



LOW-INCOME COMMUNITY SOLAR POLICY GUIDELINES AND SAMPLE BILL LANGUAGE

Early lessons from low-income community solar policies and approaches demonstrate that a combination of targeted programmatic support and incentives, consumer protection measures and market based strategies will ensure that low-income customers have access to community solar programs from the outset and that markets will develop to support their robust, long-term participation and benefit.

Below are guidelines, best practice recommendations and sample bill language for making community solar accessible to low-income customers. These recommendations are meant to serve as a toolbox for policymakers to adopt or reference when setting up low-income community solar programs for their own unique markets.

CUSTOMER PREFERENCE

When starting a new community solar program, it is essential to keep low-income customers at the forefront of the discussion to ensure they will be able to participate and benefit. Inclusion of language that establishes prioritization and enables preference for low-income customers will allow regulators, utilities and stakeholders to create targeted, low-income community solar policies that ensure strong low-income participation and flow of program benefits to these customers. A few examples from Colorado and Massachusetts which have enabled the innovative low-income community solar policies in those states are referenced below, in addition to various other important components to include in legislation.

Sample language: 'Low-income customers may receive preference by utilities and policymakers under the community solar program, including community solar tariffs, incentives and siting'

Example: Colorado Community Solar Statute C.R.S. § 40-2-127(5)(e) 'utility may give preference to community solar gardens that have low-income subscribers'

In practice, this developed into the first carveout for low-income customers in Colorado community solar projects - 5% customer participation in all projects - and has since evolved into targeted community solar programs that support low-income customer participation.

Example: In Maryland statute "It is in the public interest that the state enable the development and deployment of energy generation from community solar energy generating systems in order to:

- 1) Allow renters and low-income and moderate-income retail electric customers to own an interest in a community solar energy generating system;
- 2) Facilitate market entry for all potential subscribers while giving priority to subscribers who are the most sensitive to market barriers; and
- 3) Encourage developers to promote participation by renters and low-income and moderate-income retail electric customers"

Example: "Any plan approved by the [Commission] must reasonably allow for the creation, financing, and accessibility of community solar facilities"



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If a program is intended to provide access to underserved communities, any rulemaking process should set an appropriate credit rate to support the development of community solar facilities and to meet the legislative intent of the [Act].

EQUITABLE BENEFIT

The program should be structured to ensure that low-income customers in all housing types receive proportionate access and economic benefits under the program. Generally, programs should strive to enable proportionate access for all rate classes, and low-income participation should reflect low-income demographics within the ratebase/utility/state service territory. For example, if 30% of residential customers are low-income, and 10% of the commercial rate class is affordable housing, these demographics should inform the structure of the program and any participatory targets. This principle ensures that a program is not disproportionately weighted towards a certain customer class and that benefits flow equitably to all eligible customer classes and income levels. Program designers may also want to include low-income service providers, such as nonprofits serving low-income communities, in policies.

Sample language: ‘Low-income customers in all housing types should receive at least proportionate benefit to the community solar program’s incentives and crediting’.

Example: Massachusetts SB 1979¹ ‘promotes energy justice and equitable access to the benefits of solar energy, including support of community-shared solar projects’

HOUSING CONSIDERATIONS

Low-income customers reside in a diverse range of housing, from single family homes to multifamily rental properties. Often, low-income customers may not pay their bills directly, and are represented by an affordable housing operator or other service organization. These unique housing characteristics create both barriers and opportunities. For example, low-income affordable housing operators are often able to serve as financeable offtakers for projects and can serve as passthrough intermediaries for their tenants to benefit from community solar. Single-family households can capture program benefits (bill credits) directly, but typically face the highest financial barriers to entry for programs. As such, it is essential to ensure that all low-income customers are included in policy and program design, to ensure opportunity for participation regardless of housing type, and that incentives are structured which account for difference in financing barriers between low-income residential customers, low-income housing providers, and low-income service organizations (if included). Low-income residential customers who pay their bills directly will typically require the highest incentives as they face the highest financial barriers to entry.

Sample language: ‘Targeted policies should ensure that low-income customers are included regardless of housing type. Incentives should differentiate between nonprofits serving low-income customers, low-income property owners, and low-income residential customers’

Examples: Colorado, Maryland, Massachusetts programs include targeted policies differentiating between low-income customers and property/building owners/operators.

In Massachusetts, Chapter 75 of the Acts of 2016 directs the Department of Energy Resources (DOER) to create a solar incentive program.



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In creating the program, DOER must:

“...differentiate incentive levels to support diverse installation types and sizes that provide unique benefits, including, but not limited to, community-shared solar facilities, low-income solar facilities and municipal or other governmental entity-owned solar facilities.”

DOER established three incentive types to ensure low income residents receive the same level of access as other residents.

PROGRAM TARGETS (CAREVEOUTS)

Low-income participation targets can be designed as a per-project carveout or capacity or “inclusionary” targets carved out of the entire program. If overall program capacity is capped, low-income program targets should be a percentage of overall program capacity goals, i.e. 30% of total program capacity. If this program approach is taken, it is necessary to further define what constitutes a “low-income project” within that program carveout. Low-income projects may still be defined to enable the inclusion of anchor offtakers to support financing. Maryland and Massachusetts are examples of this approach.

Sample language: “At least 30% of the electricity generating capacity of all community-owned energy generating facilities, in the aggregate, shall serve low-income residential, moderate-income residential, and low-income affordable housing customers and operators. [Program implementer] may allocate this capacity among “low-income projects” in order to ensure that benefits are distributed between these low-to-moderate-income customer segments, with priority towards low-income residential customers.”

“Low-income projects are defined as projects which include at least 60% low-income customer participation, including residential, affordable housing, and low-income service organizations, of which at least 20% is reserved for low-income residential customers who capture bill savings/net metering/bill credits directly.” [these minimum percentages should be adjusted based on project economics from state to state]

Program Impact

Generally, as is echoed throughout this guide, it is important to take a programmatic approach to ensure successful low-income participation solar. Many states develop low-income solar programs in an assistance model, towards the goal of electric bill savings or overall energy burden reduction for low-income customers. Programs may also include additional benefits or goals for low-income customers and underserved communities, including energy efficiency services and workforce development opportunities.

Sample language: “The Commission/authority shall develop one or more mechanisms sufficient to guarantee accessibility for low-income and moderate income customers, low-income affordable housing and low-income service organizations. At least one of the mechanisms adopted by the commission and state energy coordinator shall be structured in an assistance model to reduce energy burden for participating low-income residential customers at no cost to these customers and should integrate with complementary programs such as energy efficiency, energy assistance, workforce development, and others. In determining the appropriate mechanism(s), the Commission, Electric Providers, and stakeholders should work with the appropriate stakeholders and state agencies to consider the development of financing options, financing incentives, education and outreach programs, community engagement to meet program goals for residential and affordable housing participation.



Furthermore, to ensure robust participation by low-income and moderate-income residential customers, low-income affordable housing and low-income service organizations, the Commission shall develop a process for regular program evaluation and adjustments.”

The sample language, provided above, is intended to create a program that reduces overall energy burden. For example, a 50% bill savings target is required by low-income solar programs in CA and DC. It also addresses the need for education and outreach support in conjunction with community-based organizations.

COMPENSATION (CREDITING)

Program crediting should be inclusive of residential rate classes, as well as all rate classes that pertain to multifamily properties, affordable housing, and other housing arrangements characteristic of low-income communities, to ensure that participation is enabled regardless of housing type. Full NEM, including all supply, distribution and transmission charges, is typically an appropriate way to ensure that low-income customers and low-income property owners (or operators) can adequately capture benefits of community solar. Other states like Massachusetts have taken further steps to set tariff multipliers to provide the highest benefit to low-income customers, sending strong market signals to encourage participation by this customer class.

If a process other than VNEM is used, such as a value of solar tariff or value of distributed energy resources tariff, tariffs should offer the highest value, or preference, for low-income customers, including the potential of community solar to:

- Reduce low-income customers’ energy burden
- Provide economic benefits for low-income customers
- Reduce GHG / carbon emissions, which disproportionately affect low-income and underserved communities
- Provide workforce training and other local economic benefits for low-income communities

The credit rate must be set at an appropriate level to reasonably allow for the creation, financing, and accessibility of community solar facilities. An appropriate credit is essential to ensure that low-income households can receive bill savings and much needed energy burden relief. It is important for programs include participation by all rate classes, as these parties can also play essential roles in enabling strong low-income participant and project financing.

FINANCING AND INCENTIVES

Appropriate incentives are needed by developers, installers, and other groups interested in developing low-income community solar projects to overcome marketing and financing barriers associated with low-income customer participation in projects, as well as to provide attractive offerings to low-income customers and subscribers in order to motivate their participation at scale. An attractive solar offering for a low-income customer generally means no upfront cost, no ongoing payments, and immediate and significant savings. Low-income customers should receive differential, higher incentives (or adders, on top of general market incentives) in order to encourage their participation and benefit in community solar programs. Incentives should be differentiated for low-income residential customers and low-income property owners or operators, with low-income residential customer incentives set the highest as these customers face the highest financial and market adoption barriers. Nonprofits that serve low-income customers may also be included and incentivized. Incentives can be effective within programs that have carveouts, to ensure that targets are successful and benefits to low-income customers are maximized, as well as in uncapped programs without specific targets, to drive low-income participation through a market-based mechanism.



Examples: Massachusetts SMART program which includes adders that differentiate between low-income customers and property owners.²

Generally, if low-income customers pay into a pilot or program's incentive pool as ratepayers or taxpayers, low-income incentives should be created in proportion to their contribution to the incentive pool. This policy ensures that all rate-payers who contribute to the solar initiative have equitable access to receive the benefits of the program.

Incentives should be set to ensure that low-income customers face no up-front costs for participation, and can achieve significant savings through ownership or subscription of community solar capacity. Significant savings should be defined as a savings goal (i.e. at least 50%) or to achieve average electric energy burden for the states they reside in.

Example: if electricity expenditures make up 50% of an average low-income customer's energy bill in a state, and an average low-income customer faces an energy burden of 2x that of state average, incentive levels should be set so that this customer's electricity bill can be offset by 100%, bring their energy burden within the state average. This goal can also be coordinated with efficiency measures

If projects are competitively procured, consideration should be included for low-income impact including but not limited to:

- Percentage % of electric bill savings or energy burden reduction for low-income communities
- Coordination with energy efficiency measures
- Workforce development for underserved communities

Examples: Colorado Investor Owned Utility programs (both Xcel³ and Black Hills⁴) include consideration of low-income impact in awarding REC incentives [insert link to 2-pager PDF that explains Xcel Settlement Agreement]

Other financing strategies and considerations:

- Solar Renewable Energy Credit (SREC) multipliers can also encourage low-income projects, and should be differentiated for low-income residential customers and low-income property owners/operators.
- Grants can also facilitate solar project development and/or low-income community solar pilots.
- State energy offices, housing authorities or other low-income service entities may serve as intermediary purchasers of community solar capacity on behalf of low-income customers, mitigating the financing risk and taking on the customer engagement directly.
- Green banks or other mission-driven financing entities may offer backstops, credit enhancement or loan loss reserves to help attract low-cost financing and tax equity investment to low-income projects. Credit enhancement can be an important tool for affordable housing participation in projects, because although these customers may have stronger credit than single family residential customers, many smaller affordable housing providers still need support to participate as financeable offtakers in projects.
- Cities or local governments may also serve as backstops or passthrough offtakers for low-income customers, if low-income participation awareness and tangible passthrough benefit is included.



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- On-bill financing, for example through a Pay as You Save Model, can be an excellent strategy to reduce low-income barriers to solar participation. A second utility bill is a significant barrier for low-income customers and will limit participation. Utility crediting and billing, structured to enable passthrough payment to participating third party vendors helps reduce barriers to entry for low-income customers.
- Exclude community-solar facilities that predominantly serve low-income subscribers from any caps on overall program capacity (MW).

DEFINITIONS

A definition of low-income should be included based on Area Median Income (AMI), such as US Department of Housing and Urban Development (HUD) low-income definition of 80% AMI, as opposed to Federal Poverty Level (FPL). AMI is used across many federal programs, especially HUD, to determine low-income and affordable housing eligibility. AMI is more sensitive to the variation of income levels from county to county, as opposed to FPL which is set uniformly to national averages. This definition should be used as a program threshold - as this income level encompasses most other low-income programs. Programs should enable existing low-income energy programs and service providers to qualify automatically as much as possible, to reduce administrative burden and marketing barriers for low-income customers, as well as the often uncomfortable requirement of demonstrating (or re-demonstrating) income eligibility.

Example low-income verification form: <https://www.xcelenergy.com/staticfiles/xcel/Marketing/Files/co-sr-community-Low-Income-Verification-Form.pdf>

Additionally, recognizing again that low-income communities often reside in multifamily affordable housing, this type of housing should be included in low-income program approaches. However, minimum residential low-income customer targets should be maintained and/or incentivized as these customer classes face very different barriers to participation, with low-income residential customers who pay bills directly facing the highest barriers. Participating low-income affordable housing operators and low-income property owners should be required to demonstrate passthrough benefit for their tenants. This requirement should be flexible to ensure a variety of market solutions, recognizing also that HUD rules and utility subsidies may not always enable direct tenant passthrough savings. The following definitions may also be helpful:

- **Low-income:** in-state retail customer of an electric distribution company whose income does not exceed 80% of the area median income by county, adjusted for family size and revised every 5 years.
- **Moderate-income:** in-state retail customer "" whose income does not exceed 120% of the area median income by county, adjusted for family size and revised every 5 years.
- **Low-income service provider:** means a nonprofit entity or affordable housing provider that predominantly serves low-income customers
- **Low-income project:** means a community solar facility that allocates at least XX% of its output capacity for low-income customers and service providers, of which at least XX% is dedicated to low-income residential customers who capture bill savings directly [this definition may be adapted based on project economics from state to state]
- **Environmental justice community:** means a United States census block group, as determined in accordance with the most recent United States census, for which 30% or more of the population consists of low income persons who are not institutionalized. Self-designation as an environmental justice community should also be allowed.



CONSUMER PROTECTION

As with all low-income solar programs, low-income community solar customers require targeted consumer protection measures. Importantly, target savings levels and / or energy burden reduction targets should be included to ensure that low-income customer capture benefits of program bill crediting and incentives directly.

Specific measures should be taken to protect customers participating in energy assistance so they they are not harmed by participation in community solar. If subscriptions are offered to customers with energy assistance, the value proposition (% electric bill savings) must be required to exceed that of energy assistance subsidies to ensure that low-income customers on bill assistance are not negatively impacted. A reduction in electricity bills through community solar savings may reduce some customers' eligibility for energy assistance. If this reduction is not greater than the value of energy assistance, a low-income customer may be harmed by participation in a low-income community solar program.

If structured properly, community solar can be an excellent tool to extend or complement low-income energy assistance services, by offering a long-term, sustainable 'solar assistance' solution as opposed to an annual subsidy.

COMPREHENSIVE PROGRAMMING

Programs should be structured to encourage integration with complementary low-income programs, such as weatherization and efficiency programs, to maximize impact for low-income customers and encourage efficient use of program resources. This strategy can also support program outreach (marketing).

Example: [The Colorado Energy Office Low-income Community Solar Demonstration Project](#) subscribed community solar through the state's' weatherization program, to achieve comprehensive energy burden reduction⁵

SITING

Low-income projects may be given siting preference to help reduce siting costs. For example, local governments may be encouraged to enable siting for low-income projects on city land to reduce project development expenses, or co-location requirements could be eased or exempted for low-income projects.

Projects may receive incentives, multipliers or adders for siting in low-income or disadvantaged communities, but this should not be required as it may raise project costs.

Example: Poudre Valley Rural Electric Association (siting on county-owned land)

COMMUNITY ENGAGEMENT

As stated in our Guiding Principles, a successful program requires partnership with communities through local organizations such as community development corporations, housing organizations or other service providers to ensure that community needs and challenges are addressed and assets utilized. These partners can provide critical outreach, planning support, and engagement with low-income communities. Moreover, many communities desire even more engagement, including an ownership interest in solar projects serving them. Putting communities at the center ensures that programs are responsive and effective and helps maximize participation.

Example: In December of 2016, Illinois lawmakers passed sweeping energy legislation, called the Future



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Energy Jobs Bill (SB 2814). The bill restarts renewable energy development in Illinois, with a particular focus on making sure low-income communities participate and benefit from the anticipated launch of solar in the Land of Lincoln. In addition to creating a pathway toward the development of 3 Gigawatts of solar, including behind-the-meter installations, community solar, and brownfield development, the Future Energy Jobs Act creates the Illinois Solar for All Program, which includes a significant focus on community solar development.

The program specifies that community solar developers must engage in partnership with community stakeholders when planning community solar projects. And, for the first time in a piece of legislation, the bill includes funding for community-based organizations to engage in grassroots education about the Solar for All Program. Community stakeholders can provide critical outreach, planning support, and engagement with the surrounding community. By including this requirement and the funding to back it up, the Future Energy Jobs Act helps to ensure that the community solar program will be responsive and effective, and help maximize participation. What's more, the development of the Solar for All Program and the concepts for solar job training in the bill included community engagement in the legislative process. The Illinois Clean Jobs Coalition ensured that community groups were integral in crafting the bill.



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1. <https://malegislature.gov/Bills/189/Senate/S1979> 166-168
2. <http://www.mass.gov/eea/docs/doer/rps-aps/final-program-design-1-31-17.pdf>
3. Xcel settlement for 16A-0139E, p. 71
4. Black Hills settlement for 16A-0436E, p. 30.
5. <https://www.colorado.gov/pacific/energyoffice/community-solar-0>