

THE STEWARD

Trustworthy Insurance Insights for Churches and Ministries

Ecclesiastes 1:5 NIV

“The sun rises and the sun sets, and hurries back to where it rises.”

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Solar Panels: The Benefits & The Challenges

Insurance Board

In an effort to be more responsible stewards of the earth and its natural resources, many churches are exploring or have already adopted solar energy solutions to help power their facilities. Solar panels have become an increasingly popular option for faith-based organizations seeking to reduce energy consumption, manage utility expenses, and demonstrate a commitment to environmental responsibility. This issue of *The Steward* newsletter focuses on solar panel usage and highlights key considerations ministry leadership teams should evaluate before adding or modifying solar energy systems on church property. While solar energy offers meaningful benefits, it also presents important risks and responsibilities that should be thoughtfully reviewed. As you read this Summer edition, we encourage you to consider both the advantages and challenges of solar technology to develop a well-rounded understanding of this growing energy trend.

The concept of leveraging renewable resources such as sunlight to reduce operating costs and reliance on traditional energy sources is understandably appealing. However, it is essential that churches conduct thorough due diligence before moving forward with any solar panel installation. Factors such as safety, installation location, long-term maintenance, insurance implications, and potential hazards must all be carefully weighed. One of the most significant risks associated with solar panels is the potential for fire. Solar panels may overheat, suffer electrical malfunctions, or sustain damage during severe weather events, including lightning strikes. Any of these situations can lead to fires on church property, posing risks to facilities, congregants, and neighboring structures. Fire risk is generally greater when solar panels are mounted directly on a church building particularly on rooftops, because damage or overheating can affect the structure itself. In comparison, free-standing or ground-mounted solar panel arrays typically present fewer risks, as they are physically separated from the main building. Additional hazards may include defective equipment, improper or faulty installation, electrical system damage, or water intrusion caused by roof penetrations. Water and electricity create a particularly dangerous combination and can lead to costly repairs, safety concerns, and long-term structural damage if not properly addressed. Because of these risks, it is critical that any solar panel installation be completed by qualified professionals, meet all applicable safety codes, and be regularly inspected and maintained. Despite these challenges, solar panels can offer several notable benefits when properly installed and maintained:



- **Reduced Electrical Costs:** While energy costs vary by state and municipality, lowering utility expenses can provide meaningful financial relief over time. Reduced operating costs may allow ministries to redirect funds toward mission-focused initiatives and community outreach.
- **Increased Property Value:** Solar panel systems may enhance property value and contribute to energy resilience. In some cases, solar technology can help maintain power during outages, improving safety and continuity of operations during storms or emergencies.
- **Environmental Stewardship:** Solar energy reduces reliance on nonrenewable resources, lowers carbon emissions, and supports sustainable practices. Additionally, solar panels have an average lifespan of 25 years or more, requiring relatively limited long-term maintenance.
- **Potential Financial Incentives:** Depending on location and eligibility, federal solar tax credits or other incentives may be available, helping to offset initial installation costs.

Insurance Board encourages ministry leaders and property committees to educate themselves on fire prevention strategies, risk mitigation methods, and proper solar safety considerations.

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Controlling Fire Exposure in Churches: Safety Planning That Protects People and Property

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Churches serve as places of worship, fellowship, and community outreach, often accommodating large and diverse groups of people. Because of their unique layout, historic construction, and frequent public gatherings, churches must establish comprehensive fire safety plans to protect congregants, staff, and property. A strong fire prevention strategy combines planning, training, and region-specific considerations.

Core Elements of a Church Fire Safety Plan

Every church should begin with a written fire safety plan that is reviewed annually. This plan should outline evacuation procedures, emergency roles, and coordination with local fire departments. Clearly marked exits, illuminated signage, and unobstructed pathways are essential across all facilities. Churches should also ensure that fire extinguishers, alarm systems, and sprinkler systems (where available) are properly installed, inspected, and maintained per local fire codes.

Regular fire drills are especially important for churches with schools, daycare centers, or large weekly attendance. Ushers, greeters, and ministry leaders should be trained to assist calmly with evacuation, including helping children, seniors, and individuals with disabilities.

Electrical and Kitchen Fire Prevention

Electrical systems are one of the leading causes of fires in assembly buildings. Churches should avoid overloading outlets, use surge protectors, and have licensed electricians inspect older wiring—particularly in historic sanctuaries. Any commercial or volunteer-run kitchen should follow clear protocols: never leaving cooking unattended, keeping flammable items away from heat sources, and ensuring hood suppression systems are operational.

Fire Prevention When Lightning Strikes

Lightning poses a significant but often overlooked fire risk to churches, particularly those with tall steeples, towers, crosses, or older construction. From a risk management perspective, proactive lightning protection and post-storm procedures are essential components of a comprehensive fire safety plan.

Churches should consider installing a professionally designed **lightning protection system**, including air terminals (lightning rods), bonding, grounding, and surge protection. These systems safely direct electrical energy into the ground, reducing the risk of fires starting within the structure or electrical system. This is especially important for churches located on elevated ground or in regions with frequent thunderstorms, such as the Midwest, Southeast, and portions of the Plains states. Our program has suffered many claims related to lightning strikes, causing fires and damage to our organs and buildings.

Electrical surge protection is another critical control. Lightning strikes—both direct and indirect—can damage electrical panels, sound systems, HVAC units, and fire alarm systems. Churches should install surge-protective devices at main service panels and on sensitive equipment to limit electrical arcing and overheating that can lead to a fire. Risk control does not end once the storm passes. After any significant lightning event, designated staff or facility volunteers should conduct a **post-storm inspection**, checking for tripped breakers, smoke odors, damaged roof areas, or water intrusion. Any unusual findings should prompt immediate evaluation by a qualified electrician or contractor.

Regional Fire Safety Examples

Northeast (e.g., Massachusetts, New York):

Many churches in the Northeast are historic structures built with wood framing, steeples, and aging electrical systems. Fire prevention efforts should prioritize wiring upgrades, lightning protection, and automatic fire detection systems designed to preserve historic architecture. Cold winters also increase the use of space heaters, which should be discouraged or tightly controlled.

Southeast (e.g., Florida, Georgia):

In warmer, humid climates, churches must balance fire safety with storm preparedness. Electrical systems should be checked after hurricanes or major storms, as water intrusion can create fire risks. Churches with large window areas should ensure emergency exits remain usable even after severe weather events.

Midwest (e.g., Ohio, Illinois):

Churches in the Midwest often experience wide temperature swings. Heating systems should be inspected before winter, and storage areas should be kept clear of combustibles. Many Midwestern churches host community meals and events, making kitchen safety training especially important.

West (e.g., California, Colorado):

In wildfire-prone states, exterior fire prevention is critical. Churches should maintain defensible space by clearing dry vegetation, using fire-resistant landscaping and signage/banners, and ensuring roofs and gutters are free of debris. Emergency plans should include shelter-in-place and evacuation coordination with local authorities during wildfire season.

Building a Culture of Safety

Fire prevention is not a one-time effort but an ongoing commitment. By combining clear procedures, regular training, and geographic awareness, churches can significantly reduce fire risk while caring for their congregations and communities.

Agent Corner

Favor Khaoya, ChurchWest Insurance Services



For years, you've watched the summer sun pour down on your church roof. Lately, with utility costs continuing to rise and the board asking tougher questions about operating expenses, it's only natural to ask: *Could all that energy work for the ministry instead of against it?*

You see another glossy solar proposal on your desk, promising significant savings. The vision is attractive, harnessing the sunlight God already provides, reducing overhead, and redirecting resources towards the mission.

Before you move forward with that vision, here's what most solar companies won't tell you: your standard property policy may not automatically cover solar systems or the unique liabilities they create. Before you sign that contract, you need to talk with your insurance agent.

Critical Questions Your Agent Will Help You Answer

Coverage for theft and vandalism: We see multiple claims for copper theft from solar installations each month, especially ground-mounted systems. Your agent will review whether your policy covers stolen equipment and what security measures, like fencing and signage, are required to maintain coverage.


Ownership structure risks: Leasing your roof to a solar company doesn't eliminate your liability. If someone is injured during installation or

maintenance, your church could still face claims. Your agent will ensure your liability coverage extends to third-party arrangements and that contractors carry adequate insurance, naming you as an additional insured.

Equipment damage responsibility: If lightning or power surges damage your inverter or control systems, who pays? Standard policies may not automatically cover solar equipment. Your agent will clarify coverage limits and identify gaps before damage occurs.

Contract penalties: Some power-sale agreements penalize churches if systems fail to generate guaranteed electricity due to weather or damage. Your agent will help you understand who bears this financial risk and whether your policy would respond.

Tax implications: Selling excess power back to utility companies or clean-energy credits may trigger unrelated business income reporting. Your agent can flag this consideration and recommend consulting your tax advisor early.

This summer, before you green-light that solar project, schedule a call with your agent. This conversation can prevent devastating coverage gaps and protect your ministry's mission. 



Roof-Mounted Solar Panels and Fire Prevention for Churches

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What Are Solar Panels?

Solar photovoltaic (PV) systems convert sunlight into electricity and typically include roof-mounted PV modules (panels), wiring and conduit, inverters that convert power into usable electricity, and disconnect switches intended to support safe servicing and emergency operations. A key difference from conventional building electrical systems is that PV circuits can remain energized whenever panels are exposed to sunlight, even if the main electrical service to the building is turned off.

Many churches are installing rooftop solar PV systems to reduce energy costs and support environmental stewardship. When properly designed, installed, and maintained, these systems are generally safe and reliable. However, like any electrical system, they introduce property damage system exposures that should be understood and managed.

Following industry standards such as FM Data Sheets 1-15, National Fire Protection Association (NFPA), Underwriters Laboratories (UL) product safety listings, the International Fire Code (IFC), and the local Authority Having Jurisdiction (AHJ), allows churches to meaningfully reduce the likelihood and severity of fire and property losses while benefiting from solar power. Fire Marshals / Fire Inspectors, establish requirements and standards intended to ensure solar systems are installed and maintained properly.

Potential Fire and Property Risks

Electrical faults are a primary concern, as loose connections, damaged conductors, or inverter/component failures can lead to arcing, overheating, and potentially fire. Equipment selection is critical, as UL-listed components (such as UL 1703 or UL 61730 PV modules and UL 1741 inverters) are designed and tested to meet recognized standards when properly applied and installed. Property risks also include roof leaks and interior water damage caused by improper roof penetrations, flashing, or mounting practices. In high-wind or hurricane-prone areas, inadequately engineered or secured racking can allow panels to shift or detach, damaging roof coverings and increasing water intrusion probability. Large arrays can also hinder firefighter movement and ventilation activities if roof access pathways and setbacks are not incorporated into the system design.

Insufficient maintenance can allow debris accumulation, corrosion, insulation breakdown, or other deterioration to go unnoticed until it results in failure.

Practical Risk Reduction Steps

Risk can be reduced by engaging qualified contractors who understand applicable requirements and standards outlined by NFPA, coordinating early with the local AHJ, and ensuring a third-party consulting firm is conducting plan review services.

System layout should preserve clear roof access pathways and setbacks consistent with fire code concepts in NFPA and the IFC supporting safe firefighter operations. PV equipment locations, inverters, and disconnects should be clearly and durably labeled, to help verify/reduce electrical hazards during emergency response. Ongoing maintenance should include routine electrical inspections. Thermal imaging can help identify overheating connections or failing components early. Engaging the fire department in pre-incident planning is critical to reducing the potential for a major loss by ensuring responders understand the site layout and associated hazards.

Lessons from Losses

Loss experience involving solar PV installations most often relates to electrical or inverter failures, roof leaks resulting from deficient installation or compromised flashing, and storm damage where panels or racking were not adequately secured for site conditions. These outcomes are frequently preventable when churches require code-compliant design and installation, specify properly listed equipment, and maintain roof integrity through periodic checks.

In Summary

Solar PV systems can be a strong long-term investment for churches, supporting sustainability goals and reducing operating costs, but they also change the building's electrical and roof risk profile. By prioritizing qualified installation, code compliance, clear labeling and shutdown provisions, roof-access considerations for firefighters, and ongoing inspection and maintenance, churches can meaningfully reduce the likelihood and severity of fire and property losses while benefiting from solar power.

Claims Lessons Learned

Insurance Board



Solar panels are becoming increasingly popular for churches because of their positive environmental impact, favorable aesthetics, and energy cost savings. In the event of a claim, however, there is one aspect churches should be mindful of, particularly if damages result in a total loss of the building where the panels are attached.

Panels that are permanently attached are generally considered part of the building, meaning if they are damaged from a covered peril, insurance will cover the cost of the repairs. In the event of a total loss to the building, however, if the building is significantly underinsured, there may not be enough insurance money available to cover replacement of the damaged building and solar panels.

It is wise, therefore, to make sure building values listed on the Memorandum of Insurance are accurate and account for upgrades such as solar panels. For example, one recent claim involved a fire that destroyed all of the buildings for one of our participants, including the solar panels, which were on the main building.

Fortunately, the participant in this case listed building values that were sufficient to cover replacement costs for the damaged buildings and solar panels. However, we have seen many total-loss fire claims involving

buildings that were significantly underinsured. In those situations, unfortunately, congregations were forced to make the tough choice of replacing their building with a smaller one without the specialty items on the original building.

With severe convective storms becoming more common, solar panels are also at risk of being damaged by hail and/or severe winds. Hailstorms are the main cause of most of the solar panel claims we have received. Fortunately, these claims have been relatively minor, and the damages have been covered under the policy.

For claims where only a repair is necessary, all policy provisions and exclusions, such as wear and tear, and/or faulty workmanship, would still apply.

A significant event, such as a tornado or fire, can easily destroy any building. Building values that accurately reflect the cost to replace the building and any specialty items, such as solar panels, will ensure that houses of worship have adequate insurance coverage.



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Safety of Solar Panels for Churches: An Insurance and Risk Management Perspective

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Safety of Solar Panels for Churches: An Insurance and Risk Management Perspective

As churches across the United States explore solar energy to reduce operating costs and demonstrate environmental stewardship, it is critical to evaluate solar panel installations through a safety and insurance lens. While solar systems offer long-term benefits, they also introduce new risks that must be properly managed to protect people, property, and the church's financial stability.

Key Risk Considerations for Churches

From an insurance standpoint, the primary concerns related to solar panels include fire risk, structural integrity, electrical hazards, and liability exposure. Improperly designed or installed systems have been linked to roof fires, water intrusion, and damage caused by high winds. Churches, many of which have older roofs or unique architectural features such as steeples and flat roof assemblies, must ensure their structures can safely support the additional load of solar panels. Ground locations can be a better option to protect your roof and building and still gain the positive outcome.

Electrical risks are another major factor. Solar installations involve high-voltage DC wiring, inverters, and grid interconnections. Poor workmanship, inadequate maintenance, or incompatible equipment can increase the likelihood of electrical faults or fires. Insurers typically look for evidence that systems comply with National Electrical Code (NEC) standards and local building and fire codes.

Fire Prevention and Emergency Response

Solar panels can complicate firefighting efforts. Panels generate power whenever exposed to sunlight, which may make roof access more dangerous for first responders. From a loss control perspective, churches should coordinate with local fire departments to ensure they are aware of the layout of the system, inverter locations, and shut-off procedures. Clear labeling, rapid-shutdown technology, and unobstructed roof access paths are essential risk-control measures.

Insurance Coverage Impacts

Before installation, churches should notify their insurance carrier. Solar panels may increase the building's replacement value and alter coverage requirements. Insurers may require updated property limits, revised endorsements, or evidence of professional installation. Failure to disclose the system could result in coverage gaps or claim disputes following a loss.

Churches should also consider business interruption exposure.

If a solar-related fire or roof failure makes the facility unusable, coverage for temporary relocation or lost income from events may be affected.

Importance of Proper Contract Review

One of the most critical—and frequently overlooked—risk management steps is thorough contract review prior to installation. Whether the system is purchased outright, financed, or installed through a power purchase agreement (PPA), the contract should clearly define responsibilities and liability.

Key elements that should be addressed in the contract include:

- **Language Indemnification** protecting the church from losses caused by the installer's negligence or defective work
- **Insurance requirements**, specifying minimum limits and requiring the installer to name the church as an additional insured. Have the installer and solar panel company provide proof of liability insurance prior to starting work.
- **Warranties** for equipment, workmanship, and roof penetration
- **Maintenance responsibilities**, including those who handle inspections, repairs, and removal at end of life
- **Roof damage and leak remediation**, with clear accountability

Compliance with building, fire, and electrical codes

Legal counsel and the church's insurance broker or loss control professional should review all agreements before signing.

Conclusion

Solar panels can be a safe and beneficial investment for churches when risks are properly identified and managed. By addressing fire safety, structural concerns, insurance implications, and contract protections upfront, churches can confidently pursue solar energy while safeguarding their congregation and assets.





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The movement from traditional energy to green, solar energy sources provides a number of potential benefits. Such benefits include reduced electricity costs, the generation of renewable energy, less carbon emissions, less overall pollution in the environment, among others. Solar panels have been around for a number of years but have become more widely available in residential and other non-commercial settings. As this edition of *The Steward* highlights, churches are also adopting solar panel technology more frequently.

According to Solar Tech¹, a typical solar panel system can offset 3-4 tons of CO₂ annually. They equate this to planting over 100 trees each year or removing a car from the road for 7,500 – 10,000 miles. Experts claim that it is one of the most effective ways of reducing carbon emissions. Carbon emissions are among the leading causes of particulate matter (PM_{2.5}) and ground level ozone; both of which not only contribute to climate change but are widely known health hazards.

While the adoption of solar panels for churches is not prohibited by most property and liability insurers, there are risk considerations. Proper installation of solar panels which adhere to industry standards and local codes is critical to ensure a secure and weather-tight fit preventing water intrusion, potential uplift from strong winds, and mitigating fire risk. As an alternative to

rooftops, churches should consider whether panels can be installed at ground level, although this option might not be suitable in all situations. In the event of a fire, solar panels may prevent firefighters from accessing the roof for safety reasons, so consultation with local fire authorities on installation is reasonable. For churches in hail prone areas, leadership should consider the best solar roofing options based on geography.

Given the potential increase in valuation solar panels add to a church facility, churches should also verify that the insurance limits carried on the property are adequate to repair and replace the facility, including solar panels, in the event of an insured loss. For our participants considering installation, solar panels can provide many cost and environmentally friendly benefits, but maximizing those benefits requires proactive risk management, consultation, and preparation.

Our insurance serves you so you can serve God.

Serve God

¹ Solar Tech, solar company headquartered at 9410 Bond Avenue, El Cajon, CA 92021. References to Solar Tech are informational only and do not constitute an endorsement by Insurance Board.