



Methodists Helping Methodists

F O U N D A T I O N

Considerations for Churches Seeking to Reduce Their Carbon Footprint

Methodists Helping Methodists Foundation, serving, nurturing, and securing the ministries of the Methodist movement in the Mountain Sky Conference region.

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INTRODUCTION

The Methodists Helping Methodists Foundation has been contacted by several churches in the Mountain Sky Conference who are applying for loans to help fund energy efficient capital improvements in their buildings to reduce their carbon footprint and/or reduce their energy costs. This is an opportune time to consider making these investments due to the various rebates and incentives that are currently available.

Each church varies in size, construction, age and many other factors. Therefore, there is not a single strategy (solar, lighting, window replacement, etc.) that will be effective for all churches. However, there is a protocol to determine what upgrades can be made to increase energy efficiency and enable a church to become more environmentally friendly. Once the options are known along with costs for renovations, additions and upgrades, a church will be able to establish a list of priorities, explore funding alternatives, establish a timeline for the various improvements and begin the process of implementation.

Improvements may be categorized into four sections: 1) High energy savings investments (such as renewable energy and LED lighting conversion); 2) Lower energy efficiency savings upgrades that may be required (such as HVAC, boiler system, heat pumps, roof, windows, doors, etc.); 3) Other energy related Investments (such as EV Charging Stations or water conservation upgrades); 4) Non-energy savings construction upgrades (such as interior renovations, major repairs, parking lots, etc.)

The first step in assessing the best and most cost-effective options for an individual church is a full audit and assessment of the four areas listed above. A “Green Team” consisting of representation from key committees and at-large church members could be established to review the recommendations and develop a comprehensive proposal to achieve the changes desired.

Energy reduction can be a complicated field, and often the expertise needed to make decisions about the best alternatives does not exist within the local church. There are reputable consultants who can help identify areas for improvement, investment in renewable energy, costs to retrofit or upgrade, the potential cost savings and resulting reduction in carbon footprint and/or energy cost. Consider contacting your local utility provider to determine whether they provide on-site assessment services to determine energy savings opportunities.

Consideration of energy efficiency improvements is timely as there are various rebates and incentives that are currently available. The following pages provide details of a variety of funding options along with links to additional information. There is also information about financing options, including through the Methodists Helping Methodists Foundation.

While this is just the beginning of ideas and resources for churches, we encourage churches to engage with the **Mountain Sky Creation Justice Task Force** where new resources are being added as they are discovered by the team and others around the conference.

<https://www.mtnskyumc.org/creation-justice> or email creationjustice@mtnskyumc.org

Monetary Incentives, Rebates and Grants

Monetary Incentives:

The Inflation Reduction Act (IRA) that was signed into law in August 2022 included the greatest investment in climate care provisions in history. The climate care investments in the IRA are historic and are imperative in addressing the urgent moral issue of climate justice. The new law puts the nation on the path to cut greenhouse gas emissions up to 44% by 2030. Included in the IRA are clean energy tax credits for wind and solar, EVs, efficiency upgrades, heat pumps, and much more for nonprofits.

With the passage of the IRA, nonprofits which include houses of worship now have easier access to clean energy funds and cash rebates through a program called [“Direct Pay,” often called Elective Pay](#). Before the IRA, only homeowners and commercial entities with tax liability could claim investment tax credits when installing solar panels, wind turbines, or other eligible technologies on an eligible property. Now, the Direct Pay option means non-taxable entities can also benefit from the Direct Pay rebate option.

The Infrastructure Investment and Jobs Act (IIJA) signed into law in November 2021 also provided some investments to reduce greenhouse gas emissions and increase resilience to climate impacts. The IIJA provides the Department of Energy with \$50 million over five years for a new program, [the Renew America’s Nonprofits program](#). This program will provide grants of up to \$200,000 to nonprofits to improve the energy efficiency of their facilities.

This document does not provide guidance on the 2023 U.S. Department of Energy program for Renew America’s Nonprofits. The proposal for this program is led by the University of Colorado Boulder (CUB) in cooperation with the Mountain Sky Annual Conference of the United Methodist Church as well as other organizations. The proposal requested a \$4,000,000 grant that will be shared among eligible nonprofit organizations to retrofit their facilities. Over the lifetime of the project, the DOE will identify 400 facilities, with an annual goal of 25% of these facilities being owned and operated by disadvantaged communities. The Mountain Sky Conference and CUB was awarded the grant to retrofit 20 nonprofit facilities, including churches, annually over four years. The geographic area included in this grant includes Colorado, Wyoming, Utah, New Mexico, Idaho and Montana. The Mountain Sky Conference Climate Justice Committee will work with individual churches in disbursing awards.

Monetary Rebates

The Inflation Reduction Act (IRA) of 2022 introduced a 30% Federal Direct Pay rebate to nonprofits that are exempt from income tax, who invest in renewable energy. Systems installed in 2023 are eligible to file for the rebate in 2024. The Direct Pay provision enables certain tax-exempt customers to receive a direct cash payment in lieu of an investment tax credit. Entities that qualify for Direct Pay are eligible to receive a 30% direct payment toward projects lowering greenhouse gas emissions. An additional 10% payment is available if the project is located in an economically depressed area. A “low-income community” is defined as any population census tract where the poverty rate for such tract is at least 20% or in the case of a tract not located within a metropolitan

area, median family income for such tract does not exceed 80% of statewide median family income. There is also an additional 10% incentive available if more than 50% of the materials used in the solar system are made in the USA. (This is not feasible in many cases due to the much higher cost and limited number availability of USA made products.) Organizations that are exempt from tax by 501(c)(3) are eligible for Direct Pay. The Federal 30% Direct Pay incentive program continues until 2033; after that period, it will continue at a reduced rate.

Elective Pay allows tax-exempt entities that would normally not be able to benefit from investment tax credits since they do not pay tax, to receive clean energy tax credits. The eligible entity would be required to make a Direct Payment election on Form 990T and Form 3800 along with any form required to claim the relevant Direct Pay rebate.) For more information, the following sites are available:

Tax exempt organizations: <https://www.irs.gov/pub/irs-pdf/p5817d.pdf>

Guidebook to the Inflation Reduction Act's Investments in Clean Energy and Climate Action: <https://www.whitehouse.gov/wp-content/uploads/2022/12/Inflation-Reduction-Act-Guidebook.pdf>

Federal Direct Pay Rebate Application Process

- If you have a solar photovoltaic (PV) project and want to receive the Direct Pay option, you should pre-file with an online form that will be available later this year – submit basic information to get a unique registration number which is available for each eligible credit property.
- Transferring payment of the Direct Pay to a third-party: must fill out a transfer election statement; may transfer to multiple unrelated parties, such as a lender or a contractor.
- To obtain the Federal Direct Pay Cash rebate you must file a tax return Form 990-T and Form 3800.

Nonprofit Energy Efficiency Program (NEEP) Grants (Energy Outreach Colorado)

The Nonprofit Energy Efficiency Program (NEEP) helps nonprofits that serve income-qualified Coloradans across the state in upgrading their facilities to increase energy efficiency and lower operating costs. Energy Outreach Colorado staff help conduct an energy assessment and supply grant funding to offset the purchase and installation of new equipment, including efficient lighting, insulation, low-flow fixtures, and HVAC systems. Nonprofits of all types, including churches, youth centers, crisis shelters, food pantries, and clinics have all benefited from NEEP.

The program is open to nonprofits that:

- Serve income-qualified Coloradans, including religious institutions that provide direct services regularly.
- Own their building or in a long-term lease.
- Pay their energy costs.
- Are classified as 501(c)(3) and are in good standing with the state of Colorado.

Completed applications submitted between June 1, 2023, and December 15, 2023, will be reviewed in calendar Q1 2024. Applications submitted after December 15, 2023, will be reviewed in calendar Q3 2024.

If your organization is working on a larger renovation outside of this timeline or is experiencing an emergency, contact the NEEP team directly. <https://www.energyoutreach.org/nonprofit-energy-efficiency/>

Montana Department of Environmental Quality

The Energy Bureau houses two sections: Energy Efficiency and Compliance Assistance, and Energy Planning.

The Energy Bureau's vision is a future where Montana's energy needs are met through sustainable means that are protective of the state's natural and human resources. The Energy Bureau works toward this vision through specific activities that support our mission to increase Montanan's access to energy efficiency and renewable energy, improve the state's energy security, provide analysis of energy trends and issues, and demonstrate the benefits of compliance with environmental regulations through innovation, education, and technical and financial assistance.

<https://deq.mt.gov/energy/> or call 406-444-2544

Montana churches should also call their local energy company for more programs and referrals.

Utah Office of Energy Development

Affordability, reliability, and sustainability are Utah's priorities for all its energy-related work. Taking a thoughtful, measured approach to energy policy keeps Utah's energy prices among the lowest in the country, enables planning and investment towards helping communities survive and thrive, and puts Utah in a leadership position for developing the resources and technology necessary to power the country in the future.

<https://energy.utah.gov/>

General Office Number: 801-538-8732

Tax Credits Number: 801-538-8682

energy@utah.gov

Utah churches should also call their local energy company for more programs and referrals.

Wyoming Energy Authority

Wyoming energy covers the entire spectrum, including all sources of generation and extraction, distribution through transmission lines, pipelines and export facilities as well as end use and consumption.

In Wyoming we know that energy development and the protection of our environment can go hand-in-hand and we consistently support energy technology research, commercialization, and deployment to continue to move our industries forward.

Call 307-635-3573 or visit <https://wyoenergy.org/>

Wyoming churches should also call their local energy company for more programs and referrals.

Energy Reduction Actions

There are many actions your church can take to reduce energy costs. To follow are some examples. A more complete list of types of energy efficiency, water conservation and renewable energy improvements that are available appear on pages 10 and 11.

You should contact your local utility provider to determine if there are any additional incentives or rebates provided for energy reduction, water conservation, EV charging stations and production of renewable energy. Some local utility providers may offer expertise in determining potential energy saving opportunities by conducting an assessment and inspection of the facility.

Solar Gardens:

You can also reduce your carbon footprint by purchasing your electricity from a solar garden. You will not experience any energy cost reductions, but there is no expense to you, and you are supporting clean energy. For more information on solar gardens and a list of available solar garden companies, explore the following: <https://co.my.xcelenergy.com/s/renewable/solar-rewards-community>

Solar Energy (Photovoltaic Systems):

Renewable energy generated from a Solar system allows your church to replace some of your utility expenses with an asset: the money your church typically pays to your local utility provider can instead be used to purchase a solar asset which increases the value of your church property. On-site solar electricity is cheaper and environmentally cleaner than traditional, utility-based electricity. As utility rates continue to rise, so does the value of your solar system's energy, freeing up capital to fund other church programs and to control costs. In addition to lowering your operating expenses, some utility providers offer additional incentives for the extra kilowatt-hours (kWh) of energy generated by the solar system in the form of solar rewards.

An experienced solar installer should be able to evaluate your property and historical energy usage and recommend the best investment opportunity based on the factors below and more.

Utility Savings:

The product of a solar system is kilowatt-hours (kWh); therefore, the value of on-site solar energy production is directly tied to the local utility's price per kWh – the higher the price of utility energy, the higher the value of on-site solar energy.

Site Characteristics:

Roof

- Sites with minimal roof obstructions allow for larger, more contiguous solar arrays which results in more cost-effective pricing.
- Solar should not be installed on roofs with minimal remaining life. Replacing the roof before installation may ultimately be the cheaper option, since removing the panels to replace the roof will be an additional expense.
- There may be additional incentives available when upgrading a roof combined with a solar array. Consider professional assistance to determine if any additional incentives qualify.

- Flat roofs are generally most effective for solar arrays to maximize solar production. However, pitched roofs are feasible with solar arrays preferably located on the south side.
- The size of a roof top solar system will be maximized depending on the roof space available.

Structural

- Flat roofs need at least 5-6 pounds per square foot (psf) of deadload capacity. The more deadload capacity available, the less mechanical attachments required, resulting in a lower cost.
- Pitched roofs need approximately 3 pounds psf.

Electrical

- Solar is required to tie behind the meter of each unique utility provider account. Fewer utility meters on site typically results in fewer interconnections and a lower price.
- There are many additional considerations in terms of available space for equipment and gear configuration for the solar interconnection that a solar provider will need to determine.
- An electrical inspection should be conducted prior to determining a solar system to ensure it meets the local utility and municipality building codes.

Practical Designs

- Advocate for a practical, cost-effective design.
- While some system types come with aesthetic or ancillary benefits like façade solar or solar awnings, it is important to know these come with a higher upfront cost due to the custom-making required, as well as additional labor to install such systems. They also may have higher, longer-term maintenance costs due to access of system components via lifts or scaffolding.
- Ground mount and carport systems are common alternatives to rooftop solar, but they are typically more expensive due to the need for additional steel and civil work. The size of the system has an impact on the cost per kWh due to the economy of scale.

Utility Rate Tariff:

- Because the value of solar is tied to the price you pay for electricity, solar offers greater value for meters billed on higher priced rate tariffs.
- The utility cost of energy varies by utility provider but is typically between \$0.05/kWh - \$0.16/kWh on the various tariffs.
- Each utility provider has its own commercial rate structure and tariffs.

In addition to the IRA Act rebates, some utility providers offer a Solar Rewards Program providing incentives for customers who install grid-connected photovoltaic (PV) systems. Solar rewards are based on the annual kWh produced by the solar system which enable the local utility to help fulfill its mandated requirement for production of renewable energy.

If your church decides to pursue a solar installation, consider obtaining professional guidance and competitive bids. Compare the warranties installers offer on their installation and the equipment along with price, customer service, monitoring and how well their proposed plans meet your needs. A reputable solar installer will advise you on the age of your roof before installation. Replacing the roof before installation may ultimately be the most economically feasible option, since removing solar panels to replace the roof in the future will be an additional expense.

The following United Methodist churches in our Conference are in the process or have installed solar panels and may be contacted to share their experience:

First UMC of Glenwood Springs, CO – <https://www.roaringforkchurch.org/>

Lakewood UMC, Lakewood, CO <https://www.lumc.net/>

Mountain View UMC of Boulder, CO - <http://mtview.org/>

Mountain Vista UMC of West Jordan, UT <https://mtnvistaumc.org/>

First UMC of Missoula, MT <https://www.firstumcmissoula.org/>

EV Charging Stations

Installation of EV charging stations in a church parking lot can be a revenue generator for the church. Multiple levels of fees can be charged for the service; one level for cars off the street, and a reduced cost for members of the church or the community.

The Colorado Energy Office (CEO) provides grants for electric vehicle (EV) charging stations through Charge Ahead Colorado (CAC). The objectives of Charge Ahead Colorado are to improve air quality, reduce transportation emissions, and increase adoption of electric vehicles across Colorado. The Application Guide is intended to lead participants through CAC's funding process. To view the guide, click on the following:

<https://docs.google.com/document/d/16uYmKVhEfFYHn6s8A-GT4ncxCYYEqrCF8rkkOxpvbXM/edit>

These grants are available based on the type of EV Charging station installed. Example: A dual port level II EV Charging station will be eligible for a grant of \$4,500 per port. There are additional incentives available if the church property is in an income qualified enhanced area which increase the grant to \$5,750 per port. Additional grants may also be available from Xcel Energy, or your local energy provider, for EV Charging stations installed in low-income areas.

For churches located in Montana, Utah and Wyoming contact the State Energy office to determine if there are any additional incentives for EV Charging stations.

The net costs incurred in the development and installation of EV Charging stations are also eligible for the 30% Federal Direct Pay rebate for nonprofit organizations.

Financing Options:

Just like getting more than one quote from a contractor, you should always compare lenders. A project for a church is considered a commercial project, and rates, costs, and other rules vary greatly from one lender to another.

Capital Campaigns

If your church has capacity and the excitement for this project, a capital campaign may be a great idea. This can help the entire church have a bigger role in a creation-justice initiative. If you can, pay for the project up front. Or rebates. Then you can get excited. Your current cost of energy can ultimately be used for other missions of the church.

Typically, the capacity of a congregation to raise money in a capital campaign is about two-times the annual budget. If the project exceeds this, then inviting community partners, along with a loan can be a good strategy for financing a project. Larger campaigns invite their members to pledge over a three-year time period. A loan can be used to fill in the time for pledge receipts, like a bridge loan.

Methodists Helping Methodists Foundation can discuss options about what a total financing package could look like for your church.

Methodists Helping Methodists Foundation (MHM)

The MHM Foundation is a private, commercial mortgage lender which gives it the flexibility to do what makes sense for churches. It is a ministry partner that understands church loans are for a higher purpose.

As a part of the Foundation's services, the Methodists Helping Methodists Fund extends first and second mortgage loans to United Methodist churches and agencies in Colorado, Wyoming, Utah, and Montana, for new construction, renovation projects, or refinancing of existing church loans.

The Foundation's loan rates and closing costs are typically more favorable than other lending institutions, including CPACE, and the Foundation adds value by helping ensure that the total funding plan makes sense for the size of the church's budget. The Foundation will also allow tax credits to be immediately applied to pay down a loan and will also reduce the loan payments at no cost to the church and with no pre-payment penalty.

A priority for the Foundation's church loan program is to enhance the ministries of a church, not overburden a congregation by the church's debts. The Foundation understands church income patterns, including annual commitments, capital campaigns, and seasonal trends. Please call (303) 778-6370 or email info@mhmfoundation.org for current rates and information.

C-PACE

Colorado Commercial Property Assessed Clean Energy C-PACE is a financing tool that offers up to 100% loan to cost, long-term, fixed, non-recourse, non-accelerating funding. This financing is linked to the commercial building via a special assessment on property taxes and is transferable with sale of the property. This financing is provided by state C-PACE approved capital providers at competitive rates with repayment terms up to 25 years. Nonprofits that are normally exempt from property taxes are eligible as the property will be assessed a special property tax assessment equivalent to the C-PACE funding provided.

C-PACE financing repayment is facilitated through the County property tax assessment process. A voluntary assessment (similar to a sewer district assessment) is placed on the building owner's property tax bill. The assessment is repaid over the financing term (up to 25 years) and the annual energy cost savings generally exceed the annual assessment payment over time thereby enabling and supporting capital intensive equipment upgrades.

The property receives a property tax assessment equivalent to the loan and terms repayable over the life of the loan. This is administered and collected by the local municipality. Each county within the state must elect to adopt the program to be eligible for C-PACE financing. Check to determine if your church facility is located within an eligible county that has adopted the C-PACE program. This financing is available for renewable energy, energy efficiency upgrades, water conservation and EV charging stations. The C-PACE loan cannot be accelerated in a case of a sale, foreclosure, or bankruptcy. Lender consent is required if the facility is encumbered by an existing loan mortgage. A purchaser would inherit the property tax assessment. No Personal guarantees are required.

C-PACE is currently available in Colorado, Montana and Utah. Wyoming has passed C-PACE legislation, but it is currently not offered within the state.

A church should contact the state C-PACE administration office and view the state C-PACE website for additional information if considering this financing option.

Other Resources for Churches

Consultants do not need to be licensed, but installers should be qualified electricians or NABCEP certified <https://www.nabcep.org/>

COSSA Colorado Solar & Storage Association <https://cossa.co/>

David Chittle, consultant, NED Enterprises Inc., 720-560-7131

Rachel Mountain, Namaste Solar, 720-305-4468

Group 14 Engineering <https://group14eng.com/>

Energetics Consulting Engineers, LLC <https://energetics-eng.com/>

Acknowledgements

Many thanks go to the following individuals and organizations for their assistance in providing the preceding information:

David Chittle, consultant, NED Enterprises Inc., 720-560-7131

Rachel Mountain, Namaste Solar, 720-305-4468

Excel Energy

Disclaimer

The Methodists Helping Methodists Foundation assumes no responsibility or liability for any errors or omissions in the content of this document. The information contained in this document is provided on an "as is" basis with no guarantees of completeness, accuracy, usefulness or timeliness.

APPENDIX

Types of Energy Efficiency, Water Conservation, Renewable Energy
and other Improvements Available:

1. Water Efficiency

- a. Deionization Equipment
- b. High Efficiency Shower Heads
- c. High Efficiency Faucets
- d. High Efficiency Toilets
- e. Waterless Urinals
- f. High Efficiency Irrigation Pumps
- g. Artificial Turf
- h. Drip Irrigation
- i. Drought Tolerant Landscaping
- j. Grey Water Systems
- k. High Efficiency Sprinkler Nozzle
- l. Industrial Process Water Reuse Projects
- m. Rainwater Catchment System
- n. Recycle Water Source Projects
- o. High Efficiency Irrigation System
- p. Septic to Sewer Conversion
- q. Sewer Lateral Replacement or Repair
- r. Weather Based Irrigation Controller
- s. Xeriscaping

2. Lighting

- a. Energy Star - Fluorescent
- b. Energy Star - LED
- c. LED Luminaire
- d. Linear LED Ambient Luminaire 1X4
- e. Lighting Control Systems
- f. Occupancy Sensors

3. Advanced Energy Storage System

- a. Electric Vehicle Charging Station
- b. Stationary Fuel Cell Power System
- c. Co-Generation Systems
- d. Fuel Cell Power Systems
- e. Wind Turbines

4. High Efficiency Water Heating

- a. High Efficiency Gas Storage Water Heater
- b. Tankless Water Heater
- c. Hot Water System Controls
- d. Recirculating Hot Water System

5. Building Envelope

- a. Building Control Systems
- b. Commercial Kitchen Exhaust/Controls
- c. Electrical Panel Upgrade
- d. Elevators, including motors and controls
- e. Green Roof
- f. Insulating Carpet & Padding
- g. Attic Insulation
- h. Insulation Siding
- i. Insulation Floor
- j. Wall Insulation
- k. Radiant Barrier
- l. White or Cool Roof - Low Slope
- m. White or Cool Roof - Steep Slope
- n. Glass Spandrel Panels/Curtain Walls
- o. Exterior Door
- p. Window - Fixed
- q. Window - Operable
- r. Glass Door
- s. Curtainwall/Storefront
- t. Skylight - Glass Curb Mounted
- u. Skylight - Glass Deck Mounted
- v. Window Film

6. Heating & Heat Rejection Equipment

- a. Gas Fired Furnace
- b. Oil Fired Furnace
- c. Gas Warm Air Duct Furnace
- d. Unit Heater - Gas or Oil Fired
- e. Hot Water Boiler
- f. Steam Boiler - Gas or Oil Fired
- g. Radiant Floor Heating
- h. Cooling Towers & Controllers
- i. Propeller/Axial Fan Cooling Tower
- j. Centrifugal Fan Cooling Tower
- k. Demand Controlled Ventilation
- l. Duct Insulation for Heating Ducts
- m. Duct Insulation for Mechanically Cooled
- n. Duct Replacement
- o. Heat Recovery for Kitchen Ventilation

7. HVAC & Chillers

- a. Air Cooled A/C
- b. Water Cooled A/C
- c. Air Cooled Heat Pump
- d. Condensing Unit Only
- e. Non-Air-Cooled Heat Pumps
- f. Var Refrigerant Flow A/C - Air Cooled
- g. Var Refrigerant Flow Heat Pump - Various
- h. Air Cooled Electric Chiller w/wo Condenser

8. Renewable & Alternative Energy

- a. Solar Panels
- b. Inverter
- c. Solar Water Heater
- d. Advanced Energy Storage System
- e. Electric Vehicle Charging Station
- f. Stationary Fuel Cell Power System
- g. Fuel Cell Power Systems
- h. Wind Turbines

9. High Efficiency Water Heating

- a. Tankless Water Heater
- b. Inverter
- c. Hot Water System Controls
- d. Recirculating Hot Water System

10. Seismic

- a. Seismic resiliency upgrades