



Harnessing the Power of Nonprofits to Deliver Low-Cost Solar to Low-Income Homeowners

The Inflation Reduction Act (IRA) of 2022 creates new ways for nonprofit organizations to deliver low-cost solar arrays to low-income families. The following case study charts the efforts of Solar United Neighbors and One Roof Community Housing to use the new "Direct Pay" provisions in the IRA to overcome the challenges of financing and installing solar for low-income homeowners.

Who

Solar United Neighbors (SUN) is a national nonprofit solar energy consumer advocate. It envisions a clean, equitable energy system that directs control and benefits back to local communities. One Roof Community Housing (One Roof) is a nonprofit organization in Duluth, Minnesota. It is committed to providing housing services and building permanently affordable homes using a community land trust model. Minnesota Interfaith Power & Light (MNIPL) is a faith-based nonprofit dedicated to supporting equitable climate solutions that build value in local communities. Avisen Legal's Jeremy Kalin supported MNIPL to ensure compliance with the new IRA Direct Pay tax credit requirements.

What

SUN and One Roof, with the support of MNIPL, are piloting a model where we design, finance, install, and operate a solar array on the homes of low-income homeowners. After six years of operation, we transfer ownership of the systems to the homeowner at zero cost.

Why

People who need the benefits of solar energy the most lack the ability to pay for it. Current market financing offerings may not deliver meaningful electricity savings on a monthly basis. Specifically, low-income homeowners who are trying to buy solar for their homes face the following challenges:



- **Lack of upfront capital to fund initial system costs.**
- **Inability to use federal tax incentives that reduce the installation cost. Incentives for solar from the Federal government come in the form of tax credits. A family that makes an insufficient income may not be able to use tax credits.**
- **Lack of resources to maintain systems during operations and ensure energy savings.**
- **Limited access to trusted and unbiased information about how solar works and the costs and solar's benefits.**
- **Unaffordable loan products and rigid loan terms.**

How

SUN and One Roof will deploy solar on the rooftops of participating One Roof homeowners in northeastern Minnesota. We'll use an innovative lease model that enables One Roof to claim the Federal Tax Credit through "Direct Pay." One Roof will then pass the savings onto the homeowners. "Direct Pay" is a provision of the IRA. It allows nonprofit organizations to receive the value of the tax credit as a refund from the Internal Revenue Service. Here's how the process works:



1. **SUN and One Roof provide extensive outreach and education to LMI homeowners. We educate them about the steps to go solar. This builds their confidence in the process.**
2. **One Roof will design, install (through a contractor), and finance the solar array on the roof of the unit. They'll fund 100% of the upfront cost of the solar array through a combination of tax credits and grants.**
3. **The homeowner and One Roof will enter into a Solar Equipment Lease and Services Agreement. This lets One Roof to maintain ownership of the system for a minimum of five years. IRS rules require this to claim tax credits for the system.**
4. **During that period, the owner will make no payments. Nor will they have any responsibility for maintenance of the system. One Roof will ensure the highest performance of the system and take care of maintenance needs.**
5. **Once the system is operational, the homeowner will receive the full benefit of the solar energy produced in the form of lower utility bills.**
6. **At the end of One Roof's ownership period, One Roof will donate the system to the homeowner. The homeowner will be responsible for any maintenance thereafter. The solar array will become the homeowner's property and be considered part of their home. Maintenance costs are expected to be very minimal over the long-term and there are equipment warranties in place.**

About Direct Pay

The "Direct Pay" provision in the IRA offers a promising solution for SUN and One Roof to address the financial challenges of financing and installing solar panels for low-income homeowners. Direct Pay allows nonprofit organizations like SUN or One Roof to receive a direct cash payment from the government. This payment is equal to the value of the commercial solar tax credit. This funding source can address the challenges of going solar for low-income homeowners who have a very limited federal tax liability and cannot monetize the solar tax credit themselves. This Direct Pay allows SUN and One Roof to offer solar to qualified homeowners at a \$0 down, cash-flow-positive basis and to build long-term equity

Homeowner Benefits

- **Zero upfront cost to homeowner**
- **Approximately \$700 to \$900 per year in electricity savings**
- **Increased home value and marketability**
- **Reduced carbon emissions**

Key Project Stages

The project includes three critical stages toward completion. Each has its own set of critical questions and solutions.

- 1. Planning through Kickoff – program design and approval by organizations**
- 2. After Interconnection – the transition from installation to operation and applying for Direct Pay**
- 3. After Direct Pay – after system installation and the tax credit refund**

Key Documents

Solar Equipment Lease and Services Agreement – agreement between One Roof and the homeowner, allowing One Roof to maintain ownership of the solar array on the homeowner's roof during One Roof's ownership period, which is required by IRS rules to claim the tax credits for the system.

Fair Market Value End-of-Lease Agreement – agreement between One Roof and the homeowner for a grant to fund any costs borne by the homeowner to buyout the solar array at the end of the lease term.

Solar Lease Explainer – document provided by One Roof to the homeowner to simply explain the process and provide an overview of the legal documents.

Solar Installer Contract – agreement between One Roof and the solar installer to design and install the solar array on the homeowner's rooftop and for all associated equipment and installation warranties.

Project Status

As of March 2024, the first homeowner has signed the lease agreement and the Fair Market Value (FMV) agreement. Construction is complete. The system is interconnected. When each stage is complete, these documents will be updated to reflect lessons learned.

Project Financials – Choosing the best of three options

Included in Option #1 (this pilot) below are the sample project financials. The \$12,600 in grant funds provides \$893 per year in savings to each homeowner. If grant funds were not available to cover 70% of the cost, the pilot could still be possible, but the terms become less interesting for the homeowners very quickly.

Under Option #2, One Roof could contribute a grant of \$6,600 and take out a loan for \$6,000 to close the financing gap and be repaid by the homeowners through a lease payment of \$30 per month, which would ensure that in no month of the year the homeowners pays more for solar and electricity than they would before solar was installed. Ensuring no increased monthly bill impact is a critical piece of an effective program. In addition to charging the \$30 per month, One Roof would have to extend the lease term from the original 6 years to 15 years. One Roof would also have to deal with the administration of invoicing and receiving payment from residents for 15 years.

Under Option #3, it is still possible to offer homeowners small savings on an annual basis, but in some months the homeowners might see higher costs for their solar payment and their electric utility bills, compared to their pre-solar electric bills. For this reason, neither Option #2 or #3 are optimal for One Roof or the homeowners.

One Roof Solar Pilot Financials

	Option #1: No Monthly Payment (Pilot)	Option #2: Homeowner Never Pays More in Any Month	Option #3: Homeowner Gets Small Annual Discount
Solar Project Cost (\$/Home)	\$21,000	\$21,000	\$21,000
Federal Tax Refund	\$8,400	\$8,400	\$8,400
Up-front Grant	\$12,600	\$6,600	\$0
Upfront Cost to Homeowner	\$0	\$0	\$0
Upfront Cost to Land Trust, Before Tax Credit Recieved	\$8,400	\$14,400	\$21,000
Longterm Land Trust Loan, After Tax Credit Recieved	\$0	\$6,000	\$12,600
Power Discount from Solar (%)	100%	60%	10%
Monthly Payment from Homeowner to Land Trust (Year 1)	\$0	\$30	\$67
Monthly Savings to Homeowner (Year 1)	\$74	\$45	\$7
Annual Savings to Homeowner (Year 1)	\$893	\$536	\$89
Savings to Homeowner Over System Life (25 years)	\$28,597	\$17,158	\$2,860
Homeowner Payback (Years)	0	0	0
1Roof Lease Term (Years)	6	15	15

Stage 1: Planning through Kickoff

Key Questions & Solutions

Below are a set of program design questions that we had to address to structure the pilot and prepare it to be replicated by other organizations in other states.

What kinds of nonprofit organizations are interested and able to own solar arrays for homeowners? Many nonprofits who work directly with at-risk populations could have interest. Nonprofit organizations that have experience financing projects, performing construction, and operating real estate and equipment may have the required experience. But, they may have less connection to at-risk populations. Those with both project experience and a built-in constituency of low-income homeowners are stronger contenders.

For example, land trusts seem to be particularly suited toward this type of solution. They have a connection to at-risk homeowners, familiarity with real estate and property management, and an understanding of co-ownership possibilities for value building within at-risk populations.

Will the homeowners be responsible for paying any portion of the upfront cost? No. The lease structure enables the nonprofit to combine a set of sources to fully fund the upfront cost.

How will the solar installations be funded upfront? We explored two options; 1) upfront grants and 2) loans. Fortunately, for this pilot we were able to identify and secure upfront grant funding. We will continue to pursue grants for this work. We are also exploring a combination of grants, donations, and loans to leverage more resources, support program management costs, and scale the work.

How will "Direct Pay" actually work? Final guidance on the Direct Pay program was released on March 5th, 2024. As of March 2024, we are still exploring exactly how to apply and secure the tax credit as a refund.

Regarding the legal documentation, is a lease or a power purchase agreement preferable to One Roof and the Homeowner? We created a "Lease Agreement" as the foundational document of the transaction between One Roof and the homeowner. Legal counsel advised us to use a lease structure. Leases are allowable in most states. Power purchase agreements are not.

.....

At the end of the lease term, can the lease state a specific value to buy out the solar? If yes, can that value be \$0? We learned that in order to be considered a proper lease, the document must offer sale of the solar at the end of the term for Fair Market Value, and that Fair Market Value cannot be specifically stated in the lease. As such, to ensure that homeowners do not have to make a buyout payment, we developed a separate agreement offering a grant to the homeowner to fund whatever Fair Market amount is determined for the buyout.

How do we communicate the buyout provisions of the lease to the homeowner? We developed a "Lease Explainer" document to explain the process to homeowners. It ensures them that, no matter the buyout payment, One Roof will either donate the system or grant them the funds to make the purchase of the system at Fair Market Value. The Lease Explainer lays out how the pilot program works and the responsibilities of each party.

What will the homeowner's experience be like upfront? The homeowners have had little work to do or concern. One Roof and SUN have handled the majority of the the work through the execution of the documents and the installation. The Homeowner be required to do the following:

- 1. Review and execute the lease and all other documentation.**
- 2. Ensure the roof is in good enough condition to receive the solar system.**
- 3. Ensure access of the property to the solar installer and utility company for the period of the installation.**

What questions will homeowners have? Homeowners were most concerned about three issues; "Who is paying for the solar and will I have to pay?", "Who is responsible for maintenance during operations?" and "How does the buyout work?"

Other questions were typical of any new solar owner including questions about monitoring solar production, how net metering works, etc. Supporting those types of questions is just as important as addressing the more financing/program specific ones mentioned above. SUN's consumer education-based programming and resoures are a critical part of making sure homeowners are well informed about their solar property and its benefits. The One Roof team also took extra time to walk through the process with homeowners and explain how each of the documents defines the terms of the agreement. We recommend dedicating funds toward program administration to support additional engagement with homeowners.

How do we ensure that the systems perform as anticipated?

- Select installers with proven track records and check references.**
- When complete, secure a third-party inspection of the system.**
- Purchase extended warranties.**
- Monitor performance at regular frequency and call installer about any issues.**
- The homeowner can help by being familiar with the solar monitoring program that is part of the inverter and knowing who to communicate with if they notice a problem.**

Stage 2: After Interconnection and Operations and Applying for Direct Pay

Key Questions & Solutions

Below are a set of project completion questions that we will have to address in order to execute the pilot in a way that can be replicated by other organizations in other states.

How do we apply for “Direct Pay” on the IRS website? The One Roof team has signed into the portal and is currently going through the application process. Final guidance on the Direct Pay program was released on March 5th, 2024.

Because it is one of the first “Direct Pay” projects, will the IRS provide extra scrutiny? This question is yet to be determined.

How much should be anticipated for maintenance costs? Much of maintenance over the first 20 years is covered by warranties. SUN recommends anticipating an average of \$100 to \$200 per year to cover maintenance costs during that time period.

How long will it take for the IRS to distribute the funds? The IRS “Direct Pay” rules suggest that the IRS will provide funds to the nonprofit owner within 12 to 18 months of system activation.

Stage 3: Program Implementation to After Direct Pay

Key Questions & Solutions

Below are a set of program implementation questions that we had to address in order to execute the pilot in a way that can be replicated by other organizations in other states

Are there additional grants that could be used on this kind of project?

Included in the Inflation Reduction Act of 2022 is the Solar For All Program. It provides \$7 billion dollars for grants to states to fund low-income solar. The Minnesota Commerce Department has not been awarded yet, but it applied for the maximum award size allowed for Minnesota. This is \$100 million over five years. Commerce proposed to allocate a portion of the funds for financial assistance for solar low-income homeowners. The team is tracking these funds and hoping that they can be granted into projects to limit or eliminate monthly payments from homeowners.

Did the grants to One Roof limit their ability to claim the full tax credit? IRS guidance states that grants do not change how the tax credit value is calculated. If a total of tax-exempt grants and federal tax credits is greater than 100% of the project cost, then the tax credit will be lowered to limit the total tax-exempt project support, including the credit, to no more than 100% of total cost. For these projects, restricted grant funds provided for equipment and installation totaled 70% of the total system cost, leaving the remaining 30% to be provided by One Roof and then subsequently recovered through Direct Pay.

How is the team preparing for potential high demand for this program in the future?

This question is yet to be determined.

How is the team preparing for long term program sustainability? This question is yet to be determined.

What are some areas for improvement in successive projects? This question is yet to be determined.

What are some areas for future advocacy and policy support? This question is yet to be determined.
