photovoltaic (PV) panels to meet annual electric needs by more than 150 times over. All across America—and especially across Iowa—there are opportunities to turn our homes, congregations, schools, and neighborhood rooftops into solutions to climate change.

This guide is meant to serve as an addendum to the [Iowa Energy Center's Solar PV Guide](#), a resource compiled for Iowans looking to install solar on their homes and businesses. At Iowa IPL, we know that congregations and faith communities face additional challenges when it comes to installing and financing solar on their facilities. We hope this guide will help congregations overcome those unique obstacles.

In order to get the most out of this guide, please read through [Iowa Energy Center's Solar PV Guide](#) first. This will give you a better understanding of how solar PV technology works, where to begin, what to expect at a site visit, what questions to ask of a solar vendor, and other helpful information.

Within this guide, you will find success stories from congregations across Iowa that have installed solar or have undergone significant energy efficiency updates. These stories speak to the specific challenges faith communities face and share the lessons they have learned in making renewable energy updates. You also will find models for financing solar, a list of solar installers willing to work with congregations, and additional resources that will help your congregation move toward installing clean and renewable energy on your facility.



SUCCESS STORY ↓

Energy Efficiency First, Then Solar

First Lutheran Church, Decorah

First Lutheran Church in Decorah quietly has been going about caring for creation in a big way, cutting their energy bill in half! It's not splashy and it's not showy. In fact, you can hardly even see the changes. Still, First Lutheran has gradually reduced the amount of energy it takes to heat, cool, and light their congregational building as a way of caring for the earth.

Since 2009 they have reduced their energy use by an average of 48% per year and their carbon emissions by 45%. They are well on their way to meeting the goal they set for themselves by signing the [Paris Pledge](#), a promise by individuals and congregations to reduce carbon emissions 50% by 2030 and 100% by 2050.

Over the course of several years, they replaced their windows and doors with energy efficient products and replaced their incandescent lighting with more efficient fluorescent fixtures.

When they conducted an energy audit, they found that their building was losing 48% of its heat through the walls and 18% through attic areas due to lack of insulation. The audit also found poor zoning and an inefficient steam-to-hot-water converter.



Using the energy audit data, they submitted an energy efficiency and conservation block grant proposal through the City of Decorah to the Iowa Office of Energy Independence with funding from the American Recovery and Reinvestment Act of 2009.

The project was awarded \$114,000 to be matched by the congregation. A new 96% efficient hot water condensing boiler system, computerized energy management system, new domestic hot water system, and insulation were installed and have dramatically reduced heating costs and related greenhouse gas emissions.



The congregation's energy costs declined 49% in the first year. Since then, First Lutheran has invested in subsequent, smaller measures, such as continuing to insulate new areas, adding the air conditioning to the energy management system, and adding motion sensors to lighting. They were able to reduce their energy use while utilization of the church's space increased for various ministries.

Recently, the EPA certified First Lutheran as an Energy Star congregation with a rating of 97, and the ELCA invited them to be a part of the [Energy Stewards Initiative](#).

In August of 2014 First Lutheran installed an 8-kilowatt solar array on the roof of the education building, saving an additional 23% off their electricity bill over two years. They saved \$2,100 the first year, and \$1,700 the second year. (The amount differed due to the varying number of sunny days.) Part of the savings also was due to the installation of new L.E.D. lights in areas of high usage.

The solar project was funded in a three-prong way: two families donated one third of the total cost and then loaned the church another third to be repaid with energy savings on an annual basis. The final third was covered by a rebate from their electric utility, Alliant. (This rebate is no longer available.)

The Green Team at First Lutheran feels that there are still many steps they can take to reduce energy costs and carbon, and they hope to continue their efforts. They are looking to change the bulbs in the historic fixtures in the sanctuary to more efficient bulbs once they become available. They also will investigate how to improve the insulation



in their bell tower and how to replace their old dishwasher with an energy efficient one.

Pastor Chad Huebner says, **“We are committed to the care of God's creation and are aware that the energy efficiency of our building is a testimony to our commitment to be good stewards of God's gifts. We hope that the work we do on our church property will encourage others in our community to make the same leap of faith.”**

Visit their website at www.firstlutherandecorah.org. For more information about their solar array or efficiency updates, contact Larry Grimstad at larrygrimstad@gmail.com.

Energy Efficiency Tips

The Iowa Energy Center's Solar PV Guide recommends maximizing energy efficiency as the preliminary step to installing solar. First Lutheran Church of Decorah modeled this important step in their success story by making sure their facility was as efficient as possible before investing in solar. Energy efficiency is typically less expensive and can stretch resources farther—allowing for smaller and less expensive solar systems to be installed. Begin by contacting your utility provider for an energy assessment or audit. Many Iowa utilities provide this assessment for free and have additional rebates and programs to help congregations cover the cost of energy efficiency projects.

Some faith communities may want to begin by evaluating their **energy conservation practices**. While efficiency and conservation are related, they are not the same practice. Energy conservation is the process of using less energy or going without. Congregations can cultivate habits of turning lights off when leaving rooms, making sure the dishwasher is full before running it, and lowering the thermostat to conserve energy. Energy efficiency is using technology that requires less energy to perform the same function, such as replacing light bulbs, windows, or appliances.

Iowa IPL's *Cool Congregations* program teaches faith communities how to reduce their energy use in their homes and places of worship. For more information about that program and other energy efficiency tools, [visit our website](#). To schedule a workshop for your congregation, contact Sarah Paulos, Iowa IPL Program and Outreach Coordinator, at programs@iowaip.org.

Download a tip sheet here: [14 Ways to Save Energy & Money](#)



A Community and Congregational Effort

Collegiate United Methodist Church/Wesley Foundation, Ames

Mary Jean Baker, an active member of Collegiate United Methodist Church/ Wesley Foundation in Ames, has been working on energy issues within congregations for 30 years. In 1987 at her church in Annapolis, Maryland, she helped the congregation work through a dispute over a particularly high energy bill. At the time she knew there must be a scientific way to find out why their bills were so high and how they could work to use less energy in their facility.

She brought together representatives from each part of the church—from the women’s groups, from music, from education—to learn the facts and share in making decisions that lowered the church’s energy bill significantly. Then she formed an Energy Pool, which is a list of persons with interest and expertise in



energy management. The pool was a source of volunteers to help answer or research technical questions and help with projects to improve efficiency and expand the building.

While the congregation doesn’t have an official Green Team or a committee focused on sustainability, they have many members and staff that are conscious about caring for creation. Small groups of people have worked on various projects over the years. “The congregation has been very supportive; we have a lot of smart people from the community and the university who want to see these updates made,” says Mary Jean.

When Collegiate/Wesley added a new space in 2007, they incorporated programmable thermostats with remote sensors and installed low flow toilets and faucets in that space. They chose more efficient lighting for the whole building.



Through the congregation's Raise the Roof campaign, they replaced and insulated the roof, including the roof over the sanctuary. They replaced old kitchen appliances—including their refrigerator and freezer—with new, more efficient models. A year later they replaced the old steam boiler with two more efficient boilers. In 2014 they installed a Direct Digital Control system that allows for strategic scheduling of equipment and off-site control of their heating, ventilation, and air conditioning system in their sanctuary and fellowship hall.

Even though Collegiate/Wesley has made quite a few energy efficiency updates, they continue to dream and think about ways to become more efficient and more sustainable. They are slowly swapping lights to LED's. What's next? "Hopefully solar," says Mary Jean. "There are people in the Energy Pool that want to work on the idea."

Mary Jean served on the Mayor's Sustainability Task Force in 2011 as a representative of the faith community. She helped write "Best Management Practices for Houses of Worship in Ames," a document that provides information on everything from lighting and thermostats to details concerning a sanctuary and pipe organ. She has organized workshops on subjects such as electricity demand and LED lighting.

Mary Jean cultivates a community wide "Care and Share" document that lists equipment, methods, updates, and programs currently tried by 14 Ames congregations working to care for creation. The document is meant to be an open resource for churches and faith communities looking to make similar updates—so they can reach out to their neighbors with questions and concerns.

This widespread effort—which brings together committees, members, and groups and engages congregations throughout the Ames community—is a model for success. By taking into consideration church-wide cooperation and community-wide collaboration, Collegiate/Wesley offers a model for creation care that should be shared and celebrated.

For more information visit their website at www.cwames.org. For information about Collegiate/Wesley's energy efficiency updates or the Ames Cares & Share document, contact Mary Jean Baker at bakerae@aol.com.

Why Go Solar?

Clean and renewable energy represents the priorities of people of faith across the political spectrum: protecting the earth, helping care for the poor and vulnerable, creating jobs, and stimulating the local economy. By installing solar on your facility, you are caring for creation, the poor, and your local and global community—all while saving money you can reinvest into your mission.

Care for Creation

- Solar energy keeps our air and water clean, leaves no pollution, reduces our carbon emissions, and is healthy both for workers and users.
- Solar energy provides a vast and constantly replenished source of energy with significantly less environmental impact than coal, oil, and natural gas.

Care for our Neighbors

- Energy costs make up a disproportionate part of low-income household budgets. Investing in renewable energy helps low-income communities by providing steady power not subject to the same shocks of coal or gas price spikes. As congregations, businesses, and residents invest in solar, it grows Iowa's solar market and encourages a larger shift to clean energy—a shift that will benefit the most vulnerable in our state.
- The poor often are hit hardest by pollution, which can lead to childhood asthma, heart attacks, and cancer. These conditions require significant health care costs. Transitioning to renewable energy protects the most vulnerable in our community from the costs of pollutants.

Help Create Jobs and Stimulate the Local Economy

- Across the nation, the solar industry is adding jobs twelve times faster than the rest of the economy. As of January 2017, there are approximately 600 solar jobs in Iowa. As solar continues to grow more local, good-paying jobs will become available.
- When congregations and faith communities install solar on their facility, they inspire their members and the larger community to think sustainably about their energy use. Congregations serving as models for energy efficiency and renewable energy 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.
- Installing solar on your facility allows your congregation to save money on your monthly utility bill—money you can invest in your local community and your mission.



A Smart and Sustainable Plan for Efficiency

Grinnell United Methodist Church

Across Iowa, faith communities and congregations are facilitating important conversations about their energy use—they are having energy audits conducted on their places of worship, they are educating their community on the importance of conservation and efficiency, and they are joining together around their call to care for creation.

Members of Grinnell United Methodist Church have been engaged in this work for over 25 years. In 1998, when they began construction on a new addition to make room for their increasing membership and activities, they installed a geothermal heating and cooling system. Over the years they have updated and added efficient lighting throughout the church, have replaced doors and windows, and have done the hard work of building environmental awareness throughout the congregation.



With the help of an active Environmental Stewardship Committee, the church has hosted composting workshops, moved to reusable cups and dishware, posted notes around the church to encourage members to think efficiently and environmentally as they use the building, and encouraged members to take what they've learned in church back to their homes—by recycling, conserving water, and producing less waste. Each week, an Environmental Stewardship Fact is featured in the worship bulletin.

The congregation's motivation for this work stems from the [*Social Principals of the United Methodist Church*](#), a guide that explains how United Methodists are called to live in the world. In particular, the principal on the Natural World names the earth as God's good creation which has inherent value. It calls United Methodists to be responsible for the ways in which humans use and abuse creation and lists lifestyle changes, efficiency, and renewable energy development as tangible practices to care for the earth.

As Grinnell UMC looks to the future and dreams about plans for energy reduction and renewable energy, they hope to create a masterplan that is smart, sustainable, and tailored to their community. Craig and Monique Shore have been members of Grinnell UMC since the early '90s and have been active in the push for conservation and efficiency.

“The church knows what the right thing to do is—in terms of caring for the environment—but we want to make sure we have collected all of the information and are doing things in



the right order,” says Craig. For example, the church received a free energy audit from their utility provider and now are engaging in conversations about replacing more windows and the state of their roof (which may need to be replaced if the congregation moves toward rooftop solar).

“We're also looking at increasing the efficiency of our geothermal system. At nearly 20 years old the heat

pumps and controls are nearing end of life. The efficiency improvements in these systems may give us a better return on investment for our money than installing solar at this point,” says Craig. **He knows there is not a one-size-fits-all approach to engaging in this kind of stewardship.** The size, age, and location of the building all must be taken into consideration as a community identifies what updates should be made first and what measures make the most sense.

These are timely and important conversations for any congregation looking to invest in solar energy. Identifying barriers to direct sunlight (such as a large, neighboring building behind Grinnell UMC) and auditing the building's roof are prerequisites that can make the installation process run much smoother.

The congregation has come a long way. “Five years ago a committee brought the possibility of solar to the church council and it didn't get anywhere,” says Monique, “but now we have members with personal experiences with solar, and we see solar throughout our larger community.” Though leadership has received little pushback from the congregation around their consistent emphasis on efficiency, they have

had to engage in the slow work of building awareness. One piece of advice Monique offers to faith communities beginning to make similar efficiency updates is to find and cultivate environmental champions. **“You need champions in the congregation that are consistent, persistent, and willing to educate and advocate on behalf of the environment,”** says Monique.

One of the biggest barriers the congregation has faced is breaking longstanding habits and learning how to work through the logistics of creating new, sustainable habits. “The congregation readily understood the move to use reusable mugs and tableware, but when it came to putting this habit into practice, it took time to iron out the details,” says Monique. Making sure there are enough reusable mugs and insuring someone is tasked with starting and emptying the dishwasher are all part of environmental stewardship.

It’s not just about making a change or haphazardly adding solar to your roof. It’s about seeing each change through and creating a smart and sustainable plan that works for your congregation and your facility.



Grinnell UMC paid for their geothermal system through a capital campaign and received a free energy audit from Alliant Energy. You can read more about Grinnell UMC on their website at www.grinnellumc.org. For more information on Grinnell UMC’s efficiency updates, contact Monique Shore at moniquemshore@gmail.com.

Solar Financing Models

For many congregations the biggest obstacle to going solar isn’t garnering support or maintaining the physical equipment. Rather, because non-profit organizations are not eligible for tax incentives, congregations and faith communities—many already facing financial burdens—must figure out how to finance their solar project. We have compiled several tested models for financing your solar energy system as a non-profit organization.

Power Purchase Agreement

A Power Purchase Agreement (PPA) is a contract between a solar power company and a congregation in which the solar company installs and owns the solar system and the congregation or faith community agrees to buy the electricity from the company. In this agreement, a church pays for solar as a service, rather than paying the up-front costs of the solar panels. The solar power company provides the capital to fund the installation and they serve as the owner-operator of the system, covering insurance, fees, and maintenance. The solar power company is able to take advantage of the solar tax credits for which non-profit organizations are not eligible.

In other states, nearly all congregations that decide to go solar pay a private company, which owns the panels on their roof, for the use of the power the panels are generating. In these communities, congregations only pay for the power provided by the panels.

Entering into a PPA eliminates the need for congregations to raise the up-front funds to purchase and install their own solar panels. Even without owning the panels on their roofs, congregations can take advantage of the benefits of solar energy.

When negotiating a contract, congregations can ask PPA providers to quote them for both “zero down” proposals as well as “pre-paid” proposals. A pre-paid option is suitable for congregations who have members that want to contribute personally to the solar project. In this option, the congregation purchases the electricity to be generated by the panels up-front. Members of your congregation invest in your church’s future by paying for future electricity costs! These pre-paid options can be funded in a variety of ways. For example, if your congregation has members prepared to make significant contributions toward your solar project, they can donate the cost of the pre-paid PPA. Donations that add up to a few thousand dollars would gift the congregation with “free” energy from the solar panels for years to come. Your donors also would enjoy the tax deduction for that year’s donation.

We are grateful for our state partners—especially Interfaith Power & Light DC.MD.NoVA—who have helped dozens of congregations on the east coast go solar. Check out their guide, *Going Solar for Congregations*, [here](#). Their work helping congregations finance solar has informed our own suggested financial models.

Refinance a Mortgage

Some congregations outside Iowa have refinanced the mortgage on their building and put the freed-up capital toward their solar system. It is possible that the energy savings from your solar system might pay for the repayment on the refinanced mortgage.

Sponsor a Panel / Fundraising/ Capital Campaign

A few congregations have decided to purchase their solar system outright. Some have turned to members of the congregation to buy full or partial solar panels and have honored donors with plaques and memorials. Others have initiated a capital campaign. Still others have undergone fundraising efforts with a promised donor match. These are fairly simple but intensive efforts designed to raise the money needed for your solar project.

Identify Loans

Some denominational offices, as well as banks and credit unions, offer low-cost loans for you to finance your solar project. The Iowa Energy Center lists financial incentives and low-cost loan options on their [website](#). Check with your faith tradition's state or national office for information on grants or low-interest loans for building projects.

If you need financing advice or alternative financing, please contact us so we can connect you with someone who has overseen a solar project before. No matter which financing model you use or what your project looks like, it is important to find professionals—energy auditors, solar installers, accountants, and lawyers—who can provide adequate documentation for RFPs, PPAs, leases, and construction agreements. It is important to get each piece of the project right and to make sure each aspect has been addressed. For solar projects, all of these documents can be found and duplicated, but they still need individual legal review.



Mennonites Buy into Solar Garden

Lower Deer Creek Mennonite, Kalona

Lower Deer Creek Mennonite in Kalona has purchased modules in Iowa's first community-owned Solar Garden operated by the nation's oldest electric cooperative, Farmer's Electric Co-op in Frytown, Iowa.

Pastor Don Patterson at Lower Deer Creek says they were motivated by the desire to conserve in the Mennonite way of making more with less, using finite resources with restraint out of concern for future generations. "It's in the DNA of the congregation," says Don. Many of their members are farmers who use hydro and wind power on their farms and are on the front lines of caring for the earth through their soil conservation practices—using no-till, cover crops, and cutting back on pesticides.

As their [Confession of Faith](#) says, "Human beings have been made for relationship with God, to live in peace with each other, and to take care of the rest of creation."

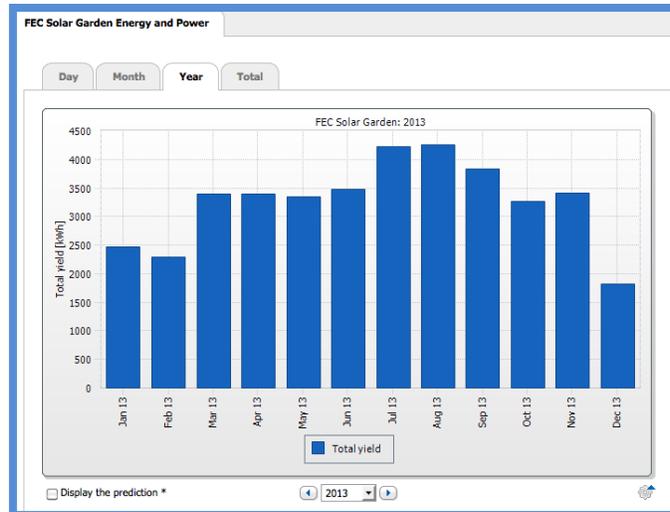


One initial question in the mind of some congregants was the desire for more tangible evidence of the investment by having the panels on church property. But several congregants, including some on the board who made the decision, already had invested in the Solar Garden and offered convincing testimonies. Plus one congregant worked for FEC and was able to provide answers to questions. Don's advice to other congregations that are considering solar is to **keep the conversation going, be sure to answer all questions of the congregants, and find the right people to answer the questions.**

Community-owned solar gardens allow individuals an affordable way to invest in solar. Many can't afford the up-front costs or don't have adequate site conditions.

With this community project, individually owned modules are installed on common arrays, with FEC providing mounts, transformers, insurance, and labor. Warren McKenna, Farmers Electric general manager, says, "To sign up, all they have to do is call us. We invoice them for the solar module, and it shows up on their bill. It's just very easy to do."

Since it was put into place in **December 2011**, **annual production has been approximately 53,328 kWh**, which translates to about **37 tons of carbon emissions avoided per year!**



The Solar Garden helps keep summer peak demand down, keeps a portion of the energy dollars in the community, and helps to keep electric rates steady.

After the initial purchase made by the Lower Deer Creek congregation of \$375 per module, the church receives a credit on their monthly bill for the retail value of the power, which is working out to be an

average of about \$3 for each of the 10 modules every month, or a savings of about \$30 per month on their electricity bill. These savings will rise as retail rates rise. At this rate payback should be about 10 years, and the system will generate power for another 20–30 years after that. Over the life of the panels, it will be a money-earning venture for the church.

The 10 modules generate about 10% of the electricity used by the congregation, and as the congregation continues to reduce their electricity use, that percent will rise. When they renovated the foyer of their building, they installed LED light bulbs and fixtures in combination with motion sensors. Elsewhere in the building, they are replacing fluorescent fixtures when their ballasts wear out with new LED light fixtures.

As a result of the congregation’s investment, several members have subsequently bought into the Solar Garden as individuals, demonstrating the power of a congregation to lead by example and influence their members in caring for the earth.

There are sixteen grid-tied solar arrays producing power at the FEC Solar Garden. You can view the energy production in real time online at www.feckalona.net. Click “View Production Data” in the left column. For more information about Lower Deer Creek Mennonite, visit their website at www.ldcmc.org.

Additional Tips and a Timeline

Though there is not a one-size-fits-all timeline for solar projects, many of the items on this list have been tried and tested by congregations and faith communities in Iowa and across the United States. This timeline is best used as a guide or outline for creating your congregation's own unique timeline. The following information assumes your congregation will enter into a Power Purchase Agreement (PPA) to finance your solar system.

1. Gather Support

Whether this begins with the congregation's Green Team, a Vestry or Church Council, or a group of interested members, it is important to have a core group of passionate individuals ready to provide information and education around the project. Once this group is solidified, begin to invite and educate other members of the congregation—your Faith Leader, youth, members with legal or tax expertise, and someone from the Property or Building and Grounds committee. By identifying a solar installer or an individual with expertise in solar installation early in the process, you can have a professional assist you throughout the following steps.

2. Determine Cost & Suitability

Determine which financing model is best for your congregation (see page 10–12), create a timeline to share with the congregation, and ensure your building is suitable for solar. The age and type of your roof, as well as what direction the building faces, should all be considered before installing solar. (Ideally, your building should have shade-free south-facing roofs/potential.) See pages 9–12 of the [Iowa Energy Center's Solar PV Guide](#) for a more in-depth review of ideal solar orientation and exposure.

3. Gain Approval

Create a presentation and host forums to showcase how your project will be funded, the benefits your community will receive from the project (financial, environmental, and educational), and how the project connects with your faith tradition and faith commitment. Depending on the size of your congregation, you might consider presenting to various committees and groups first, in order to gain more support, before hosting a congregation-wide forum. If necessary, bring in experts and professionals from your community to provide information and data. Consider inviting a congregation in Iowa that already has solar to be part of the conversation. Next, meet with your Faith Leader and other necessary groups to gain approval.

4. Delegate

Once you have more support, divide into sub-committees or groups to see that everything gets done. One congregation suggests a **communications & fundraising committee** and an **installation committee**. The communications & fundraising committee would be in charge of planning a kick-off event, contacting and acknowledging donors, planning a dedication event, and creating informational materials for the congregation and the larger community. The installation committee would be in charge of determining the best type of system, soliciting bids, and contacting, communicating, and selecting vendors and a contractor.

5. Solicit and Review Solar Proposals

Identify solar companies and issue a request for proposal (RFP). Once you've met with installers and received your bids, go over estimates and review the options.

6. Sign Contract and Begin Installation

Once you've made the final decision, your congregation will sign a contract with a company and schedule the installation. Most congregations choose to have a lawyer represent them in the contract signing process, many finding members of their congregation willing to donate their time.

7. Follow Up and Celebrate

Celebrate your success! Host a dedication ceremony for the community and invite the press. Have clergy bless the panels. Honor donors, committees, and individuals who have made your success possible. Work with religious education leaders to incorporate solar panels into your education curriculum. Follow up with Iowa IPL so we can share your success story with our network and inspire other congregations to install solar!



A Model for Resiliency

The Dubuque Rescue Mission

In January of 2014, Iowa Interfaith Power & Light highlighted the Dubuque Rescue Mission as an [Iowa Success Story](#). Under the leadership of Executive Director Rick Mihm, the Mission began recycling old appliances and replacing them with energy efficient models, underwent an energy audit, and weatherized the building by updating installation and weather stripping leaky doors. The Mission utilized grants and rebates offered by the community and their utility provider, making these updates affordable.

Since that 2014 Success Story, the Dubuque Rescue Mission has continued this important work—living into their call to stewardship. Seven months after we interviewed the Mission in 2014, they added 89 solar panels to their roof. **These panels have allowed the Mission to save 25% on their annual electric bill.** In order to



finance the panels, the Mission began setting aside money several years before the installation; they also took advantage of another rebate.

When asked if there were any obstacles or barriers to getting the solar panels installed, Rick couldn't think of any. Over the course of his time at the Mission he has advocated for energy efficiency and educated supporters and the Board of Directors on the importance of renewable energy. "By the time I came to the Board with the idea of solar, we had done all of our energy efficiency work—it was the logical next step," says Rick.

The Dubuque Rescue Mission provides a model for churches and non-profit organizations committed to reducing greenhouse gas emissions, reducing air pollution harmful to public health, creating local jobs, and saving money they can reinvest into their churches and organizations. At the Dubuque Rescue Mission, money saved goes toward their mission: offering hospitality, spiritual hope, food, shelter, clothing, and job development to those in need.

Rick is dedicated to creating independence and resiliency at the Mission—resiliency in food production, energy production, and job production. The Mission’s garden and greenhouse produce over 2,000 pounds of fresh produce for meals at the Mission and create opportunities for education and job skill development. The decision to install solar and produce renewable energy onsite fits into this resiliency model. **“As systems change, as government changes, as weather changes, we want to create a bigger buffer—a safer, more reliable future here at the Mission,”** says Rick. Isn’t it incredible that in Dubuque, Iowa men experiencing homelessness “are the growers of food and producers of energy?” he asks.

The work of the Mission and the effort they have put into renewable energy and energy efficiency has lifted them up as leaders in their community. They have set strong examples of what it means to be good stewards of creation and how to promote resiliency—examples churches and faith communities across Iowa can learn from.

For more information visit their website at www.dbqrescue.org or contact Rick Mihm at mihmr@mchsi.com.

Congregation-Friendly Solar Installers

Thank you to our generous sponsors who are committed to helping Iowans put their faith in solar! While Iowa IPL cannot endorse specific businesses or companies, we can list businesses that have experience with or are willing to work with congregations and faith communities.

CB Solar Inc.

CB Solar of Des Moines offers a complete line of affordable and reliable solar energy systems. They are a turnkey contractor and can design and install systems sized for any customer. From start to finish they are there to help with your residential, agricultural, or commercial solar power project.

Website: www.cbsolarinc.com



Integrated Power

Integrated Power provides solar solutions for businesses. Their partnerships with experienced contractors provide commercial establishments with turnkey simplicity, improved risk management, and value.

Website:

www.ipowercorp.com



SiteGen Solar

SiteGen Solar provides solar site assessment, design, financing, installation, and maintenance solutions for industrial, commercial, and residential clients. A SiteGen Solar state-licensed electrician is involved every step of the way to ensure your solar array safely operates at its maximum production.

Website:

www.sitegensolar.com



Solar Planet Group

Solar Planet Group designs and installs custom photovoltaic solar arrays for residential, agricultural, and commercial electric customers across the nation. They believe that all people should become more energy independent instead of relying on an aging grid and that sustainable renewable energy is the key to our future.

Website:

www.solarplanetgroup.com





SUCCESS STORY ↓

Building the Greenest Church in Iowa

Unitarian Universalist Society of Iowa City

In April of 2016, the Unitarian Universalist Society of Iowa City (UUSIC) broke ground on their new congregational facility. With prophetic environmental priorities and a commitment to becoming the “Greenest Church in Iowa,” the new facility will include more than 400 solar panels, a geothermal system, vegetated parking, and efficient lighting and mechanical systems. These renewable energy technologies and energy efficiency measures will enable the congregation to eventually



achieve net zero energy, meaning they will create enough onsite, renewable energy to meet all of their heating, cooling, and electricity needs.

Unitarian Universalist congregations affirm and promote seven principals—ethical guidelines that shape their commitment to the world and others. The seventh principal upholds “respect for the interdependent web of all existence of which we are a part.” According to Rev. Steven Protzman, this principal calls Unitarian Universalists “to be good stewards and to heal the earth,” and was a touchstone throughout the planning process. As the congregation met, voted on the project, and began designing their new facility, they remained faithful to respecting the earth and engaging in the most environmentally sensitive project possible.

Long before the build, the congregation’s Green Sanctuary Committee had been building environmental awareness and advocating for the adoption of sustainable practices. Committees, Green Teams, and sustainability groups can help motivate and educate whole congregations on the importance of caring for the earth and adopting efficiency measures.

These committees and teams can be valuable resources in sharing why clean energy matters and what difference it will make in the life of the congregation, the neighborhood, and the greater community—or in the case of UUSIC, what difference a completely new building fitted with multiple renewable energy technologies will make!

Steven recommends that faith communities interested in making big changes **prepare for an open and transparent communication process**—host forums and meetings, build consensus, listen, and be able to answer the question of why it matters and what difference it will make. The open process UUSIC followed ensured that all members of the congregation were invested in the build. Their buy-in meant that each vote was met with little resistance. Together, they moved forward, committed to making the greenest, most organic, and most sustainable building choices.

These choices include on-site renewable energy production through their solar array, a geothermal ground-source heat pump, LED lighting throughout the building, recycled glass countertops, Energy Star appliances and an energy recovery steam dishwasher unit, and an environmentally friendly site design. For example, they are extending a local bicycle trail to connect to the building, installing bike racks, planting native grasses, and building bioswales and permeable pavers to reduce storm water run-off and toxicity.

Steven also recommends picking an architect, a contractor, and other building professionals that have experience doing environmentally friendly design and who understand your congregation’s vision. For UUSIC, they made sure those involved in the process understood their commitment to the earth and to becoming the “Greenest Church in Iowa.” The same goes for choosing your facility steering committee. Steven says, “choose them carefully—give them a good charge, and be sure the committee is ready to interact, educate, and advocate.”

The building is set to be finished in June 2017, and the congregation is gearing up and planning for growth. With a cutting-edge design and a community dedicated to creating a just and inclusive world, the Unitarian Universalist Society of Iowa City is taking very seriously its seventh principal, to respect the interdependent web of all life. The clean and renewable technologies they are investing in and their careful choice of green and organic building strategies highlight that this is both about caring for the earth and for the health and well-being of humanity.

For more information visit their website www.uusic.org or contact Rev. Steven Protzman at minister@uusic.org.

Contact Us

We want to help educate and empower you and your congregation to be more efficient, to conserve more energy, and to put your faith in solar. As you form committees, make plans, and work to implement these updates, please do not hesitate to contact us. If you have used this guide to make energy efficiency updates or to install solar on your facility, please share your story with us! We want to showcase your stewardship and inspire other congregations to make similar updates. For more information, visit our website at www.iowaip.org.



- Contact Susan Hendershot Guy, Executive Director, at director@iowaip.org.
- Contact Hannah Landgraf, Climate and Energy Policy Specialist, at policy@iowaip.org.

Iowa IPL Programs

Iowa IPL also offers interactive programming and workshops for congregations and faith communities. We have received national recognition for our [Cool Congregations](#) program, which inspires and educates religious communities to be faithful stewards of earth. It helps people reduce their energy use and save money in the process. Our second signature program is [Food • Faith • Climate: Connecting the Dots](#). This program provides education on how our “foodprint” practices contribute to climate change and explores how our faith traditions call us to respond with practical solutions. Our newest program, [The Good Life Redefined](#), explores how our stuff contributes to climate change and how we each can make a difference by finding meaningful ways to create more joyful lives and reduce our impact on the environment.

To schedule a workshop in your area, contact Sarah Paulos, Program and Outreach Coordinator, at programs@iowaip.org.

