



COMMUNITY SOLAR

EXPANDING ACCESS AND SAFEGUARDING
LOW-INCOME FAMILIES



National
Consumer Law
Center
*Fighting Together
for Economic Justice*

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Since 1969, the nonprofit National Consumer Law Center® (NCLC®) has used its expertise in consumer law and energy policy to work for consumer justice and economic security for low-income and other disadvantaged people, in the United States. NCLC's expertise includes policy analysis and advocacy; consumer law and energy publications; litigation; expert witness services; and training and advice for advocates. NCLC works with nonprofit and legal services organizations, private attorneys, policymakers, and federal and state governments and courts across the nation to stop exploitive practices, help financially stressed families build and retain wealth, and advance economic fairness.

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EXECUTIVE SUMMARY

The ongoing transition to a clean economy requires utilities, advocates, and policymakers to consider how to balance equitable access to carbon-free resources with rising energy bills and the need to address climate change. Currently, 34 million U.S. households—more than a quarter of households—struggle to meet their energy needs, and many of these households frequently face the risk of having their utility service terminated due to late or non-payment.¹ The energy affordability crisis disproportionately impacts Black and Latino/Hispanic households, households with children, and renters. Low-income families,² for example, spend, on average, 8.6% of their household income on energy bills compared to higher-income households, which spend 3% of their income on energy bills.³ Socially vulnerable populations, including racial and ethnic minority communities and low-income households, also face increased vulnerability to the impacts of climate change, driven by greenhouse gas emissions from fossil fuel energy production.⁴ Moreover, low-income families have the least financial ability to adapt to the harms caused by climate change—whether resulting from more frequent and stronger hurricanes, unprecedented drought and flooding, or massive wildfires.⁵ With the cost of solar energy declining, utilities, consumer advocates, state leaders, and utility regulators⁶ have an unprecedented opportunity to leverage this technology not only to reduce greenhouse gas emissions and their impacts, but also to lower energy bills for low-income families.

Community solar, in particular, provides an opportunity to expand solar access to low-income families, renters, and multifamily building residents. The U.S. Department of Energy (Energy Department) defines community solar as “any solar project or purchasing program, within a geographic area, in which the benefits of a solar project flow to multiple customers such as individuals, businesses, nonprofits, and other groups.”⁷ Community solar customers typically subscribe to—or in some cases own—a portion of the energy generated by a solar array, and receive an electric bill credit for electricity generated by their share of the community solar system. Community solar can allow customers or subscribers to access meaningful benefits of renewable energy, such as reduced energy costs, increased access to low-income households, community ownership, and equitable workforce development and entrepreneurship opportunities.

Energy Burden refers to the percentage of annual household income spent on annual energy bills. Energy burdens tend to be disproportionately higher for low-income households, renters, multifamily building residents, and communities of color.

See Ariel Dreihobl, Lauren Ross, and Roxana Ayala, “How High are Household Energy Burdens,” ACEEE (Sept. 2020).

General Principles For Protecting Low-Income Community Solar 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

Community solar can bring clean energy within reach of those for whom rooftop solar is not a feasible or economic option. But if community solar programs are not designed with intentional consumer protections, low-income subscribers or participants may not experience equitable outcomes or

meaningful benefits. **When carefully designed and coordinated with other low-income economic assistance and clean energy programs**, community solar may go a long way toward reducing the low-income energy burden and helping low-income communities to address climate change.⁸

Although community solar programs can provide substantial benefits, states must implement robust consumer protections to avoid adverse impacts⁹ on low-income families. Low-income consumers are frequently the targets of predatory sales and marketing, and have been for decades. To combat the repeated targeting of these communities, federal and state regulators have adopted numerous consumer protections, such as the Federal Trade Commission's door-to-door sales rule¹⁰ and state Unfair and Deceptive Acts and Practices (UDAP)¹¹ laws. Emerging energy technologies, and deceptive and abusive practices related to energy,¹² have led regulators to adopt new protections¹³ as these products come onto the market. To protect low-income consumers from financial harm and to preserve the integrity of new community solar programs that will serve low-income families, consumer protections should be implemented from the start.

This report will provide states with model community solar consumer protections to ensure equitable outcomes for low-income participants.¹⁴ Specifically, this report will discuss existing community solar models, best practices, and state policies; the U.S. Department of Energy's effort to advance community solar through a state-managed low-income subscription software; and examples of key guardrails to protect low-income subscribers or participants and ensure substantial bill savings.

To protect low-income families and equitably expand access to community solar, the National Consumer Law Center recommends the following best practices for state implementation:¹⁵

- **States must¹⁶ set strong financial and marketing protection requirements for community solar marketers,¹⁷ and**
- **States must set strong oversight and compliance, eligibility and enrollment, and low-income program coordination requirements for community solar state administrators,¹⁸ particularly committing to standardization and coordination with existing low-income programs.**

Table 1: Summary of Key State Community Solar Consumer Protection Requirements for Community Solar Marketers and for State Administrators

	STATE REQUIREMENTS FOR MARKETERS AND STATE ADMINISTRATORS
Financial Protections	<ul style="list-style-type: none"> ▪ States must require marketers to ensure verifiable bill savings, provide a no-cost exit clause in contracts, and prohibit marketers from including unreasonably long contract terms, flat fees, late payment fees, termination fees, and sign-up fees. ▪ State administrators must develop a robust process to monitor and evaluate bill savings and ensure compliance with consumer protections. ▪ State administrators must implement consolidated billing¹⁹ so that households do not receive separate bills for their community solar subscription, and all program costs and credits are included on their electric bill monthly.
Marketing Protections	<ul style="list-style-type: none"> ▪ States must require marketers to make all documents available electronically,²⁰ if so requested, and in paper format before a subscriber signs;²¹ provide all documents in a potential customer’s primary and/or preferred language; use standardized marketing materials and disclosure forms; and ensure responsiveness to customers. ▪ State administrators must develop standardized plain language and concise contract considerations and disclosure forms²² for use by marketers; establish a Code of Practice for marketing, especially for door-to-door and telephone sales; and develop standardized consumer education materials. Non-compliance must not be tolerated and must result in consequences.

	STATE REQUIREMENTS FOR MARKETERS AND STATE ADMINISTRATORS
<p>Compliance Protections</p>	<ul style="list-style-type: none"> ■ States must require marketers to comply with the state’s Code of Practice and consumer protection act,²³ inform subscribers about complaint mechanism, and track and report complaint data monthly to the state administrator, including but not limited to the number of complaints filed and resolved. ■ State administrators must develop an accessible complaint mechanism, including explicit information about how it will resolve complaints; establish data collection protocols; develop protocols for protecting customer privacy; and create a Code of Practice to ensure that marketers comply with relevant consumer laws.²⁴
<p>Eligibility and Enrollment Protections</p>	<ul style="list-style-type: none"> ■ States must require marketers to adhere to the state administrator-provided eligibility determinations and enrollment processes. Households must not be rejected based on additional criteria from the marketer. ■ State administrators must develop an income eligibility determination process coordinated and/or streamlined with the Low-Income Home Energy Assistance Program (LIHEAP), Weatherization Assistance Program (WAP), and/or other income-tested programs, and this includes developing methods to determine eligibility for low-income households not receiving LIHEAP; create a system for managing waitlists; and ensure the community solar program complements and coordinates with existing low-income energy and bill assistance programs.
<p>Low-Income Program Coordination</p>	<ul style="list-style-type: none"> ■ States must require marketers to develop community solar programs that are compatible and adhere to the low-income energy assistance programs identified by the state and do what is necessary to make changes if their program has adverse impacts on low-income benefits and utility allowances. ■ State administrators must ensure program compatibility with low-income energy assistance programs, such as LIHEAP and U.S. Department of Housing and Urban Development (HUD)-assisted housing, to avoid adverse impacts on low-income benefits and utility allowances.

Not all community solar programs offer the same level of consumer protection and meaningful bill savings. However, with strong consumer protections in place, community solar can increase clean energy access for low-income households, thereby reducing household energy burden and climate impacts. The highlighted models and recommendations in this report have broad applicability and include significant financial protections to ensure an equitable transition to clean energy.

COMMUNITY SOLAR AND THE URGENT NEED TO BROADEN ACCESS TO CLEAN ENERGY

In recent years, the United States has experienced increasing numbers of heat waves, heavy rain events, major storms and hurricanes, all of which have become more frequent and intense because of rising global temperatures. Heat is currently the leading cause of weather-related deaths in the United States,²⁵ especially among vulnerable groups, such as older adults, children, low-income families, and those with chronic health conditions.²⁶ According to the U.S. Environmental Protection Agency (EPA), heat waves or “extreme heat events” have increased in duration, frequency, and intensity for fifty years, particularly in major cities due to the changing climate.²⁷ Not only do extreme weather events cost hundreds of billions of dollars every year,²⁸ but these events displace many low-income families and racial and ethnic minority communities from their homes.²⁹ Ultimately, extreme weather events and natural disasters push many families into being impoverished and further trap in cycles of poverty families who are already struggling to make ends meet.³⁰

Despite being the most adversely impacted by climate change, low-income families (who are disproportionately people of color)³¹ have the fewest resources to prepare for and cope with extreme weather driven by rising temperatures. Carbon-free energy technology, such as solar energy systems, can play a critical role in protecting low-income consumers by reducing greenhouse gas emissions that contribute to climate change as well as reducing energy production costs.³² Public policy efforts to address climate change continue to drive growth in the renewable energy sector, with President Biden signing into law the Inflation Reduction Act in 2022,³³ launching the Greenhouse Gas Reduction Fund in 2023,³⁴ and with states launching updates to their clean energy plans. To ensure we have an equitable transition to a clean energy economy, policymakers must ensure that lower-income households are intentionally included in the transition through tailored policies and programs.

This is where community solar provides a unique opportunity to equitably transition low-income consumers to renewable energy. Some residential homes have rooftop solar

photovoltaic systems, but these systems tend to be most affordable and accessible for higher-income homeowners.³⁵ Several barriers can make rooftop solar out of reach for low-income consumers. More than half of low-income families are renters³⁶ and are more likely to live in multifamily buildings,³⁷ meaning they do not own a roof where solar can be installed. Among those who own, their homes tend to be older with roofs in need of repair or replacement and, therefore, unsuitable for rooftop solar installation. Furthermore, rooftop solar is expensive, costing on average \$19,000 for an installation.³⁸ Low-income homeowners may lack the necessary upfront capital or access to affordable and safe loan products required to finance and install rooftop solar. Requiring no rooftop and typically no upfront capital, community solar removes these barriers and makes investment in solar more accessible for low-income families. It also provides an opportunity for low-income homeowners to choose their energy source, which may not otherwise be available.

What is Community Solar?

According to the U.S. Department of Energy, community solar is “any solar project or purchasing program, within a geographic area, in which the benefits of a solar project flow to multiple customers such as individuals, businesses, nonprofits, and other groups.”³⁹

See Figure 1.⁴⁰ Community solar customers subscribe (and often pay a subscription cost) to a share of the energy generated by the solar array and, in turn, receive a credit on their electric bill for electricity generated by their share of the solar system.⁴¹ The solar array is not installed on the subscriber’s rooftop and instead is usually installed offsite from subscribers. Unlike rooftop solar, community solar typically requires no upfront capital or personal loans nor any ongoing financial investment to maintain the panels by the individual subscribers or participants. For these

reasons, community solar presents an equitable alternative for low-income renters and low-income homeowners who are unable to access or afford rooftop solar to benefit from the lower cost of solar energy generation.

How does it work?

Community solar projects generate electricity from sunlight and the electricity flows to the electricity grid. Project owners can sell this power to their local utility.

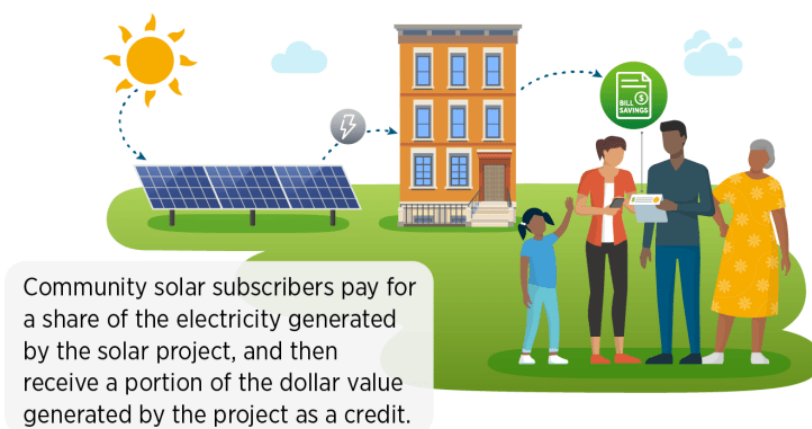


Figure 1. Community solar definition (Source: U.S. Department of Energy)

Community solar can lower energy bills and protect low-income households from rising electric rates. If a customer, for example, has a monthly electric bill of \$100 and the customer generates \$100 in energy credits from an \$80/month community solar subscription, then the customer would owe only \$80 to the community solar program since the customer's full utility bill would be covered by the credits the community solar project generated that month. This means the customer would save \$20 (or 20%) on their electric bill for that month. In this example, over the course of a year, these savings could be \$240.⁴² More than \$200 a year in bill savings is a notable amount of money for a low-income family.⁴³

Not all state community solar projects have guaranteed bill savings, low-income specific-options, or strong consumer protections in place. As of 2022, about 2% of all installed community solar capacity is currently designated for low-income households.⁴⁴ When rolling out a community solar program, developers, utilities, advocates, and state administrators should carefully determine how to ensure strong consumer protections and bill savings are in place for community solar subscribers, and especially for low-income subscribers.

PROTECTING LOW-INCOME FAMILIES: COMMUNITY SOLAR PROGRAM RECOMMENDATIONS AND PRINCIPLES FOR STATES

An equitable transition to clean energy requires broadened access to clean energy benefits for low-income families and households that can benefit significantly from lower energy bills, greater opportunities for local community ownership of power generation, and reduced greenhouse gases that contribute to climate change. To make sure that low-income families experience these benefits, programs must be tailored to fit their needs and protect their financial well-being. For this reason, the National Consumer Law Center offers the following consumer protection recommendations for community solar marketers and state administrators (see endnotes for state examples throughout):

States must set strong consumer protection requirements for community solar marketers and state administrators, including:

A. Financial Protections

1. States must require marketers ensure a minimum of 20% verifiable bill savings per household⁴⁵ (whether the savings are in terms of \$/time period or a percent off the

distribution company's price or other format),⁴⁶ which must be meaningful.⁴⁷ The customer savings should exceed what the customer pays (if there is a cost for the solar energy credited to the electric bill) on a monthly basis. The marketer must submit regular reports,⁴⁸ if the state so requests and specifies the data that should be reported.

2. States must prohibit marketers from requiring any down-payment for subscriptions, or from requiring any deposits to be added to a waitlist. Up-front payments can serve as a barrier to participation.
3. States must prohibit marketers from imposing additional flat fees (such as a flat monthly fee or one-time sign-up fee) beyond the monthly cost for the solar energy credited to the electric bill.
4. States must prohibit marketers from charging termination fees, late fees, or other fees/penalties to customers, sending bills to collections,⁴⁹ placing a lien on a home for nonpayment, and imposing unreasonably long initial terms.⁵⁰
5. States must require marketers include in the contract an exit clause that clearly states there is no penalty or payment for canceling the contract and explains the cancellation process.
6. States administrators must implement consolidated billing so that households do not receive separate bills for their community solar subscription, and all program costs and credits are included on their electric bill monthly.

B. Marketing Protections

1. States must require marketers ascertain the primary language of the potential or actual subscribers and offer documents in the language they understand;⁵¹ the marketer must receive confirmation from the potential or actual subscriber that the language used in the documents is in a language the potential or actual subscriber understands. If the marketer is unable to do this, they must break off engagement with the potential subscriber.
2. States must require marketers make all contracts and related documents available to potential subscribers for review before they sign. States should require that documents be delivered in paper format and, where signature is required, signed on paper.⁵² Marketers also must be able to provide relevant documents electronically, at the potential subscriber's request.

3. States must require marketers consider methods for reaching out to and enrolling households that are unbanked and/or lacking credit cards and/or having low credit scores and/or having no internet access.⁵³
4. States must require marketers and their agents provide accurate and up-to-date contact information to customers and the state program administrator, and require that they are responsive to contact made via telephone, email, or text message.
5. State administrators must establish rules regarding the marketing of community solar subscriptions, covering in-person, on-line, mail, and telephone marketing channels. Because the solar industry often relies on door-to-door marketing, states must establish specific rules to ensure marketers act well when using that channel.⁵⁴ Any established rules regarding misleading and deceptive marketing must include recommended and prohibited language that can be used to describe financial savings, marketer affiliations, government incentives and programs, terms and conditions, and other issues.⁵⁵
6. State administrators must develop standard disclosure, contract, and enrollment forms⁵⁶ that marketers and their agents will be required to use without edits or revisions except as explicitly approved. Standard forms must be clear and concise;⁵⁷ written in plain language that can be understood by those without legal training or experience reading contracts;⁵⁸ and provided in minimum 12-point typeface and in a language understood by the subscriber.⁵⁹ The disclosure form⁶⁰ must be a maximum of two pages and focus on the elements of the subscription agreement that are most impactful to the customer's finances, such as:
 - i. The rate that the customer will be charged for their community solar subscription;
 - ii. Guaranteed savings information;
 - iii. Whether there are any additional allowed fees;
 - iv. The length of the contract, how to cancel the contract; and
 - v. Under what circumstances, if possible, the subscription can be moved to another address.
7. The approved marketing materials may be supplemented with other materials, if consistent with all program rules or guidance on language that can be used to describe the solar program.
8. State administrators must develop standardized consumer-facing education materials (in appropriate languages) which, at a minimum, describe:

- i.** How solar power and community solar work;
 - ii.** The benefits of subscribing to community solar;
 - iii.** How to subscribe and unsubscribe through the state's programs;
 - iv.** The standards for marketing behavior and customer rights;
 - v.** Financial obligations and benefits connected with subscriptions;
 - vi.** Approved subscription managers and vendors in the state;
 - vii.** How to file a complaint; and
 - viii.** Who to contact with questions.
- 9.** In states/programs where a household may be matched with one (and only one) marketer,⁶¹ the educational materials must explain the potential risks of engaging with marketers offering rooftop and community solar via door-to-door sales⁶² or via unsolicited phone calls, but households must be encouraged to shop wisely in states where the state's approved marketers may offer different prices and terms.⁶³
- 10.** State administrators must ensure transparency of relevant information, including the prices, discounts, or credits being offered by marketers. Standard contracts and other forms must be posted on a publicly accessible website.

C. Compliance Protections

- 1.** States must require marketers sign and comply with any Code of Practice (or other state requirements) provided by the state and that may include relevant provisions based on the aforementioned requirements, as well as general consumer protections (e.g., compliance with generally applicable state law and regulations regarding prohibitions of unfair or deceptive practices; obligations to treat customers honestly; etc.).
- 2.** States must require marketers inform subscribing households of the state's complaint mechanism for those enrolling in the low-income community solar program and how to access it, and that the subscribing household may pursue action if any promised bill savings are not realized.
- 3.** States must require marketers track and report data to the state program administrator on a frequent basis (e.g., monthly or such other period as the state prescribes), such as the number and type of subscribers, estimated savings, waiting list, complaints received and resolved, and any other reporting metrics imposed by the state.

4. State administrators must establish protocols for data security, collection and reporting, and review required reports from solar developers and marketers to track customer participation, bill savings, demographics, and other metrics. States must develop a program evaluation plan that will measure the impact of the program, verify energy savings achieved, confirm consumer protections, and capture both energy and non-energy benefits.⁶⁴
5. State administrators must establish an easily accessible complaint mechanism, and a transparent tracking system, available to any interested person, so that patterns of complaints can be easily identified.⁶⁵ States may choose to promote the existence of the complaint mechanism and how to access it.
6. State administrators must articulate how complaints will be resolved, investigate any marketer's failure to comply with program requirements, make clear the time period for investigating and addressing complaints, and explain what the potential sanctions would be for any violations, up to and including dismissal from the program.⁶⁶
7. State administrators must consider thoroughly vetting and approving marketers to ensure that they have all applicable licenses and reviewing their project development track record and history of complaints. State administrators must also set minimum standards for a developers' and marketers' creditworthiness, insurance coverage, and employee training. A list of approved marketers and, if relevant, developers must be publicly available, updated regularly, and easily accessible by customers.
8. State administrators must develop protocols for customer privacy and security and must only collect information needed for marketers to conduct outreach and complete enrollment, and to evaluate or analyze the program.
9. State administrators must develop a Code of Practice that incorporates all relevant provisions from above, as well as other provisions, and that marketers are required to sign and comply with. Any such Code of Practice must have marketers affirm that they will comply with relevant consumer laws, including, but not limited to: (1) the FTC Cooling-off Period for Sales Made at Home or Other Locations ("door-to-door sales rule," 16 CFR Part 429); (2) E-Sign (Electronic Signatures in Global and National Commerce Act), 15 USC ch. 96; (3) Telemarketing and Consumer Fraud and Abuse Prevention Act, 15 U.S.C. §§ 6101-6108; and (4) Section 45 of the FTC Act (15 USC 45) (prohibiting "unfair or deceptive acts or practices").⁶⁷ The implementing agency must have the authority to enforce compliance and be willing to act if enforcement is required.⁶⁸

D. Eligibility and Enrollment Protections

1. State administrators must establish simple, low-cost, non-invasive, and accurate ways to determine income eligibility. Those receiving LIHEAP assistance must be deemed eligible for the low-income community solar offering. To the extent a state also wishes to enroll other income-eligible households who may not be LIHEAP recipients, it could use: (a) proxies, such as enrollment in SNAP and other income-based government programs; (b) tenancy in income-based housing; and/or (c) residency in a low-income Census tract, combined with income self-attestation by the household.⁶⁹ While more burdensome, subscription managers could verify eligibility using tax forms, pay stubs, or other documents.⁷⁰ Requiring households to repeatedly or frequently prove eligibility must be limited, thus multi-year eligibility must be offered. Qualification requirements must also comply with any existing and applicable legislative or regulatory mandates of the state's community solar program.
2. State administrators must explore program designs that do not require the customer to have a bank account, credit card, automatic payments, or minimum credit score, so that unbanked households and those with low or no credit can participate. Additionally, state administrators could explore consolidated billing, which is less confusing to low-income households.
3. If community solar programs are limited on the number of households that can be served, state administrators must consider how to equitably prioritize households to receive program benefits. This could be based on community/household demographics and geography, such as prioritizing customers in Environmental Justice communities (using state or federal designations),⁷¹ the energy burdens of utility customers with high delinquent bills and communities with disproportionately high rates of utility shutoffs,⁷² households with older adults or disabled members, or households with young children, all subject to the availability of such information to the state LIHEAP agency and/or state community solar program managing agency. State administrators must avoid pure first-come, first-served models for acquiring community solar program participants because such models are contrary to reaching equity goals.
4. State administrators must develop protocols for managing wait lists. Protocols must require non-binding and non-exclusive terms, clear communications to households placed on wait lists, and easy ways for customers to leave a wait list without penalty. States might also want to consider protocols for managing "expressions of interest," so that data can be provided to the market showing regions where demand for additional low-income community solar exists, without promises of projects arriving in any specific timeframe.⁷³

E. Low-Income Program Coordination⁷⁴

1. State administrators must design community solar programs to be compatible with and complementary to low-income energy assistance programs, such as LIHEAP⁷⁵ and the Weatherization Assistance Program (WAP), rate discounts, arrearage management, energy efficiency and weatherization.
2. The community solar program administrator must have a formal working relationship with LIHEAP administrators, utilities, and other social agencies to ensure that energy assistance programs are not burdened by community solar programs. Designs of both types of programs must be flexible to achieve an optimal outcome. To the extent energy assistance programs are burdened, they should be compensated for any higher administrative costs to the extent possible. Energy assistance program managers must be trained on community solar, the sign-up process, complaint procedures and related issues at no fee to the energy assistance program.
3. State administrators must strive to prevent adverse impacts to LIHEAP benefits. Due to insufficient studies, data, and analysis to understand how community solar savings impact customers' bills long-term, LIHEAP benefits must not be reduced based on a household's participation in community solar to ensure that households do not end up with higher electric bills after subscribing to community solar. This is especially applicable in states that determine LIHEAP benefits based on household energy burden. To avoid adverse impacts on the utility allowances provided to some public and subsidized housing tenants, state administrators should refer to helpful guidance provided by HUD.⁷⁶

NATIONAL COMMUNITY SOLAR POLICY LANDSCAPE: AT A GLANCE

Although community solar program design varies significantly from installation to installation, the programs generally seek to close the solar access gap (so that the benefits of solar are not limited only to affluent homeowners) and reduce energy bills for families. As of January 2024, there is at least one community solar project in 43 states and the District of Columbia. [See Figure 2.](#)⁷⁷ Of those, 22 states and the District of Columbia have passed enabling legislation that encourages or mandates community solar in their jurisdictions.⁷⁸ The District of Columbia and at least 17 states have passed legislation to expand community solar to low-income consumers via carve-outs and/or financial incentives.⁷⁹

Where is community solar available?

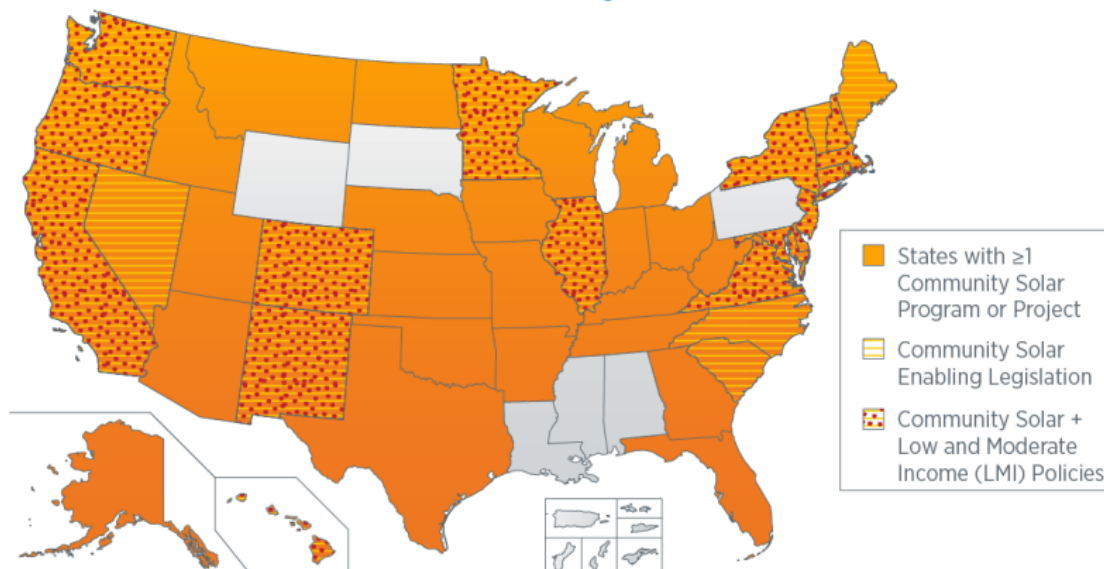


Figure 2. States with Community solar projects, enabling legislation, and Low-to-Moderate-Income policies (U.S Department of Energy)

The most accessible low-income community solar programs eliminate excessive or unnecessary fees, require no upfront costs, offer discounts and guaranteed savings, and simplified or streamlined applications with plain language terms in multiple languages.⁸⁰

According to the National Renewable Energy Laboratory, as of December 2022, about 2,500 community solar projects have been developed in the U.S., with a capacity of approximately 6,000 MW, the equivalent of four large fossil-fired central generating plants.⁸¹ Community solar has grown rapidly in the past decade and will likely continue to proliferate, especially with recent policy support. A close look at existing programs offers some guidance about how to best protect the financial well-being of low-income consumers while expanding access to community solar. The following sections highlight some example programs around the country, state consumer protection policies for community solar, and the U.S. Department of Energy's effort to bring community solar within reach of low-income families.

Best Practices: State Program Models and Consumer Protection Policies for Protecting Low-income Community Solar Participants

This section provides case studies of community solar programs with strong protections for low-income community solar participants in the District of Columbia, Illinois, Maryland, New Jersey, New Mexico, New York, and Oregon. Additional details on these state program models and policies can be found in [Appendices A](#) and [B](#).

Best Practice Key Takeaways

The highlighted state programs employ one or more of the following best practices:

- Community solar programs that provide subscription discounts for low-income households, guarantee bill savings, prohibit upfront costs and termination fees, ensure no impacts on LIHEAP benefits, allow self-attestation* for eligibility determination, streamline the sign-up process, make subscriptions portable, and protect households' personal information, and provide consolidated billing and clear communication about customer benefits from community solar participation.
- Consumer protection policies and guidance that prohibit marketers from engaging in unfair and deceptive practices, provide standard language and templates for contracts and disclosures, establish a complaint process, set specific compliance requirements (including ongoing reporting), suggest or require sales agent training, set broad income verification requirements, encourage coordination with low-income programs, and/or establish a code of conduct for project managers.

*While **self-attestation** of income has been allowed in community solar programs in some states, including Maryland and New Jersey, and can be seen as a best practice in terms of facilitating enrollment of low-income households, states should consider that some developers may feel limited in their ability to access certain tax credits (e.g., under 26 U.S.C. § 48E(h)) if they do not individually income-qualify participating households. The extent to which a developer may (or may not) need to individually income-qualify households to access tax benefits is a complex tax law question and beyond the scope of this report.

See [Appendices A](#) and [B](#) for more information about best practice state models.

District of Columbia

Launched in 2017, the DC Solar for All program aims to provide the benefits of solar to 100,000 low-and-moderate-income households (defined as at or below 80% of the area median income) “in an amount equivalent to reducing the average electric bill by 50% (based on the residential rate class average electricity bill for 2016) by December 31, 2032.”⁸² As of September 2023, DC Solar for All had more than 8,000 subscribers. Administered by the Department of Energy and Environment (DOEE), the Solar for All website includes an online application portal as well as the option to print and mail in the application. The printable application contains detailed information about the program's terms and conditions and explains the income verification process, how bill credits are calculated, termination procedures, and Low-Income Home Energy Assistance Program (LIHEAP) benefits. In terms of specific protections, the Solar for All program has no upfront costs, no early termination fees (the term length is fifteen years), and it does not impact

customers' LIHEAP benefits.⁸³ Importantly, the DC Solar for All program does not charge a subscription cost for enrolled households, so participants only receive credit on their utility bill and no separate bill for the subscription. DOEE has further streamlined the sign-up process by combining the application for utility bill assistance and pre-qualification for the Solar for All program into one form, lowering the barrier for enrollment for low-income households across energy assistance programs.⁸⁴

Illinois

The Illinois Solar for All (ILSFA) program, a mandatory set-aside program that launched in 2018,⁸⁵ targets community solar to low-income families, defined as households with annual incomes that are 80% or less of the area median income.⁸⁶ Community solar projects approved in the 2023-2024 Program Year and beyond are required to utilize a consolidated, single billing option. In addition, to simplify the billing process and improve participant experience, community solar projects approved prior to 2023-2024 Program Year may also utilize consolidated billing.⁸⁷

The Illinois Power Agency's (IPA) *Consumer Protection Handbook* contains useful requirements and standardized language for protecting low-income Solar for All participants from predatory marketing, unfair and abusive practices, and lack of transparent customer disclosure. To ensure savings for low-income subscribers, the handbook requires community solar vendors to "demonstrate that any ongoing costs and fees paid by the participant will not exceed 50% of the value of energy generated by the customer's share of the system."⁸⁸ The handbook explicitly prohibits vendors or marketers from engaging in unfair and abusive practices, offering the following definition of abusive practices:⁸⁹

"An act or practice is abusive if:

- It materially interferes with the ability of a consumer to understand a term or condition of the offer or contract; or
- It takes unreasonable advantage of (1) a customer's lack of understanding of risks, costs, or conditions of the offer or contract or (2) the inability of the consumer to protect their interests in accepting an offer."⁹⁰

Marketers who become aware that a customer has misunderstood the contract terms or other information must correct the misunderstanding, as well as be responsive to customers' questions and concerns. To prevent misleading marketing, the handbook provides examples of language marketers are prohibited from using regarding bill savings (e.g., "If you participate in ILSFA you will save 50% on your energy bills").⁹¹ Marketers are allowed

to make more general statements, such as, “ILSFA participants see value from their solar project in different ways, depending on the project and property type, or project size.”⁹²

In addition to specific rules around unfair and abusive practices and representations about potential savings, the handbook lays out specific requirements (providing standardized language in some cases) around the following:

- **Legal compliance:** vendors or marketers “must comply with all existing local, state, and federal laws, regulations, and guidance, including Federal Trade Commission (FTC) guidance on advertising and marketing.”⁹³
- **Disclosure:** for all marketing channels (online, in-person, direct mail), certain information must be prominently stated.⁹⁴ Here, the handbook not only provides exact language vendors can use on various marketing channels but also contains additional requirements for each individual type of marketing.
- **Sales agent training:** All sales agents who will engage in marketing must receive appropriate initial training⁹⁵ and “refresher training” every six months that, at a minimum, includes information about applicable marketing requirements.⁹⁶
- **Complaint reporting:** Participants in ILSFA can file complaints with the Program Administrator by email or phone. Vendors must report any complaints submitted directly to them to the ILSFA Program Administrator.⁹⁷ The handbook outlines a clear process for how Program Administrators should identify and handle any consumer protection violations from a vendor, and this includes formal disciplinary actions.⁹⁸

Failure to comply with the handbook’s requirements may result in disciplinary measures, including “suspension of eligibility to receive or otherwise benefit from Program-administered REC delivery contracts” and suspension “from performing services in connection with projects.”⁹⁹ ILSFA program administrators have enforcement authority, overseeing compliance and investigative matters as necessary; additionally, IPA may undertake ILSFA program administrator enforcement roles as needed.¹⁰⁰

A Glance at Illinois' Complaint System

The complaint processes included in the Illinois Shines/Solar for All programs provide a good model for states that wish to implement robust complaint and enforcement mechanisms for community solar programs.

PROGRAM INTAKE AND FOLLOW-UP:

- Consumers are provided two easy routes for filing a complaint: filling out a form on the solar program web page, or calling a designated phone number.
- The program makes it clear that complaints will be followed up by phone or email, which makes it more likely the consumer will actually file the complaint.
- Consumers are informed that the program will consider taking a range of enforcement actions depending on the severity of the violation, including: warning letters, restrictions on taking on new customers, or suspension or expulsion from the program.
- The program also informs consumers how to file complaints with the state Attorney General for those who believe they have been the victim of unfair or deceptive practices.

TRANSPARENCY:

- To ensure that any interested party can see what complaints have been filed and the action the program took in response, the program regularly puts out:
 - A Program Violations Report, which publicly posts warning and suspension letters;
 - A Consumer Complaints Report, listing all complaints received, and all vendors who have been suspended; and
 - An Annual Complaints Report filed with the Illinois Commerce Commission.

Maryland

In 2015, Maryland adopted a mandatory set-aside for community solar, directing utilities to implement a three-year Community Solar Pilot Program. In 2019, the Maryland legislature later passed House Bill 683, extending the pilot program from three to seven years.¹⁰¹ The pilot program was available to low-income households, defined as those with household annual incomes at or below 175% of the federal poverty level, and moderate income households or those at or below 80% of median area income.¹⁰² In 2020, the Public Service Commission approved self-attestation of income plus proof of participation in other low-income benefit programs (e.g., Medicaid, HeadStart, LIHEAP, etc.) as a method for determining eligibility to participate in the community solar program.¹⁰³ Moreover, the law required programs marketed to low-and moderate-income (LMI) customers must be

portable¹⁰⁴ and provide savings throughout the contract.¹⁰⁵ In 2023, Maryland passed House Bill 908, making the community solar program permanent, available to all residents,¹⁰⁶ and the following significant changes:

- Projects must deliver at least 40% of the kWh output to LMI subscribers¹⁰⁷ (unless the project is wholly owned by the subscribers).
- LMI subscribers may also qualify by residing in a census tract that is an overburdened and underserved community,¹⁰⁸ or by self-attestation of income.
- Consolidated billing provided by the electric utility must be made available (to be implemented by 1/1/2026).
- Subscriber organizations may not charge LMI subscribers a subscription rate that is more than 90% of the monetary value of the bill credit.¹⁰⁹

New Jersey

The Clean Energy Act (CEA) of 2018 established the state's Community Solar Energy Pilot Program, and directed the Board of Public Utilities (BPU) to develop rules for implementing the program.¹¹⁰ The CEA required the pilot program to include consumer protection measures and "a verification process to ensure that the solar energy projects are producing an amount of energy that is greater than or equal to the amount of energy that is being credited to its participating customers' electric utility bills."¹¹¹ The CEA further directed the BPU to adopt rules and regulations that establish "access to solar energy to low and moderate income customers."¹¹² The law defines households with total gross income at or below 80% of the median income as "moderate-income," and those with adjusted gross income at or below 200% of the federal poverty level as "low-income household[s]."¹¹³ For the pilot program, at least 40% of the annual capacity limit must be allocated to LMI customers.¹¹⁴

In 2020, the BPU reevaluated procedures for verification of LMI status for the program (which then required proof of participation in specified public assistance programs, or copies of applicants' federal tax returns).¹¹⁵ At the recommendation of BPU staff and after a public comment period, the BPU broadened the LMI verification requirements to allow community solar developers to submit alternative documents in lieu of tax returns for low-income applicants not enrolled in public assistance programs.¹¹⁶ In August 2023, New Jersey made the program permanent, replacing the pilot.¹¹⁷

LMI verification requirements under the administrative rules for the program state:

“(d) The following LMI eligibility criteria shall be applied:

1. If the community solar pilot project is sited on government-owned property, and is serving LMI subscribers living on that property, the government site owner may provide a sworn statement that those community solar pilot project subscribers are considered LMI for the purposes of the Pilot Program.
2. In all other cases, subscribers must be individually qualified as LMI for the purposes of the Pilot Program. The subscriber organization for each project shall receive and review proof of LMI eligibility for each LMI subscriber. Any of the following may be accepted by a subscriber organization as proof of LMI status for individual subscribers:
 - i. Proof of participation in one or more of the following: LIHEAP, Universal Service Fund, Comfort Partners, Lifeline Utility Assistance Program, Payment Assistance for Gas and Electric, Section 8 Housing Choice Voucher Program, Supplemental Nutrition Assistance Program, the Lifeline program administered by the Universal Service Administrative Company, or other low- or moderate income local, State, or Federal programs, as may be added to this list by the Board by Board Order;
 - ii. If the subscriber is a residential customer, proof that the subscriber's metered residence is in a census block group in which 80 percent or more of the households earn less than 80 percent of the area median income, as determined by data from the U.S. Department of Housing and Urban Development; or
 - iii. An alternate form of income verification proposed through a petition by a subscriber organization and approved by the Board. The petition shall include: a written description of the proposed income verification method; a complete description of how the method respects consumer privacy concerns; how the measures and safeguards established prevent fraud or misrepresentation by either the prospective subscriber or a subscriber organization; if the proposed methodology utilizes a statistical probability-based identification mechanism, how the method is reasonably expected to minimize incorrect eligibility determinations; and how the Board will be able to verify the income claims for accuracy. Alternatively, a subscriber organization may provide notice to Board staff of the entity's intent to utilize a verification mechanism that has already been approved by the Board. A subscriber organization may not utilize any alternate method of income verification until it has been approved by the Board.”¹¹⁸

In the August 2023 order establishing the permanent Community Solar Energy program, the BPU also included self-attestation as a method of LMI eligibility determination.¹¹⁹

In addition, New Jersey's permanent program will implement consolidated billing for community solar, with a deadline of January 1, 2025, with the requirement that all residential subscribers must participate in consolidated billing. Projects that were approved and built under previous pilot are also required to use consolidated billing, with a one-year transition allowed.¹²⁰

New Mexico

The state's community solar best practices guide¹²¹ is not compulsory but offers recommendations for protecting consumers. Some suggested best practices include sales agent training, particularly training on all federal, state, and county requirements on door-to-door sales.¹²² The guide also suggests training on ethical sales practices (i.e. avoiding misleading representations about savings, etc.), the nature of New Mexico's Community Solar Program,¹²³ and the New Mexico Subscriber Information Disclosure Form.¹²⁴ Additional recommendations include weekly and monthly reporting of subscriptions, and quarterly reviews.¹²⁵ Specifically, the guide recommends subscriber organizations review subscription managers quarterly for compliance with program requirements, and that the review include an examination of the disclosure processes, customer materials, changes to customer fees, marketing materials, etc.¹²⁶

New York

Expanded Solar for All Program: Through its Expanded Solar for All Program,¹²⁷ New York is deploying a parallel "automatic enrollment" community solar model that aims to eventually provide all households participating in LIHEAP and the supplemental Energy Assistance Program (EAP) with electric bill savings from community solar. New York State Energy Research and Development Authority (NYSERDA) and National Grid have partnered to procure up to 300 MW of community solar for over 160,000 low income households in Phase 1 of the program, and a statewide expansion is under consideration by the New York Public Service Commission. Under this model, households sign up as part of their annual enrollment in LIHEAP and EAP, and may choose to "opt-out" of the program and/or "opt-in" to a conventional community solar subscription as well. Community solar project owners receive no personally identifiable information about participating households, and they are paid for the solar generation directly by the utility, ensuring that customers are not exposed to any additional risk through the program.

*Distributed Energy Resources (DER) Oversight, Uniform Business Practices, and Disclosures:*¹²⁸ In 2015, New York’s Public Service Commission (NYPSC) initiated a regulatory proceeding to discuss regulation and oversight of Distributed Energy Resource providers and products, including community solar. Through this proceeding, the NYPSC has established rules for community solar products, marketing practices, and mandatory disclosures to prevent exploitive pricing and deceptive marketing practices to residential and small business customers; ensure that customers and suppliers know their rights and responsibilities, including complaint resolution procedures; and provide oversight tools needed to monitor the growing markets and resolve potential issues.

*Inclusive Community Solar Program Rules:*¹²⁹ In addition to the protections provided by the NYPSC’s oversight, Uniform Business Practices for Distributed Energy Resources, and required consumer disclosures, the New York State Energy Research and Development Authority (NYSERDA) sets additional requirements for community solar projects receiving additional state incentive funds through the Inclusive Community Solar program, a part of the NY-Sun initiative. Participating projects must dedicate at least 40% of their output to eligible low-to-moderate income households and residents of disadvantaged communities, with a minimum 10% bill credit discount. To qualify for funding, project developers must submit a “Marketing and Implementation Plan” that demonstrates their ability to effectively serve low-to-moderate income residents and meet the program’s requirements for clear, accurate, and transparent customer acquisition and management practices.

In December 2019, New York adopted the “net crediting” (i.e., consolidated billing) model for the community solar program. Community solar credits and charges (including subscription costs and utility administrative fees) appear as a single line item on customer electric bills. This order also set a minimum savings rate of 5% for community solar subscribers.¹³⁰ In September 2022, New York issued an updated order that recognized ongoing billing issues and timing delays with their consolidated billing rollout. They required a stakeholder convening and negative revenue adjustment for underperforming or non-compliant utilities, and also required utilities to issue implementation plans detailing their progress on consolidated billing implementation.¹³¹

*Oregon*¹³²

Community Solar Program: Established in 2016 when the Oregon Legislature passed the Clean Electricity and Coal Transition Plan, the Oregon Community Solar Program is funded by customers of Portland General Electric, Pacific Power, Idaho Power, and by program participants.¹³³ The law mandates that 10% of community solar capacity be carved out or set aside for low-income (defined as 80% or below the Oregon State Median Family Income)¹³⁴

subscribers. The program offers special benefits and protections to low-income subscribers, including subscription discounts of at least 20%, guaranteed energy bill savings, no upfront costs, and no termination fees. Additionally, the program has an "exemption from the requirement to make automatic payments," which helps to protect unbanked households.¹³⁵ Program flyers, brochures, and FAQs are available in at least four languages common in the state. Marketing materials on the program's website clearly explain expected annual bill savings based on utility provider, household consumption, and solar subscription size. The program's "Subscriber Resources" page¹³⁶ offers additional information about how to understand bill credits, so that potential subscribers understand how to read their bills. Currently, the program is available to customers of Portland General Electric and Pacific Power.¹³⁷ Both utilities' websites include FAQs, information about how to sign-up online or by phone, and Portland General Electric provides a helpful infographic describing how community solar works.¹³⁸

Program Implementation Manual: As part of the state community solar program, Oregon developed a Program Implementation Manual outlining procedures and requirements.¹³⁹ The implementation manual defines low-income as less than or equal to 80% of the Oregon State Median Family Income, requires income verification¹⁴⁰ be conducted by a Low-income Facilitator,¹⁴¹ provides standardized template language for contracts, and contains a code of conduct for project managers.¹⁴² The "Project Manager Code of Conduct" section specifies the project manager's obligation to comply with the law, to ensure compliance, and outlines rules around advertising, treatment of customers, protection of customer information, and customer contracts.¹⁴³ For example, the section contains language similar to ILSFA to prevent misleading marketing: "Project Managers and their Agents shall not refer to a community solar Subscription as "free" in oral or written marketing or sales discussions unless the customer will not pay anything –up-front and on a monthly basis – for their subscription or the energy it generates."¹⁴⁴

The code of conduct section also emphasizes that specific information must be included in all customer contracts. All contracts between project managers and participants must be written in plain language and include the following provisions:

- Disclosure checklist
- Description of the costs, risks and benefits of participation
- Length of contract
- Contract portability if a participant relocates¹⁴⁵
- Contract transferability to another participant¹⁴⁶

- Early termination (including no termination fee for low-income customers)¹⁴⁷
- Utility disconnection and non-payment¹⁴⁸
- Changing the size of a subscription
- Explanation of the concept of renewable energy credits
- Data privacy and security
- Responsibilities of the program administrator, utility, and Oregon Public Utility Commission¹⁴⁹
- Notifications regarding project status and performance
- The participant's right to file a complaint with the program using a dispute resolution process
- Additional mandatory provisions (i.e. consent to access and use participant energy information, participant information release, and project manager's right to impose additional requirements on participants)¹⁵⁰

The manual links to a resource repository where project managers can find a “low-income standard contract” template.¹⁵¹ Furthermore, the implementation manual requires developers to establish a complaint and dispute resolution process:

“Any complaints pertaining to a Project or Project Manager that are received by the Program Administrator, Low-income Facilitator, Oregon Public Utility Commission or utilities will be referred initially to the applicable Project Manager for resolution. The Project Manager must investigate each complaint and provide a written response to the complainant.”¹⁵²

An escalation procedure exists for situations where the Project Manager is unable to resolve the complaint. If a Project Manager cannot resolve a complaint with a customer, the Project Manager must escalate the complaint to the Program Administrator and inform the customer of such action. Once the Program Administrator receives the complaint, they will work with the customer and the Project Manager to resolve the problem. In the event the Program Administrator cannot reach a resolution between the two parties, the Program Administrator “will notify and collaborate with the Oregon Public Utility Commission Consumer Service Division to further investigate and resolve the complaint according to OPUC customer complaint procedures.”¹⁵³

U.S. DEPARTMENT OF ENERGY: LOW-INCOME CLEAN ENERGY CONNECTOR

In an effort to bring community solar to low-income households, the U.S. Department of Energy, through its National Community Solar Partnership and in partnership with the U.S. Department of Health and Human Services (HHS), developed software, the “Low-Income Clean Energy Connector,” that aims to make community solar more accessible to low-income families.¹⁵⁴ The Connector is an online software tool that states can opt-in to using to help streamline income-eligible enrollment into low-income community solar programs that have strong consumer protections and verified savings. The Connector will support the Energy Department’s broader goal of bringing community solar with verified savings to around five million households by 2025, initially targeting participants in LIHEAP.¹⁵⁵ Through this tool, the Energy Department intends to bring low-income households into the growing clean energy economy and ensure that community solar will reduce household energy bills, while avoiding potential consumer risks:

“Connecting LIHEAP recipients to community solar subscriptions with verified savings and strong consumer protections through the Connector will reduce the cost of customer acquisition for solar developers and subscription managers, increase household savings and meaningful benefits for LIHEAP-enrolled households, and increase the deployment of community solar projects in states with low-income community solar programs.”¹⁵⁶

Subscription managers,¹⁵⁷ state program administrators (both community solar and LIHEAP), and local LIHEAP administrators will be able to use the Connector to more easily connect low-income families interested in opting into community solar during the LIHEAP enrollment process, while making it easier for developers and subscription managers to enroll income-eligible households. Households will not interface with the Connector. One goal is for subscription managers to compensate local LIHEAP administrators for their effort to educate households about community solar.¹⁵⁸ Subscription managers will identify interested households who want to enroll in a community solar subscription and upload interested households into the Connector. To use the Connector, a state must have a low-income community solar program with minimum household savings requirements; states also must agree to enforce minimum consumer protection requirements.¹⁵⁹ Moreover, the state community solar administrator (i.e., the energy office and/or Public Utility Commission) and the state LIHEAP office must jointly agree to participate in the Connector.

Community solar subscription managers seeking to use the Connector will need to be verified and approved by the state administrator, who will ensure that the subscription manager complies with Energy Department-required and state-required consumer protection requirements. During LIHEAP enrollment, local LIHEAP administrators will provide consumer education on community solar, allowing LIHEAP-eligible households to express their interest in enrolling in available community solar projects. If a community solar program is not available, LIHEAP-eligible households can indicate their interest in participating in a community solar program when one launches in their area.¹⁶⁰ Once LIHEAP administrators upload customer opt-in data to the Connector, subscription managers will be able to securely access the data to enroll interested customers in an available community solar program.¹⁶¹

The Connector is one of several initiatives of the Energy Department's National Community Solar Partnership to equitably accelerate community solar development. In addition to the Connector, the National Community Solar Partnership provides technical assistance to organizations and partners, convenes a States Collaborative, provides access to funding through the Community Power Accelerator, and supports education and outreach.¹⁶²

See the Energy Department's "[Low-Income Clean Energy Connector](#)" webpage for ongoing updates and resources.

CONCLUSION AND KEY TAKEAWAYS

Not all community solar programs offer the same level of consumer protection and meaningful bill savings across the U.S. As states develop and expand community solar programs, state administrators and advocates should consider program design measures that ensure meaningful savings and protect the financial wellbeing of low-income families. With the right consumer protections in place, community solar can increase clean energy access for low-income households, thereby reducing household energy burden and climate impacts. As shown in this report, states with community solar programs have adopted a wide range of models to ensure savings and protections for low-income households. The above recommendations have applicability to a broad range of low-income community solar models and include significant financial protections to ensure an equitable transition to clean energy.

APPENDIX A: RESOURCES

General Information and Tools

- “National Community Solar Programs Tracker,” *Institute for Local Self-Reliance*, available at <https://ilsr.org/national-community-solar-programs-tracker/>.
- Kaifeng Xu, Jenny Sumner, Emily Dalecki, and Robin Burton. “Expanding Solar Access: State Community Solar Landscape,” *National Renewable Energy Laboratory* (2022), available at <https://www.nrel.gov/docs/fy23osti/84247.pdf>.
- Diana Chace and Nate Hausman. “Consumer Protection for Community Solar: A Guide for the States,” *Clean Energy States Alliance* (June 2017), available at <https://www.cesa.org/wp-content/uploads/Consumer-Protection-for-Community-Solar.pdf>.
- “Low-Income Clean Energy Connector,” U.S. Department of Energy, National Community Solar Partnership, available at <https://www.energy.gov/communitysolar/low-income-clean-energy-connector>.
- “Community Power Accelerator,” U.S. Department of Energy, National Community Solar Partnership, available at <https://www.energy.gov/communitysolar/community-power-accelerator.htm>.
- “Technical Assistance,” U.S. Department of Energy, National Community Solar Partnership, available at <https://www.energy.gov/communitysolar/technical-assistance>.
- “Community Solar and HUD Subsidized Housing: An Overview of Current Policies, Programs and Practices and the Impact to Tenant Utility Allowances and Income,” *Stewards of Affordable Housing for the Future* (2022), available at <https://www.sahfnet.org/resources/community-solar-and-hud-subsidized-housing-overview-current-policies-programs-and>.
- “Community Solar Consolidated Billing: Review of State Requirements, Policies, and Key Considerations,” *National Association of State Energy Officials* (May 2023), available at <https://www.naseo.org/news-article?NewsID=3872>.
- “State Policies and Programs for Community Solar,” *NREL Data Catalog*, available at <https://data.nrel.gov/submissions/215>.
- “Inclusive Shared Solar Initiative: ISSI,” *National Association of State Energy Officials*, available at <https://www.naseo.org/issues/solar/issi>.
- “Low-Income Communities Bonus Credit Program,” U.S. Department of Energy, Office of Energy Justice and Equity, available at <https://www.energy.gov/justice/low-income-communities-bonus-credit-program> (for sample customer disclosure form templates).

- “LIHEAP IM-2023-04 Community Solar and LIHEAP Considerations,” Office of Community Services, *available at* <https://www.acf.hhs.gov/ocs/policy-guidance/liheap-im-2023-04-community-solar-and-liheap-considerations>.

State-Specific Models, Materials, and Standard Templates

District of Columbia:

- Solar for All Implementation Plan, *available at* https://doee.dc.gov/sites/default/files/dc/sites/ddoe/service_content/attachments/DOEE-%20Report-%20Solar%20for%20All%20Implementation-%20Final%20for%20Transmittal.pdf.
- Department of Energy and Environment, Solar for All, *available at* <https://doee.dc.gov/solarforall>.
- Department of Energy and Environment, Receive Assistance with Your Utility Bills (LIHEAP), *available at* <https://doee.dc.gov/liheap>.

Illinois:

- Consumer Protection Handbook for Illinois Shines (Adjustable Block Program) & Illinois Solar for All, *Illinois Power Agency* (April 17, 2023), *available at* <https://www.illinoisfa.com/app/uploads/2023/04/Consumer-Protection-Handbook-Final-4.17.23.pdf>.
- Approved Vendor Manual (Solar for All), *available at* https://www.illinoisfa.com/app/uploads/2023/07/Approved-Vendor-Manual-v-6_1_Prevailing_Wage_IPA_Approved_Final.pdf.
- Resources for Current Approved Vendors, *available at* <https://www.illinoisfa.com/for-vendors/current-approved-vendors/>.
- Consumer Complaint Center, *available at* <https://illinoisshines.com/consumer-complaint-center/#:~:text=Illinois%20Shines%20Consumer%20Complaint%20Center,-The%20Program%20Administrator's&text=To%20file%20a%20complaint%2C%20please.takes%20all%20filed%20complaints%20seriously>.
- Program Violations and Complaint Reports, *available at* <https://illinoisshines.com/violations-report-cp-complaint-report/>.

Maryland:

- Community Solar for the LMI Community, *available at* <https://energy.maryland.gov/residential/SiteAssets/Pages/CommunitySolarLMI-PPA/Community%20Solar%20for%20the%20LMI%20Community.pdf>.

Minnesota:

- Community Solar Garden, MN Stat. § 216B.1641, available at <https://www.revisor.mn.gov/statutes/cite/216B.1641> (for an example of a community solar statute that prioritizes low-to-moderate income customers and includes disclosure requirements).

New Jersey:

- BPU Order, Dockets QO18060646 and QO20080588: Community Solar Energy Pilot Program Rules (Oct. 2, 2020), available at <https://www.nj.gov/bpu/pdf/boardorders/2020/20201002/8D%20-%20ORDER%20Community%20Solar%20LMI.pdf> (addressing income verification).

New Mexico:

- Community Solar Program Best Practices Consumer Protection & Subscriber Management, New Mexico Community Solar Program (Jan. 23, 2023), available at <https://csnewmexico.com/wp-content/uploads/2023/01/NM-CS-Consumer-Protection-Best-Practices-1.23.23-final.pdf>.¹⁶³
- New Mexico Community Solar Program: Subscriber Information Disclosure Form, available at <http://www.csnewmexico.com/wp-content/uploads/2023/07/Subscriber-Disclosure-Form-3-page-Sample.pdf>.
- New Mexico Community Solar Program Guidebook, available at <https://csnewmexico.com/wp-content/uploads/2022/12/New-Mexico-Community-Solar-Program-Guidebook-12.1.22.pdf>.
- Community Solar, New Mexico Public Regulation Commission, available at <https://www.prc.nm.gov/utilities/community-solar/#:~:text=The%20community%20solar%20program%20in%20New%20Mexico%20is,don%E2%80%99t%20have%20access%20to%20energy%20from%20solar%20installations>.

New York:

- New York State Department of Public Service (NYDPS): Distributed Energy Resource Regulation and Oversight, available at <https://dps.ny.gov/distributed-energy-resource-der-regulation-and-oversight>.
- New York State Research and Development Authority (NYSERDA): Inclusive Community Solar Adder, available at <https://www.nyserda.ny.gov/icsa>.

- NYSERDA and National Grid: Expanded Solar For All Implementation Plan (revised Oct. 3, 2023), *available at* <https://documents.dps.ny.gov/public/Common/ViewDoc.aspx?DocRefId={A077F68A-0000-C958-AB14-8CAF9BBD65F4}>.
- NYDPS: Proposal for a Statewide Solar for All Program (May 19, 2023), *available at* <https://documents.dps.ny.gov/public/Common/ViewDoc.aspx?DocRefId={80923588-0000-CC13-94D1-C5BDA17FEB11}>.

Oregon:

- Program Implementation Manual, *available at* <https://www.oregoncsp.org/wp-content/uploads/2021/03/PIM-v20210112.pdf>.
- Low-Income Standard Contract, *available at* <https://www.oregoncsp.org/wp-content/uploads/2023/07/LI-participant-contract-template-230710.docx>.
- Disclosure Checklist Template, *available at* <https://www.oregoncsp.org/wp-content/uploads/2023/07/Disclosure-Checklist-Template-072023.docx>.
- Utility Data Release Form, *available at* https://www.oregoncsp.org/wp-content/uploads/2022/05/Utility-Data-Release_PAC-generic.docx.

APPENDIX B: STATE BEST PRACTICES AND MODELS FOR LOW-INCOME COMMUNITY SOLAR

	COMMUNITY SOLAR PROGRAM	PROGRAM IMPLEMENTATION PLAN / HANDBOOK / MANUAL	LEGISLATIVE AND ADMINISTRATIVE AUTHORITY	SAMPLE TEMPLATES
District of Columbia	DC Solar for All Program: mandatory 10% of community solar capacity be carved out or set aside for low-income customers (defined as at or below 80% of the area median income). Benefits to low-income customers include no upfront costs, no early termination fees (the term length is three years), and no impacts on subscribers' LIHEAP benefits.	<u>Solar for All Implementation Plan</u> outlines background on solar energy, recommendations to address challenges, and strategies for coordination with LIHEAP.	<u>B21-0650, also known as Renewable Portfolio Standard Expansion Amendment Act (2016)</u> .	<u>Solar for All application; LIHEAP utility assistance application</u> .
Illinois	Illinois Solar for All Program: for community solar to low-income families, (defined as households with annual incomes of 80% or less of the area median income). Benefits to low-income customers include no upfront costs, and fees may not exceed more than 50% of the value of energy generated by the customer's share of the system.	<u>Consumer Protection Handbook</u> outlines requirements and standardized language for protecting low-income Solar for All participants from predatory marketing, unfair and abusive practices, and lack of disclosure. Also has an <u>Approved Vendor Manual</u> for Solar for All vendors.	<u>Senate Bill 2814 Public Act 099-0906 An Act Concerning Regulation (2016)</u> .	Income Verification forms, brochures, and other forms available through the Approved Vendor Portal and "Resources for Current Approved Vendors" webpage; <u>Disclosure Forms</u> .

	COMMUNITY SOLAR PROGRAM	PROGRAM IMPLEMENTATION PLAN / HANDBOOK / MANUAL	LEGISLATIVE AND ADMINISTRATIVE AUTHORITY	SAMPLE TEMPLATES
Maryland	Community Solar Program: mandatory carve-out for low-income households (defined as those with annual incomes at or below 175% of the federal poverty level), and moderate income households (or those at or below 80% of median area income).		Public Utility section 7-306.2 (2015) established a 3-year pilot; House Bill 683 (2019) extended the pilot program from three to seven years. House Bill 908 made the community solar program permanent.	Contract Disclosure Form and Instructions at Public Service Commission site.
New Jersey	Community Solar Energy Program: mandatory carve-out of 40% of community solar capacity for low-income customers (income at or below of 200% of the federal poverty level) and moderate income customers (income at or below 80% of the median income). Broad income verification requirements.		P.L. 2018, Ch. 17: Act Concerning Clean Energy, also known as the Clean Energy Act (2018) ; Board of Public Utilities order making the community solar program permanent.	
New Mexico	Community Solar Program: mandatory carve-out of 30% of community solar capacity for low-income customers (defined as at or below eighty percent of area median income).	Community Solar Best Practices manual is not compulsory but offers guidelines to protect consumers. Program Guidebook provides an overview of the procedures and requirements for the program.	Community Solar Act, Senate Bill 84 (2021) (Chapter 34 Section 2 Laws 2021) ; Section 62-16B et. seq. NMSA 1978 .	Subscriber Disclosure Form .

	COMMUNITY SOLAR PROGRAM	PROGRAM IMPLEMENTATION PLAN / HANDBOOK / MANUAL	LEGISLATIVE AND ADMINISTRATIVE AUTHORITY	SAMPLE TEMPLATES
New York	New York State Research & Development Authority (NYSERDA) Low-Income Community Solar Initiative (through Solar for All): benefits to customers include consolidated billing.		Climate Leadership and Community Protection Act (2018) . Expanded by Public Service Commission Order 22007/ 19-E-0735 (2022).	
Oregon	Community Solar Program: mandatory 10% of community solar capacity carved out or set aside for low-income customers (less than or equal to 80% of the Oregon State Median Family Income). Benefits to low-income customers include subscription discounts of at least 20%, guaranteed energy bill savings, no upfront costs, no termination fees, and no impacts on subscribers' LIHEAP benefits.	Oregon Community Solar Program Implementation Manual outlines procedures and requirements and includes standard contract templates, disclosure checklists, and data release form templates.	Senate Bill 1547, also known as the Clean Electricity and Coal Transition Plan (2016) .	Low-Income Standard Contract; Disclosure Checklist; and Utility Data Release Form .

ENDNOTES

1. U.S. Energy Information Administration, *available at* <https://www.eia.gov/todayinenergy/detail.php?id=51979>.
2. We are not precisely defining “low-income” in this report but recommend that a state consider its Low-Income Home Energy Assistance Program’s financial eligibility rules, which provide guidance for establishing a definition. Under the LIHEAP statute, 42 U.S.C. §8624(b)(2), a state can set income eligibility at no less than 150% of the federal poverty level, or, at the state’s discretion, 60% of the state’s median income. Moreover, many of the programs highlighted in this report, define low-income as at or below 80% of median area income, or at or below 200% of the federal poverty level.
3. U.S. Department of Energy, “Low-Income Community Energy Solutions,” *available at* <https://www.energy.gov/scep/slsc/low-income-community-energy-solutions> (“The national average energy burden for low-income households is 8.6%, three times higher than for non-low-income households which is estimated at 3%”).
4. *See, for example*, a September 21, 2021 EPA press release, *available at*: <https://www.epa.gov/newsreleases/epa-report-shows-disproportionate-impacts-climate-change-socially-vulnerable> (“A new EPA analysis released today shows that the most severe harms from climate change fall disproportionately upon underserved communities who are least able to prepare for, and recover from, heat waves, poor air quality, flooding, and other impacts. EPA’s analysis indicates that racial and ethnic minority communities are particularly vulnerable to the greatest impacts of climate change”).
5. “National Climate Assessment,” *available at* <https://nca2023.globalchange.gov/>.
6. State utility regulators (public service commissions or public utility commissions) have a unique role in developing and approving community solar program details. Ideally, commissions approving community solar programs should take into account consumer protections at the start, rather than after the fact as a separate docket.
7. U.S. Department of Energy, “National Community Solar Partnership,” *available at* <https://www.energy.gov/communitysolar/community-solar>.
8. U.S. Department of Energy, “Low-Income Community Energy Solutions,” *available at* <https://www.energy.gov/scep/slsc/low-income-community-energy-solutions> (“Energy burden is defined as the percentage of gross household income spent on energy costs”).
9. Without strong consumer protections, one risk community solar participants may experience includes inappropriately-sized subscriptions where solar credits end up exceeding the customer’s bill; in short, a customer may receive more credits than they can use because their portion of the community solar system generates more power than they need. In the absence of intentional consumer protections, other potential risks include adverse impacts on other low-income benefits and utility allowances.
10. *See Federal Trade Commission*, “Cooling-off Period for Sales Made at Home or Other Locations,” *available at* <https://www.ftc.gov/legal-library/browse/rules/cooling-period-sales-made-home-or-other-locations>.

11. Carolyn Carter, “Consumer Protection in the States: A 50-State Evaluation of Unfair and Deceptive Practices Laws,” National Consumer Law Center (March 2018), *available at* <https://www.nclc.org/resources/how-well-do-states-protect-consumers/>.
12. For examples of early California Property Assessed Clean Energy (PACE) abuses, see National Consumer Law Center, “Residential Property Assessed Clean Energy (PACE) Loans: The Perils of Easy Money for Clean Energy Improvements” (Sept. 2017), *available at* <https://www.nclc.org/resources/residential-pace-loans-the-perils-of-easy-money-for-clean-energy-improvements/>. For other examples of common abuses in the industry, see Alana Semuels, “The Rooftop Solar Industry Could Be on the Verge of Collapse,” *Time Magazine* (Jan. 25, 2024), *available at* <https://time.com/6565415/rooftop-solar-industry-collapse/>.
13. For example, homeowners in California must receive a financing estimate and certain disclosures before consummation of the agreement, and a notice of the right to cancel. Additionally, California imposed an ability-to-repay requirement. See Cal. Sts. & High. Code § 5898.17 and Cal. Fin. Code § 22686.
14. Although it is beyond the scope of this report and will not be addressed herein, we strongly encourage discussion of community solar for Tribal nations, specifically through the lens of upholding federal trust responsibilities and Tribal sovereignty, as well as ways to ensure access for Tribal low-income households.
15. It is important to note that the recommendations provided in this brief apply in the context of community solar, not rooftop solar, where additional consumer safeguards are required because financing is often involved as well as physical work to the consumer’s home. Furthermore, state legislative and regulatory decisions about subsidies provided to support the implementation of solar programs should carefully consider the rate impacts, if any, on consumers. A full discussion of that issue is outside the scope of this paper, which is focused on specific protections for low-income community solar participants. See Meg Power, Keith Kueny, and John Howat, “Access to Solar Energy: An Update and Cautions,” *Community Action Partnership* (2018), *available at* <https://communityactionpartnership.com/wp-content/uploads/2018/09/Access-to-Solar-Project-Updates-and-Consumer-Protection-Cautions.pdf> (discussing concerns with rooftop solar and providing consumer protection recommendations).
16. We use the mandatory word “must” to mean what states should do to protect the interests and financial wellbeing of residential consumers.
17. “Marketers” includes solar developers if the developers themselves take on the marketing function or have direct contact with actual or potential customers, and the applicability of each specific protection to developers will therefore vary. “Marketers” is broadly intended to include those who communicate with potential subscribers to community solar projects, and thus may include developers, subscription managers, vendors, utilities, or other entities.
18. “State administrators” may be used interchangeably with “state program administrators” or “program administrators” in this report.
19. “Consolidated billing” refers to a system where the utility adds the monthly community solar subscription charge to the utility bill of the participant, and remits payment received for those charges to the developer or marketer. The community solar subscription benefits appear on the same bill as other utility services.

20. Any electronic documents should also be compliant with the American Disabilities Act, Section 508. See “Test for Accessibility,” available at <https://www.section508.gov/test/>.
21. If a consumer chooses to accept documents electronically, certain requirements must be met under federal law. See Electronic Records and Signatures in Commerce Act, 15 U.S.C. §§ 7001 to 7006 (“Under federal and state law, a consumer could choose to accept documents electronically and, where a signature is required, sign electronically, so long as all of the requirements of the Electronic Signatures in Global and National Commerce [E-sign], 15 U.S.C. sections 7001 to 7006, were complied with”).
22. The U.S. Department of Energy intends to make standard templates for community subscription disclosure forms available soon. See “Low-Income Communities Bonus Credit Program,” available at <https://www.energy.gov/justice/low-income-communities-bonus-credit-program>.
23. In every state, a state agency (usually the Attorney General’s office) has authority to enforce the state’s consumer protection law. See, for example, the Illinois Consumer Fraud and Deceptive Business Practices Act, at 815 ILCS 530/1 et. seq. See also Carolyn Carter, “A 50-State Report on Unfair and Deceptive Acts and Practices Statutes,” National Consumer Law Center (Feb. 9, 2009), pp. 16-17, available at <https://www.nclc.org/resources/a-50-state-report-on-unfair-and-deceptive-acts-and-practices-statutes/>.
24. A strong state consumer protection act, targeting unfair and deceptive business practices, is essential as an enforcement mechanism for community solar.
25. National Oceanic and Atmospheric Administration. “Extreme heat: A media resource guide,” August 24, 2021, available at <https://www.noaa.gov/media-advisory/extreme-heat-media-resource-guide>.
26. Environmental Protection Agency. “Technical Documentation: Heat Waves,” available at https://www.epa.gov/sites/default/files/2021-04/documents/heat-waves_td.pdf.
27. Environmental Protection Agency. “Climate Change Indicators: Heat Waves,” available at <https://www.epa.gov/climate-indicators/climate-change-indicators-heat-waves>.
28. Adam B. Smith. “2021 U.S. billion-dollar weather and climate disasters in historical context,” *National Oceanic and Atmospheric Administration* (Jan. 4, 2022), available at <https://www.climate.gov/news-features/blogs/beyond-data/2021-us-billion-dollar-weather-and-climate-disasters-historical>. See also Gloria Oladipo, “US sets new record for billion-dollar climate disasters in single year,” *The Guardian* (Sept. 11, 2023), available at <https://www.theguardian.com/environment/2023/sep/11/us-record-billion-dollar-climate-disasters>.
29. Kiara Alfonseca. “Impoverished communities pay for worsening impacts of climate change: Experts,” *ABC News* (Nov. 6, 2021), available at <https://abcnews.go.com/US/impoverished-communities-pay-worsening-impacts-climate-change-experts/story?id=80794967>.
30. Hessel C. Winsemius, Brenden Jongman, Ted I.E. Veldkamp, et. al. “Disaster risk, climate change, and poverty: assessing the global exposure of poor people to floods and droughts,” *Environment and Development Economics* (2018), 23,328–348, [doi:10.1017/S1355770X17000444](https://doi.org/10.1017/S1355770X17000444).

31. “Energy Equity Project Report, 2022,” *University of Michigan School for Environment and Sustainability*, available at https://energyequityproject.com/wp-content/uploads/2022/08/220174_EEP_Report_8302022.pdf (“For decades, Black, Indigenous, and People of Color (BIPOC), frontline and low-income communities have borne the brunt of the negative impacts of the energy system while receiving a negligible slice of benefits from the clean energy transition”).
32. Solar is currently the lowest cost energy generating resource. See IEA (2022), *Renewables 2022*, IEA, Paris <https://www.iea.org/reports/renewables-2022>.
33. The Inflation Reduction Act authorizes funding, programs, and incentives to accelerate the transition to a clean energy economy and drive deployment of new clean electricity resources, such as solar.
34. The Greenhouse Gas Reduction Fund, created by the Inflation Reduction Act, is a \$27 billion investment aimed at mobilizing “financing and private capital to combat the climate crisis and ensure American economic competitiveness. The Greenhouse Gas Reduction Fund will deliver lower energy costs and economic revitalization to communities, particularly those that have historically been left behind.” See “About the Greenhouse Gas Reduction Fund,” *Environmental Protection Agency*, available at <https://www.epa.gov/greenhouse-gas-reduction-fund/about-greenhouse-gas-reduction-fund>.
35. U.S. Energy Information Administration. “Homes and buildings in the West and Northeast have the largest share of small-scale solar,” (Oct. 25, 2022), available at <https://www.eia.gov/todayinenergy/detail.php?id=54379> (3.7% of one-family homes have rooftop solar installed). See also Galen L. Barbose, Sydney Forrester, Eric O’Shaughnessy, Naim R. Darghouth, “Residential Solar-Adopter Income and Demographic Trends: 2022 Update,” *Lawrence Berkeley National Laboratory* (Feb. 2022), available at <https://emp.lbl.gov/publications/residential-solar-adopter-income-0> (“The median solar adopter income was about \$115k/year in 2020, compared to a U.S. median of about \$63k/year for all households and \$79k/year for all owner-occupied households”).
36. According to data from the U.S. Census Bureau, “Renter-occupied households made up 52.9% of households in the lowest income quintile and 42.4% of households in the second lowest income quintile.” See Peter J. Mateyka and Jayne Yoo, “Share of Income Needed to Pay Rent Increased the Most for Low-Income Households From 2019 to 2021,” *U.S. Census Bureau* (Mar. 2, 2023), available at <https://www.census.gov/library/stories/2023/03/low-income-renters-spent-larger-share-of-income-on-rent.html>.
37. Data from the National Multifamily Housing Council shows that families with annual household incomes of less than \$75,000 are more likely to live in apartments or multifamily buildings. See National Multifamily Housing Council, available at <https://www.nmhc.org/research-insight/quick-facts-figures/quick-facts-resident-demographics/household-incomes/>.
38. Becca Jones-Albertus. “Replacing Your Roof? It’s a Great Time to Add Solar,” *U.S. Department of Energy* (July 28, 2021), available at <https://www.energy.gov/eere/solar/articles/replacing-your-roof-its-great-time-add-solar>.
39. U.S. Department of Energy. “Community Solar Basics,” available at <https://www.energy.gov/eere/solar/community-solar-basics>.
40. U.S. Department of Energy. “Community Solar Basics,” available at <https://www.energy.gov/eere/solar/community-solar-basics>.

41. U.S. Department of Energy. “Community Solar Basics,” *available at* <https://www.energy.gov/eere/solar/community-solar-basics>.
42. Community solar programs often provide substantial discounts to low-income subscribers, as is discussed further in the next section.
43. The White House’s Inflation Reduction Act and the EPA’s Greenhouse Gas Reduction Fund Solar for All Program have set a goal of delivering an average bill savings of 20% per household. See “Solar for All,” *Environmental Protection Agency*, *available at* <https://www.epa.gov/greenhouse-gas-reduction-fund/solar-all>.
44. National Renewable Energy Laboratory (NREL), “Sharing the Sun Community Solar Project Data (December 2022),” *available at* <https://data.nrel.gov/submissions/220>.
45. The Energy Department’s National Community Solar Partnership, the White House’s Inflation Reduction Act, and the EPA’s Greenhouse Gas Reduction Fund Solar for All Program have all set a goal of delivering an average bill savings of 20% per household. While the 20% savings goal is admirable, it may not be achievable in states that do not have deep subsidies for solar or hard-to-replicate program designs.
46. Some states may not be able to measure actual bill savings because they do not have access to the enrolled household’s utility bills. Also, some marketers may not promise bill savings per se, but instead promise a specified reduction (% or other) off of the otherwise applicable generation charges. In those situations, the state should determine the metrics that would allow it to ensure that participating households get a meaningful benefit.
47. The extent to which a developer can offer savings, for example, greater than X% of the otherwise applicable energy price, will depend on many factors, including the solar subsidies that may be available in that state, the requirements to access those subsidies, the costs of developing solar projects, the price of energy offered by the incumbent utility, and others. A specific numeric percentage is not proposed here as to what is “meaningful,” as that will vary from state to state. However, the Energy Department’s National Community Solar Partnership has set a goal of delivering an average bill savings of at least 20% per household from community solar, which would put community solar on par with rooftop solar savings which are 20% on average. See *also* the Solar for All Program (from the Gas Reduction Fund), which requires 20% savings, *available at* <https://www.grants.gov/web/grants/view-opportunity.html?oppId=348957>, p. 12.
48. The frequency of any such reports would be up to the state to decide.
49. If a participant fails to pay, they should be removed from the program without penalty.
50. Each state should determine what it would consider an unreasonably long initial term. For example, a state might decide that terms longer than 3 years are unreasonable given how frequently households move. However, to the extent the contract allows the customer to cancel the contract, at no cost, and upon relatively short notice (e.g., 30 days’ notice), the nominal length of the contract would be of much less concern.
51. The state may want to consider requiring translated documents to be notarized or certified in some way to ensure the right message is being communicated to the customer.

52. "Under federal and state law, a consumer could choose to accept documents electronically and, where a signature is required, sign electronically, so long as all of the requirements of the Electronic Signatures in Global and National Commerce [E-sign], 15 U.S.C. sections 7001 to 7006, were complied with." See Electronic Records and Signatures in Commerce Act, 15 U.S.C. §§ 7001 to 7006.
53. For example, states and community solar marketers may consider consolidated billing, a system whereby the utility adds the monthly subscription charge to the utility bill of the participant or subscriber and remits payment received for those charges to the developer or marketer. In short, the community solar subscription benefits appear on the same bill as other utility services, reducing any payment confusion and increasing program access for low-income households who may lack credit cards, credit-worthiness, or internet access. The New York Public Service Commission adopted this consolidated billing model. See State Public Service Commission of New York, *In the Matter of Consolidated Billing for Distributed Energy Resources*, Case No. 19-M-0463, p.2. See also "Community Solar Consolidated Billing: Review of State Requirements, Policies, and Key Considerations," *National Association of State Energy Officials* (May 2023), available at <https://www.naseo.org/news-article?NewsID=3872>. Additionally, Oregon increases program access for unbanked low-income customers by not allowing subscription managers to require automatic payments for the community solar program. See "In the Matter of Use of the Agent Subscription Model in Project Eligibility for the Community Solar Program," Public Utility Commission of Oregon, Order No. 22-363, October 2022, p. 11, available at <https://apps.puc.state.or.us/orders/2022ords/22-363.pdf>.
54. See NY-Sun Inclusive Community Solar Adder Proposed Round 2 Program Design, which requires contractors to submit a detailed Marketing & Implementation Plan form, available at <https://www.nyserda.ny.gov/solar-contractor-resources>.
55. Illinois has a detailed "Consumer Protection Handbook" that states may choose to use as a model. <https://www.illinoisfa.com/app/uploads/2023/04/Consumer-Protection-Handbook-Final-4.17.23.pdf>. Other potential resources for states adopting consumer protections for community solar programs include "Consumer Protection for Community Solar: A Guide for States," *Clean Energy State Alliance* (2017), available at <https://www.cesa.org/wp-content/uploads/Consumer-Protection-for-Community-Solar.pdf>; and "Consumer Protection Primer," *Solar Energy Industries Association*, available at <https://www.seia.org/sites/default/files/2022-03/SEIA%20Consumer%20Protection%20Primer%20v1.0%20-%20FINAL.pdf>.
56. The U.S. Department of Energy intends to provide sample disclosure form templates at "Low-Income Communities Bonus Credit Program," available at <https://www.energy.gov/justice/low-income-communities-bonus-credit-program>.
57. See the Oregon Community Solar Program low-income standard template, which is ten pages long, available at <https://www.oregoncsp.org/pm-resources/>.
58. States may wish to use tools that determine a "readability score" or similar metric for contracts and other documents. Many "readability" tools can be found by typing "readability score checker" into a browser. There are a wide range of products, some available for a fee, others purportedly for free.

59. For guidance, states may wish to consult the Consumer Financial Protection Bureau's "Statement Regarding the Provision of Financial Products and Services to Consumers with Limited English Proficiency," available at <https://www.consumerfinance.gov/rules-policy/notice-opportunities-comment/open-notices/statement-regarding-the-provision-of-financial-products-and-services-to-consumers-with-limited-english-proficiency/>.
60. A useful sample of a standard Disclosure Form from Maryland can be found here: https://www.psc.state.md.us/wp-content/uploads/Community-Solar-Contract-Disclosure-Form-and-Instructions_04162018.pdf.
61. The Energy Department's Low-Income Clean Energy Connector will make it easier for developers and subscription managers to locate and enroll income-eligible households. See "Low-Income Clean Energy Connector," U.S. Department of Energy, available at <https://www.energy.gov/communitysolar/low-income-clean-energy-connector>.
62. To protect low-income customers, it is important to determine how to distinguish door-to-door community solar marketers using the Energy Department's Low-Income Clean Energy Connector from community solar marketers not using the Connector.
63. For example, whereas District of Columbia's program offers uniform savings, New Mexico's program (which does not offer uniform savings) allows competitive solicitations.
64. For examples of data collection and evaluation practices, see "An Assessment of Evaluation Practices of Low- and Moderate-Income Solar Programs," Lawrence Berkeley Nat. Lab (April 2021), available at https://eta-publications.lbl.gov/sites/default/files/lmi_solar_meta-evaluation_report_final.pdf.
65. See [Appendix A](#) as well as the "Best Practices" section of this report for a description of the complaint system for the Illinois Shines and Illinois Solar for All programs.
66. For a model, see the complaint and discipline process developed by the Illinois Power Agency. "Consumer Protection Handbook for Illinois Shines (Adjustable Block Program) & Illinois Solar for All," Illinois Power Agency (April 17, 2023), pp. 30-36, available at <https://www.illinoissfa.com/app/uploads/2023/04/Consumer-Protection-Handbook-Final-4.17.23.pdf>.
67. The Illinois Power Agency's Consumer Protection Handbook provides a useful model for states considering developing a Code of Practice or consumer handbook. <https://www.illinoissfa.com/app/uploads/2023/04/Consumer-Protection-Handbook-Final-4.17.23.pdf>.
68. For example, the Illinois Power Agency has the authority to enforce the requirements of the Illinois Solar for All Program. See *Consumer Protection Handbook*, available at <https://www.illinoissfa.com/app/uploads/2023/04/Consumer-Protection-Handbook-Final-4.17.23.pdf>. Additionally, any community solar program in the state would be subject to the Illinois Consumer Fraud and Deceptive Business Practices Act, which is enforceable by the state's Attorney General.
69. While self-attestation of income has been allowed in community solar programs in some states, including Maryland and New Jersey, and can be seen as a best practice in terms of facilitating enrollment of low-income households, states should consider that some developers may feel limited in their ability to access certain tax credits (e.g., under 26 U.S.C. § 48E(h)) if they do not individually income-qualify participating households. The extent to which a developer may (or may not) need to individually income-qualify households to access tax benefits is a complex tax law question and beyond the scope of this report.

70. The Energy Department's Low-Income Clean Energy Connector will streamline income verification for enrollment in community solar.
71. See "State and Federal Environmental Justice, Climate Justice, Disadvantaged, and Vulnerable Community Definitions," available at <https://illumeadvising.com/ej-definitions/>. See also "Disadvantaged Communities," available at <https://energyjustice.egs.anl.gov/>. Illinois, for example, defines "environmental justice communities" as those areas "where residents have historically been subject to disproportionate burdens of pollution." See Illinois Public Act 102-0662, Section 5-5, available at <https://www.ilga.gov/legislation/publicacts/102/PDF/102-0662.pdf>.
72. Customers struggling with their utility bills need the most help and can benefit the most from potential community solar bill savings. Low-income community solar programs requiring no monthly subscription fee or other payment would benefit this customer class.
73. Expressions of interest will be tracked through the Energy Department's Low-Income Clean Energy Connector.
74. Ideally, any coordination concerns should be addressed and resolved in a way that avoids burdening the household with the administrative problems.
75. Oregon's community solar model avoids adversely impacting a household's LIHEAP benefits. For low-income customers only, the state's utilities adapted billing processes so that solar program bill credits and on-bill subscription charges are netted against each other before the net savings are applied to a customer's net balance. As a result, the marketer or subscription manager is paid in full from the value of the bill credits, not from customer payments. The result is that the customer's net balance is made up entirely of utility charges and is entirely eligible for LIHEAP.
76. That guidance states that "solar credits are excluded when calculating utility allowances" and "solar credits are excluded from annual income." See HUD Office of Housing, available at <https://www.illinoisfa.com/app/uploads/2022/07/2022-Illinois-Solar-for-All-Determination-signed.pdf>. For additional HUD national guidance, see "Multifamily Memorandum Re: Treatment of Community Solar Credits on Tenant Utility Bills," available at https://www.hud.gov/sites/dfiles/Housing/documents/MF_Memo_Community_Solar_Credits_signed.pdf, and "Multifamily Memorandum Re: Treatment of Solar Benefits for Residents in Master-metered Buildings," available at https://www.hud.gov/sites/dfiles/Housing/documents/MF_Memo_re_Community_Solar_Credits_in_MM_Buildings.pdf. See also "Renewable Energy," *Stewards of Affordable Housing for the Future*, available at <https://www.sahfnet.org/our-work/environmental-sustainability/low-carbon-homes/renewable-energy>.
77. U.S. Department of Energy. "Community Solar Basics," available at <https://www.energy.gov/eere/solar/community-solar-basics>.
78. U.S. Department of Energy. "Community Solar Basics," available at <https://www.energy.gov/eere/solar/community-solar-basics>.
79. Kaifeng Xu, Jenny Sumner, Emily Dalecki, and Robin Burton. "Expanding Solar Access: State Community Solar Landscape," *National Renewable Energy Laboratory* (2022), available at <https://www.nrel.gov/docs/fy23osti/84247.pdf>.
80. Kaifeng Xu, Jenny Sumner, Emily Dalecki, and Robin Burton. "Expanding Solar Access: State Community Solar Landscape," *National Renewable Energy Laboratory* (2022), available at <https://www.nrel.gov/docs/fy23osti/84247.pdf>.

81. National Renewable Energy Laboratory (NREL), “Sharing the Sun Community Solar Project Data (December 2022),” *available at* <https://data.nrel.gov/submissions/220>. See also Institute for Local Self-Reliance, “National Community Solar Programs Tracker,” *available at* <https://ilsr.org/national-community-solar-programs-tracker/>.
82. Department of Energy and Environment, Solar for All, *available at* <https://doee.dc.gov/solarforall>. See also “Fiscal Year 2020 Solar for All Annual Report,” *Department of Energy and the Environment*, *available at* https://doee.dc.gov/sites/default/files/dc/sites/ddoe/service_content/attachments/FY%202020%20SFA%20Annual%20Report.pdf.
83. Solar for All terms and conditions, *available at* <https://doee.dc.gov/node/1608861>. HUD also excludes DC Solar for All credits from annual income and utility allowance calculations. See U.S. Department of Housing and Urban Development, *available at* https://doee.dc.gov/sites/default/files/dc/sites/ddoe/service_content/attachments/US%20HUD_DC%20Solar%20for%20All%20Guidance.pdf.
84. Department of Energy and Environment, Receive Assistance with Your Utility Bills (LIHEAP), *available at* <https://doee.dc.gov/liheap>. For more information, see Ariel Drehobl, Diana Hernández, Roxana Ayala, et. al., “An Examination of District Residents’ Experiences with Utility Burdens and Affordability Programs,” *American Council for an Energy-Efficient Economy* (March 2021), *available at* https://doee.dc.gov/sites/default/files/dc/sites/ddoe/service_content/attachments/Report_An%20Examination%20of%20District%20Residents%E2%80%99%20Experiences%20with%20Utility%20Burdens%20and%20Affordability%20Programs.pdf.
85. ILSFA was created under the Future Energy Jobs Act, which authorized the Illinois Power Agency to implement and enforce the program. See Public Act 099-0906, *available at* <https://www.ilga.gov/legislation/publicacts/99/PDF/099-0906.pdf>.
86. Illinois Solar for All: Community Solar, *available at* <https://www.illinoisfa.com/app/uploads/2019/10/0919-ILSFA-infosheet-low-income-community-solar-v11.pdf>.
87. “Illinois Solar for All: Community Solar Opportunities for Owners and Renters,” *Illinois Power Agency* (Sept. 2023), p. 1., *available at* <https://www.illinoisfa.com/app/uploads/2020/12/CS-Offers.pdf>.
88. “Consumer Protection Handbook for Illinois Shines (Adjustable Block Program) & Illinois Solar for All,” *Illinois Power Agency* (April 17, 2023), p. 37, *available at* <https://www.illinoisfa.com/app/uploads/2023/04/Consumer-Protection-Handbook-Final-4.17.23.pdf>.
89. “Consumer Protection Handbook for Illinois Shines (Adjustable Block Program) & Illinois Solar for All,” *Illinois Power Agency* (April 17, 2023), p. 7, *available at* <https://www.illinoisfa.com/app/uploads/2023/04/Consumer-Protection-Handbook-Final-4.17.23.pdf>.
90. “Consumer Protection Handbook for Illinois Shines (Adjustable Block Program) & Illinois Solar for All,” *Illinois Power Agency* (April 17, 2023), p. 7, *available at* <https://www.illinoisfa.com/app/uploads/2023/04/Consumer-Protection-Handbook-Final-4.17.23.pdf>.

91. “Consumer Protection Handbook for Illinois Shines (Adjustable Block Program) & Illinois Solar for All,” *Illinois Power Agency* (April 17, 2023), pp. 8-10, available at <https://www.illinoisfsfa.com/app/uploads/2023/04/Consumer-Protection-Handbook-Final-4.17.23.pdf>. It should be noted that promising savings of 50%, per the example, is potentially misleading and deceptive because subscriptions are not always sized to 100% of their energy usage; this means that if the subscriber is only generating 80% of the energy they use through the panels, they will not experience 50% savings on their bill.
92. “Consumer Protection Handbook for Illinois Shines (Adjustable Block Program) & Illinois Solar for All,” *Illinois Power Agency* (April 17, 2023), p. 10, available at <https://www.illinoisfsfa.com/app/uploads/2023/04/Consumer-Protection-Handbook-Final-4.17.23.pdf>.
93. “Consumer Protection Handbook for Illinois Shines (Adjustable Block Program) & Illinois Solar for All,” *Illinois Power Agency* (April 17, 2023), p. 14, available at <https://www.illinoisfsfa.com/app/uploads/2023/04/Consumer-Protection-Handbook-Final-4.17.23.pdf>.
94. “Consumer Protection Handbook for Illinois Shines (Adjustable Block Program) & Illinois Solar for All,” *Illinois Power Agency* (April 17, 2023), pp. 15-18, available at <https://www.illinoisfsfa.com/app/uploads/2023/04/Consumer-Protection-Handbook-Final-4.17.23.pdf>.
95. Approved vendors are responsible for supervising and ensuring compliance, including developing trainings that comply with the stated requirements of the handbook. See “Consumer Protection Handbook for Illinois Shines (Adjustable Block Program) & Illinois Solar for All,” *Illinois Power Agency* (April 17, 2023), available at <https://www.illinoisfsfa.com/app/uploads/2023/04/Consumer-Protection-Handbook-Final-4.17.23.pdf>.
96. “Consumer Protection Handbook for Illinois Shines (Adjustable Block Program) & Illinois Solar for All,” *Illinois Power Agency* (April 17, 2023), p. 26, available at <https://www.illinoisfsfa.com/app/uploads/2023/04/Consumer-Protection-Handbook-Final-4.17.23.pdf>.
97. See “Consumer Protection Handbook for Illinois Shines (Adjustable Block Program) & Illinois Solar for All,” *Illinois Power Agency* (April 17, 2023), p. 30, available at <https://www.illinoisfsfa.com/app/uploads/2023/04/Consumer-Protection-Handbook-Final-4.17.23.pdf>.
98. “Consumer Protection Handbook for Illinois Shines (Adjustable Block Program) & Illinois Solar for All,” *Illinois Power Agency* (April 17, 2023), pp. 31-36, available at <https://www.illinoisfsfa.com/app/uploads/2023/04/Consumer-Protection-Handbook-Final-4.17.23.pdf>.
99. “Consumer Protection Handbook for Illinois Shines (Adjustable Block Program) & Illinois Solar for All,” *Illinois Power Agency* (April 17, 2023), p. 1, available at <https://www.illinoisfsfa.com/app/uploads/2023/04/Consumer-Protection-Handbook-Final-4.17.23.pdf>.
100. “This Handbook outlines the Program Administrators’ and IPA’s typical roles in enforcement; however, nothing in these guidelines shall preclude the Agency from undertaking roles specified for the Program Administrators on an as-needed basis.” See “Consumer Protection Handbook for Illinois Shines (Adjustable Block Program) & Illinois Solar for All,” *Illinois Power Agency* (April 17, 2023), p. 2, available at <https://www.illinoisfsfa.com/app/uploads/2023/04/Consumer-Protection-Handbook-Final-4.17.23.pdf>.
101. House 683 (2019), available at https://mgaleg.maryland.gov/2019RS/fnotes/bil_0003/hb0683.pdf.

102. David Comis. “Community Solar – Tracking the Maryland Legislation and Regulation,” Maryland Energy Administration (Dec. 1, 2020), *available at* <https://news.maryland.gov/mea/2020/12/01/community-solar-tracking-the-maryland-legislation-and-regulation/>. *See also* Community Solar for the LMI Community, *available at* <https://energy.maryland.gov/residential/SiteAssets/Pages/CommunitySolarLMI-PPA/Community%20Solar%20for%20the%20LMI%20Community.pdf>.
103. “RM 56 Low and Moderate Income Verification,” Maryland Public Service Commission (Feb. 14, 2020), *available at* https://webapp.psc.state.md.us/newIntranet/AdminDocket/NewIndex3_VOpenFile.cfm?FilePath=//Coldfusion/AdminDocket/RuleMaking/RM56//132.pdf.
104. Ensuring that subscriptions are “portable” (meaning the subscriptions move with the customer) is critical for low-income families who, because they are frequently renters, may change residences often.
105. *Community Solar for the LMI Community*, *available at* <https://energy.maryland.gov/residential/SiteAssets/Pages/CommunitySolarLMI-PPA/Community%20Solar%20for%20the%20LMI%20Community.pdf>.
106. House Bill 908, *available at* <https://mgaleg.maryland.gov/2023RS/bills/hb/hb0908f.pdf>. *See also* Michael Schoeck, “Maryland passes community solar bill,” *PV Magazine* (Apr. 17, 2023), *available at* <https://pv-magazine-usa.com/2023/04/17/maryland-passes-community-solar-bill/>.
107. The law defines LMI customers as those who are low-income, moderate income, or reside in a census tract that is overburdened or underserved community. It further defines low-income as an annual household income at or below 200% of the federal poverty level, while moderate income refers to annual household income at or below 80% of the median income in Maryland. *See* House Bill 908, *available at* <https://mgaleg.maryland.gov/2023RS/bills/hb/hb0908f.pdf>.
108. The definition of “overburdened community” and “underserved community” is based on section 1–701 of the Maryland Code, which list several “environmental health indicators” (including proximity to traffic, lead paint indicator, and more) that must be shown for an area to be considered overburdened. Furthermore, the section defines an underserved community as one where “(i) at least 25% of the residents qualify as low-income, (ii) at least 50% of the residents identify as nonwhite; or (iii) at least 15% of the residents have limited English proficiency.” *See* Md. Code Ann. § 6 1–701.
109. House Bill 908, *available at* <https://mgaleg.maryland.gov/2023RS/bills/hb/hb0908f.pdf>.
110. P.L. 2018, Ch. 17: Act Concerning Clean Energy, *available at* https://pub.njleg.gov/bills/2018/AL18/17_.PDF.
111. P.L. 2018, Ch. 17: Act Concerning Clean Energy, *available at* https://pub.njleg.gov/bills/2018/AL18/17_.PDF.
112. N.J.S.A. § 48:3-87.11(b)(7).
113. N.J. Admin. Code § 14:8-9.2.
114. N.J. Admin. Code § 14:8-9.4(e) and 14:8-9.8(b).

115. BPU Order, Dockets QO18060646 and QO20080588: Community Solar Energy Pilot Program Rules (Oct. 2, 2020), *available at* <https://www.nj.gov/bpu/pdf/boardorders/2020/20201002/8D%20-%20ORDER%20Community%20Solar%20LMI.pdf> (citing N.J.A.C. 14:8-9.8(d) rules for LMI verification: “The current Pilot Program Rules specify those documents sufficient to serve for qualification: i) Proof of participation in LIHEAP, Universal Service Fund, Comfort Partners, and/or the Lifeline Utility Assistance Program, or ii) copies of the first and second pages of the would-be subscriber’s previous three years’ Federal income tax returns”).
116. BPU Order, Dockets QO18060646 and QO20080588: Community Solar Energy Pilot Program Rules (Oct. 2, 2020), *available at* <https://www.nj.gov/bpu/pdf/boardorders/2020/20201002/8D%20-%20ORDER%20Community%20Solar%20LMI.pdf>.
117. “NJBPBPU Makes Community Solar Pilot Program Permanent,” State of New Jersey Board of Public Utilities (August 16, 2023), *available at* <https://www.nj.gov/bpu/newsroom/2022/approved/20230816.html>. See also “In Matter of the Community Solar Energy Program,” Docket No. QO22030153, August 2023, State of New Jersey Board of Public Utilities, *available at* <https://nj.gov/bpu/pdf/boardorders/2023/20230816/8F%20ORDER%20Community%20Solar%20Energy%20Program.pdf>.
118. N.J. Admin. Code § 14:8-9.8.
119. The BPU order specifically allowed “self-attestation of household income being less than 80 percent of the area median income, as recorded by a standard self-attestation form.” See “In Matter of the Community Solar Energy Program,” Docket No. QO22030153, August 2023, State of New Jersey Board of Public Utilities, *available at* <https://nj.gov/bpu/pdf/boardorders/2023/20230816/8F%20ORDER%20Community%20Solar%20Energy%20Program.pdf>.
120. 55 N.J.R. 1985(a), *available at* [https://nj.gov/bpu/pdf/rules/PRN%202023-095%20\(55%20N.J.R.%201985\(a\)\).pdf](https://nj.gov/bpu/pdf/rules/PRN%202023-095%20(55%20N.J.R.%201985(a)).pdf).
121. “New Mexico Community Solar Program Best Practices Consumer Protection & Subscriber Management,” *New Mexico Community Solar Program* (Jan. 23, 2023), *available at* <https://csnewmexico.com/wp-content/uploads/2023/01/NM-CS-Consumer-Protection-Best-Practices-1.23.23-final.pdf>.
122. “New Mexico Community Solar Program Best Practices Consumer Protection & Subscriber Management,” *New Mexico Community Solar Program* (Jan. 23, 2023), p. 2, *available at* <https://csnewmexico.com/wp-content/uploads/2023/01/NM-CS-Consumer-Protection-Best-Practices-1.23.23-final.pdf>.
123. “Community Solar Customers,” *New Mexico Community Solar Program*, *available at* <https://csnewmexico.com/community-solar-customers/>.
124. “New Mexico Community Solar Program Best Practices Consumer Protection & Subscriber Management,” *New Mexico Community Solar Program* (Jan. 23, 2023), p. 2, *available at* <https://csnewmexico.com/wp-content/uploads/2023/01/NM-CS-Consumer-Protection-Best-Practices-1.23.23-final.pdf>.
125. *Id.* at 85.
126. *Id.* at 7.

127. “Expanded Solar For All Program Implementation Plan,” State of New York Public Service Commission, Case 19-E-0735, October 2023, *available at* <https://documents.dps.ny.gov/public/Common/ViewDoc.aspx?DocRefId=%7bA077F68A-0000-C958-AB14-8CAF9BBD65F4%7d>. See also “Department of Public Service Staff Proposal on a Statewide Solar for All Program,” State of New Department of Public Service, May 2023, *available at* <https://dps.ny.gov/event/solar-all-psc-seeks-comment-proposal-filed-department-public-service-staff-regarding>.
128. “Distributed Energy Resource (DER) Regulation and Oversight,” New York State Department of Public Service, *available at* <https://dps.ny.gov/distributed-energy-resource-der-regulation-and-oversight>.
129. “Inclusive Community Solar Adder,” New York State Energy Research & Development Authority, *available at* <https://www.nyserda.ny.gov/All-Programs/NY-Sun/Contractors/Dashboards-and-incentives/Inclusive-Community-Solar-Adder>.
130. “In the Matter of Consolidated Billing for Distributed Energy Resources: Order Regarding Consolidated Billing for Community Distributed Generation,” Case 19-M-0463, Dec. 12, 2019, *available at* <https://documents.dps.ny.gov/public/MatterManagement/CaseMaster.aspx?Mattercaseno=19-M-0463>.
131. “In the Matter of Consolidated Billing for Distributed Energy Resources: Order Establishing Process Regarding Community Distributed Generation Billing,” Case 19-M-0463, Sept. 15, 2022, *available at* <https://documents.dps.ny.gov/public/MatterManagement/CaseMaster.aspx?Mattercaseno=19-M-0463>.
132. Although not discussed in detail in this report, the Energy Trust of Oregon also runs a low-income solar incentive program, called Solar Within Reach. See Energy Trust of Oregon, *available at* <https://www.energytrust.org/incentives/solar-within-reach/#tab-two>.
133. Senate Bill 1547 (2016), *available at* <https://olis.oregonlegislature.gov/liz/2016R1/Downloads/MeasureDocument/SB1547/Enrolled>.
134. Program Implementation Manual, *available at* <https://www.oregoncsp.org/wp-content/uploads/2021/03/PIM-v20210112.pdf>.
135. “In the Matter of Use of the Agent Subscription Model in Project Eligibility for the Community Solar Program,” Public Utility Commission of Oregon, Order No. 22-363, October 2022, p. 11, *available at* <https://apps.puc.state.or.us/orders/2022ords/22-363.pdf>.
136. “Subscriber Resources,” *Oregon Community Solar Program*, *available at* <https://www.oregoncsp.org/subscriber-resources/>.
137. Portland General Electric, “Community Solar,” *available at* <https://portlandgeneral.com/energy-choices/renewable-power/community-solar>. See also Pacific Power, “Oregon Community Solar Program,” *available at* <https://www.pacificpower.net/savings-energy-choices/blue-sky-renewable-energy/oregon-community-solar.html>.
138. Oregon’s “Program Implementation Manual,” *available at* <https://www.oregoncsp.org/wp-content/uploads/2021/03/PIM-v20210112.pdf>.
139. See Program Implementation Manual, *available at* <https://www.oregoncsp.org/wp-content/uploads/2021/03/PIM-v20210112.pdf>.

140. “Income verification occurs once when the customer is enrolled in the program. Income information is confirmed again when the customer is assigned to a Project. As part of the income verification process, the Low-income Facilitator will also collect demographic information and obtain permission to access utility data on behalf of the customer.” See Program Implementation Manual, p. 53, *available at* <https://www.oregoncsp.org/wp-content/uploads/2021/03/PIM-v20210112.pdf>.
141. The manual defines “low-income facilitator” as “The entity responsible for serving as a liaison among low-income residential customers and affiliated organizations and Project Managers to help meet any low-income capacity requirements.” See Program Implementation Manual, p. 9, *available at* <https://www.oregoncsp.org/wp-content/uploads/2021/03/PIM-v20210112.pdf>.
142. Program Implementation Manual, pp. 41-48, 53, *available at* <https://www.oregoncsp.org/wp-content/uploads/2021/03/PIM-v20210112.pdf>.
143. Program Implementation Manual, pp. 21-28, *available at* <https://www.oregoncsp.org/wp-content/uploads/2021/03/PIM-v20210112.pdf>.
144. Program Implementation Manual, p. 23, *available at* <https://www.oregoncsp.org/wp-content/uploads/2021/03/PIM-v20210112.pdf>.
145. For example, “Participants must be allowed to retain their Subscription if they relocate within their utility service territory.” See Program Implementation Manual, p. 43, *available at* <https://www.oregoncsp.org/wp-content/uploads/2021/03/PIM-v20210112.pdf>.
146. Project managers have to allow participants to transfer their subscription to another eligible participant, and any applicable fees must be disclosed. See Program Implementation Manual, p. 43, *available at* <https://www.oregoncsp.org/wp-content/uploads/2021/03/PIM-v20210112.pdf>.
147. Project managers have to provide clear instructions for terminating a subscription early and must not charge an early termination fee to low-income subscribers. See Program Implementation Manual, p. 44, *available at* <https://www.oregoncsp.org/wp-content/uploads/2021/03/PIM-v20210112.pdf>.
148. The manual outlines specific requirements in the event that a customer’s utility service is disconnected or shutoff off due to non-payment. For example, “Project Managers may not charge low-income customers subscription payment late fees or a penalty for utility disconnection or related contract termination.” See Program Implementation Manual, pp. 44-45, *available at* <https://www.oregoncsp.org/wp-content/uploads/2021/03/PIM-v20210112.pdf>.
149. The manual provides specific language to include outlining the roles of each party. For a detailed description of the roles of each, see Program Implementation Manual, p. 46, *available at* <https://www.oregoncsp.org/wp-content/uploads/2021/03/PIM-v20210112.pdf>.
150. Program Implementation Manual, pp. 41-49, *available at* <https://www.oregoncsp.org/wp-content/uploads/2021/03/PIM-v20210112.pdf>.
151. Program Implementation Manual, p. 49, *available at* <https://www.oregoncsp.org/wp-content/uploads/2021/03/PIM-v20210112.pdf>. See also Project Manager Resources, *Oregon Community Solar Program*, *available at* <https://www.oregoncsp.org/pm-resources/>.
152. Program Implementation Manual, p. 19, *available at* <https://www.oregoncsp.org/wp-content/uploads/2021/03/PIM-v20210112.pdf>.

153. Program Implementation Manual, pp. 19-20, *available at* <https://www.oregoncsp.org/wp-content/uploads/2021/03/PIM-v20210112.pdf>.
154. “Low-Income Clean Energy Connector,” *U.S. Department of Energy*, *available at* <https://www.energy.gov/communitysolar/low-income-clean-energy-connector>.
155. “Low-Income Clean Energy Connector,” *U.S. Department of Energy*, *available at* <https://www.energy.gov/communitysolar/low-income-clean-energy-connector>.
156. “Low-Income Clean Energy Connector,” *U.S. Department of Energy*, *available at* <https://www.energy.gov/communitysolar/low-income-clean-energy-connector>.
157. As noted, NCLC uses the term “marketer” to refer to solar developers that take on the marketing function or have direct contact with actual or potential customers. Therefore, “marketer” is interchangeable with solar developers, vendors, utilities, and subscription managers (entities that manage subscription enrollment for a developer of a solar project).
158. While this is highly desirable, it may depend on what is allowable in a particular state, as in some states solar developers or subscription managers may not be able to directly compensate local LIHEAP administrators based on the type of entity that would receive the payment (e.g., certain government entities cannot receive compensation from subscription managers).
159. “Low-Income Clean Energy Connector,” *U.S. Department of Energy*, *available at* <https://www.energy.gov/communitysolar/low-income-clean-energy-connector> (also noting that to make a community solar subscription available through the Connector, the guaranteed savings must be at least 20%.)
160. The Energy Department will track community solar projects as they become available, as well as interest in community solar to determine demand. Therefore, the Connector is also beneficial for states that do not have any current community solar projects.
161. “Low-Income Clean Energy Connector,” *U.S. Department of Energy*, *available at* <https://www.energy.gov/communitysolar/low-income-clean-energy-connector>.
162. “National Community Solar Partnership Initiatives,” *U.S. Department of Energy*, *available at* <https://www.energy.gov/communitysolar/national-community-solar-partnership-initiatives>.
163. Notably, the New Mexico best practices are not requirements. NCLC strongly suggests states set best practices standards as requirements for marketers.



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