Community Solar for All

Key Findings for State Energy Offices and State LIHEAP Agencies from the Inclusive Shared Solar Initiative

Inclusive Shared Solar Initiative

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Table of Contents

Executive Summary

Despite the significant potential for community solar to reduce energy burdens and costs, it has largely remained out of reach for low-income households. While the U.S. community solar market has grown considerably over the last decade, as of December 2022 low to moderate-income (LMI) community solar represented just 2% of the overall market.[1]

Effective community solar policies and program decisions can help address this dynamic. State laws, policies, and program rules are critical to the development of community solar programs and projects that are affordable for and cater to the needs of LMI utility customers, who often face disproportionately high energy costs relative to their incomes. According to the American Council for an Energy-Efficient Economy, households that spend 6% or more of their income on energy costs are considered energy burdened. As of 2023, U.S. households overall had a median energy burden of 2.9%; by contrast, low-income households had a median energy burden of 8.3%, and a quarter of low-income households had an energy burden above 15%.[2]

This report explores how two sets of state agencies in particular — State and Territory Energy Offices and State Low Income Home Energy Assistance Program (LIHEAP) Agencies —can help to streamline and prioritize the delivery of affordable and accessible shared solar. State Energy Offices are often involved in community solar policy and program design from inception, whether by supporting the enactment of enabling legislation or informing the development of program rules and regulations. State Energy Offices may also be charged with administering or overseeing the implementation of statewide community solar programs and, through the U.S. State Energy Program and other sources of funding, can provide resources and loans that enhance community, developer, and utility confidence and capacity to build, host, and derive value from projects. Relatedly, as implementers of federal LIHEAP block grants, State LIHEAP Agencies have a deep understanding of the needs of lower-income households and can help inform the design and delivery of community solar programs.

Between 2020 and 2024, and with support from the U.S. Department of Energy's Solar Energy Technologies Office (SETO), the Inclusive Shared Solar Initiative (ISSI) served as a forum for three states to navigate the design and development of LMI-accessible community solar projects. A collaboration between the National Association of State Energy Officials and National Energy Assistance Directors Association, ISSI provided financial and technical assistance to teams of State Energy Offices and State LIHEAP Agencies in the District of Columbia, Minnesota, and Wisconsin. In addition to developing and launching five new projects serving LMI subscribers, the ISSI state partners pioneered community solar policy and program design strategies that increased protections for low-income consumers, reduced barriers to enrollment and project development, and fostered inter-program coordination.

This report explores key experiences and findings from ISSI. Considerations and recommendations offered in this report include:

Centering Low-Income and Energy-Burdened Participant Needs and Experiences: State Energy Offices and State LIHEAP Agencies are uniquely-positioned to ensure community solar policies, programs, and projects meet the needs and experiences of low-income households.

When designed with these subscribers in mind, community solar programs can be an important tool in energy burden reduction. As demonstrated by the state partners in ISSI, this may involve collecting and analyzing data to understand the potential impact of a community solar subscription on a household's monthly energy bill; working with trusted partners to engage households and develop programs and communication methods that align with households' needs and preferences; understanding and protecting against adverse impacts; and exploring program design structure and project locations that offer both financial and nonfinancial value to communities.

Simplifying Community Solar Subscription and Payment Processes: State Energy Offices and State LIHEAP Agencies can advance strategies such as streamlined income verification and subscription payment processes, which reduce paperwork burdens on households and increase their likelihood of subscribing to and remaining in community solar programs. Through ISSI, states explored a variety of tools and strategies to lower barriers to participation in community solar, including automatic enrollment for income-qualified households and partnerships with local agencies with inroads into lower-income communities. At the federal level, a new platform from SETO, the Clean Energy Connector, offers states the opportunity to make cost-saving community solar subscriptions more accessible to households participating in government-run low-income support programs. Such solutions help not only to simplify entry into community solar programs, but also to ease developers' customer acquisition and income verification costs.

Addressing Utility, Developer, and Financier Risks and Concerns: Funding, financing, and revenue streams can play a make-or-break role in the viability and affordability of community solar projects. State Energy Offices and State LIHEAP Agencies can help to clarify program costs and benefits, mitigate risk, and attract greater private-sector investment in LMI-accessible community solar. Through ISSI, developers, capital providers, and other experts helped state partners understand concerns about cross-subsidization (i.e., the potential cost impacts on ratepayers associated with LMI community solar projects and programs) as well as various sources of project development and operational risks and costs, such as project approval and interconnection, tax credit monetization, and lack of access to capital and capacity in disadvantaged and rural communities, among others.

As community solar continues to grow across the country, State Energy Offices and State LIHEAP Agencies can be drivers of LMI-accessible programs and projects. The ISSI experience offers examples from three different states, representing varying market structures and levels of community solar market maturity, where interagency and inter-program coordination have enabled the delivery of tangible benefits to households in need.

Introduction

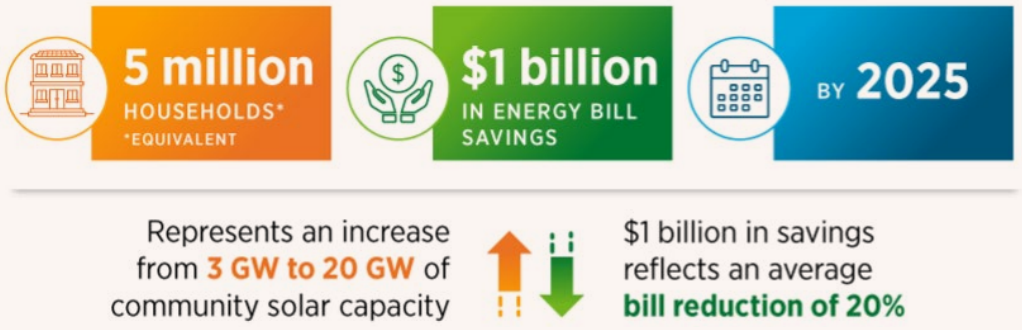
Community solar allows households, regardless of ownership status or roof suitability, to access cost savings and other benefits often associated with solar energy. Also known as shared solar or solar gardens, community solar arrangements enable customers to subscribe to a "share" of a solar power project in their community or utility territory, without installing rooftop solar panels on-site. As such, it is often the only viable solar option for households that may not be able to afford or are otherwise unable to invest directly in rooftop photovoltaic options.[1]

Unfortunately, community solar has remained largely out of reach for lower-income households. While the U.S. community solar market has grown significantly over the last decade, as of December 2022 low- to moderate-income community solar represented just 2% of the overall market based on capacity.[3] Subscription costs, contract terms and fees, and customer outreach and acquisition strategies can impede LMI households from accessing and benefiting from community solar. What's more, policy and regulatory uncertainty resulting in high capital costs may stall projects and reduce profit margins for developers and investors, limiting their ability to deliver benefits to subscribers.

Get engaged on community solar through NCSP+

The National Community Solar Partnership+ is a coalition of stakeholders working to expand access to affordable, distributed solar to every U.S. household, while enabling communities to realize the benefits of solar energy, which include equitable access, meaningful household savings, energy reliability and resilience, community-led economic development, and solar workforce opportunities. The partnership is a U.S. Department of Energy initiative led by the Solar Energy Technologies Office, in collaboration with the National Renewable Energy Laboratory and Lawrence Berkeley National Laboratory.

Partners leverage peer networks and technical assistance resources to set goals and overcome barriers to expanding distributed solar access. The partnership is open to any individual or organization with an interest in supporting equitable solar development. The States Collaborative enables state partners at all levels of market maturity to benefit from regular opportunities to engage with and learn from their peers in other states as they explore, design, launch, administer, and expand community solar programs. Learn more at https://www.energy.gov/communitysolar/states-collaborative.



Source: U.S. Department of Energy

1 Renter status, roof suitability, and high up-front costs can all prevent households from installing solar on their roofs. Structural barriers alone prevent up to 75% of households in the United States from installing rooftop solar, and low-income people often face heightened barriers to access, as they are more likely to rent their homes, may lack the necessary up-front capital, and tend to require more costly roof repairs and electrical wiring work to prepare their homes and roofs for solar.

States' Roles in LMI-Accessible Community Solar

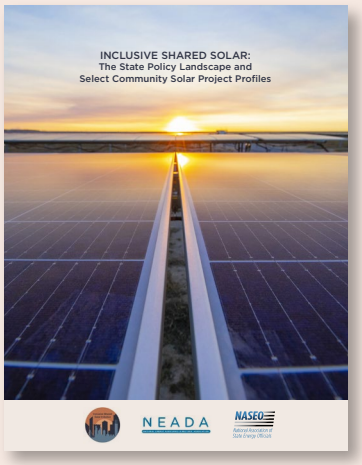
State laws, policies, and program designs create and shape the market for community solar and can play an influential role in eliminating barriers to access for lower-income households. When designed with underserved subscribers in mind, community solar offers states an opportunity to reduce costs for households with vulnerabilities such as high energy burdens, i.e., where energy costs exceed 6% of gross income, while supporting clean energy and grid resilience policies and goals.

As of August 2024, 23 states and the District of Columbia had passed community-solar enabling legislation that establishes a mandate for community solar and/or to develop programs that support or incentivize its expansion.[4,5] A subset of state policies have included provisions that lower costs and other barriers to participation for lower-income subscribers, supporting the development of what this report categorizes as "LMI-accessible community solar" (see text box below). Seventeen states, including the District of Columbia, have legislation [laws?] requiring or encouraging LMI participation in community solar development or have community solar pilots under way that include LMI customers. Some of these states have employed carve-outs that mandate that a certain percentage of subscribers or proportion of project capacity or output be reserved for LMI households. Others promote low-income subscriber participation by offering discounted or waived subscription rates, requiring LMI consumer protections, and/or providing financial incentives to developers, for example.

Potential Components of LMI-Accessible Community Solar

- Establish a minimum proportion of community solar project or program capacity for LMI subscribers
- Offer financial incentives to community solar providers who meet LMI participation thresholds
- Discount or waive subscription rates for LMI subscribers
- Require consolidated billing by utilities
- Eliminate up-front costs, cancellation fees, and minimum commitment periods
- Encourage or automatically enroll beneficiaries of income-qualified programs to subscribe to cost-saving community solar projects, for instance through the U.S. Department of Energy's Clean Energy Connector Tool
- Adhere to the National Consumer Law Center's "Principles for Protecting Low-Income Community Solar Subscribers," which include meaningful bill savings, transparent and reasonable contract terms, clear communication in appropriate formats, no hidden or additional fees, accessible complaint mechanisms and data disclosures, and effective evaluation and enforcement processes

Learn more about States' LMI-Accessible Community Solar Programs



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As stated, State Energy Offices and State Low Income Home Energy Assistance Program Agencies can help to streamline and prioritize the delivery of affordable community solar to households and communities with the greatest needs. This report surfaces key findings of the Inclusive Shared Solar Initiative, a joint effort between the National Association of State Energy Officials and National Energy Assistance Directors Association. Since its launch in 2020, ISSI received financial support and technical guidance from the U.S. Department of Energy's Solar Energy Technologies Office to serve as a forum for teams of State Energy Offices and State LIHEAP Agencies to navigate the design and development of LMI-accessible community solar projects.

State Energy Offices are often involved in community solar policy and program design from inception, whether by supporting the enactment of enabling legislation or informing the development of program rules and regulations. State Energy Offices may also be charged with administering or overseeing the implementation of statewide community solar programs. Given their broader role in shaping state level energy policies and programs, State Energy Offices can track and influence energy policies that impact community solar deployment and access, such as interconnection processes and rebates and incentives for energy efficiency and electrification.

As recipients of the federal LIHEAP block grants, State LIHEAP Agencies are responsible for delivering energy assistance benefits to households with low incomes, often with a focus on those experiencing high energy burdens. As a result, State LIHEAP Agencies have a deep understanding of the needs of the people they serve and can help inform the design of community solar programs to decrease household energy burden and, potentially, reliance on energy assistance.

KEY ISSI PLAYERS	
State Energy Offices	**State LIHEAP Agencies**
✓ Have access to and influence over potential funding sources, such as the U.S. State Energy Program, that can offset costs and mitigate risks for LMI-accessible community solar projects and programs. ✓ Have knowledge of and relationships with investor and consumer-owned utilities that may be interested in supporting or hosting community solar projects in their territories. ✓ May inform and support complementary policies, such as enabling legislation, net metering, clean energy portfolio standards, renewable energy credits, clean energy financing, resilience plans, and other programs that can support community solar development. ✓ Have relationships with and experience engaging key industry stakeholders, such as capital providers, solar developers, and community-based organizations, to inform community solar pilots, programs, and policies that are accessible to and benefit LMI participants.	✓ Have existing relationships and databases with low-income households and organizations in their states. ✓ Have in-depth knowledge of low-income programs, including best practices for delivery, enrollment, cancellation, and innovation, as well as communities with needs greater than current LIHEAP funding. ✓ May be interested in complementing bill assistance programs by expanding access to community solar subscriptions, which offer a more price-stable and less carbon-intensive source of electricity than coal or natural gas generation. ✓ Have deep partnerships with community action agencies and other organizations that support low-income households directly.

The Value of LMI-Accessible Community Solar to LIHEAP Households

Community solar can present a particularly important value proposition to LIHEAP Agencies. High energy costs place a strain on the budgets of low-income households. LIHEAP, which provides federally funded assistance to reduce the costs associated with home heating and cooling bills, offers significant relief. Yet, annual funding for LIHEAP is only sufficient to support one in six eligible households. In this context, many State LIHEAP Agencies have sought ways to stretch these limited funds further. Bill reduction strategies such as energy efficiency and weatherization offer one set of solutions; community solar, when paired with robust consumer protections and guaranteed bill savings, can be another important tool.

An accessibility advantage of community solar over rooftop solar (and most energy efficiency projects) is that participation in a shared solar program does not require homes to undergo upgrades, construction, or maintenance. Community solar avoids issues related to roof or electric wiring quality and age, questions of ownership of properties or panels, and solar panel maintenance contracts; in other words, there can be no on-site technical problems such as inoperable or disconnected panels because there are no on-site systems. With community solar, responsibilities such as construction, operation, and maintenance fall to the solar provider, which is typically more sophisticated and better positioned than individual households to attract and use financing for these purposes.

In the early years of community solar, subscription contracts were often for the life of the arrays: subscriptions helped pay for the construction of panel systems and subscribers faced steep penalties for exiting contracts early. Many contracts also resulted in a "price premium" – an increase in net energy costs for households due to more expensive subscriptions – in exchange for the procurement of cleaner, alternative energy. These provisions were particularly onerous for households that could not afford steep prices or to be locked into 20 to 30 year contracts, and presented a deterrent for people who expected to relocate from their households.

Today, many community solar programs have loosened subscription requirements and eliminated the need for participation contracts entirely. Increasingly, states are implementing and enforcing savings requirements for LMI subscribers to ensure a net reduction on utility bills. Such actions are helping to create smoother experiences for all types of community solar subscribers, regardless of their incomes, but can be especially beneficial for people with limited financial means who may rely on assistance programs such as LIHEAP to pay household bills.

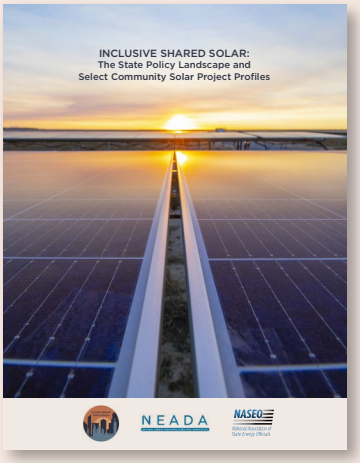
How Can LMI-Accessible Community Solar Help LIHEAP Recipients?

Two key components of LMI-accessible community solar — *guaranteed savings and utility-consolidated billing* —can be important tools for states seeking to optimize benefits for LIHEAP households. Community solar subscriptions with guaranteed savings reduce the total energy burden by lowering electric utility bills. Under utility-consolidated billing, electric bills must show both the solar credits and the subscription costs of participating in community solar. Consolidated bills tend to contain a more complete and accurate picture of the household's energy costs and burden than dual bills, which retain the credits on utility bills but invoice customers separately for subscription costs.

Guaranteed savings offer LIHEAP administrators an opportunity to allocate precious LIHEAP funds even more effectively to households in need, and utility-consolidated bills leave LIHEAP programs better-positioned to calculate the size of households' benefits based on actual energy costs and burdens. By coordinating these programs, community solar and LIHEAP administrators can ensure that solar generation credits are sized to the needs of customers without compromising assistance benefits inadvertently.

States can apply similar principles to coordinate community solar with other assistance programs, such as Temporary Assistance for Needy Families, the Supplementary Nutritional Assistance Program, rental assistance, utility allowance programs, and others.

Learn more about consolidated billing:



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Inclusive Shared Solar Initiative

Since its establishment in 2020 and with support from SETO, ISSI has served as a forum to examine how interagency collaboration and program coordination can address barriers to solar access, protect consumers, and prioritize investments.

Through ISSI, NASEO and NEADA facilitated regular peer exchange meetings, provided technical assistance, and supported the development of community solar pilot projects in three states: the District of Columbia, Minnesota, and Wisconsin. The original inspiration for ISSI came from New York's Solar for All program, through which the New York State Energy Research and Development Authority (New York's State Energy Office) and the Office of Temporary and Disability Assistance (New York's LIHEAP Agency) piloted the concept of aggregating LIHEAP households to serve as anchor tenants on community solar projects. While New York's solar offerings have continued to evolve since the launch of ISSI, its principles of protecting low-income consumers, reducing barriers to enrollment, and fostering inter-program coordination helped inform the strategies and innovations developed by the ISSI pilot states.

The market conditions in each ISSI partner state varied, covering projects in investor-owned, municipally-owned, and cooperatively-owned utility territories, as did their approaches to policy development, program design, and project investments. These variables helped highlight a wide range of strategies for LMI-accessible community solar development that can inspire low-income solar approaches by other State Energy Offices and LIHEAP Agencies around the country.

Summary: ISSI State Partner and Project Highlights		
 **Minnesota Equitable Solar Access Project**	 **Washington, DC Solar for All Program**	 **Wisconsin Inclusive Solar Community Offering**
• **Leads:** Minnesota Department of Commerce Energy Division and Energy Assistance Program	• **Lead:** District of Columbia Department of Energy and Environment	• **Lead:** Wisconsin Office of Energy Innovation
• **Key Partners:** Detroit Lakes Public Utility, Mahube-Otwa Community Agency, University of Minnesota Chan Lab, Clean Energy Resource Teams	• **Key Partners:** F.H. Faunteroy Community Enrichment Center, American Microgrid Solutions, Pepco	• **Key Partners:** Wisconsin Department of Administration, Division of Housing and Community Resources; and community action agencies CouleeCAP and West CAP
• **Project:** Detroit Lakes Public Utility 11 kW Solar Array	• **Project:** Faunteroy Community Enrichment Center Resilience Incubator	• **Projects:** Vernon Electric Bluff Prairie Community Solar Project (serving 144 low-income households); Pierce Pepin Community Solar Project (to serve an estimated 200 households)
• **Outcomes:** LIHEAP program changes enabling categorization of community solar gardens as vendors; analysis of costs and benefits to utility of LMI-accessible projects; demonstration of a novel approach to bank credits and distribute them when household energy costs are highest	• **Outcomes:** Demonstration of the resilience benefits of community solar and storage microgrid; establishment of automatic enrollment process for LIHEAP households in DC SfA	• **Outcome:** Development of an auto-enrollment subscription model that automatically applies the benefits to eligible customers' bills based on the output of the system

The Minnesota ISSI team implemented a new program design model and advanced critical policy changes that help increase access to community solar for energy-burdened households across the state. By making adjustments to the Energy Assistance Program (EAP) policy and application form, Minnesota became the first state to allow households to elect to use a portion of their LIHEAP benefits to pay for community solar subscription fees, as they would any other energy or fuel cost. Following Minnesota's lead, the U.S. Department of Health and Human Services released a memo with guidance for how State LIHEAP Agencies can do the same, as well as recommendations for protecting consumers. Minnesota's revised method for calculating the energy burden used to determine LIHEAP benefit amounts has provided a model for other states (including Wisconsin) and will help ensure households' LIHEAP benefits are not reduced as a result of participating in community solar.

In addition to the EAP policy changes, the ISSI-supported pilot project led Minnesota to implement a novel approach to reduce the energy burden of EAP-enrolled households in rural electric cooperative territory. By "banking" solar generation credits from the community solar array, which has higher output in the cooling season, the local community action agency partner will disburse credits to households during the heating season, when energy costs are typically highest.

The Washington, D.C. experience in ISSI offers insights into how states with established LMI-accessible community solar markets can deepen and expand benefits for households. DC Solar for All serves over 6,000 households with no-cost community solar subscriptions and rooftop solar, saving low to moderate-income families approximately $500 a year per household. To meet the program's goal of bringing the benefits of solar to 100,000 LMI families in the District by 2032, the District Department of Energy and Environment (DOEE) sought to develop more innovative ways to scale the program and address barriers such as administrative and enrollment burdens for subscribers, disincentives impeding full participation and benefits for residents of master-metered multifamily housing, needed grid upgrades to accommodate new solar interconnections, and a lack of available real estate for solar development within the District.

DOEE's participation in ISSI resulted in important and nationally scalable outcomes. To begin, DOEE pioneered the first community solar and storage Resilience Hub in the District in partnership with a local community center, the investor-owned utility Pepco, and private sector partners to install and manage the microgrid. DOEE also advanced innovative strategies to reduce barriers to participation in DC Solar for All such as automatic enrollment of LIHEAP households, and took steps to prevent affordable housing tenants from adverse impacts such as rental and energy assistance reductions, as a result of their participation in the program.

The state of Wisconsin does not have an enabling law allowing third-party ownership of energy generation. As a result, community solar projects have historically been owned and operated by utilities and typically require customers to pay an up-front fee or monthly subscription premium to participate. To address this challenge while working within Wisconsin's existing market framework, the Office of Energy Innovation (OEI, the State Energy Office) decided to leverage ISSI technical assistance and State Energy Program funding to launch parallel pilot projects in partnership with the Wisconsin Division of Energy Housing and Community Resources (DEHCR), two Community Action Program agencies, and two rural electric cooperatives. Through these pilot projects, the Wisconsin team harnessed the expertise of community action agencies to inform the development of Power Purchase Agreements and low-income carve-outs that automatically apply benefits to LIHEAP customers' energy bills based on the output of the systems.

Recommendations and Considerations for States

The ISSI experience shed light on important recommendations and considerations for states interested in exploring, developing, or expanding LMI community solar programs. More details about each of the ISSI pilot projects and key project documents and materials can be found in the appendices.

Centering Low-Income and Energy-Burdened Participant Needs and Experiences

LMI-accessible community solar programs center the needs and experiences of low-income and energy-burdened households. This may involve collecting and analyzing data to understand the potential impact of a community solar subscription on a household's monthly energy bill; working with trusted partners to engage households and develop programs and communication methods that align with households' needs and preferences; understanding and protecting against adverse impacts; and exploring program design and ownership structures beyond the traditional community solar subscription model.

Centering Low-Income and Energy Burdened Participant Needs and Experiences Summary: ISSI State Partner Innovations and Outcomes

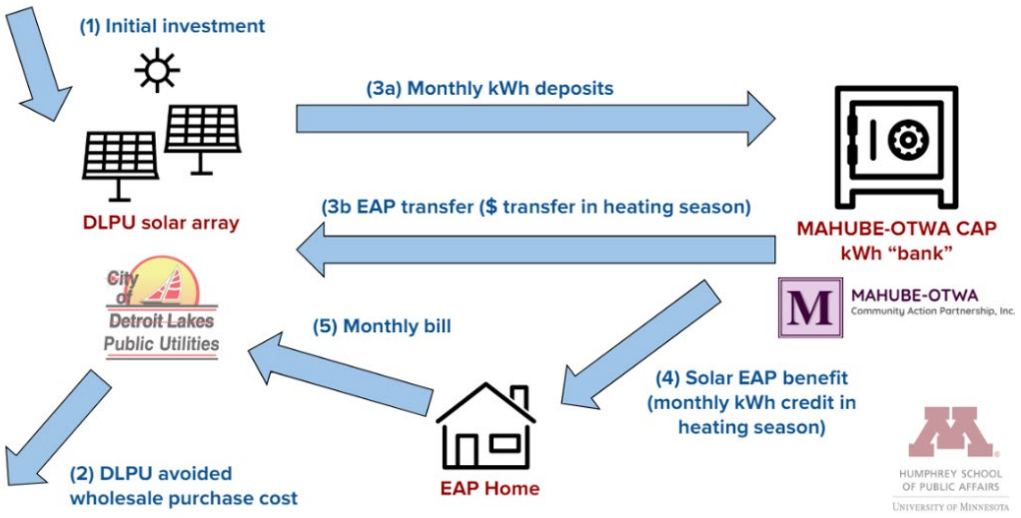
 **Minnesota**	 **Washington, DC**	 **Wisconsin**
• Developed model to inform banking and distribution of solar credits to EAP households • Reduced costs for participating households by delivering bill credits in kilowatt hours rather than dollars • Adjusted LIHEAP to avoid reduction in benefits due to solar credits	• Convened Equity Advisory Group to plan and select site for Resilience Hub combining community solar, storage, and community services. • Secured HUD waiver to ensure bill credits do not affect subsidized housing residents' rental assistance and/or utility allowance benefits • Examined nonfinancial benefits of community solar and storage installation in frontline community	• Funded local community action agency to conduct in-depth stakeholder engagement • Adjusted LIHEAP benefits calculation to avoid reduction in benefits due to solar credits • Delivering solar bill credits on a monthly basis in response to stakeholder input and preferences • Used U.S. State Energy Program funding to offer no-cost community solar subscriptions to LIHEAP households

Data collection and analysis

To ensure community solar projects and programs maximize energy burden reductions and other benefits for participating households, states can conduct detailed data analyses to help inform program design. As part of ISSI, the Minnesota Department of Commerce worked with the University of Minnesota, the Mahube-Otwa Community Action Partnership, and Detroit Lakes Public Utility (DLPU, a local municipal utility) to develop a model that tracks solar output, costs and benefits to the utility, and customer impacts of the community solar pilot project. The team collected monthly customer load profiles using data from the Mahube-Otwa CAP and National Renewable Energy Laboratory (NREL) End User Load Profiles to understand customer bills before and after community solar credits were applied. The model also included solar production data from NREL's System Advisor Model, utility wholesale rates for DLPU, and the Project Cost Base from Lawrence Berkeley National Lab's *Tracking the Sun* and *Utility Scale Solar* reports.

The resulting model helped the Minnesota team compare the monthly output from the solar array (in kWh of electricity generated) with the timing and amount of energy assistance provided to households through the Energy Assistance Program. Because households accrue EAP benefits at a fixed rate during the heating season months (October through April) when solar production is lowest, Minnesota designed a pilot approach that enables the Mahube-Otwa CAP to bank the solar generation credits and distribute them to EAP households when energy burden is highest: during the heating season for most households, according to the customer load profiles analyzed. The model helped Minnesota compare scenarios with different subscription levels (4kW versus 5kW) to understand the impact on customers' monthly and annual bill savings, which helped inform how many households could be served by the pilot project while delivering meaningful energy burden reductions (See Figure 3 below). Finally, in analyzing the customer load profiles, the Minnesota team learned that delivering bill credits in kWh rather than a dollar amount resulted in greater benefits for households and had DLPU adjust its crediting accordingly; the kWh credit reduces customer usage and therefore the fees calculated based on usage, while the dollar amount credit would reduce the total bill after fees are applied.

Flow of Solar Benefits and Payments in Minnesota Equitable Solar Access Project



Source: University of Minnesota

Empowering Trusted Partners and Programs to Engage Households

States can leverage trusted partners to engage prospective subscribers throughout the development of community solar projects. The primary objective of many state and local LIHEAP administrators, community action agencies, and community-based organizations is to serve lower-income, energy-burdened or otherwise vulnerable residents. As such, these organizations are well-positioned to help communicate about and gather feedback on community solar projects and programs.

DOEE supported a community-driven process to pilot its approach to co-locating community solar and storage. In 2017, DOEE helped establish and fund an Equity Advisory Group (EAG) comprised of residents and community organizations in far northeast Ward 7 with the goal of developing community-based recommendations for the implementation of the District's Climate Ready DC and Clean Energy DC plans. The EAG provided recommendations for the creation of neighborhood-scale resilience hubs as well as workforce development programs that would benefit community members and support a resilient economy in far northeast Ward 7 communities. The group recommended that the resilience hubs:

- *Be strategically located in Far Northeast Ward 7 in physical spaces that are trusted and recognized by the community they serve; resilient to flooding and other physical hazards; and welcoming and accessible, addressing barriers (both physical and perceived) that limit connectivity and the likelihood that residents will utilize them.*
- *Offer resources during a disaster including power, information, and essential provisions, and be natural gathering places to meet community needs during non-emergency situations.*
- *Uplift the community by leveraging sustainable funding to hire and train local residents, building on existing community resources, and partnering with established leaders.*[6]

The guiding principles helped inform the Resilience Hub Community Coalition's Ward 7 Resilience Hub Proposal in 2020 and the community's ultimate decision to select the F.H. Faunteroy Center (Faunteroy Center) as the host site for the District's first resilience hub pilot.[7] The Faunteroy Center is a nonprofit community center located on the first floor of an affordable housing building in the Deanwood neighborhood of Ward 7 and provides a number of community services, including youth programming, workforce development, health and wellness, and environmental education. Because of the Faunteroy Center's history and community-driven structure and mission, it is a trusted and recognized gathering space among community members in Ward 7. Since its selection as the host site for the resilience hub, the Faunteroy Center has led community engagement efforts and coordinated with DOEE to inform the design of the hub and secure additional funding to support the hub build-out and the expansion of community services.

In Wisconsin, the Office of Energy Innovation used U.S. State Energy Program funds to enable CouleeCAP, a local community action agency in the Vernon Electric Cooperative territory, to conduct focus groups with residents. These engagements, which included facilitated discussions and a survey (see Appendix E), informed the pilot design and program communications strategies. Households indicated their preference to receive bill credits on a monthly basis.[2] The focus groups also provided feedback on program messaging and outreach, which led to the development of a name for the program (Energize Wisconsin) and a page on CouleeCAP's website explaining the benefits of the program and how it works.

2 In contrast, stakeholder engagement in Minnesota revealed that households preferred to receive the combined monthly bill credits in one-time payments with EAP benefits at the beginning of heating season.

Protecting and Enhancing Consumer Benefits

Strong partnerships between State Energy Offices and State LIHEAP Agencies can help ensure consumer protections are incorporated into community solar policies and program designs. The National Consumer Law Center has identified a framework of best practices states can adopt to protect consumers, including bill savings requirements and fair contract terms, marketing standards, complaint mechanisms, streamlined income verification processes, and coordination with other low-income programs (such as LIHEAP) to ensure benefits are protected.[8]

National Consumer Law Center's General Principles for Protecting Low-Income Community Subscribers

- Meaningful bill savings
- Transparent and reasonable contract terms
- Clear communication in appropriate formats
- No hidden or additional fees
- Accessible complaint mechanism and data disclosure
- Effective evaluation and enforcement process

Learn more at https://www.nclc.org/resources/community-solar-expanding-access-and-safeguarding-low-income-families/

By working closely with their State LIHEAP Agencies, State Energy Offices participating in ISSI explored and implemented many of these best practices. In Minnesota, the Energy Assistance Program (the State LIHEAP Agency) and State Energy Office are both in the Minnesota Department of Commerce; they coordinated to ensure households' LIHEAP benefits would not be reduced because of their participation in community solar. The Energy Assistance Program updated the state's model plan in 2022 to include community solar subscription costs when calculating household energy burden, the metric used to determine LIHEAP benefit amounts in Minnesota. This change allowed for a more accurate LIHEAP benefit calculation that incorporates all energy costs (see Minnesota Energy Program application below). The Minnesota team also included several provisions within their community solar program design to protect households should they decide to end their subscriptions. If a household ends its participation in the program, any future subscription payments are stopped and future applications to the Energy Assistance Program would not include the subscription cost in the energy burden calculation.[9]

The Wisconsin ISSI team designed their pilot projects so that eligible households were auto-enrolled into a no-cost subscription. To ensure the community solar bill credits do not affect households' LIHEAP benefits (i.e., by reducing energy bills and lowering the energy burden calculation used to determine benefit amounts), the Wisconsin Home Energy Assistance Program utilized the state's proxy table for determining benefits for households enrolled in community solar, inspired by Minnesota's use of their backup matrix when they are unable to obtain subscription cost data from community solar garden vendors.

Minnesota LIHEAP Application

Part 4. Energy Providers

What companies supply heat, electricity, and water* to your home?

Send a copy of your last bills and/or fuel receipt with this application.

***Help may be available if you have a past due water bill.**

	Main Heating	Other Heating	Electric	Solar Garden	Water
Company Name					
Fuel Type:	◯ Natural Gas ◯ Propane ◯ Oil ◯ Biofuel ◯ Steam	◯ Natural Gas ◯ Propane ◯ Oil ◯ Biofuel ◯ Steam	☐ Main heat source is electricity		
Account Number:					
Name on Account:					

Unless indicated below, we will split your benefit. 70% will be paid to your main heating company and 30% to your electric company.

OPTIONAL: If you want your benefit paid differently, please indicate below:

◯ All to main heating ◯ All to electric ◯ Other: .....

Do you share your fuel tank or energy meter with another household? ◯ Yes ◯ No

If you heat with wood or other biofuel:

Biofuel you use - ◯ Wood ◯ Pellets ◯ Corn ◯ Other

What percent of your heat does this supply? ..... %

How many bedrooms are in your home? .....

Do you supply your own wood/corn? ◯ Yes ◯ No

Source: Minnesota Energy Assistance Program

Community solar programs serving renters in multifamily and affordable housing buildings often bring unique challenges that underscore the need for consumer protections. Intentional policies and program design decisions can help ensure that tenants who do not pay utility bills (for instance, in a master-metered property) can still access the benefits of community solar and that participation will not impact overall housing costs or rental assistance benefits. For example, DOEE secured a waiver[10] from the U.S. Department of Housing and Urban Development to ensure the bill credits provided through DC's Solar for All program would not affect household income and utility allowance calculations.[3]

DOEE has also examined the ways LMI-accessible community solar can deliver nonfinancial benefits. The ISSI-supported pilot project with the Faunteroy Center will not only provide bill savings to subscriber households but also deliver resiliency benefits to a community with heightened vulnerabilities due to climate change. The solar and storage microgrid installation will allow the Faunteroy Center to serve as a resilience hub during power outages and emergency weather events, providing off-grid electricity for critical services such as air conditioning, power and refrigeration for medical devices, and charging cell phones. The solar and storage will reduce operating costs for the Faunteroy Center, enabling it to expand its regular programming, which includes workforce development and entrepreneurship support, youth events, community building, and health and wellness services —all of which contribute to the community's overall resiliency.

3 California's Solar on Multifamily Affordable Housing program offers another example of ensuring consumer protections for multifamily subscribers. The SOMAH program requires building owners to sign an affidavit assuring that economic benefits tenants receive will continue throughout the life of the systems.

Simplifying Community Solar Subscription and Payment Processes

Simplifying Community Solar Subscription and Payment Processes Summary: ISSI State Partner Innovations and Outcomes		
 **Minnesota**	 **Washington, DC**	 **Wisconsin**
• Adjusted LIHEAP application to enable the use of assistance funds to pay community solar subscription costs	• Automatic enrollment in Solar for All (with opt-out option) for households applying to LIHEAP • Piloting the Clean Energy Connector tool to connect LIHEAP households with cost-saving community solar subscriptions • Encouraging coordination with federal agencies to enable data sharing across low-income programs	• Used U.S. State Energy Program funds to buy down subscription costs for low-income households • Engaged local community action agencies to purchase bulk subscriptions from electric cooperative partners on behalf of households • Automatic enrollment for LIHEAP-eligible households with high energy burden

Streamlined enrollment and payment processes have emerged as critical elements of program design and implementation as states look to scale community solar programs and expand access for energy-burdened households. Simplified income verification can not only make enrollment in community solar easier for participating households, but also lower customer acquisition costs for developers and subscription managers. Similarly, streamlined payment processes can alleviate the burden of having to pay additional bills while improving transparency and predictability for households and reducing projects' subscription drop-off and non-payment rates.

Streamlining Subscription and Enrollment Processes

Some community solar programs, by statute or by program design, require households to furnish proof of income annually to remain in the programs. Some jurisdictions have found that such requirements place excessive burden on already resource-constrained households, deterring their enrollment and/or participation. Several states, including the ISSI pilot states, have explored ways to simplify the income verification process for community solar by automatically enrolling income-qualified households, coordinating and data-sharing across state agencies, and working with trusted partners.

In 2023, DOEE established an automatic enrollment pathway for DC Solar for All for customers who apply and qualify for LIHEAP and therefore also meet the DC Solar for All low-income eligibility requirement. Specifically, DOEE updated its energy assistance form to include a statement notifying applicants that if they qualify for LIHEAP benefits, they may be automatically enrolled in the DC Solar for All program and would save an estimated $500 annually on their electric utility bills unless they choose to opt out of the program.[11] The language includes a link to the DC Solar for All Terms and Conditions, and applicants must sign to certify they understand and agree to the terms. Since this update to the energy assistance application, over 2,000 households have been enrolled in DC Solar for All based on categorical eligibility, representing a significant increase in participation among income-eligible households.

For the Wisconsin and Minnesota pilot projects, the State Energy Offices coordinated closely with the State LIHEAP and Weatherization offices, local community action agencies, and utility partners to select and automatically enroll LIHEAP-eligible households experiencing high energy burdens. The Minnesota team opted to prioritize people living in manufactured housing as well as households using electric heating. The Wisconsin team, led by the Office of Energy Innovation (OEI, the State Energy Office) applied U.S. State Energy Program funds to dedicate a portion of its ISSI community solar projects to households with high energy burdens. OEI engaged local community action agencies to purchase bulk subscriptions on behalf of households, thereby delivering energy savings without the need to reverify their income levels or complete additional paperwork. To explain the benefits of the program, the Wisconsin ISSI team delivered Enrollment Postcards to participating customers, directing recipients to the program website for additional information and resources (see Appendix F).

While it may not make sense for all state community solar projects or programs to use an automatic or opt-out enrollment process when projects involve subscription costs to households, coordination across state agencies and with federal and local partners can help streamline enrollment. For example, prior to establishing an automatic enrollment process, the District of Columbia's State Energy Office and LIHEAP Agency (both within DOEE) coordinated to include a check box on the energy assistance form to allow households applying for LIHEAP to indicate interest in DC Solar for All without having to complete a separate income verification form. Washington, D.C., New Mexico, Illinois, Rhode Island, and Massachusetts are also piloting the Clean Energy Connector, a tool developed by the U.S. Department of Energy and the U.S. Department of Health and Human Services (HHS) to connect households that qualify for LIHEAP with community solar programs that offer meaningful savings and adhere to consumer protections. The Clean Energy Connector provides a platform to match interested households with available subscriptions, with designated roles for state community solar administrators and State LIHEAP Agencies, and support for local LIHEAP administrators who share information about a state's community solar program and compile information from interested households.

To further expand access to the benefits of community solar, states can leverage similar strategies to enroll households eligible for other low-income support programs, such as the Weatherization Assistance Program or the Supplemental Nutrition Assistance Program (SNAP). In Washington, D.C., DOEE has taken steps to access data in order to expand the reach of the DC Solar for All program by engaging the D.C. Department of Human Services (DHS), the agency that implements SNAP. DOEE also submitted letters to federal partners at HHS and the U.S. Department of Agriculture (USDA) to clarify SNAP regulations that would allow for such data sharing. (See Appendix G for copies of letters DOEE sent to HHS and USDA). At the national level, the Clean Energy Connector, which currently focuses on connecting LIHEAP-eligible households with community solar projects, may expand in the future to incorporate other income-verified programs.

Alleviating Payment Transaction Burdens

Complex payment mechanisms can create an additional burden for households and may make it more difficult to track net savings, potentially leading households to drop out of community solar programs or decline participation up front. By incorporating billing considerations into program and policy design, collaborating closely with utilities, and exploring creative solutions to billing challenges, states can help streamline payment processes and improve transparency and trust among participating households. Under a typical community solar subscription model with dual billing, customers pay separate bills to the developer for their shares of the solar array, while the generation credits they receive are applied to households' monthly utility bills. Because information about the community solar subscription is split across two different bills, households may find it more difficult to understand the net savings. Having two separate bills also adds an administrative burden for the household and may make it more challenging to manage monthly budgets if the timing of the bills is not aligned.

To address these challenges, several states have passed legislation or issued regulations requiring utilities to offer consolidated billing.[12] Under a consolidated billing structure, community solar subscription fees and credits are combined with a household's normal utility charges on a single monthly utility bill. While consolidated billing has the potential to enable a more transparent, more predictable billing experience for households, it can be challenging for utilities to implement and lead to unintended consequences. Often, utilities have to update their billing system and internal processes, which can be costly and time-intensive, particularly for rural electric cooperatives and municipal utilities. For example, Portland General Electric (an investor-owned utility in Oregon) estimated the transition to consolidated billing would cost $1.4 million. In New York, many of the utilities charged with implementing consolidated billing had been using manual processes, which led to billing delays and inaccurate bills during early implementation.[13]

Because consolidated billing may not be feasible for some utilities or in certain state policy environments, states have explored other solutions to help ease payment burden for households and protect consumers. For example, when updating the state's model plan, the Minnesota Energy Assistance Program included an option to allow households to use LIHEAP funds towards community solar subscription costs. This change not only creates a more accurate picture of a household's energy burden (which is used to determine LIHEAP benefit amounts), but also allows a household to avoid paying a separate bill as a result of selecting community solar gardens as their energy provider or vendor to which they would like some or all of their LIHEAP benefit paid.

As of October 2024, Minnesota is the only state to allow households enrolled in LIHEAP to use their benefits for community solar subscriptions. As the state moves toward a consolidated billing regime for community solar projects in Xcel territory, this accommodation may no longer be necessary. However, states without consolidated billing may seek to follow Minnesota's example. In June 2023, the U.S. Department of Health and Human Services Office of Community Services released an information memorandum confirming that State LIHEAP Agencies can choose to allow LIHEAP funds to be used for solar energy through payment mechanisms like community solar subscription fees. The letter also outlines key consumer protections for states to consider when utilizing LIHEAP funds for community solar subscriptions.[14]

Addressing Utility, Developer, and Financier Risks and Concerns

Funding, financing, and revenue streams can play a make-or-break role in the viability and affordability of community solar projects. The state partners' experiences in ISSI, as well as their engagements with capital providers and financial institutions, revealed important lessons about the steps that states can take to mitigate various sources of financial risk and attract greater private sector investment in LMI-accessible community solar.

Clarifying Electric System Impacts

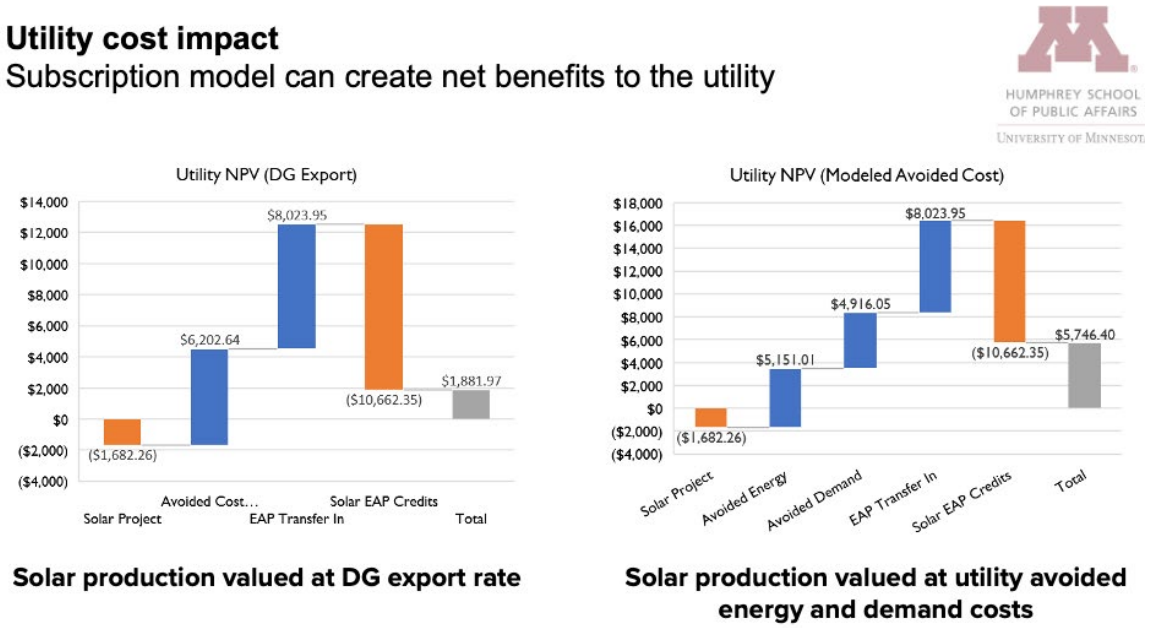
A common objection to the development of LMI-accessible community solar projects and programs stems from their potential to contribute to inequities in electric system costs, a dynamic commonly known as "cross-subsidization" or "cost-shifting." Concerns about cross-subsidy may become especially thorny when utilities lack processes or rules governing how to quantify and recover community solar-related costs, which hampers project development and potentially limits access to financing. As Chan, et al., note:

> In standard energy infrastructure investment, costs and benefits are distributed across ratepayers (e.g., through increased utility rates), taxpayers (e.g., government subsidies), and utility shareholders (e.g., through lost profit)....In the case of [community shared solar] CSS schemes, the distribution of costs and benefits is made complex by the introduction of third-party solar developers, subscriptions — which take heterogeneous forms of compensation schemes — and specific tariff schemes for electricity generated. The distribution of costs and benefits raises the issue of fairness in CSS schemes. Because analysis of these cross-group transfer effects is so complex, CSS programs have been implemented without a broadly agreed-upon ex ante understanding of these impacts.[15]

Through a survey administered in 2020, the Smart Electric Power Alliance identified the categories of community solar program costs that utilities have found difficult to quantify, including "costs from overall grid impact (integration, transmission, etc.); pre-program marketing and administration; costs incurred due to unsubscribed generation; and costs of stranded assets stemming from participation in the [community solar] program."[16] Some utilities have claimed that without the option to recover such costs directly from program participants, ratepayers as a whole bear a disproportionate burden.

After experiencing a project setback due to concerns about cost-shifting, the Minnesota team sought to use its experience in ISSI to quantify and clarify potential cross-subsidies. Importantly, alongside the exploration of costs borne by utilities and their ratepayers was an examination of ***benefits*** created by community solar projects. The Minnesota Department of Commerce engaged the Chan Lab at the University of Minnesota to collect and analyze data to document how community solar can help utilities' bottom line and provide benefits for all customers. The Chan Lab utilized real data from the Detroit Lakes Public Utilities project to demonstrate that community solar can help avoid demand charges, which can make up a significant portion (between 30 and 50% —of the amount some utilities pay to their wholesale provider. Outside of ISSI, at the direction of the state legislature, the Minnesota Department of Commerce has commissioned an analysis of its new Low and Moderate-Income Accessible Community Solar Garden Program that will include, among other focus areas, a comparison of "the relative cost to ratepayers of the community solar gardens programs versus other potential options for encouraging adoption of solar electricity in Minnesota."[17]

Utility Cost Impact of Detroit Lakes Public Utilities LMI-Accessible Community Solar Garden



Source: University of Minnesota Humphrey School of Public Affairs

Minnesota's ongoing work joins a growing body of research across the United States examining the electric system costs and benefits of distributed solar projects and, beyond the grid, their societal impacts. A 2024 analysis from the National Renewable Energy Laboratory for Frankfort, Kentucky, found that meeting a portion of the city's electricity demand through 11.54 megawatts of solar production would reduce costs borne by the power supplier, the Kentucky Municipal Energy Agency, by over $1,000,000 annually by decreasing aggregate peak demand.[18] A 2023 study by the Brattle Group found that both ground-mounted and rooftop community solar and storage projects, particularly in urban and suburban settings, provide net value across grid, land use, workforce, and resiliency value streams.[19] In a national modeling study commissioned by Local Solar for All, the Coalition for Community Solar Access, and Vote Solar, Vibrant Clean Energy, LLC, came to similar conclusions: that distributed energy resources can lower costs across the entire electricity system (ranging from $301 billion to $473 billion by 2050) and result in net-new jobs, without sacrificing system reliability and resource adequacy,[20] thus benefiting all ratepayers regardless of income or rate class.

In addition to studying the issue, states have used a variety of approaches to enable utilities to manage costs related to third-party community solar development in their territories. Colorado allows any investor-owned utility with more than 500,000 customers to file updates to tariffs to implement interconnection cost-sharing for system upgrades "whereby a community solar facility only pays the facility's proportional share of newly created hosting capacity associated with the facility."[21] New Mexico's Adopting Rule allows the New Mexico Public Regulatory Commission to make decisions about cost-sharing for necessary distribution system upgrades on a case-by-case basis. Costs may be shared across the subscriber organizations connected to the same distribution system, across all ratepayers for the utility, or across all ratepayers in the same class as the subscribers for the project.[22] Customers in the Solar Massachusetts Renewable Target Program pay a "Distributed Solar Charge" that helps fund enhancements to solar energy delivery, efficiency, and availability; improvements in solar billing, metering, and program implementation; and incentivizing Massachusetts residents to go solar.[23]

Increasing Developer and Investor Confidence

The passage of the Inflation Reduction Act of 2022 (IRA), which includes billions of dollars in tax incentives as well as grants through the Greenhouse Gas Reduction Fund, has heightened interest in clean energy projects serving lower-income households and/or disadvantaged communities. For example, total allocation requests received by the Low-Income Communities Bonus Credit Program, which was established by the IRA and offers incentives for solar and wind projects in low-income communities, were over four times the amount of capacity available.[24] To understand opportunities to scale their LMI-accessible community solar efforts in the future, the ISSI State Partner teams met with developers, capital providers, and financial institutions in December 2023 for a series of roundtable discussions about funding and financing opportunities.

Clean energy lending, including for community solar projects, may make use of a wide array of financial instruments, ranging from pre-development and construction financing to capital that supports ongoing project operations and revenue building. Investors may have different types of stakes in a project, including as debt or equity. They are likely motivated by profit, such as the ability of a project to generate revenue, but potentially also by its environmental or societal attributes.

The variability of community solar programs and projects often prompts lenders to examine proposals closely. Due diligence occurs at the customer level (for instance, the size and structure of subscriptions, subscriber enrollment processes, subscriber repayment mechanisms, and subscriber protections); at the developer level (including such factors as creditworthiness, ownership and size, and existing operations in the state or region); and at the program and policy level (such as the size and availability of upfront incentives, interconnection delays, net metering and virtual net metering laws, and compensation rates for solar electricity generation). The amount of time needed to investigate these various aspects, along with perceived risks that may delay or halt project development, the monetization of tax credits, or revenue generation, all contribute to the availability and cost of capital that developers can use to build community solar.

These dynamics spurred the roundtable attendees to examine how state community solar policy and program designs can build confidence, clarity, and consistency for developers and capital providers alike. State Energy Offices, State LIHEAP Agencies, and other state agencies and organizations (such as public utility commissions and green banks) are well-positioned to:

- Ease developers' customer acquisition and income verification costs by connecting beneficiaries in existing low-income programs to community solar projects (for instance, through automatic enrollment, data-sharing, or the federal Clean Energy Connector);
- Provide bridge financing for developers to begin project development or construction prior to receiving state or federal tax incentives, such as the one-time Investment Tax Credit or 10-year Production Tax Credit[25];
- Facilitate the development of community benefits plans that delineate the costs, benefits, and responsibilities of host institutions and communities;
- Provide technical or financial assistance that enables public and nonprofit hosts of community solar projects to access IRA tax incentives via elective pay;
- Build capacity for community-based agencies and organizations to engage and represent residents and hosts in the development and design of community solar projects;
- Explore opportunities to streamline or fast-track siting, permitting, interconnection, and other approvals for projects that meet certain location, size, commercial readiness, and/or equity goals; and
- Support rural electric cooperatives in accessing low-cost capital (for instance, through the U.S. Department of Agriculture's Rural Energy Savings Program or Rural Economic Development Loans and Grants Program) to build community solar projects for their members.[26]

Over time, and combined with federal and state subsidies and incentives for LMI-accessible community solar, these and other actions can help to deliver greater benefits to subscribers and host communities by bringing project financing costs down.

Putting the U.S. State Energy Program to Work for LMI-Accessible Community Solar

The U.S. State Energy Program (SEP) provides resources directly to states to develop innovative energy programs within a broad statutory framework set by Congress. States set their priorities for the use of SEP funds on activities such as planning for and responding to energy emergencies resulting from natural and man-made disasters; assisting small businesses and manufacturers in reducing energy costs to improve competitiveness and create jobs; aiding farms and rural homeowners in developing homegrown energy solutions to lower energy costs; and supporting local governments in retrofitting schools, police stations, and other public facilities to reduce utility bills paid by taxpayers.

Because of its flexibility, SEP funding can be a valuable tool to states in the development of LMI-accessible community solar. Across the country, states have used SEP funds to conduct analyses of technologies, policy mechanisms, and programs relevant to their clean energy goals. So, too, can SEP help states investigate suitable structures, policies, and program designs to support LMI-accessible community solar. As the Wisconsin Office of Energy Innovation has done with its community action agency partners, State Energy Offices can deliver SEP funding through community-based organizations to support stakeholder engagement and ensure the design and allocation of community solar credits benefit low-income, energy-burdened households with the greatest needs.

SEP funds can be structured as loans or grants, enabling states to provide low-interest capital to developers to support their business growth, monetize state and federal tax incentives, and expand community solar deployment in support of state energy, equity, and economic development goals. SEP funds reauthorized by the Infrastructure Investment and Jobs Act of 2021 include provisions in electric distribution planning, which can ultimately facilitate and reduce the costs of building, interconnecting, and scaling LMI-accessible community solar.

Conclusion

As community solar continues to grow across the country, State Energy Offices and State LIHEAP Agencies can be critical drivers of LMI-accessible programs and projects. The ISSI experience offers examples and lessons from three different states representing varying market structures and levels of community solar market maturity, where interagency and inter-program coordination have enabled the delivery of tangible solar and resiliency benefits to households in need.

iStock.com/JasonDoiy

Appendices

iStock.com/Alex Potemkin

Appendix A: Wisconsin's Inclusive Solar Community Offering

Motivation and Pilot Project Goals

The Wisconsin Office of Energy Innovation, which serves as the State Energy Office, joined the Inclusive Shared Solar Initiative with the goal of improving access to community solar for low-income households in rural Wisconsin, which often experience disproportionately high energy burdens and unique challenges to access renewable energy resources. For example, low-income households in Vernon County have energy burdens approximately twice as high as households at similar income levels in Dane County, with the average energy burden for the lowest income households in Vernon County as high as 25%.[27]

Because Wisconsin does not have an enabling law allowing for third-party ownership, community solar projects in the state have historically been owned and operated by utilities and typically require customers to pay an up-front fee or monthly premium to participate, making it difficult for households with lower incomes to participate. To begin to address this challenge while working within Wisconsin's existing market framework, OEI decided to leverage ISSI technical assistance and U.S. State Energy Program funding to launch parallel pilot projects in partnership with the Wisconsin Division of Energy Housing and Community Resources at the Department of Administration (DOA), two Community Action Program agencies, and two rural electric cooperatives. Through these two pilot projects, the Wisconsin team sought to develop a unique scalable approach to community solar for low-income customers, and develop a subscription model that automatically applies the benefits to customers' bills based on the output of the system.

Overview of Projects and Partner Roles

To achieve these objectives, each pilot project relied on strong partnerships and ongoing coordination among OEI, DEHCR, the CAP agencies, and the co-ops, with clear roles and responsibilities for each partner (see table below for a summary). In 2021, OEI signed a Memorandum of Understanding (see Appendix D) with partners at DOA and the two CAP agencies, CouleeCap and West Cap, outlining reporting requirements for the projects and a process for how OEI's grant funding would flow through DOA to the CAP agencies, which would then serve as proxy subscribers to the community solar arrays and provide the co-ops with a list of households who should receive bill credits. The partners also met monthly to discuss progress on the projects, address challenges, and share lessons learned from each pilot project to help inform the other.

Partner Organization	Roles and Responsibilities
Wisconsin Public Service Commission Office of Energy Innovation	Allocated portion of State Energy Program funding to CAP agencies through DOA to purchase community solar subscriptions on behalf of energy burdened households. Coordinated across project partners to keep pilot projects on track, review program messaging, provide insight on bill credit structure, and develop ongoing reporting requirements.
Wisconsin Department of Administration Division of Housing and Community Resources	Distributed grant funding from OEI to CAP agencies to purchase community solar subscriptions. Worked with CAP agencies to determine which households enrolled in LIHEAP and WAP had the highest energy burden and could therefore benefit most from cost-saving community solar. Analyzed existing LIHEAP benefit calculation method to ensure participation in community solar would not negatively affect households' access to energy assistance.
CouleeCap and West Cap	Conducted focus groups, interviews, and other outreach with members to inform program design and identify which messages would resonate. Developed outreach materials, branding, and a program website (Energize Wisconsin) that other CAP agencies and co-ops in Wisconsin can utilize to launch similar community solar initiatives. Worked with DOA to determine which LIHEAP-eligible households could benefit most from cost-saving community solar. Serve as the proxy subscriber on behalf of income-eligible households.
Vernon Electric Cooperative and Pierce Pepin Electric Cooperative	Own and operate the community solar arrays. Coordinated the development of the project with nine other rural electric cooperatives and OneEnergy to achieve economies of scale and secure a lower price for members. Selected project developer, entered into a Power Purchase Agreement, and oversaw siting, permitting, construction, and interconnection of the project, while keeping partners up to date on project progress. Vernon Electric also contributed funding toward the carve-out subscription for energy burdened households to complement OEI's grant.

Summary of Project Details

Project Characteristics	Vernon Electric Bluff Prairie Community Solar Project[28]	Pierce Pepin Community Solar Project
Size of solar array	1.5 MW	2 MW
Portion available for community solar	60%	
Number of income-eligible households served	144	Approximately 200
Total estimated annual generation	528,000 kWh	
Estimated annual savings per income-eligible household	$220	

Lessons Learned and Next Steps

Despite the lack of an enabling law for community solar in Wisconsin, the project team successfully launched two pilot projects in rural electric cooperative territory that will provide monthly bill savings for households with the highest energy burdens over the next decade.

Key lessons learned from the pilot projects include:

- **Holding regular project team check-ins** improved coordination across partners by allowing for consistent communication flow as well as information sharing across the two parallel pilot projects. The monthly cadence also helped maintain project momentum and provided a forum to talk through challenges, such as supply chain delays, and discuss different approaches to questions like the bill crediting structure and outreach strategies.
- **Building in time for and establishing consistent communication around utility processes**, including the power purchase agreement negotiations and the need to secure buy-in from the broader co-op membership, is essential for planning project timelines and ensuring project support.
- **Connecting with other states** allowed Wisconsin to leverage best practices and avoid recreating the wheel. For example, DOA met with Minnesota's Energy Assistance Program team to understand how they accounted for community solar bill credits when calculating LIHEAP benefit amounts. As a result, DOA was able to use a similar proxy method to avoid any negative impacts on participating households' benefit amounts.
- **Establishing clear reporting requirements** can help create more transparency and accountability to make sure household savings are realized. By requesting details surrounding rate structures, bill credit amounts, and delivery mechanisms up front, state and community partners can have more insight into program impacts and ensure consumers are protected.
- **Developing a wait-list process** can help simplify enrollment and bill crediting if a household moves or decides to unsubscribe. While CouleeCap provided an initial list of households to which Vernon Electric should deliver the bill credits, the co-op has had to request additional households from CouleeCap to replace subscriptions for which the original household moved outside of the utility territory.

The relationships built among partner organizations and lessons learned from each pilot project will also inform the design of future community solar projects and programs in Wisconsin, including implementation of the state's Solar for All award from EPA (led by the Wisconsin Economic Development Corporation), as well as projects and programs in other states with similar market structures to Wisconsin.

Source: Joe Pater

Source: https://www.piercecountyjournal.news/stories/ppcs-shows-off-new-solar-array-in-trenton,106652

Appendix B: District of Columbia's Solar for All

Motivation and Pilot Project Goals

Through the Inclusive Shared Solar Initiative, the District of Columbia Department of Energy and Environment sought to expand on the success of its nation-leading DC Solar for All program by piloting new and streamlined approaches to delivering community solar benefits to energy-burdened communities. DC SfA currently serves over 9,000 households with no-cost community solar subscriptions and rooftop solar, saving low to moderate-income families approximately $500 per year. However, to meet the program's goal of bringing the benefits of solar to 100,000 LMI families in the District by 2032, DOEE has had to develop more innovative ways to scale the program and address barriers such as administrative and enrollment burdens for subscribers, disincentives impeding full participation and benefits for residents of master-metered multifamily housing, the need for grid upgrades to accommodate new solar interconnections, and a lack of available real estate for solar development within the District. To begin to address these challenges, DOEE developed the following objectives to work towards throughout the ISSI project:

1. **Pilot resilience technologies in community solar projects.** DOEE aimed to build on existing relationships with community partners to pilot a resilience hub that utilizes a solar and battery storage microgrid system to provide resilience services to a neighborhood particularly vulnerable to climate impacts and power outages.
2. **Reduce administrative program barriers to entry for residents.** DOEE sought to increase coordination between the DC SfA and LIHEAP programs and with other District agencies and federal partners to simplify DC SfA enrollment and expand participation for energy burdened households.

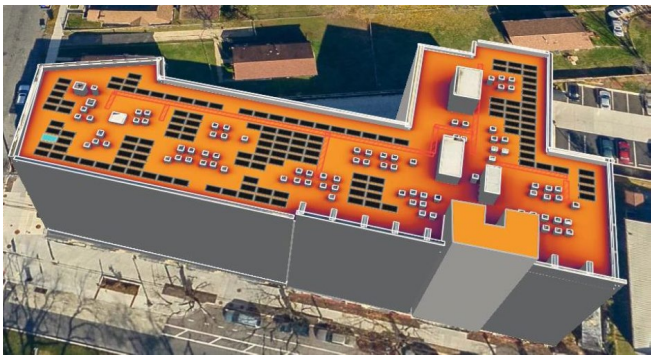
Community Resilience Hub

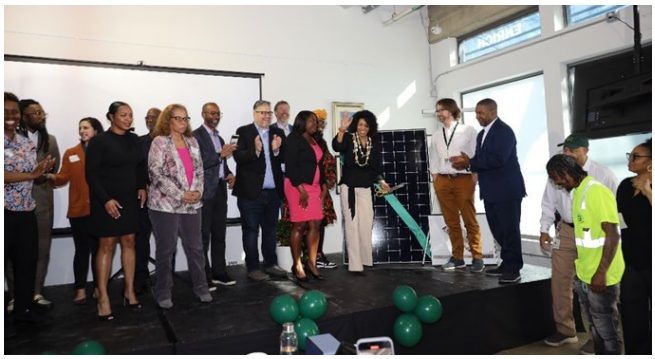
DOEE's Community Resilience Hub pilot project grew out of an extensive community engagement and planning process that began in 2017 to help inform the implementation of the District's Climate Ready DC, Resilient DC, and Clean Energy DC plans. Through the Equity Advisory Group, which DOEE helped support, residents and community organizations met regularly to develop recommendations for neighborhood-scale resilience hubs and other climate mitigation and adaptation solutions. The recommendations laid the groundwork for DOEE's pilot project and established guiding principles for a future network of community resilience hubs across the District.[29]

Based on this community input, DOEE released a Request for Applications to support the development of a solar and battery storage microgrid system that would provide clean backup power to a resilience center in Ward 7, the most climate impacted ward in the District.[30] In March 2024, DOEE announced it had selected and awarded $540,000 to the F.H. Faunteroy Community Enrichment Center in Deanwood, an underserved neighborhood in Ward 7 facing disproportionate impacts from flooding and extreme heat. Located within an affordable housing complex, the Faunteroy Center already serves as a trusted resource and gathering space for community members and provides important neighborhood services, including after-school youth programs, job training, and community education and outreach. The microgrid system will use 61 kW of solar and a 30 kW / 60 kWh battery storage system to provide up to 72 hours of backup power to the Faunteroy Center and enable the provision of essential emergency services, such as cell phone charging and refrigeration of medication, to hundreds of neighboring residents. The system will also provide community solar benefits for up to 17 households.

The development of the community resilience hub has been a collaborative effort involving multiple partners, with the Faunteroy Center spearheading the effort as the site host and lead for ongoing community services and DOEE providing financial and technical assistance. Greenscape

Environmental Services, a Ward 7 based Certified Business Enterprise, is managing the solar and battery storage installation, in collaboration with American Microgrid Solutions, and Pepco is the utility partner. The project has also received funding support from the U.S. Department of Housing and Urban Development through a community grant from U.S. Representative Eleanor Holmes Norton and the National Atmospheric and Oceanic Administration.[31]





Reducing Barriers to Participation

In addition to piloting the resilience hub technology, DOEE also used the ISSI project as an opportunity to explore additional ways to reduce barriers to entry for the DC SfA program. Throughout ISSI, DOEE worked to:

1. Help address disincentives to participation for residents receiving rental assistance;
2. Simplify enrollment through an opt-out mechanism on the LIHEAP form; and
3. Coordinate with federal partners to expand categorical eligibility for additional low-income support programs.

Many households experiencing low incomes in D.C. receive rental assistance through the U.S. Department of Housing and Urban Development (HUD), which uses income and utility allowance calculations to determine benefit amounts. Because DC SfA provides financial benefits to participants, DOEE was concerned the bill credits from DC SfA could affect the amount of HUD assistance low-income families receive, which would create a disincentive for those households to participate and benefit from cost-saving community solar subscriptions. To address this concern, DOEE sent a letter to HUD asking that community net metering credits not be included in income or utility allowance calculations. As a result, in April 2022 HUD confirmed in a memo that DC SfA bill credits would be excluded from household income and utility allowance calculations, ensuring that housing assistance amounts would not be affected for residents of HUD-assisted multifamily properties.[32]

To streamline the DC SfA income verification and enrollment process, DOEE created an automatic enrollment pathway for customers who qualify for LIHEAP and therefore also meet the DC SfA low-income eligibility requirement. To do so, DOEE updated the LIHEAP form to include a statement notifying applicants that if they qualify for LIHEAP benefits, they may be automatically enrolled in DC SfA and would save an estimated $500 annually on their electric utility bills, unless they choose to opt out of the program (see Appendix H).[xiii] Since DOEE's update to the application, over 2,000 households have been enrolled in DC Solar for All based on categorical eligibility, representing a significant increase in participation among income-eligible households.

To further expand access for low-income households, DOEE considered leveraging eligibility through other assistance programs in addition to LIHEAP, such as SNAP and the Weatherization Assistance Program. While establishing an opt-out mechanism for LIHEAP provides an important pathway for energy burdened households to access community solar, not all low-income households eligible for DC SfA are eligible for LIHEAP, and the LIHEAP form can be burdensome to complete. To reach additional low-income households, DOEE engaged the D.C. Department of Human Services, the agency that implements SNAP in the District, to see whether DC SfA could access SNAP data to allow for categorical eligibility. DOEE also submitted letters to federal partners at HHS and the U.S. Department of Agriculture to clarify SNAP regulations that would allow for such data sharing —in particular, the definition of "federally-assisted State programs." (See Appendix G for copies of the letters DOEE sent to HHS and USDA.)

Lessons Learned and Next Steps

Over the course of ISSI, DOEE worked to expand the reach of its successful DC SfA program by making strategic changes to program rules and processes, collaborating with other D.C. and federal agencies, and piloting an innovative community solar model in partnership with community leaders. The Faunteroy Center Resilience Incubator represents the first resilience hub in D.C. and will inform a District-wide network of resilience hubs to help meet the goals outlined in the District's Climate Ready DC and Resilient DC plans. Going forward, DOEE will leverage lessons learned from navigating internal bureaucratic requirements to create a more streamlined process and lean on the expertise and insights from community partners to ensure the hubs continue to be driven by community needs. The Faunteroy Center Resilience Incubator can provide an example to other states looking to increase the resilience benefits of community solar, particularly given the new incentives and funding available for solar and associated storage through EPA's Solar for All program and the Inflation Reduction Act tax incentives.

As DOEE begins implementation of its $62-million award through the EPA Solar for All program, the changes made to reduce barriers to entry and simplify enrollment for DC SfA will enable DOEE to reach more households and improve the program experience for participants. DOEE will continue to explore ways to streamline income verification and enrollment processes, while developing a strategy to balance the increase in enrollment with the pace of project build-out, particularly given the physical real estate constraints in an urban setting like D.C., as well as interconnection challenges. DOEE will also leverage the Clean Energy Connector platform to further streamline program data and coordination efforts among DOEE's LIHEAP team, D.C.'s utility, solar developers, and subscription managers.

Appendix C: Minnesota's Equitable Solar Access Project

Motivation and Pilot Project Goals

The Minnesota Department of Commerce utilized the Inclusive Shared Solar Initiative to explore policy changes that would make existing community solar programs across the state more accessible, while also developing a scalable model for equitable community solar in municipal and cooperative utility territory. While Minnesota has historically led the nation in community solar deployment, with nearly 900 MW of cumulative community solar capacity installed as of 2023,[33] most projects have been located within Xcel Energy territory (an investor-owned utility). Cooperative and municipal-owned utilities serve 85% of the geographic area of the state, and while some have voluntarily deployed community solar programs, the majority are offered at a price premium and are not accessible to Minnesota households experiencing low incomes. Even within Xcel Energy territory, the mechanics of subscription payment and bill credit delivery have presented a barrier for households enrolled in LIHEAP.

To address these challenges, the Minnesota State Energy Office partnered with the Energy Assistance Program office (both within Commerce's Division of Energy Resources) to expand access to community solar through the following strategies:

1. Leverage the Energy Assistance Program network and resources to reduce burdens. and barriers on low and moderate-income community solar garden (CSG) participants
2. Adjust EAP policy to include CSG subscription cost as a household energy cost factored into the calculation of energy assistance benefit payments.
3. Focus efforts in non-Xcel territory.
4. Credit CSG participation benefits as a kWh credit rather than a dollar credit.
5. Assess ISSI CSG pilot site options based on local priorities and needs.
6. Pursue opportunities for broader impact.

Overview of Projects and Partner Roles

Energy Assistance Program Policy Changes

While the Minnesota team focused most of their ISSI efforts in municipal and cooperative territory, the State Energy Office and Energy Assistance Program office made two key policy changes to the Energy Assistance Program in July 2021 to improve access and reduce participation barriers for EAP-enrolled households interested in subscribing to Xcel Energy's CSG program, where CSG subscribers and participants receive bills from both the utility and the CSG operator.

As a result of early conversations with the State Energy Office about ISSI, the Minnesota EAP office modified the EAP policy in two ways. The first change enables EAP-eligible households to choose to use a portion of LIHEAP funds to cover CSG subscription costs. With this change, CSG operators in Minnesota can sign up to be "energy vendors" in the EAP system (just like any other energy provider), and households enrolled in EAP can elect to use their LIHEAP benefits to cover the subscription costs. The second change allows CSG subscription costs to be included as part of the energy burden calculation used to determine the benefit amount EAP-eligible households will receive. Prior to this policy change, a household's electric bill would have appeared low because of the CSG credit, but the subscription cost that helped lower the bill would not have been fully accounted for in the benefit calculation, putting low-income CSG subscribers in Xcel Energy's program at risk of receiving reduced energy assistance payments. By incorporating the subscription cost into the energy burden calculation, the new policy allows for a more accurate understanding of participating EAP households' full energy costs and ensures the EAP benefit received will not be negatively impacted as a result of participating in community solar.

Piloting Accessible Community Solar in Municipal and Cooperative Territory

Because the majority of community solar projects in Minnesota are only available to customers in Xcel Energy territory, the Minnesota Department of Commerce sought to launch ISSI pilot projects in non-Xcel territory: one in a municipal utility territory and one in an electric cooperative territory.

For the municipal utility pilot project, the Department of Commerce partnered with Detroit Lakes Public Utility, Mahube-Otwa Community Action, the Chan Lab at the University of Minnesota Humphrey School of Public Policy, and the Clean Energy Resource Teams (CERTs) to test mechanisms for integrating community solar with the Energy Assistance Program in a way that maximizes energy burden reductions for households. With additional grant funding from the CERTs, DLPU worked with a developer to install and host an 11-kilowatt array near an existing community solar garden that will help the utility avoid demand costs while lowering energy costs for EAP-enrolled households. To determine which households to award the bill credits, Mahube-Otwa worked with Commerce and the Chan Lab to identify customers whose energy profiles would allow them to benefit most from community solar. After an initial analysis of Energy Assistance Program data and monthly utility bill data, the team established three main criteria to prioritize households: repeated years on energy assistance, living in a manufactured home (which are often deferred from weatherization), and using electric heat.

Prior to delivering the bill credits to the priority households, the Chan lab conducted additional analysis and scenario modeling to understand how the community solar bill credits would impact EAP customers' energy burden at different subscription levels and during different months of the year. The analysis demonstrated that the seasonal variation in solar generation, which typically determines the community solar bill credit amount, did not align with the months of the year when EAP-enrolled households could most benefit from a reduction in their energy bills (typically, during heating season when solar production is lowest). To address this misalignment, the Minnesota team piloted an innovative approach that allows Mahube-Otwa to bank the solar generation credits and distribute them to EAP households when energy burden is highest. The model also helped Minnesota compare scenarios with different subscription levels (4kW vs. 5kW) to understand the impact on customers' monthly and annual bill savings, which helped inform how many households could be served by the pilot project while still delivering meaningful energy savings.

For the pilot project in electric cooperative territory, the Minnesota team had planned to utilize a similar approach. However, the original cooperative partners decided not to move forward with the pilot after a vote of the cooperative's board, which indicated concerns about cross-subsidization (the idea that community solar would raise costs for nonparticipating ratepayers while providing energy bill savings for participating customers). To address concerns about cross-subsidization, the Minnesota Department of Commerce worked with the Chan Lab at the University of Minnesota to collect and analyze data to document how community solar can help utilities' bottom lines and provide benefits for all customers. The Chan Lab utilized real data from the DLPU project to demonstrate that community solar can help avoid demand charges, which make up a significant portion — between 30 and 50% — of the amount utilities pay to their wholesale providers. While more difficult to quantify, community solar can also improve overall grid resilience, in addition to the greenhouse gas and pollution reduction benefits.

Lessons Learned and Next Steps

Through the Inclusive Shared Solar Initiative, Minnesota successfully implemented a new program design model and advanced critical policy changes that will help increase access to community solar for energy burdened households across the state. By making straightforward but significant changes to the Energy Assistance Program policy and application form, Minnesota became the first state to allow households to elect to use a portion of their LIHEAP benefit toward community solar subscription fees, as they would for any other energy cost. Following Minnesota's lead, the U.S. Department of Health and Human Services released a memo with guidance for how other State LIHEAP Agencies can do the same, as well as recommendations for protecting consumers. Minnesota's revised method for calculating the energy burden used to determine LIHEAP benefit amounts has also provided a model for other states (including Wisconsin) and will help ensure households' LIHEAP benefits are not reduced as a result of participating in community solar.

In addition to the EAP policy changes, the DLPU pilot project and parallel data analysis and modeling effort have demonstrated a novel approach to providing timely and meaningful energy burden reductions for EAP-enrolled households in rural electric cooperative territory. By banking solar generation credits from DLPU's community solar array, Mahube-Otwa will be able to disburse credits to households with the most need (based on the initial prioritization criteria) during the months of the year when energy costs are highest. Going forward, the Minnesota team may consider expanding eligibility to reach a broader group of households with high energy burden, including residents living in multifamily buildings, households deferred for weatherization, and households relying on delivered fuels. Commerce is also working to identify ways to help scale the process for issuing bill credits, particularly for cooperative and municipal utilities that may still be using manual billing systems.

The policy and program innovations the Minnesota team developed through ISSI will help shape both the state's Solar for All program, as well as the implementation of the updated statewide community solar program, which the Minnesota legislature tasked the Minnesota Department of Commerce with administering.

Appendix D: Wisconsin Memorandum of Understanding

MOU No. 22-01

MEMORANDUM OF UNDERSTANDING
Between the
DEPARTMENT OF ADMINISTRATION, DIVISION OF ENERGY, HOUSING, AND COMMUNITY RESOURCES
and the
PUBLIC SERVICE COMMISSION OF WISCONSIN, OFFICE OF ENERGY INNOVATION

THIS MEMORANDUM OF UNDERSTANDING (MOU) is made and entered into by and between the **DEPARTMENT OF ADMINISTRATION, DIVISION OF ENERGY HOUSING AND COMMUNITY RESOURCES (DOA)**, and the **PUBLIC SERVICE COMMISSION OF WISCONSIN, OFFICE OF ENERGY INNOVATION (OEI) (together, the Parties).** This **MOU** is complete and valid as of the date signed by both parties.

WHEREAS, in the Final Decision in Docket 9705-FG-2021. signed and served June 8, 2021, the Public Service Commission of Wisconsin approved a partnership with the **DOA** to allocate [redacted] ($[redacted] per pilot project) of U.S. Department of Energy State Energy Program (SEP) funds to launch at least two community solar gardens in electric cooperative territories with a specific rate structure designed for low to moderate income (LMI) subscribers. With data provided by, and in collaboration with, DOA, OEI staff will leverage technical assistance from the National Association of State Energy Officials, the National Energy Assistance Directors Association, and the New York State Energy Research and Development Authority to create a replicable rate structure that could be, subject to Public Service Commission of Wisconsin approval, deployed by Investor Owned Utilities (IOUs) or Municipal utilities in the future. With support from DOA, OEI staff has also partnered with the Community Action Program (CAP) agencies Couleecap and Westcap as well as Vernon Electric Cooperative and Pierce Pepin Cooperative to provide community solar benefits directly to citizens who qualify for the Wisconsin Home Energy Assistance Program (WHEAP); and

WHEREAS, it is the intention of the parties to this MOU that all activities described herein shall be for their mutual benefit; and

WHEREAS, DOA has a designated program delivery mechanism for the Weatherization Program through partnership with Community Action Agencies, Couleecap and Westcap that will perform services for this offering and it appears that such services can be performed more economically and effectively under a MOU; and

WHEREAS, DOA and its partners, Couleecap and Westcap, the Weatherization Program Administrator will at all times comply with and observe all applicable federal and state laws, ordinances, and regulations which are in effect during the performance period of this MOU and which in any manner affect the OEI's work or conduct;

NOW, THEREFORE, in consideration of the mutual promises and dependent documents, the parties hereto agree as follows:

ATTACHMENT A
SCOPE OF WORK

The OEI will provide [redacted] in SEP funds to DOA to provide incentives through the two aforementioned CAPs, which will utilize funds to invest in a community solar garden as a proxy for low-income households within the associated electric cooperative service area. Households that qualify for the WHEAP will receive benefits from the power produced by that investment.

The CAPs (under separate agreement) will work with the electric cooperatives and the OEI to develop a mechanism for determining a periodic benefit allocation model that can be replicated.

The CAPs will administer benefits within this Scope of Work to households that qualify for energy assistance within their respective service territories. The CAPs will contribute in-kind administration of this project during the pilot phase, and data will be gathered to inform future funding decisions.

The CAPs will develop and distribute marketing and promotional materials, (as approved by the OEI and DOA as to be determined by the Parties) to the public and program participants. The goal will be to increase awareness of the project, partners involved in the project, renewable energy generally, and the benefits of energy-saving programs such as weatherization. All program participants will receive information about other services that the CAPs offer.

The CAPs will be responsible for securing leverage funds as needed to complete or supplement the program within the terms of this Scope of Work.

Deliverables:
The Parties understand Couleecap and Westcap, will be responsible for the following:

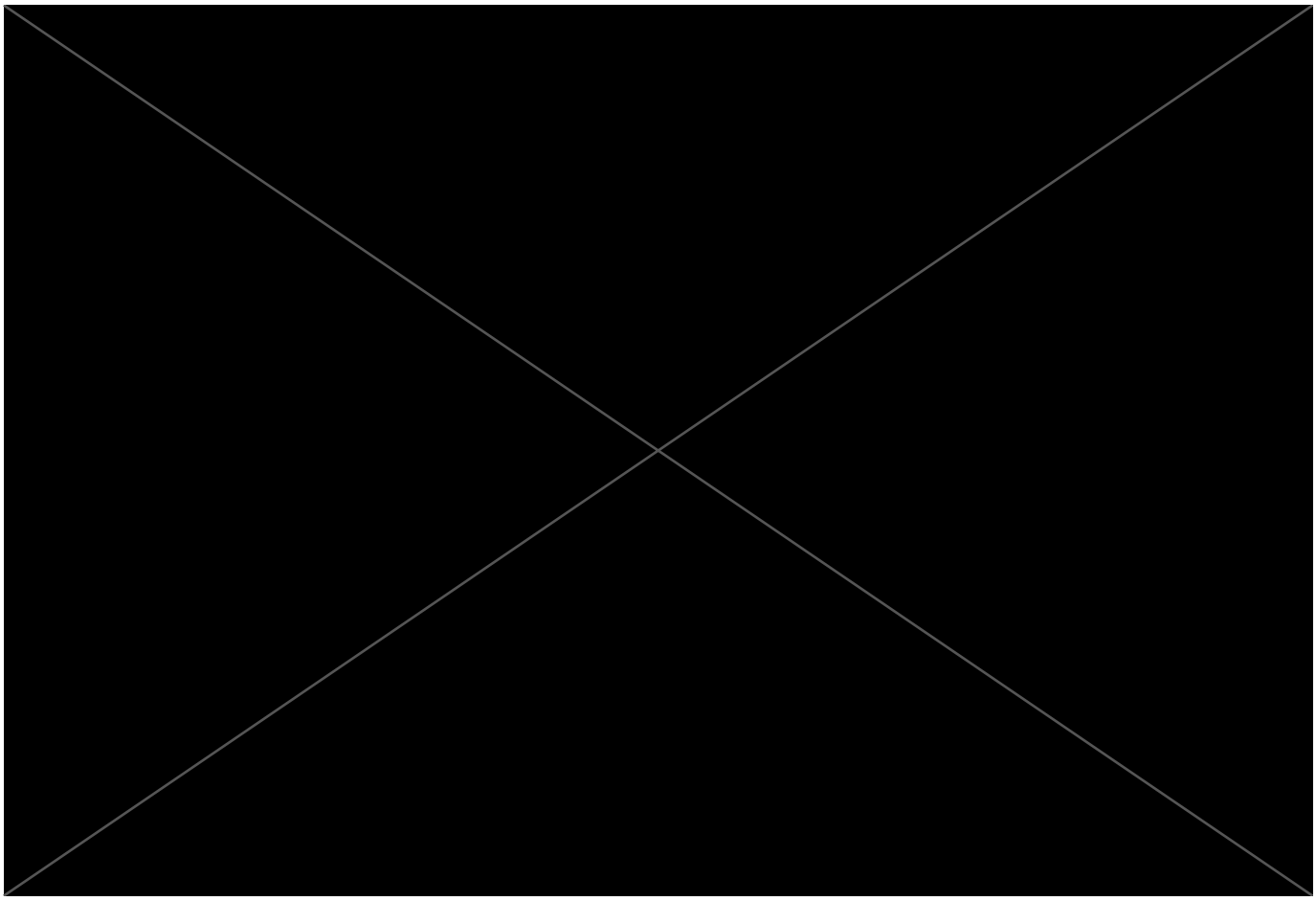
1) Overall management of the program initiative;
2) Conducting focus groups or other community outreach to inform marketing materials;
3) Collecting and reporting client demographics and customer satisfaction data upon conclusion of the project.
4) Other information may be collected as determined by the project team.
5) A final report will be issued to the Office of Energy Innovation that includes a summary of all data, key lessons learned, and recommendations for scalability and replicability no later than 60 days past the performance period.
    a. Produce quarterly reports that shall contain the following:
        i. Number of benefit recipients
        ii. Kilowatt hour output of the designated array
        iii. Dollar amount of benefits paid per household
        iv. Additional efficiency information may also be requested as well as the total number of customers contacted and events held (if any).

OEI Deliverables:
OEI will be responsible for the following:

1) Coordinating with CAPs and Electric Cooperative to develop a benefit rate formula that is equitable and sustainable;
2) Processing invoices for payment to facilitate initial investment;
3) Providing assistance with marketing, events, and technical assistance;
4) Completing and delivering quarterly progress reports to US DOE, the Public Service Commission of Wisconsin and other stakeholders as necessary.

DOA Deliverables:
DOA DEHCR will be responsible for the following:

1) Providing pass-through funds to CAP agencies named herein and cooperating in furtherance of the program initiative.



Appendix E: CouleeCap Survey

Focus Group Survey:

To what degree to you agree with the following statements?

- I alter my energy consumption habits during the summer to compensate for my air condition.
    A. Disagree
    B. Somewhat disagree
    C. Somewhat agree
    D. Agree

- I alter my energy consumption habits during the winter due to my heating bill
    A. Disagree
    B. Somewhat disagree
    C. Somewhat agree
    D. Agree

- I use electric space heaters for supplemental heat during the cold months?
    A. Disagree
    B. Somewhat disagree
    C. Somewhat agree
    D. Agree
- I alter my energy consumption habits during the summer and/or winter to compensate for cooling and heating.
    A. Disagree
    B. Somewhat disagree
    C. Somewhat agree
    D. Agree
- In the last few years, I struggled to pay my utilities.
    A. Disagree
    B. Somewhat disagree
    C. Somewhat agree
    D. Agree

- In the last few years I have been close to having my utilities disconnected?
    A. Disagree
    B. Somewhat disagree
    C. Somewhat agree
    D. Agree
- Electrical is billed at a different rate based on time-of-day usage?
    A. Disagree
    B. Somewhat disagree
    C. Somewhat agree
    D. Agree

- I would be interested in learning methods to reduce my electrical usage (attending a class / in home visit).
    A. Disagree
    B. Somewhat disagree
    C. Somewhat agree
    D. Agree

- I would be willing to commit to attempting to reduce electrical use for additional Energy Assistance benefits.
    A. Disagree
    B. Somewhat disagree
    C. Somewhat agree
    D. Agree

- I have faced a possible utility disconnection of services.
    A. Disagree
    B. Somewhat disagree
    C. Somewhat agree
    D. Agree
- I like being able to pay my electric bill online.
    A. Disagree
    B. Somewhat disagree
    C. Somewhat agree
    D. Agree

- I like being able to set up automatic payments for my electric bill.
    A. Disagree
    B. Somewhat disagree
    C. Somewhat agree
    D. Agree

Please answer the following questions:

- Have you ever asked for additional assistance to avoid a disconnection situation?
    A. Yes
    B. No
    C. I am not sure

- If you receive energy assistance, do you feel that your current Energy Assistance payment is large enough to address your current energy burden?
    A. Yes
    B. No
    C. I am not sure

- Are you aware that by qualifying for Energy Assistance it also makes you eligible for Emergency Furnace repair/replacement during the cold weather months?
    A. Yes
    B. No
    C. I am not sure

- Please rank each item by greatest electricity use from 1 - 9 (where 1 is the greatest electricity user and 9 is the lowest electricity user).
    A. Washing Machine
    B. Electric Dryer
    C. Refrigerator
    D. Water heater
    E. Air Conditioner
    F. Dishwasher
    G. Space Heater
    H. Television
    I. Computer/Laptop

- Based on usage, what do you think are the three highest billing rate times of day?

    1. _____

    2. _____

    3. _____

- During which months are your electric bills usually the highest?

- On average, what percent of your monthly earnings or income do you spend on your energy bill?

- Does it matter to you where and how your power is generated?

- Which Vernon Electric Co-op communications do you read? (circle all that apply)
    A. WEC News magazine
    B. VEC Watts New newsletter
    C. Facebook page
    D. Website
    E. SmartHub
    F. None

- Do you prefer to receive your billing statement by mail or email?
    A. Email
    B. Mail

- Please rank the following items in order of importance to you, with one being the most important:
        A. Reliability
        B. Cost
        C. Price
        D. Type of generation
        E. Location of generation

- What is your Household annual income?
        A. Less than $15,000
        B. $15,000 to $24,000
        C. 25,000 to $34,000
        D. $35,000 to $49,000
        E. $50,000-$74,000
        F. $75,000 or more

Appendix F: Energize Wisconsin Enrollment Postcard

This material is based upon work supported by the U.S. Department of Energy's Office of Energy Efficiency and Renewable Energy (EERE) under the State Energy Program Award Number DE-EE0008669. The views expressed herein do not necessarily represent the views of the U.S. Department of Energy or the United States Government.

Appendix G: DOEE Letters Regarding SNAP Data

GOVERNMENT OF THE DISTRICT OF COLUMBIA
Department of Energy and Environment

Secretary Xavier Becerra
U.S. Department of Health and Human Services
200 Independence Ave., SW
Washington, DC 20201

May 6, 2024

Secretary Becerra,

I am writing to request that the United States Department of Health and Human Services (HHS) provide a determination that the District of Columbia Department of Energy and Environment's (DOEE) Solar for All (SfA) Program receives "federal financial assistance" according to HHS regulations. This determination would assist DOEE in enrolling and providing the benefits of community solar to significantly more low income households in the District that are categorically eligible for SfA through participation in the Supplemental Nutrition Assistance Program (SNAP) program.

Background

DOEE is responsible for administering SfA, which is legislatively mandated to "provide the long-term financial benefits of solar energy production to at least 100,000 District low-income households in an amount equivalent to at least 50% of the District's average residential electric bills for calendar year 2016 by December 31, 2032."[1] SfA is a means-tested program as it only benefits District residents who earn at or below 80% of the Area Median Income (AMI)[2] according to published United States Department of Housing and Urban Development (HUD) income guidelines.[3] SfA provides two options for participation: single family Net Energy Metering (NEM) systems or Community Renewable Energy Facility (CREF) subscriptions. Regardless of how the electric savings are delivered, SfA sizes NEM systems and CREF subscriptions to provide at least $500 in annual savings. Households receiving NEM benefits see their own grid electric usage reduced while also being credited for excess system generation to offset utility usage and demand charges. Households receiving CREF benefits receive monthly Community Net Metering (CNM) credits on their bills that reflect the monetary value of their percentage share of a large solar system's generation, and which offset their grid electric usage and demand charges.

As with many government-run low income support programs, income verification poses a barrier to participation in SfA. In this regard, an efficient process to decrease the administrative burden and application submission fatigue is categorical eligibility: households that receive benefits from at least one of several government-run support programs, such as the Low Income Home Energy Assistance Program (LIHEAP), are automatically qualified for SfA.

DOEE administers LIHEAP in the District to assist eligible low-income District households

[1] DC Code § 8-1774.16(a)(2).
[2] *Id.* § 8-1774.16(g)(3).
[3] *Methodology for Calculating FY 2023 Medians*, United States Dep't of Housing and Urban Development, https://www.huduser.gov/portal/datasets/il/il23/Medians-Methodology-FY23.pdf (last visited March 22, 2024)

with their energy burden through benefits payments and weatherization assistance to offset the costs for electric, natural gas, and heating oil utility bills.[4] DOEE's energy assistance application enrolls qualified applicants in LIHEAP and, as of Fiscal Year (FY) 2023, also in SfA[5] to meet SfA's ambitious legislative goal of 100,000 active participants by 2032 and reduce the administrative burden for low income households participating in the program. Since this addition of SfA terms to the energy assistance application in FY 2023, over 2,000 households have been enrolled into the program due to categorical eligibility. DOEE wishes to use participation in the SNAP program in a similar fashion as qualifying for categorical eligibility for SfA.

The District of Columbia Department of Human Services (DHS) is the District agency responsible for assisting low income individuals and families in the District with their economic security and self-sufficiency. The Economic Security Administration (ESA) within DHS is responsible for making eligibility determinations for federally and locally funded public assistance programs in the District, including but not limited to, Medicaid, SNAP, and TANF benefits.[6]

DOEE has inquired with DHS about securing access to participant-specific data, such as residency, income, and household members information, for pre-qualifying low-income households for participation in the SfA program. However, the SNAP regulations at 7 CFR § 272.1(c)(1)(i) pose an obstacle to DOEE securing access to DHS data because they state that the "[u]se or disclosure of information obtained from SNAP applicant or recipient households shall be restricted to . . . . federally-assisted State programs providing assistance on a means-tested basis to low income individuals."

A "federally-assisted State program" is not defined by the USDA regulations for SNAP at 7 CFR § 271. In addition, DHS has interpreted this term are requiring DOEE to receive federal assistance in the current fiscal year to be granted access to SNAP participant-specific data.

HHS' regulations define "federal financial assistance" as:

> (1) grants and loans of Federal funds;
> (2) the grant or donation of Federal property and interests in property;
> (3) the detail of Federal personnel;
> (4) the sale and lease of, and the permission to use (on other than a casual or transient basis), Federal property or any interest in such property without consideration or at a nominal consideration, or at a consideration which is reduced for the purpose of assisting the recipient, or in recognition of the public interest to be served by such sale or lease to the recipient, and;
> (5) any Federal agreement, arrangement, or other contract which has as one of its

[4] *See, e.g.*, DISTRICT OF COLUMBIA LOW INCOME HOME ENERGY ASSISTANCE PROGRAM (LIHEAP) DETAILED MODEL PLAN, https://doee.dc.gov/sites/default/files/dc/sites/doee/service_content/attachments/Final%20FY%2024%20LIHEAP%20State%20Plan.pdf

[5] *See, e.g.*, DEP'T OF ENERGY AND THE ENV'T, ENERGY ASSISTANCE APPLICATION, https://doee.dc.gov/sites/default/files/dc/sites/doee/service_content/attachments/LIHEAP-Application%20FY24.pdf

[6] *Data and Storymaps*, District of Columbia Dep't of Hum Servs., https://dhs.dc.gov/page/data-and-storymaps (last visited March 22, 2024).

purposes the provision of assistance.[7]

DOEE believes that SfA has received the following forms of federal financial assistance:

- SfA received $17.5 million in federal American Rescue Plan Act (ARPA) funds in FY 2022, and used these funds to build solar facilities that are now providing low- income District residents with the benefits of solar power.
- SfA participates in the United States Department of Energy (DOE)'s National Community Solar Partnership (NCSP), which works to expand access to affordable community solar to every American household.[8]
- SfA was awarded $10,000 through the NCSP's Sunny Awards by DOE for excellence in equitable community solar development. This funding was given to the District of Columbia Sustainable Energy Utility (DCSEU) to support their efforts in solar development and energy efficiency work on behalf of the District.
- SfA received funding for an Oak Ridge Institute for Science and Education (ORISE) fellow from DOE's NCSP to support the work of SfA and to ease the administrative burden for District residents seeking to enroll in SfA.
- SfA will receive technical assistance and $90,000 through a reimbursable agreement with DOE's Inclusive Shared Solar Initiative.[9] This funding is being used to support the creation of a solar-powered resilience hub at the Faunteroy Community Enrichment center in Ward 7.[10]
- One of the community solar systems in the District that provides benefits to SfA participants is located at Oxon Run, a former United States Park Service property that was transferred to the District Government in 1972.

For the foregoing reasons, I request that you provide DHS, the District agency that administers SNAP, with a determination that SfA has received and continues to receive "federal financial assistance" according to HHS regulations because of the program's history of using federal assistance to provide low-income District residents with the benefits of solar power. In addition, such an interpretation of HHS regulations would be consistent with and advance the Biden Administration's emphasis on promoting equity in the clean energy economy, such as through its Justice40 initiative.

A letter from HHS to DHS with this determination would assist DOEE in securing access to DHS specific data to enroll significantly more income-eligible households in SfA, provide maximum financial benefits to low-income residents, and reduce the administrative burden of enrolling in the program. If there are any further questions about this letter or DOEE's request, please reach out to Thomas Bartholomew at 202-313-2186 or thomas.bartholomew@dc.gov. I look forward to working with you and your staff on this important issue.

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[7] 45 C.F.R. § 80.13(f).
[8] *About the National Community Solar Partnership*, United States Dep't of Energy, https://www.energy.gov/communitysolar/about-national-community-solar-partnership (last visited March 22, 2024).
[9] *Inclusive Shared Solar Initiative*, Nat'l Ass'n of State Energy Officials, https://www.naseo.org/issues/solar/issi (last visited March 22, 2024).
[10] *Community Resilience Hubs*, District of Columbia Dep't of Energy & Environment, https://doee.dc.gov/service/community-resilience-hubs (last visited March 22, 2024).

Sincerely,

Richard Jackson, Director
District of Columbia Department of Energy and the Environment

CC: Jeff Hild, Acting Assistant Secretary | Principal Deputy Assistant Secretary

GOVERNMENT OF THE DISTRICT OF COLUMBIA
Department of Energy and Environment

Secretary Tom Vilsack
U.S. Department of Agriculture
1400 Independence Ave., SW
Washington, DC 20250

May 6, 2024

Secretary Vilsack,

I am writing to request that the United States Department of Agriculture (USDA) provide a determination that the District of Columbia Department of Energy and Environment's (DOEE) Solar for All (SfA) Program is a "federally assisted State program providing assistance on a means-tested basis to low income individuals" under 7 CFR § 272.1(c)(1)(i). This determination would enable DOEE to enroll and provide the benefits of solar energy to significantly more low income households in the District that are categorically eligible for SfA participation through participation in the Supplemental Nutrition Assistance Program (SNAP) program.

Background

DOEE is responsible for administering SfA, which is legislatively mandated to "provide the long-term financial benefits of solar energy production to at least 100,000 District low-income households in an amount equivalent to at least 50% of the District's average residential electric bills for calendar year 2016 by December 31, 2032."[1] SfA is a means-tested program as it only benefits District residents who earn at or below 80% of the Area Median Income (AMI)[2] according to published United States Department of Housing and Urban Development (HUD) income guidelines.[3] SfA provides two options for participation: single family Net Energy Metering (NEM) systems or Community Renewable Energy Facility (CREF) subscriptions. Regardless of how the electric savings are delivered, SfA sizes NEM systems and CREF subscriptions to provide at least $500 in annual savings. Households receiving NEM benefits see their own grid electric usage reduced while also being credited for excess system generation to offset utility usage and demand charges. Households receiving CREF benefits receive monthly Community Net Metering (CNM) credits on their bills that reflect the monetary value of their percentage share of a large solar system's generation, and which offset their grid electric usage and demand charges.

As with many government-run low-income support programs, income verification poses a barrier to participation in SfA. In this regard, an efficient process to decrease the administrative burden and application submission fatigue is categorical eligibility: households that receive benefits from at least one of several government-run support programs, such as the Low Income Home Energy Assistance Program (LIHEAP), are automatically qualified for SfA.

[1] DC Code § 8-1774.16(a)(2).
[2] *Id.* § 8-1774.16(g)(3).
[3] *Methodology for Calculating FY 2023 Medians*, United States Dep't of Housing and Urban Development, https://www.huduser.gov/portal/datasets/il/il23/Medians-Methodology-FY23.pdf (last visited April 2, 2024).

DOEE administers LIHEAP in the District to assist eligible low-income District households with their energy burden through benefit payments and weatherization assistance to offset the costs of electric, natural gas, and heating oil utility bills.[4] DOEE's energy assistance application enrolls qualified applicants in LIHEAP and, as of Fiscal Year (FY) 2023, also in SfA[5] to meet SfA's ambitious legislative goal of 100,000 active participants by 2032 and to reduce the administrative burden for low income households participating in the program. Since this addition of SfA terms to the energy assistance application in FY 2023, over 2,000 households have been enrolled into the program due to categorical eligibility. DOEE wishes to use participation in the SNAP program in a similar fashion as qualifying for categorical eligibility for SfA.

The District of Columbia Department of Human Services (DHS) is the District agency responsible for assisting low-income individuals and families in the District with their economic security and self-sufficiency. The Economic Security Administration (ESA) within DHS is responsible for making eligibility determinations for federally and locally funded public assistance programs in the District, including but not limited to, Medicaid, SNAP, and TANF benefits.[6]

DOEE has inquired with DHS about securing access to participant-specific data, such as residency, income, and household member information, for pre-qualifying low-income households for participation in the SfA program. However, the SNAP regulations at 7 CFR § 272.1(c)(1)(i) pose an obstacle to DOEE securing access to DHS data because they state that the "[u]se or disclosure of information obtained from SNAP applicant or recipient households shall be restricted to …. federally-assisted State programs providing assistance on a means-tested basis to low income individuals."

A "federally-assisted State program" is not defined by the USDA regulations for SNAP at 7 CFR § 271. DOEE believes that the following forms of federal assistance SfA has received, which aid in SfA administration, make SfA a "federally-assisted State program:":

- SfA received $17.5 million in federal American Rescue Plan Act (ARPA) funds in FY 2022, and used these funds to build solar facilities that are now providing low- income District residents with the benefits of solar power.
- SfA participates in the United States Department of Energy (DOE)'s National Community Solar Partnership (NCSP), which works to expand access to affordable

[4] *See, e.g.,* DISTRICT OF COLUMBIA LOW INCOME HOME ENERGY ASSISTANCE PROGRAM (LIHEAP) DETAILED MODEL PLAN, https://doee.dc.gov/sites/default/files/dc/sites/doee/service_content/attachments/Final%20FY%2024%20LIHEAP%20State%20Plan.pdf (last visited April 2, 2024).
[5] *See, e.g.,* DEP'T OF ENERGY AND THE ENV'T, ENERGY ASSISTANCE APPLICATION, https://doee.dc.gov/sites/default/files/dc/sites/doee/service_content/attachments/LIHEAP-Application%20FY24.pdf (last visited April 2, 2024).
[6] *Data and Storymaps,* District of Columbia Dep't of Hum Servs., https://dhs.dc.gov/page/data-and-storymaps (last visited March 22, 2024).

community solar to every American household.[7]

- SfA was awarded $10,000 through the NCSP's Sunny Awards by DOE for excellence in equitable community solar development. This funding was given to the District of Columbia Sustainable Energy Utility (DCSEU) to support their efforts in solar development and energy efficiency work on behalf of the District.
- SfA received funding for an Oak Ridge Institute for Science and Education (ORISE) fellow from DOE's NCSP to support the work of SfA and to ease the administrative burden for District residents seeking to enroll in SfA.
- SfA will receive technical assistance and $90,000 through a reimbursable agreement with DOE's Inclusive Shared Solar Initiative.[8] This funding is being used to support the creation of a solar-powered resilience hub at the Faunteroy Community Enrichment Center in Ward 7.[9]
- One of the community solar systems that provides benefits to SfA participants is located at Oxon Run, a former United States Park Service property that was transferred to the District Government in 1972.

For the foregoing reasons, I request that you provide DHS, the District agency that administers SNAP, with a determination that SfA is a "federally-assisted State Program providing assistance on a means-tested basis to low-income individuals" because of the program's history of using federal assistance to provide low-income District residents with the benefits of solar power. In addition, such an interpretation of SNAP and USDA regulations would be consistent with and advance the Biden Administration's emphasis on promoting equity in the clean energy economy, such as through its Justice40 initiative.

A letter from USDA to DHS with this determination would assist DOEE in securing access to DHS' participant-specific data to enroll significantly more income-eligible households in SfA, provide maximum financial benefits to low income residents, and reduce the administrative burden of enrolling in the program. If there are any further questions about this letter or DOEE's request, please reach out to Thomas Bartholomew at 202-313-2186 or thomas.bartholomew@dc.gov. I look forward to working with you and your staff on this important issue.

Sincerely,

Richard Jackson, Director
District of Columbia Department of Energy and the Environment
CC: Deputy Under Secretary Stacy Dean

[7] *About the National Community Solar Partnership*, United States Dep't of Energy, https://www.energy.gov/communitysolar/about-national-community-solar-partnership (last visited March 22, 2024).
[8] *Inclusive Shared Solar Initiative*, Nat'l Ass'n of State Energy Officials, https://www.naseo.org/issues/solar/issi (last visited March 22, 2024).
[9] *Community Resilience Hubs*, District of Columbia Dep't of Energy & Environment, https://doee.dc.gov/service/community-resilience-hubs (last visited March 22, 2024).

Appendix H: DOEE LIHEAP Application

DEPARTMENT OF ENERGY & ENVIRONMENT
GOVERNMENT OF THE DISTRICT OF COLUMBIA

Get help paying for your utilities
Complete this form to get help paying for your electricity, gas, oil, and/or water bills. We—DC Government—will reduce the cost of your utility bills from PEPCO, Washington Gas, C & M Oil, Griffith Oil, and/or DC Water. You can visit DOEE.DC.Gov/liheap and apply online.

1. Tell us about yourself

Full Name:	Date of Birth: *(MM/DD/YYYY)*	SSN:
Email:	How would you like us to contact you? *(choose all that apply)* ☐ Email ☐ Text ☐ Mail ☐ Call	
Phone: ☐ Cell ☐ Landline		
Gender: ☐ Male ☐ Female ☐ Nonbinary	Are you Hispanic/Latinx? ☐ Yes ☐ No	
Race *(select one)* ☐ American Indian/Alaska Native ☐ Black/ Afr. American ☐ Native Hawaiian/ Pacific Islander ☐ Asian ☐ White ☐ Other: _____ _____ ☐ Prefer not to say		
What is your primary language? ☐ English ☐ Chinese ☐ Amharic ☐ Vietnamese ☐ Spanish ☐ Korean ☐ French ☐ _____		
Are you interested in receiving future communications about other DOEE programs? ☐ Yes ☐ No		

2. Tell us about your home

Home Address:	Unit #:	Washington, DC	ZIP:
Do you rent or own your current home? ☐ Own ☐ Rent	Which best describes your home? ☐ Single family home ☐ Multi-Family		

3. Tell us about your household's income

List everyone who lives in your home, including **yourself** and all children. To calculate monthly income, add up the money the person makes each month from working, as well as money received from social security, unemployment, child support, or pension payments. Please make sure to list everyone in your household, even if they do not have income.

Name of household member	SSN, ITIN # (tax ID), or Alien #	Date of birth (MM/DD/YYYY)	Has a disability? (Y/N)	Monthly income ($)
Yourself:				

Need more room to write? *Attach another sheet of blank paper with this same information.*

Turn over to the other side to complete this application.

4. Tell us about your utilities

For utilities **not included in your rent,** provide your account number and name on the billing statement. Check your statements for account and/or service number(s).

4a. Water	Is water included in your rent? ☐ Yes | *skip to Section 4b* ☐ No/I own my home | *please fill out the next row*	
	Name on bill/account:	DC Water account #:
4b. Electric	Is electric included in your rent? ☐ Yes | *skip to Section 4c* ☐ No | *please fill out the next row*	
	Name on bill/account:	PEPCO account #:
4c. Gas	Is gas included in your rent? ☐ Yes | *skip to Section 4d* ☐ No | *please fill out the next row*	
	Name on bill/account:	Washington Gas account #:
4d. Heating	Is heating included in your rent? ☐ Yes | *skip to Section 5* ☐ No | *please fill out the next three rows*	
	Pay this vendor (*Select one*) ☐ **PEPCO** ☐ **Griffith Oil** ☐ **C&M Oil** ☐ **Washington Gas**	
	What is your primary heating source? ☐ Electric ☐ Gas ☐ Oil ☐ Other: _____ ☐ I don't know	
	Name on bill/account:	Heating account #:

5. Sign here to agree to our terms

- I swear that all information on this application—and all information I submitted or will submit in support of this application—is true, correct, and complete to the best of my knowledge, ability, and belief.
- I understand that I can be fined and/or imprisoned for making false statements. **Under D.C. law, making a false statement is punishable by criminal penalties, D.C. Code § 22-2405.**
- I understand that DOEE may collect my Social Security Number based on its authority under the Social Security Act of 1935, 42 U.S.C. §301, et seq.
- My signature on this application grants DOEE, or its designee, permission to contact any parties necessary to verify the information that I have provided.
- I understand that I will be notified if funding for utility assistance runs out or if this application is denied.
- I understand that, if I qualify, I may be enrolled by DOEE to receive assistance with my electric bill of an estimated $500 annually through a community solar subscription provided through the Solar for All (SFA) program. By my signature below, I certify I have read, understood, and agree to the Terms and Conditions of the SFA program available online here: https://doee.dc.gov/service/solarterms
- If enrolled in the SFA program, I will notify DOEE within 60 days if I, for any reason, become ineligible to participate in the SFA program.
- I hereby grant permission to the utility companies to release my account number and account information to DOEE to determine eligibility for any / all utility assistance programs including the Low-Income Home Energy Assistance Program (LIHEAP) and the Low-Income Home Water Assistance Program (LIHWAP). This also includes information on any overdue payments. DOEE and its designee may use this information to assess the effectiveness of services provided to consumers by DOEE.
- I hereby grant permission to DOEE, or its designee, to use the information in my file for the purposes of verification, research, evaluation, and analysis, and provide the information:
  - to utility companies for rate classification purposes and marketing for the Utility Discount Programs only,
  - to other agencies and organizations from whom I may seek financial assistance.

☒ **Your signature:** _____ **Date:** _____

6. Gather documents & submit form

To submit your application, **gather supplementary materials** you need to include with this application:

- Copy of your government-issued **photo ID**
- Copy of Social Security, Tax ID (ITIN), or Alien card for **each household member**
- Copy of **gas, electric, and/or water bills**
- Proof of income for **each household member** (e.g. pay stubs, or documentation showing income from social security, unemployment, child support, or pension payments.). If your household has zero income, you are required to submit proof of zero income, which can be shown by filling out the zero income form, available online here: **Zero Income Form**

Then **mail this application to:** Attn: Utility Assistance Division, Department of Energy and Environment, 1200 First Street NE, 5th Floor, Washington, DC 20002 or send by fax to 202-535-1584. For more information, please call 311 or visit DOEE.DC.GOV

Endnotes

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