



# Expanding Solar Access: State Community Solar Landscape (2022)

Kaifeng Xu, Jenny Sumner, Emily Dalecki,  
and Robin Burton

*National Renewable Energy Laboratory*

**NREL is a national laboratory of the U.S. Department of Energy  
Office of Energy Efficiency & Renewable Energy  
Operated by the Alliance for Sustainable Energy, LLC**

This report is available at no cost from the National Renewable Energy  
Laboratory (NREL) at [www.nrel.gov/publications](http://www.nrel.gov/publications).

Contract No. DE-AC36-08GO28308

**Technical Report**  
NREL/TP-6A20-84247  
March 2023



# Expanding Solar Access: State Community Solar Landscape (2022)

Kaifeng Xu, Jenny Sumner, Emily Dalecki,  
and Robin Burton

*National Renewable Energy Laboratory*

## **Suggested Citation**

Xu, Kaifeng, Jenny Sumner, Emily Dalecki, and Robin Burton. 2023. *Expanding Solar Access: State Community Solar Landscape (2022)*. Golden, CO: National Renewable Energy Laboratory. NREL/TP-6A20-84247. <https://www.nrel.gov/docs/fy23osti/84247.pdf>.

**NREL is a national laboratory of the U.S. Department of Energy  
Office of Energy Efficiency & Renewable Energy  
Operated by the Alliance for Sustainable Energy, LLC**

This report is available at no cost from the National Renewable Energy Laboratory (NREL) at [www.nrel.gov/publications](http://www.nrel.gov/publications).

Contract No. DE-AC36-08GO28308

**Technical Report**  
NREL/TP-6A20-84247  
March 2023

National Renewable Energy Laboratory  
15013 Denver West Parkway  
Golden, CO 80401  
303-275-3000 • [www.nrel.gov](http://www.nrel.gov)

## NOTICE

This work was authored by the National Renewable Energy Laboratory, operated by Alliance for Sustainable Energy, LLC, for the U.S. Department of Energy (DOE) under Contract No. DE-AC36-08GO28308. Funding provided by the U.S. Department of Energy Office of Energy Efficiency and Renewable Energy Solar Energy Technologies Office. The views expressed herein do not necessarily represent the views of the DOE or the U.S. Government.

This report is available at no cost from the National Renewable Energy Laboratory (NREL) at [www.nrel.gov/publications](http://www.nrel.gov/publications).

U.S. Department of Energy (DOE) reports produced after 1991 and a growing number of pre-1991 documents are available free via [www.OSTI.gov](http://www.OSTI.gov).

*Cover Photos by Dennis Schroeder: (clockwise, left to right) NREL 51934, NREL 45897, NREL 42160, NREL 45891, NREL 48097, NREL 46526.*

NREL prints on paper that contains recycled content.

## Acknowledgments

The authors wish to acknowledge the valuable contributions of the many reviewers whose comments strengthened this publication:

- Nicole Steele (U.S. Department of Energy [DOE])
- Ariel Drehobl (DOE)
- Anna Balzer (DOE)
- Juliana Williams (National Renewable Energy Laboratory [NREL])
- Joyce McLaren (NREL)
- Abbe Ramanan (Clean Energy States Alliance [CESA])
- Sandy Fazeli (National Association of State Energy Officials [NASEO])

We also appreciate the input from members of the National Community Solar Partnership States Collaborative on the concept for this publication, provided during a member meeting in June 2022.

Thank you to specific members of the States Collaborative who provided input on their states' community solar policies and programs.

- Ethan Tremblay (Maine Governor's Energy Office)
- Lisa Thomas (Michigan Department of Energy)
- Anonymous reviewers from California, Illinois, Maryland, Vermont, and Virginia

## List of Acronyms

AMI	area median income
AC	alternating current
CESA	Clean Energy States Alliance
CSEGS	Community Solar Energy Generating Systems
DAC	disadvantaged community
DC	direct current
DOE	U.S. Department of Energy
ECR	export credit rate
FP&L	Florida Power & Light
HUD	U.S. Department of Housing and Urban Development
GWac	gigawatt (alternating current)
kWh	kilowatt-hour
LICSD	Low-Income Community Solar Deployment
LMI	low- and moderate-income
MASH	Multifamily Affordable Solar Housing
MBE	minority business enterprise
MFAH	multifamily affordable housing
MWac	megawatt (alternating current)
NASEO	National Association of State Energy Officials
NCSP	National Community Solar Partnership
NEM	net energy metering
NREL	National Renewable Energy Laboratory
PACE	property assessed clean energy
PV	photovoltaic
ReMAT	Renewable Market Adjusting Tariff
SCE&G	South Carolina Electric & Gas
SFA	Solar for All
SMART	Solar Massachusetts Renewable Target
SOMAH	Solar on Multifamily Affordable Housing
SREC	solar renewable energy credit

# Table of Contents

<b>1</b>	<b>Introduction</b> .....	<b>1</b>
<b>2</b>	<b>Status of Community Solar State Policy and Deployed Capacity</b> .....	<b>3</b>
2.1	Program Caps .....	4
2.2	Subscriber Location Requirements .....	5
2.3	Subscriber Eligibility Requirements .....	6
2.4	LMI Community Solar .....	9
<b>3</b>	<b>Energy Justice Considerations for State Community Solar Policies</b> .....	<b>10</b>
	Provide Greater Household Savings and Low-to-Moderate-Income Access .....	11
	Increase Resilience and Grid Benefits.....	12
	Facilitating Community Ownership .....	12
	Supporting an Equitable Workforce and Entrepreneurship.....	13
<b>4</b>	<b>Summary and Conclusions</b> .....	<b>14</b>
	<b>References</b> .....	<b>15</b>

## List of Figures

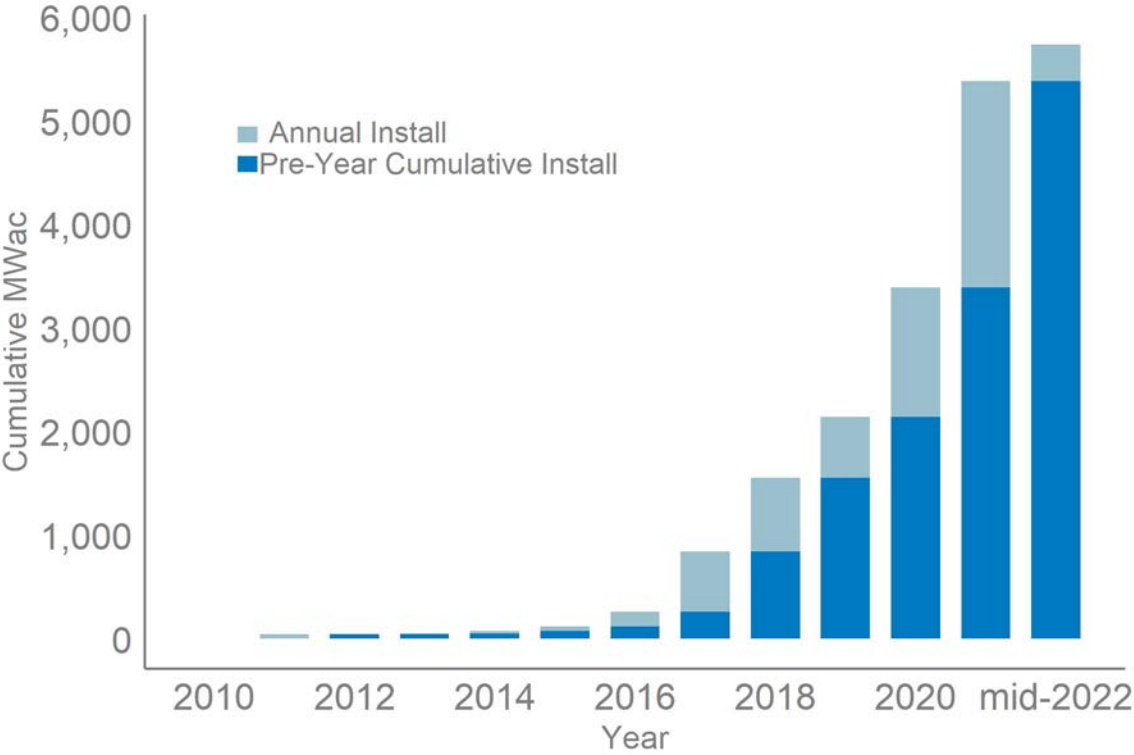
Figure 1. Community solar development capacity by year (MWac) .....	1
Figure 2. State-level community solar enabling legislation .....	3
Figure 3. Community solar caps by state .....	5
Figure 4. State-level LMI community solar legislation .....	9
Figure 5. Types of LMI community solar mandates and voluntary efforts .....	10
Figure 6. National Community Solar Partnership’s Meaningful Benefits Framework.....	11

## List of Tables

Table 1. Top 10 States by Total Community Solar Capacity in mid-2022 .....	4
Table 2. Subscriber Eligibility for Certain Community Solar Facilities by State and Location as of 2021.....	6
Table 3. Subscriber Eligibility Requirements by State as of 2021 .....	7

# 1 Introduction

In 2018, the National Renewable Energy Laboratory (NREL) reviewed U.S. community solar policies by state and summarized policy variations by program cap, project size, subscriber location, subscriber eligibility, low- and moderate-income (LMI) stipulations, and subscriber compensation (Cook and Shah 2018). Between 2008 and June 2022, cumulative national community solar capacity more than tripled, from 1.6 GWac to 5.7 GWac, as illustrated in Figure 1 (Chan, Heeter, and Xu 2022). Since June 2018, three more states (Nevada, South Carolina, and New Mexico) have also enacted enabling legislation relating to community solar.



**Figure 1. Community solar development capacity by year (MWac)**

Note: 2022 values only reflect January through June.

Although the definition of community solar varies, in this report, we focus on solar photovoltaic (PV) systems that allow subscribers to enter into a contractual relationship with the owner or operator of the installation in order to receive some or all of the financial returns from a predefined share of the installation’s output (Heeter, Xu, and Chan 2021). This is consistent with the U.S. Department of Energy’s (DOE’s) definition of community solar: “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” (DOE n.d.-b).

In 2021, DOE announced an ambitious target under the National Community Solar Partnership (NCSP): to enable community solar systems to power the equivalent of five million households by 2025 and create \$1 billion in energy bill savings (DOE 2021). While federal target-setting and capacity-building are important, states also play an essential role in community solar market



development by developing, funding, and implementing enabling policy and regulatory environments. To achieve the NCSP 2025 target, it is important to understand the current state community solar market and policy environment and identify challenges and opportunities to expand community solar access at the state level.

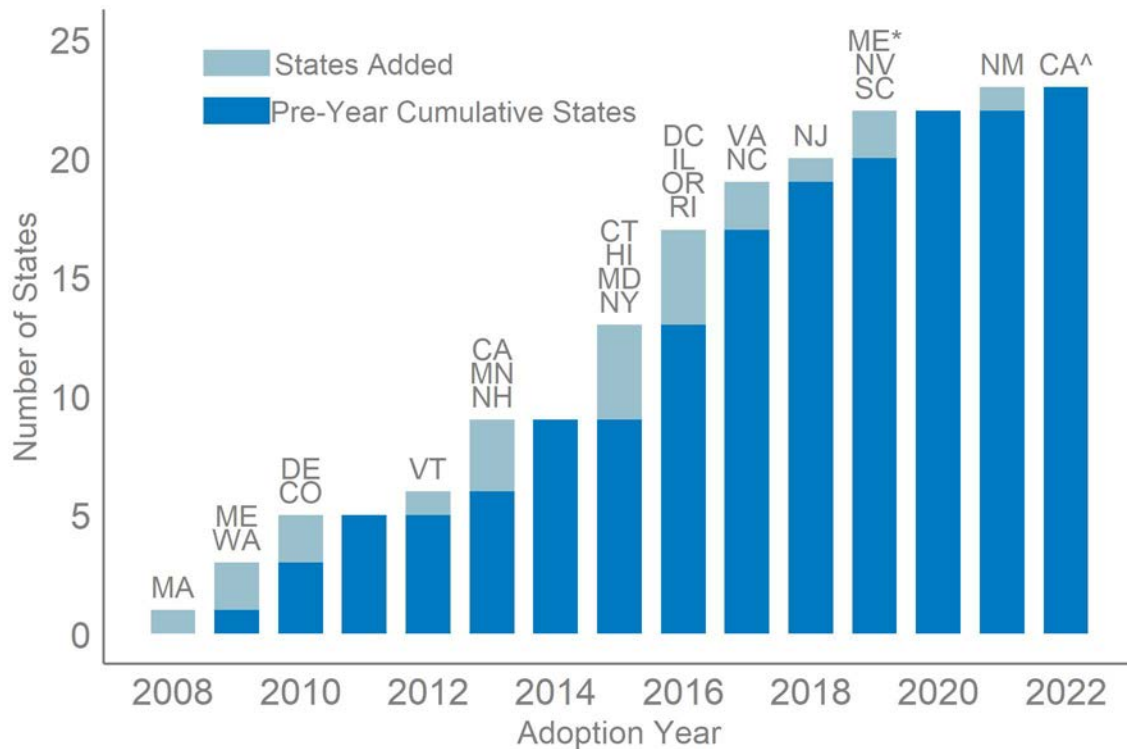
This report supports the community solar industry to meet the NCSP 2025 target by documenting existing state-level community solar policies and programs. Although many policy variants may affect program design, this report focuses on four key components:

- **Program caps:** The overall capacity or funding limit designed by a statewide community solar program.
- **Subscriber location requirements:** Whether a potential customer in a certain location can participate in the community solar program.
- **Subscriber eligibility requirements:** Including (1) which customer types (e.g., residential, commercial, or industrial) can or cannot participate in the community solar program, and (2) the minimum or maximum capacity that customers are required to subscribe.
- **LMI community solar requirements:** The capacity dedicated to LMI customer participation in community solar projects, often through carve-outs or additional incentives.

In addition to presenting the existing market and policy landscape for community solar, with increasing attention to expanding access to solar energy for LMI households, we also discuss key considerations for incorporating energy justice into community solar policies. Energy justice considerations for state community solar policies could include finding ways to ensure greater household savings, expanding LMI access, including ways for community solar to provide resilience and grid benefits, incentivizing community ownership, and developing an equitable workforce and entrepreneurship opportunities.

## 2 Status of Community Solar State Policy and Deployed Capacity

As of June 2022, at least 22 states and the District of Columbia had passed legislation enabling community solar, as illustrated in Figure 2. Massachusetts was the first state to adopt state-level community solar legislation in 2008, and California was the most recent state to adopt an expanded community solar framework. Community solar legislation has two primary forms, which vary by state: (1) establishing a state mandate for community solar and (2) developing state-level programs that support or incentivize community solar. Some states may enable legislation to apply to community solar as well as a wide range of community renewable energy sources. For example, in 2022, California passed AB 2316. Under this bill, the renewable energy subscription programs require that at least 51% of new community renewable energy program capacity serves low-income customers if approved and deemed beneficial to ratepayers (Spector 2022; State of California 2022).<sup>1</sup> Community solar policies and descriptions by state are listed in Table A-1.



**Figure 2. State-level community solar enabling legislation**

Notes: The states listed above the bars indicate those that adopted new legislation in that year.

CA<sup>^</sup> After initially passing community solar legislation in 2013, California passed a new bill in 2022 that requires, if approved by CPUC, 51% of new community energy program capacity to serve low-income customers. ME\* Maine adopted initial legislation in 2009 and adopted additional legislation in 2019.

<sup>1</sup> AB 2316 was approved by governor in September 2022. On the other hand, the renewable energy subscription program(s) have not been approved or adopted by the California Public Utilities Commission and are under consideration currently.

As of June 2022, greater than 5 GWac of community solar have been deployed cumulatively across 40 states and District of Columbia (Chan, Heeter, and Xu 2022). The community solar market began a rapid expansion in 2017, growing from 0.6 GWac of annual installed capacity to 1.6 GWac of annual deployment in 2021. States with enabling legislation account for 57% of community solar installed capacity in the U.S. Florida is the key driver of non-legislative community solar deployment, with 1.6 GWac installed as of mid-2022. Since 2017, Florida, New York, Minnesota, and Massachusetts are the leading states with significant expansion of community solar capacity. These four states make up 75% of the cumulative community solar deployment in the U.S. Table 1 shows the top 10 states with the greatest installed community solar capacity as of June 2022.

**Table 1. Top 10 States by Total Community Solar Capacity in mid-2022**

State	Enabling Legislation Year	Cumulative Capacity (MWac)
Florida	N/A	1,636
New York	2015	1,000
Minnesota	2013	855
Massachusetts	2008	802
Texas	N/A	333
Maine <sup>^</sup>	2009, 2019	205 (as of February 2023)
Arizona	N/A	183
Colorado	2010	156
Illinois	2016	145
Georgia	N/A	136

Note: N/A refers to states have no state-level legislation on community solar.

<sup>^</sup> Maine enabled its Net Energy Billing program in 2019. Since June 2022, 205 MWac of community solar projects have been installed (Maine Public Utilities Commission, 2022).

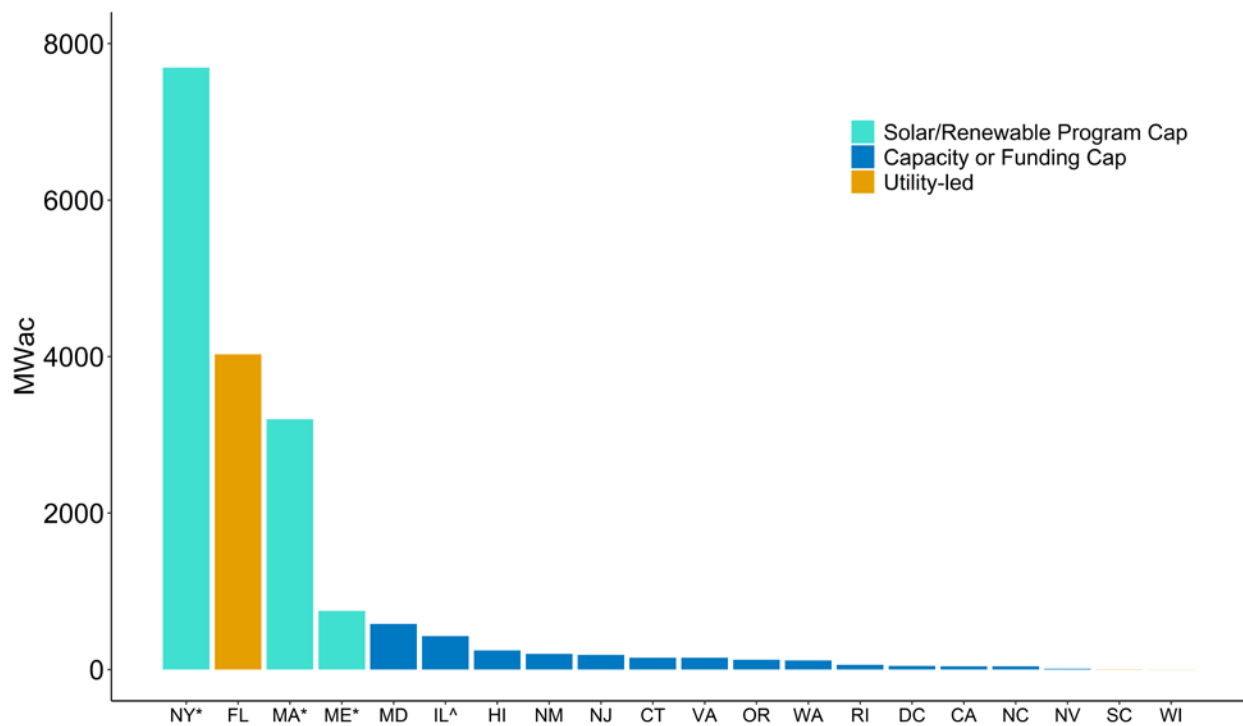
States with the most community solar deployment include a combination of states with policy-enabled community solar (i.e., New York, Minnesota, Massachusetts, Maine, Colorado, and Illinois) and states in which utilities have voluntarily adopted community solar programs (i.e., Florida, Texas, Arizona, and Georgia). For example, Florida Power & Light, an investor-owned utility, has installed 1.5 GWac of community solar under its SolarTogether program (Gheorghiu 2020).

## 2.1 Program Caps

At least 19 states and the District of Columbia have passed some form of community solar program cap. There are two approaches to community solar program caps: (1) a cap on the capacity (MW) or funding (dollars) allotted to community solar deployment,<sup>2</sup> or (2) a cap on all forms of solar program deployment, including rooftop solar, community solar, and other systems. For example, Maryland policy permits up to 580 MWac of community solar to be

<sup>2</sup> Community solar program funding sources vary by state. For example, the Illinois Solar for All Program is funded through either ratepayer contributions or through the Renewable Energy Resources Fund.

installed under its community solar pilot program. On the other hand, the New York Solar for All program is targeting up to 10 GWdc of distributed solar by 2030 across multiple solar types. In this case, there is no limit on community solar installation if the total solar installed capacity target is achieved. As shown in Figure 3, the majority of community solar caps are capacity or funding caps that are required under either state or program mandates. In contrast, Florida, South Carolina and Wisconsin have utility-led programs with the maximum installed capacity targets. Key considerations for program design and detailed studies of leading states are discussed in Heeter et al. (2022).



**Figure 3. Community solar caps by state**

Note: States may have multiple community solar programs, and caps have been aggregated. \*New York and Massachusetts have caps for solar programs but do not specify the maximum community solar capacity. \* Maine have a legislative set goal of 750 for all Net Energy Billing eligible resources. ^Illinois has multiple community solar related programs which include both funding and capacity-based caps. The Illinois Adjustable Block Program cap in the figure above refers to the initial capacity allocation for the 2022–2024 program year. Florida has multiple utility-led community solar programs, and the caps represent the total number. Solar DC output capacity has been converted to AC-rated output based on a 1.3 DC/AC ratio. See detailed capacity caps in Table A-3.

## 2.2 Subscriber Location Requirements

Community solar projects allow subscribers to benefit from solar projects that are not physically located on their property. However, in most cases, there are requirements related to the proximity of the customer to the project. All states with community solar legislation require the subscribers to be in the same electric utility service territory as the facility (Table 2). Virginia’s subscriber location requirements were unclear when the community solar legislation was first initiated and were clarified in the shared solar program code in 2020, which stated that solar programs should be located in the service territory of an investor-owned electric utility (Virginia General Assembly 2020). In addition, three states (Colorado, Minnesota, and North Carolina) require that

subscribers be in the same or an adjacent county as the facility. In California’s Enhanced Community Renewables Program, interested subscribers must live within must live within the same municipality or county, or within ten miles of the renewables project. California’s Disadvantaged Community Green Tariff Program, modeled after the existing Green Tariff/Shared Renewables Programs, requires that residential customers live in one of the top 25% most disadvantaged communities in the state, or in one of the census tracts in the highest 5% of CalEnviroScreen’s Pollution Burden (California Public Utilities Commission 2022a).

**Table 2. Subscriber Eligibility for Certain Community Solar Facilities by State and Location as of 2021**

State	Same Electric Utility Service Territory as Facility	Same or Adjacent County as Facility	Additional Requirements
California <sup>^</sup>	✓		✓
Colorado	✓	✓	
Connecticut	✓		
Delaware	✓		
Hawaii	✓		
Illinois	✓		
Maine	✓		
Maryland	✓		
Massachusetts	✓		
Minnesota	✓	✓	
Nevada	✓		
New Hampshire	✓		
New Jersey	✓		
New Mexico	✓		
New York	✓		
North Carolina	✓	✓	
Oregon	✓		
Rhode Island	✓		
South Carolina	✓		
Vermont	✓		
Virginia	✓		
Washington	✓		
Washington, D.C.	✓		

Note: California<sup>^</sup> subscriber eligibility applies to the community solar green tariff program enabled in 2013. The new legislation AB 2316 would require the commission to establish community renewable program, if deemed beneficial to ratepayers, on or before July 1, 2024.

### 2.3 Subscriber Eligibility Requirements

Subscriber eligibility requirements vary by state. These requirements typically take the form of the minimum number of subscribers required and the maximum number allowed for each project and/or the maximum capacity allowed for each subscriber. In addition, some states have

requirements on the share of subscriber types, such as residential, commercial, or government subscriptions, as well as LMI elements.

As listed in Table 3, 12 states and the District of Columbia require a minimum subscriber count of between two and 10 subscribers per community solar installation. New Jersey has established a maximum number of subscribers at 250 (per 1-MW project), respectively.<sup>3</sup> Illinois and Maryland have minimum subscription requirements by capacity, and two states (California and Oregon) have other subscriber-related considerations, such as not exceeding a certain MW of subscription per subscriber.

Some states have set a maximum share of a community solar project to which one consumer can subscribe to ensure that greater numbers of subscribers can participate. Ten states require that no more than 40% of a facility’s generation can be attributed to one subscriber.<sup>4</sup> These maximums are most relevant for nonresidential subscribers that may have electricity loads high enough to subscribe to an entire project, if they were allowed to do so. Nonresidential subscribers can lower the cost of a project by decreasing subscriber acquisition costs and ensuring that the developer has access to lower-cost capital; however, because of their larger electricity consumption and relative ease of acquisition and management, these subscribers could squeeze out residential subscribers without these types of policies to ensure residential subscriber participation. Individual residential customers typically subscribe to less than 10 kW of a project, a much smaller amount than the median community solar project size (~2 MW).

**Table 3. Subscriber Eligibility Requirements by State as of 2021**

<b>State</b>	<b>Minimum Subscription Capacity Requirements</b>	<b>Maximum Subscription Capacity Requirements</b>
California <sup>a</sup>	No minimum requirement, although some residential customer interest requirements must be met for a utility to select a developer project for procurement.	No customer can exceed a 2-MW subscription.
Colorado	Each facility must have at least 10 subscribers.	No more than 40% of a facility’s generation can be attributed to one subscriber.
Connecticut	Each facility must have a minimum of 10 subscribers.	No more than 40% of a facility’s generation can be attributed to one subscriber.
Delaware	Each facility must have at least two subscribers.	Not specified.
District of Columbia	Each facility must have at least two subscribers.	Not specified.
Hawaii	Not specified.	No more than 40% of a facility’s generation can be attributed to one subscriber.
Illinois	Minimum subscription size: 0.2 kW.	No more than 40% of a facility’s generation can be attributed to one subscriber.

<sup>3</sup> New Jersey established a 5-MW capacity limit for individual community solar projects, and a maximum of 250 subscribers per megawatt.

<sup>4</sup> The 40% maximum means that a single subscriber cannot subscribe to more than 40% of the project’s capacity.

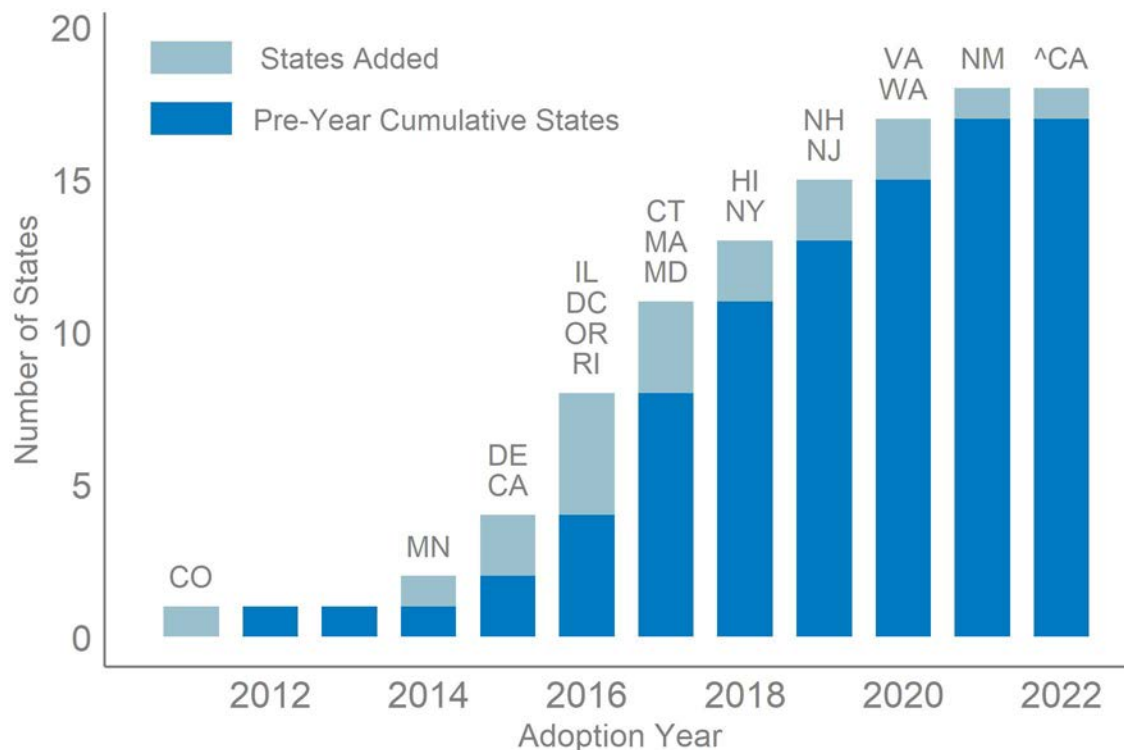
<b>State</b>	<b>Minimum Subscription Capacity Requirements</b>	<b>Maximum Subscription Capacity Requirements</b>
Maine	Maine's active community solar program is net energy billing, which has no limit on subscribers per installation.	
Maryland	Each facility must have at least two subscribers, and utilities may establish minimum 2-kW subscriptions.	Subscriptions larger than 200 kW must not make up more than 60% of a facility's subscriptions.
Massachusetts	Each facility must have at least three subscribers.	No more than two participants can receive credits from more than 25 kW of capacity, and the combined share of those subscriptions cannot exceed 50% of the project capacity.
Minnesota	Each facility must have at least five subscribers.	No more than 40% of a facility's generation can be attributed to one subscriber.
Nevada	Not specified.	50% of the program capacity is reserved for residential customers.
New Hampshire	New Hampshire has not established subscriber requirements.	
New Jersey	Each facility must have at least 10 subscribers, except for multifamily buildings.	No more than 40% of a facility's generation can be attributed to one subscriber. There is a maximum 250 subscribers per 1 MW of capacity.
New Mexico	Each facility must have at least 10 subscribers.	Subscriptions can supply up to 100% of subscribers' average annual electricity consumption. No more than 40% of a facility's generation can be attributed to one subscriber.
New York	Each facility must have at least 10 subscribers.	No more than 40% of a facility's generation can be subscribed to customers with demand of 25 kW or greater.
North Carolina	Each facility must have at least five subscribers.	No more than 40% of a facility's generation can be attributed to one subscriber.
Oregon	50% of individual projects must be subscribed by residential and small commercial customers.	No individual can subscribe to more than 40% of output, and subscribers and their affiliates are limited to 4 MW of capacity per utility territory.
Rhode Island	Each facility must have at least two residential, LMI, or educational institution subscribers.	Subscriptions larger than 25 kW cannot exceed 50% of the project capacity.
South Carolina	South Carolina has not established subscriber requirements.	
Vermont	Vermont has not established subscriber requirements.	
Virginia	Each facility must have at least three subscribers. At least 40% of a facility's capacity must be subscribed by customers with subscriptions of 25 kW or less	No more than 60% of a facility's capacity may be subscribed to by customers with subscriptions greater than 25kW.
Washington	Washington has not established subscriber requirements.	

Note: California^ subscriber eligibility applies to the community solar green tariff program enabled in 2013.

## 2.4 LMI Community Solar

As of June 2022, at least 17 states and the District of Columbia had passed legislation with stipulations that expand community solar access for LMI households (details shown in Table A-3). There are two types of enabling policies for LMI community solar: (1) carve-outs in community solar programs or projects for LMI subscribers, and (2) financial incentives to enhance LMI community solar accessibility. For example, the Colorado Community Solar Garden Act, passed in 2011, was the first state mandate to establish a 5% LMI capacity carve-out for every community solar project. New Mexico’s community solar mandate, passed in 2021, sets aside 30% of capacity from each project for LMI subscribers.

In terms of financial incentives, Illinois has allocated 37.5%–40% of the state’s annual Solar for All budget to subsidize LMI customers for community solar participation. Some states, such as Illinois, Massachusetts, and Colorado, use both approaches. In California, community solar legislation passed in both 2013 and 2022 includes LMI incentives. Based on the legislation approved in 2013, the California Public Utility Commissions (CPUC) adopted a Community Solar Green Tariff (CSGT) program which requires that 50% of community solar subscribers be income-eligible, receive a 20% bill discount, and that projects were located within five miles of customers served (California Public Utilities Commission 2022b). The legislation requirement on LMI subscribers became more specific in 2022, if adopted by CPUC, with a 51% low-income customer subscription carve-out under AB 2316 for new developed community renewable energy program. The state-level LMI policy adoption timeline is illustrated in Figure 4.

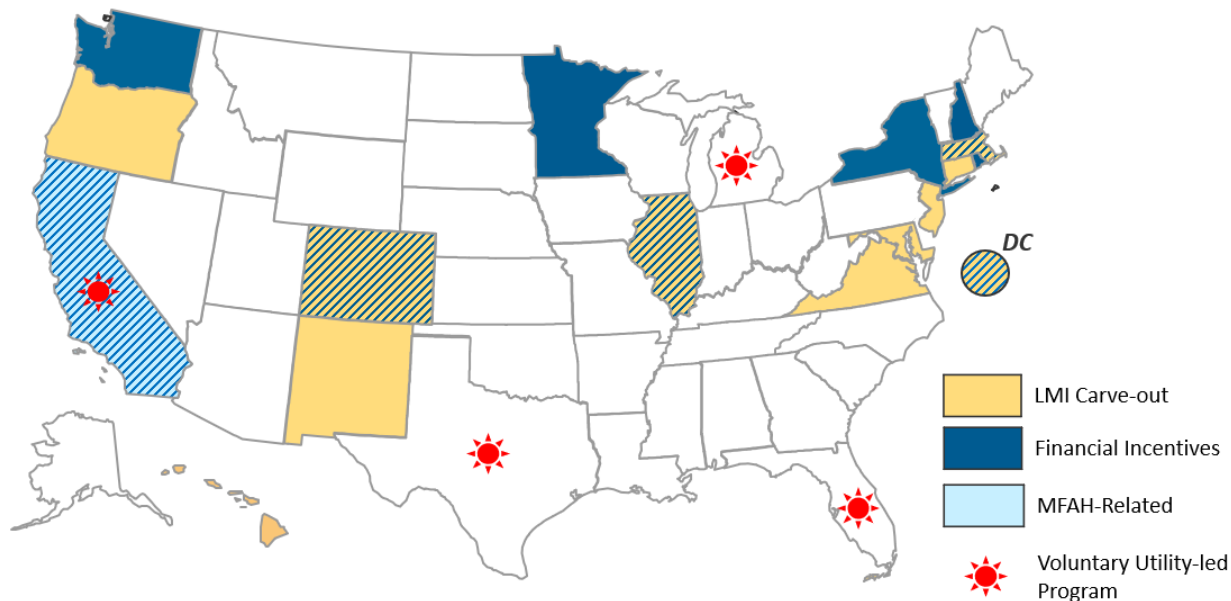


**Figure 4. State-level LMI community solar legislation**

Note: ^California requires that at least 51% of new community renewable energy program capacity serves low-income customers in 2022. States may have multiple LMI community solar programs; see Table A-2 for program details.



Two additional types of efforts related to LMI community solar development are (1) policies to enable community solar for multifamily affordable housing (MFAH) and (2) voluntary (not policy mandated) LMI community solar development. All four types of efforts are presented in Figure 5. For example, California’s Solar on Multifamily Affordable Housing (SOMAH) program provides incentives for installing PV systems on eligible MFAH, which has the effect of expanding community solar access for LMI customers. States may also develop voluntary-based LMI related community solar programs. States such as Michigan, Florida, and Texas have developed community solar pilots or programs with LMI considerations. For example, Florida Power & Light dedicated 37.5 MW of community solar to LMI subscribers.



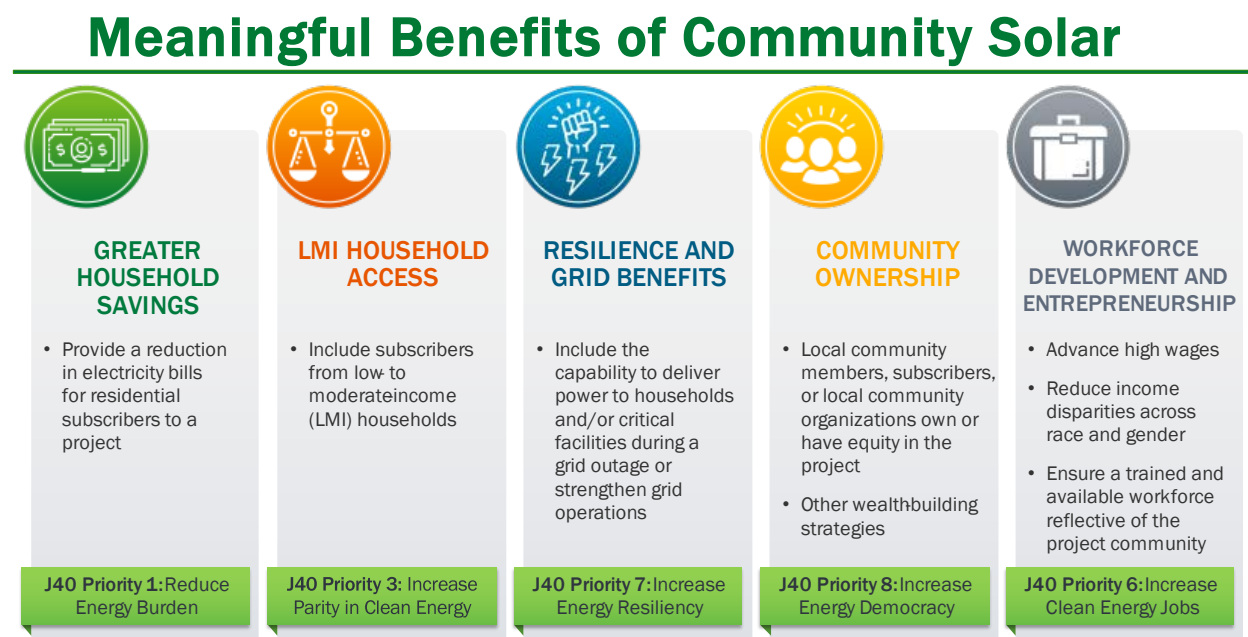
**Figure 5. Types of LMI community solar mandates and voluntary efforts**

### 3 Energy Justice Considerations for State Community Solar Policies

Understanding the ways that community solar projects can benefit disadvantaged communities (DACs) is of interest to many states. In addition to mandates on minimum participation in community solar projects or incentives to enroll LMI households, policymakers can consider adopting program design features to enhance program benefits provided to households residing in DACs. This section describes how community solar policies can support meaningful benefits of community solar as defined by the National Community Solar Partnership (DOE 2022c). These benefits also align with DOE’s implementation of the Justice40 Initiative (“Justice40

Initiative” n.d.).<sup>5</sup> Figure 6 describes the NCSP meaningful benefits of community solar and how they align with the DOE’s Justice40 Initiative.

Some states have also developed their own energy justice policies. For example, New York’s Climate Leadership and Community Protection Act (S6599) requires that 40% of the benefits of the state’s climate spending be directed to DACs.



**Figure 6. National Community Solar Partnership’s Meaningful Benefits Framework (Adapt From DOE. n.d.-c)**

### **Provide Greater Household Savings and Low-to-Moderate-Income Access**

DOE aims to have community solar lead to significant household savings and net benefits for those subscribed to projects. DOE has defined a target of at least 20% reduction in annual electricity bills for residential subscribers (DOE 2022d), which would put savings on par with average savings from rooftop solar installations. Reducing the amount that subscribers pay also translates to reduction in energy burden. Energy burden refers to the percentage of household income spent on home energy costs, which may include electricity, natural gas, and other home heating fuels (DOE 2018). Generally, LMI households suffer from disproportionately higher energy burdens than other households. Community solar can provide greater household savings by lowering the cost of energy and the overall energy bill for a household.

DOE has defined “LMI household access” as ensuring that community solar projects or programs include at least 40% of subscribers from LMI households (DOE 2022c). Specific attention to prioritizing bill reductions for LMI households through community solar, paired with efficiency, weatherization, or bill discount programs, is needed to reduce the LMI energy burden

<sup>5</sup> The Justice40 Initiative is part of Executive Order 14008 and requires that 40% of the benefits of federal investments in categories including clean energy and energy efficiency go to DACs.

to levels comparable to that of non-LMI households. NREL examined the potential for community solar and LMI community solar to reduce household energy burden and found that, for example, the median energy burden of the lowest-income households in Massachusetts (0%–30% of the area median income) would decrease by 20%, from 16.5% to 13.3% by adopting community solar (Heeter, Xu, and Chan 2021). Even so, this LMI household average energy burden is still high compared to the 4.4% burden for households at 80%–100% of the area median income level, which indicates that additional policy and support may be needed to ensure LMI households achieve equitable energy burden reduction. Community solar program administrators may consider other measures, such as consolidated billing, no cancellation fees, and no credit-check requirements, to improve accessibility to community solar for LMI households.

### ***Increase Resilience and Grid Benefits***

Solar does not provide resilience during grid outages unless specifically designed to do so. Using solar plus storage can increase resilience and benefit customers if projects are sited at customer properties. Community solar can enable households located in DACs to access solar energy, and including storage can increase the system’s resilience. The Solar Massachusetts Renewable Target (SMART) program has created additional incentives to support systems paired with energy storage. As of 2020, there was 75 MWac of community solar paired with energy storage operating in Massachusetts and more than 300 MWac in the pipeline for development (Heeter, Xu, and Chan 2021). In addition, new community solar compensation rates, for example, California’s proposed export credit rate (ECR), could have the effect of benefiting community solar paired with storage (Wood Mackenzie 2022).

### ***Facilitating Community Ownership***

Community ownership can be conferred through financial ownership in, or democratic control of, community solar projects. For example, creating an LLC where community members are “shareholders” was used by the Mad River Community Solar Farm in Vermont in 2015. Other structures, such as consumer-owned cooperatives, housing cooperatives, and consumer-owned utilities, can also confer financial benefits from projects to community members.

Facilitating community ownership can also be accomplished through components of energy democracy. The Initiative for Energy Justice (2019) defines energy democracy as “the notion that communities should have a say and agency in shaping their energy future.” Energy democracy encompasses many aspects of restorative justice—ensuring that harms associated with the energy system of the past are repaired by centering energy justice concerns in the shift to a renewable energy future.

States can support energy democracy by ensuring that stakeholder proceedings are transparent and accountable. They can also support participation by addressing barriers such as limited time, resources, or technical expertise. For example, some states allow proceeding participants (“intervenor”) to recover the costs of their participation. In California, the Intervenor Compensation Program can cover the cost of having attorneys, experts, or other staff participate in regulatory proceedings on behalf of residential or small commercial electric utility customers (NARUC 2021).

## ***Supporting an Equitable Workforce and Entrepreneurship***

State policymakers may consider pairing their community solar programs with job creation efforts. This may be of interest to states as they broadly seek to expand their clean energy workforces or as they target job creation in underserved communities.

For example, Illinois' Climate and Equitable Jobs Act includes a broad set of energy reforms ("Illinois Shines" 2022). The act not only expands the state's community solar program, but also provided plans for job training and clean job workforce network development. The act requires the establishment of 13 program delivery hub sites to support the career pipeline for clean-energy-related jobs.

As the clean energy economy grows, more clean energy businesses will be created, and existing enterprises will be expanded. To avoid replication of existing business ownership structures, community solar policymakers and programs can consider providing specifications for participation by minority business enterprises (MBEs). For example, Heeter and Reames (2021) provide a policy framework for incorporating energy justice into utility-scale PV deployment. One pathway for state policymakers is to consider competitive community solar procurement strategies that provide a minimum amount of project awards to MBEs. This was done in South Africa under the Renewable Independent Power Producer Program. The program evaluated project proposals in part based on economic development criteria, including project ownership by local communities and by Black residents.

An equitable workforce also includes creating opportunities for minority-owned businesses. Deploying solar assets requires capital that has traditionally come from large financial institutions. This capital may come at a higher cost for smaller organizations, those new to the development space, and households with low or no credit score.

States could leverage the work they have done in lowering the cost of capital for LMI rooftop PV for community solar. For example, in the rooftop solar space, Connecticut Green Bank launched the Solar for All program, which provided a solar lease for LMI rooftop solar (Connecticut Green Bank 2019). The solar installation was paired with energy efficiency so that households saw additional monthly bill savings. Connecticut Green Bank worked with PosiGen to launch the program, which did not use credit scores to qualify customers.

At the federal level, DOE's Community Power Accelerator is supporting the development of a pipeline of credit-ready community solar projects. DOE is developing an online marketplace to connect investors, philanthropic organizations, and developers of credit-ready community solar projects, thereby reducing the cost of capital, particularly for businesses new to community solar development (DOE 2022b). As part of this initiative, the Center for Impact Finance at the University of New Hampshire's Carsey School of Public Policy is offering free online training for nonprofit organizations, cooperatives, and mission-driven organizations interested in developing community solar projects through the Community Power Accelerator Learning Lab.

## 4 Summary and Conclusions

State community solar policies have evolved over the last 15 years as more states have adopted policies. Between 2008 and June 2022, 22 states and the District of Columbia adopted policies that enable or require community solar development. These actions, along with voluntary deployment led by utilities in another 19 states, have led to the creation of a national market of greater than 5.7 GWac as of June 2022. Nearly every state with a community solar policy has some method of capping deployment, either through a broad cap on solar deployment, a cap specific to community solar, or a cap instituted by regulators when approving specific utility-led programs. These program caps will influence the ability of community solar to scale across the country.

In early community solar policy discussions, stakeholders considered how “local” projects must be in relation to where customers lived. Although all state community solar policies require that subscribers be located in the same electric service territory as their projects, three states include additional requirements that subscribers can be located in the same or an adjacent county.

Policymakers have also taken action to ensure that community solar projects benefit more than one customer. States have done this by setting minimum and maximum numbers of subscribers per project and/or maximum capacities for each subscriber. These requirements can also help states regulate how projects provide access to multiple types of subscribers, such as residential and nonresidential subscribers.

In recent years, states have been more active in establishing approaches to facilitate LMI community solar access. In 2021, at least 17 states and the District of Columbia had policies that supported LMI community solar.

States also have other opportunities to incorporate energy justice principles into community solar deployment. States can draw from innovations in energy justice policies and programs in the broader solar or renewable energy space—for example, by finding ways to ensure greater household savings, expanding LMI access, including ways for community solar to provide resilience and grid benefits, incentivizing community ownership, and developing an equitable workforce and opportunities for entrepreneurship.

Looking to the future, states could consider how to use funding from the Inflation Reduction Act to support their community solar goals. The Inflation Reduction Act includes bonus credits for up to 1.8 GW of projects that provide financial benefits to LMI households; these projects could include community solar projects. The Inflation Reduction Act also established a Greenhouse Gas Reduction Fund, which provides \$7 billion for competitive grants to enable zero-emission technologies, such as community solar, in low-income and disadvantaged communities. States could consider how these new funding streams and incentives will interact with their existing state policy and incentive landscape.

## References

California Public Utilities Commission. 2022a. “The Disadvantaged Communities Green Tariff DAC-GT Program.” 2022. <https://www.cpuc.ca.gov/industries-and-topics/electrical-energy/solar-in-disadvantaged-communities/the-disadvantaged-communities-green-tariff-dac-gt-program>.

California Public Utilities Commission. 2022b. “The Community Solar Green Tariff CSGT Program.” 2022. <https://www.cpuc.ca.gov/industries-and-topics/electrical-energy/demand-side-management/solar-in-disadvantaged-communities/the-community-solar-green-tariff-csgt-program>

Chan, Gabriel, Jenny Heeter, and Kaifeng Xu. 2022. “Sharing the Sun Community Solar Project Data (June 2022).” Golden, CO: National Renewable Energy Laboratory. <https://doi.org/10.7799/1845718>.

Connecticut Green Bank. 2019. “New Report Highlights Connecticut’s Solar For All Program as an Example of Clean Energy Policy Innovation.” Connecticut Green Bank, November 6, 2019. <https://www.ctgreenbank.com/cesa-report-highlights-solar-for-all-program/>.

Cook, Jeffrey J, and Monisha R Shah. 2018. *Focusing the Sun: State Considerations for Designing Community Solar Policy*. NREL/TP-6A20-70663. Golden, CO: National Renewable Energy Laboratory. <https://doi.org/10.2172/1419711>.

DOE. 2018. “Low-Income Household Energy Burden Varies Among States — Efficiency Can Help In All of Them.” DOE/GO-102018-5122. Washington, D.C.: U.S. Department of Energy. [https://www.energy.gov/sites/default/files/2019/01/f59/WIP-Energy-Burden\\_finalv2.pdf](https://www.energy.gov/sites/default/files/2019/01/f59/WIP-Energy-Burden_finalv2.pdf).

DOE. 2021. “DOE Sets 2025 Community Solar Target to Power 5 Million Homes.” Energy.Gov. October 8, 2021. <https://www.energy.gov/articles/doe-sets-2025-community-solar-target-power-5-million-homes>.

DOE. 2022a. “Community Solar and Low-Income Utility Allowances.” Energy.Gov. Accessed September 28, 2022. <https://www.energy.gov/communitysolar/community-solar-and-low-income-utility-allowances>.

DOE. 2022b. “National Community Solar Partnership Credit Ready Solar Initiative.” DOE/EEE-2540. Washington, D.C.: U.S. Department of Energy. [https://www.energy.gov/sites/default/files/2022-02/NCSP%20Credit%20Ready%20Solar%20Initiative\\_0.pdf](https://www.energy.gov/sites/default/files/2022-02/NCSP%20Credit%20Ready%20Solar%20Initiative_0.pdf).

DOE. 2022c. “Sunny Awards for Equitable Community Solar.” Washington, D.C.: U.S. Department of Energy. [https://americanmadechallenges.org/challenges/sunnyawards/docs/Sunny\\_Awards\\_Official\\_Prize\\_Rules.pdf](https://americanmadechallenges.org/challenges/sunnyawards/docs/Sunny_Awards_Official_Prize_Rules.pdf).

DOE. n.d.-a. “Multifamily Affordable Housing Collaborative.” Accessed December 5, 2022. <https://www.energy.gov/communitysolar/multifamily-affordable-housing-collaborative>

- DOE. n.d.-b. “National Community Solar Partnership.” Accessed December 8, 2022. <https://www.energy.gov/communitysolar/community-solar>.
- DOE. n.d.-c. “Education and Outreach.” Accessed March 27, 2023. <https://www.energy.gov/communitysolar/education-and-outreach>.
- EIA. 2022. “Annual Electric Power Industry Report, Form EIA-861 Detailed Data Files.” U.S. Energy Information Administration. <https://www.eia.gov/electricity/data/eia861/>.
- EPA. 2021. “Power Plants and Neighboring Communities.” January 24, 2021. <https://www.epa.gov/airmarkets/power-plants-and-neighboring-communities>.
- Gheorghiu, Iulia. 2020. “Florida Signs off on FPL’s 1.5 GW Community Solar Program, Despite Lack of Competition.” Utility Dive. March 4, 2020. <https://www.utilitydive.com/news/florida-signs-off-on-fpls-15-gw-community-solar-program-despite-lack-of-c/573428/>.
- Halliday, Tobias. 2022. “Treatment of Community Solar Credits on Tenant Utility Bills.” Washington, D.C.: U.S. Department of Housing and Urban Development. [https://www.hud.gov/sites/dfiles/Housing/documents/MF\\_Memo\\_Community\\_Solar\\_Credits\\_signed.pdf](https://www.hud.gov/sites/dfiles/Housing/documents/MF_Memo_Community_Solar_Credits_signed.pdf).
- Heeter, Jenny and Tony Reames. 2022. “Incorporating energy justice into utility-scale photovoltaic deployment: A policy framework.” *Renewable Energy Focus* 42: 1–7. <https://doi.org/10.1016/j.ref.2022.04.003>.
- Heeter, Jenny, Kaifeng Xu, Matthew Grimley, Gabriel Chan, and Emily Dalecki. 2022. Status of State Community Solar Program Caps. Golden, CO: National Renewable Energy Laboratory. NREL/TP-6A20-84077. <https://www.nrel.gov/docs/fy23osti/84077.pdf>.
- Heeter, Jenny, Kaifeng Xu, and Gabriel Chan. 2021. “Sharing the Sun: Community Solar Deployment, Subscription Savings, and Energy Burden Reduction.” NREL/PR-6A20-80246. Golden, CO: National Renewable Energy Laboratory. <https://www.nrel.gov/docs/fy21osti/80246.pdf>.
- HUD. 2022. “Biden Administration Announces Steps to Lower Electricity Bills for Residents in HUD Programs.” U.S. Department of Housing and Urban Development. July 27, 2022. [https://www.hud.gov/press/press\\_releases\\_media\\_advisories/hud\\_no\\_22\\_136](https://www.hud.gov/press/press_releases_media_advisories/hud_no_22_136).
- “Illinois Shines.” 2022. Accessed September 28, 2022. <https://illinoisshines.com/about/>.
- Initiative for Energy Justice. 2019. *The Energy Justice Workbook*. <https://iejusa.org/wp-content/uploads/2019/12/The-Energy-Justice-Workbook-2019-web.pdf>.
- “Justice40 Initiative.” n.d. Energy.Gov. Accessed September 28, 2022. <https://www.energy.gov/diversity/justice40-initiative>.

Maine Public Utilities Commission. 2022. Public Utilities Commission Inquiry Regulation Net Energy Billing Evaluation. Accessed February 28, 2022. <https://mpuc-cms.maine.gov/CQM.Public.WebUI/Common/CaseMaster.aspx?CaseNumber=2020-00199>

NARUC (National Association of Regulatory Utility Commissioners). 2021. *State Approaches to Intervenor Compensation*. <https://pubs.naruc.org/pub/B0D6B1D8-1866-DAAC-99FB-0923FA35ED1E>.

Spector, Julian. 2022. “California Is Finally Unlocking Community Solar for the Masses.” Canary Media. September 8, 2022. <https://www.canarymedia.com/articles/solar/california-is-finally-unlocking-community-solar-for-the-masses>.

State of California. 2022. AB-2316 Public Utilities Commission: Customer Renewable Energy Subscription Programs and the Community Renewable Energy Program. [https://leginfo.legislature.ca.gov/faces/billStatusClient.xhtml?bill\\_id=202120220AB2316](https://leginfo.legislature.ca.gov/faces/billStatusClient.xhtml?bill_id=202120220AB2316).

Virginia General Assembly. 2020. § 56-594.3. Shared Solar Programs. <https://law.lis.virginia.gov/vacode/56-594.3/>.

Wood Mackenzie. 2022. US community solar market outlook H1 2022. July 2022. <https://www.woodmac.com/reports/power-markets-us-community-solar-market-outlook-h1-2022-150053488/>.



## Appendix A. Community Solar Enabling Legislation and/or Regulation by State

Table A-1. Relevant Community Solar Policies and Reference Material by State

State	Initial Year	Policy or Program Name	Initial Policy/Regulation	Other Comments
California	2022	Community Renewable Energy Act	<a href="#">AB-2316: Public Utilities Commission: customer renewable energy subscription programs and the community renewable energy program</a>	Proceeding A.22-05-022 Et Al.
<p>Other Policies/Regulations in California</p> <p>GTSR Program: Enhanced Community Renewables:  <a href="#">Senate Bill 43 Electricity: Green Tariff Shared Renewables Program (2013)</a>            Decision <a href="#">15-01-051</a> Green Tariff Shared Renewables Program (2015)</p> <p><a href="#">PUC Mandate: Rulemaking 14-07-002 Regarding Net Energy Metering (2018)</a></p> <p>Disadvantaged Communities Green Tariff (DAC-GT) and Community Solar Green Tariff (CSGT) Programs:  <a href="#">AB 327: Electricity: natural gas: rates: net energy metering: California Renewables Portfolio Standard Program (2013)</a>  <a href="#">CPUC Decision 18-06-027: Solar in Disadvantaged Communities (2018)</a></p> <p><a href="#">SOMAH Program:</a>            Assembly Bill (AB) 693 (Eggman, Chapter 582, 2015)  <a href="#">Decision : 17-12-022</a> Solar on Multifamily Affordable Housing (2017)</p> <p>California Department of Community Services and Development: <a href="https://www.csd.ca.gov/Pages/Community-Solar-Pilot.aspx">https://www.csd.ca.gov/Pages/Community-Solar-Pilot.aspx</a>  <a href="#">CEC-400-2018-020: Building Energy Efficiency Standards for Residential and Nonresidential Buildings (2019)</a></p>				
Colorado	2010	Xcel Energy leads community solar development in CO:	<a href="#">HB 10-1342: Colorado Community Solar Gardens Act (2010)</a>	

State	Initial Year	Policy or Program Name	Initial Policy/Regulation	Other Comments
		<a href="#">Solar*Reward Community Program</a>		
Other Policies/Regulations in Colorado <a href="#">PUC Decision R11-0784: Amendment to HB 10-1342 (2011)</a> <a href="#">CEO: Low-Income Community Solar Demonstration Project (2015)</a> <a href="#">HB 19-1003: Community Solar Gardens Modernization Act (2019)</a> <a href="#">AB-2316 Public Utilities Commission: customer renewable energy subscription programs and the community renewable energy program (2022)</a>				
Connecticut	2015	Shared Clean Energy Facility Pilot Program	<a href="#">Senate Bill No. 928 Public Act 15-113: Establishing a Shared Clean Energy Facility Pilot Program (2015)</a>	
Other Policies/Regulations in Connecticut <a href="#">DPUC Docket 19-07-01: Review of Statewide Shared Clean Energy Facility Program Requirements (2019)</a> <a href="#">DEEP: Shared Clean Energy Facility Pilot Program (2020)</a>				
Delaware	2021	Community Owned Energy Generating Facilities And Renewable Energy	<a href="#">SB 2: An Act To Amend Titles 6, 26, And 29 Of The Delaware Code Relating To Community Owned Energy Generating Facilities And Renewable Energy</a>	
Delaware	2010	Virtual (Community) Net Metering	<a href="#">SB267 Net Metering Act Amendment (2010)</a>	The net metering bill allows for customers participating in a community-owned energy-generating facility to be credited in kWh.
Other Policies/Regulations in Delaware <a href="#">PSC Docket 49: Implementation of SB267 (2011)</a> <a href="#">3001 Rules for Certification and Regulation of Electric Suppliers (2015)</a>				
District of Columbia	2013; 2017	Solar for All	CREA: Community Renewable Energy Amendment Act of 2013	Community solar program has been implemented since 2017.
Other Policies/Regulations in the District of Columbia				

State	Initial Year	Policy or Program Name	Initial Policy/Regulation	Other Comments
B21-0650 – Renewable Portfolio Standard Expansion Amendment Act of 2016 DOEE: Solar For All Implementation Plan (2017)				
Hawaii	2015	Community-Based Renewable Energy	<a href="#">SB1050: Community-Based Renewable Energy Program, Tariff: Public Utilities Commission (2015)</a>	
Other Policies/Regulations in Hawaii <a href="#">Docket 2015-0389 Pilot Rules (2015)</a> <a href="#">Docket 2015-0389 CBRE Phase 1 Program Tariff (2018)</a> <a href="#">Docket 2015-0389 Order 37070: Commencing Phase 2 of CPREP (2020)</a>				
Illinois	2016;2019	Solar for All Program (2016)  Illinois Shines (2019)	<a href="#">Senate Bill No. 2814 Public Act 099-0906 An Act Concerning Regulation (2016)</a>  <a href="#">Public Act 102-0662</a>	Solar for All enables multiple community-solar-related subprograms, including the Adjustable Block Program (also called the Illinois Shines Program), the Low-Income Community Solar Program, and the Low-Income Community Solar Pilot Program.  Illinois Adjustable Block Program was developed by Illinois Power Agency in 2019 through the Climate and Equitable Job Act. This program is also known as Illinois Shines
Other Policies/Regulations in Illinois <a href="#">Docket 17-0838: Final Long-Term Renewable Resources Procurement Plan (2018)</a> <a href="#">SB2408 Public Act 102-0662 Climate and Equitable Jobs Act (2021)</a>				
Massachusetts	2008; 2017	Solar Massachusetts Renewable Target (SMART) program (2017)	<a href="#">Senate Bill No. 2768: An Act Relative to Green Communities</a>	Massachusetts transitioned from the RPS Solar Carve-Out II program to the SMART program in 2017.
Other Policies/Regulations in Massachusetts <a href="#">Ch. 75: An Act Relatives to Solar Energy (2016)</a>				

State	Initial Year	Policy or Program Name	Initial Policy/Regulation	Other Comments
<a href="#">225 CMR 20.00: MA SMART Program (2016)</a> <a href="#">DER SMART: Capacity Block, Base Compensation Rate, and Compensation Rate Adder Guidelines (2018)</a>				
Maryland	2015	Community Solar Energy Generating Systems (CSEGS) Pilot Program	<a href="#">Maryland House Bill 1087 Electricity—Community Solar Energy Generating System Program</a>	
Other Policies/Regulations in Maryland <a href="#">PSC: Community Solar Pilot Program (2017)</a> <a href="#">HB683: Electricity – Community Solar Energy Generating Systems Pilot Program – Extension (2019)</a>				
Maine	2009; 2019	Virtual (Community) Net Metering	<a href="#">Maine House Bill 272 Net Energy Billing Rule To Allow Shared Ownership</a>	Net energy billing rule in 2009 allows shared ownership. The 2019 act promotes solar (including shared solar) project development in Maine. Currently, the LD 1711 is inactive and Main is now implementing Net Energy Billing Program
Other Policies/Regulations in Maine <a href="#">LD 1711: An Act To Promote Solar Energy Projects and Distributed Generation Resources in Maine (2019)</a> <a href="#">PUC Case 2019-00219, DG Procurement Rules (2019)</a> <a href="#">An Act To Amend State Laws Relating to Net Energy Billing and the Procurement of Distributed Generation (2021)</a>				
Minnesota	2013	Xcel Energy leads community solar development in MN: <a href="#">Community Solar Gardens</a>	<a href="#">HF 729: Solar Energy Jobs Act (2013)</a>	
Other Policies/Regulations in Minnesota <a href="#">Docket M-13-867, Adder: Approval of Proposed CSG Program</a>				
North Carolina	2017	Community Solar Program	<a href="#">HB 589: Reform Integration of RE Generation, Enact Distributed Resource Access Act (2017)</a>	
Other Policies/Regulations in North Carolina				

State	Initial Year	Policy or Program Name	Initial Policy/Regulation	Other Comments
<a href="#">NCUC R8-72: Community Solar Program (2017)</a> <a href="#">NCUC Order Approving Revised Duke CS Program Plan and Riders (2017)</a> <a href="#">NCUC Duke Joint Interim Report (2019)</a>				
New Hampshire	2013	Virtual Net Metering	<a href="#">SB98: Authorizing group net metering for limited electrical energy procedures (2013)</a>	A customer-generator may elect to become a group host for the purpose of reducing or otherwise controlling the energy costs of a group of customers who are not customer-generators.
Other Policies/Regulations in New Hampshire <a href="#">SB129: Requiring portion of renewable energy fund to benefit LMI residential customers (2017)</a> <a href="#">SB165: Relative to net energy metering by low-moderate income community solar projects (2019)</a>				
New Jersey	2018	Community Solar Energy Pilot Program	<a href="#">P.L. 2018, Ch. 17: Act Concerning Clean Energy (2018)</a>	
Other Policies/Regulations in New Jersey <a href="#">BPU Docket QO18060646: Community Solar Energy Pilot Program Rules (2019)</a> <a href="#">BPU Awards 165 MW of Community Solar to 105 Projects in Pilot Year 2 (2021)</a>				
New Mexico	2021	Community Solar Program	<a href="#">Senate Bill No. 84 Community Solar Act (2021)</a>	
Nevada	2019	Community Solar Program	<a href="#">AB645: Requiring electric utilities to offer an expanded solar access program (2019)</a>	
New York	2015	Community Distributed Generation	<a href="#">15-E-0082: Community Solar (Community Net Metering) Orders and Rulings</a>	
Other Policies/Regulations in New York <a href="#">15-E-0751: Order for Net Metering Successor Tariff</a> <a href="#">CASE 14-M-0101 – Proceeding on Motion of the Commission in Regard to Reforming the Energy Vision</a>				
Oregon	2016	Community Solar Program	<a href="#">SB 1547: Requires each electric company to retail consumers to</a>	

State	Initial Year	Policy or Program Name	Initial Policy/Regulation	Other Comments
			<a href="#">eliminate coal-fired resources from supply (2016)</a>	
Other Policies/Regulations in Oregon <a href="#">Order No. 17 232 (2017)</a> <a href="#">Oregon Community Solar Program Implementation Manual</a> <a href="#">Oregon Community Solar Program Fees and credits</a>				
Rhode Island	2016	Virtual (Community) Net Metering	<a href="#">Senate Bill 2450 Substitute B. Relating to Public Utilities and Carriers—Renewable Energy</a>	Enables community remote net metering scheme.
Other Policies/Regulations in Rhode Island <a href="#">HB8354: Relating to public utilities and carriers – renewable energy programs (2016)</a> <a href="#">HB7280: Relating to public utilities and carriers – net metering (2020)</a>				
South Carolina	2014	Pilot Program leads by Duke Energy	<a href="#">Act 236: Distributed Energy Resource Program Act (2014)</a>	
Other Policies/Regulations in South Carolina <a href="#">2015-54-E: SC Electric &amp; Gas Company Petition for Approval To Participate in a Distributed Energy Resource Program</a> <a href="#">Act 62: South Carolina Energy Freedom Act (2019)</a>				
Vermont	2012	Virtual (Group) Net Metering	<a href="#">House Bill 475 relating to net metering and definitions of capacity</a>	
Virginia	2017	Community Solar Pilot Program	<a href="#">Senate Bill 1393 relating to electric utility regulation; pilot programs for community solar development</a>	
Other Policies/Regulations in Virginia <a href="#">HB572: Regulation of sales of electricity under third-party sales agreements; net energy, etc. (2020)</a> <a href="#">HB573: Community solar development pilot program; low-income communities (2020)</a>				
Washington	2009; 2017	Community Solar (Production Incentive)	<a href="#">Senate Bill 6170 Environmental Tax Incentives (2009)</a>	Community solar was first defined in 2009.
Other Policies/Regulations in Washington <a href="#">SB5939: Promoting a sustainable, local RE industry through modifying RE system tax incentives (2017)</a> <a href="#">WSU Energy Program: The Renewable Energy System Incentive Program (2019)</a>				

**Table A-2. LMI Community Solar Program by State**

State Program	State	Year	Level	Program Status (Launch Date)	Program Structure
<a href="#">California Solar on Multifamily Affordable Housing (SOMAH)</a>	CA	2019	State	Active (2019)	Financial incentives for installing PV solar systems on eligible multifamily affordable housing
<a href="#">California Imperial Irrigation District Community Solar Project</a>	CA	2019	Project	Active (2019)	Launched a new 30-MW community solar project dedicated to low-income customers
<a href="#">Community Solar Green Tariff (CGST)</a>	CA	2018	State	Active (2018)	Community solar for disadvantaged communities, enabling 41 MW to be developed
<a href="#">California Multifamily Affordable Solar Housing (MASH)</a>	CA	2015	State	Closed to new applicants (2015)	Incentives for solar systems on multifamily housing
<a href="#">Xcel Energy's settlement agreement regarding the utility's 2022-2025 Renewable Energy Plan</a>	CO	2017	Program	Launched (2017)	13.5 MW of Request for proposal (RFPs) for new LMI community solar systems, Xcel Energy assuming a 5% carve-out through the new program
<a href="#">Colorado Low-Income Community Shared Solar Demonstration Projects</a>	CO	2015	Project	Closed (2015)	Incentives for 1.5 MW of dedicated LMI community solar arrays
<a href="#">Colorado Community Solar Gardens Act</a>	CO	2011	State	Active (2011)	Specified LMI participation levels: 5% of each project designated through rulemaking
<a href="#">Statewide Shared Clean Energy Facility (SCEF) Program</a>	CT	2022	State	Active (2022)	Program allows projects ranging in size from 100 to 5,000 kilowatts (AC), starting in the Year 4 Procurement. Earlier SCEF procurements only allowed projects up to 4,000 kilowatts. Further, Public Act 22-14 increased the yearly program capacity from 25 megawatts to 50 megawatts
<a href="#">Connecticut Shared Clean Energy Facility Pilot Program</a>	CT	2017	State	Active (2017)	5.2 MW across three projects, with 20% LMI participation in each; Senate Bill 9 (2018) made the Shared Clean Energy Facility program permanent, allowing up to 25 MW of projects per year, with 10% of capacity toward LI subscribers and 10% to LMI or low-income service organizations
<a href="#">District of Columbia Solar for All</a>	DC	2016	State	Active (2016)	Program required to reduce electricity bills of at least 100,000 low-income households by at least 50% (community solar is one piece of this program); incentives for demonstration projects

State Program	State	Year	Level	Program Status (Launch Date)	Program Structure
<a href="#">Florida SolarTogether Program</a>	FL	2020	Program	<a href="#">Active (2020)</a>	FPL SolarTogether Phase I will reserve capacity for low-income customers. FPL will allocate 10% of the residential capacity, or 37.5 MW, to low-income customers
<a href="#">Hawaii Community-Based Renewable Energy</a>	HI	2018	State	Active (2018)	Specified LMI participation levels: 50% for 9 MW of utility-led projects
<a href="#">Illinois Low-Income Community Solar Pilot</a>	IL	2019	State	Active (2019)	Rather than applying to the Illinois Solar for All Program and receiving an administratively determined Renewable Energy Credit price (as is the case for the other Illinois Solar for All subprograms), projects selected through the Low-Income Community Solar Pilot will receive a \$/REC price determined through a competitive bidding process.
<a href="#">Illinois Solar for All Low-Income Community Solar Program</a>	IL	2018	State	Active (2018)	The budget for the Low-Income Community Solar program is up to \$12.5 million per year, making it a highly competitive application process for approved vendors. Qualified participants who subscribe to a Low-Income Community Solar project do not incur upfront costs, and any ongoing costs and fees will not exceed 50% of the value of the energy produced.
<a href="#">Illinois Adjustable Block Program</a>	IL	2019	State	Active (2019)	Illinois Adjustable Block Program was developed by Illinois Power Agency in 2019 through the Climate and Equitable Job Act. This program is also known as Illinois Shines
<a href="#">Solar Massachusetts Renewable Target (SMART)</a>	MA	2018	State	Active (2018)	1,600-MW declining block net metering program. Community solar serving at least 50% low-income customers receives an added 6 cents/kWh; low-income community solar projects less than 25 kW will receive 230% of the base compensation rate
<a href="#">Massachusetts Virtual Net Metering</a>	MA	2017	-	Phasing out (2017)	Incentives to LMI customers: LMI customers are eligible for low-interest financing from the Mass Solar Loan program
<a href="#">Maryland Community Solar Pilot Program</a>	MD	2017	State	Pilot (2017)	Specified LMI participation levels: 17.5 MW carve-out for Low Income subscribers, with an additional 35 MW carved-out for either Low or Moderate Income subscribers
<a href="#">Michigan Energy Office's Low-Income Community Solar Program</a>	MI	2018	State	Active (2018)	In CELICA phase 1, Energy Services partnered with Cherryland Cooperative and the Northwest Michigan Community Action Agency (NMCCA) to deliver \$350/year in additional savings for participating, previously weatherized, low-income households



State Program	State	Year	Level	Program Status (Launch Date)	Program Structure
<a href="#">Michigan MIGreenPower Community Impact Pilot</a>	MI	2021	Pilot	In Development	Committed by DTE, the Michigan MIGreenPower Community Impact Pilot aims to bring community solar projects to three communities (Detroit, Highland Park and River Rouge).
<a href="#">Minnesota Xcel 2019 Solar*Rewards Program</a>	MN	2019	Program	Launched (2019)	Xcel Energy opened its 2019 Solar*Rewards Program for residential and commercial customers on Jan. 28, 2019, with approximately \$1 million of the \$10 million program earmarked for its Income-Qualified Customers program
<a href="#">Xcel Community Solar Garden</a>	MN	2014	State	Active (2014)	Utilities are required by commission to submit plans for LMI projects. Xcel's pilot proposal involves a 0.5-MW–1.0-MW system providing free subscriptions to low-income customers
<a href="#">NH Senate Bill 270 Low to Moderate Income Community Solar Program</a>	NH	2022	State	Active (2022)	Establishes an opportunity for certain additional LMI electric customers to participate in designated community solar projects eligible for the 2.5¢ per kWh adder for net export compensation
<a href="#">New Jersey Community Solar Energy Pilot Program (Senate Bill 877)</a>	NJ	2019	State	Active (2019)	Senate Bill 877 directs the Board of Public Utilities to develop a community solar pilot program; the program must “provide access” to LMI customers. In year 1, at least 40% of program capacity (i.e., at least 30 MW) will be allocated to LMI projects
<a href="#">Senate Bill 84: Community Solar Act</a>	NM	2021	State	Active (2021)	Paving the way for a statewide community solar program in 2022 that includes a 30% capacity carve-out for low-income people and service organizations
<a href="#">Assembly Bill 465: Establishes provisions relating to solar energy</a>	NV	2019	State	Active (2019)	25% of program capacity must be for low-income eligible customers
<a href="#">Con Edison's Implementation Plan for "Shared Solar" Project for Low-Income Customers</a>	NY	2018	Program	Active (2018)	While the pilot project will initially produce 3 MW of power, Con Edison could propose and seek commission approval of an expansion to 11 MW that could serve a total of 6,000 customers if the pilot is deemed successful
<a href="#">NYSERDA Low-Income Community Solar Initiative Through Solar For All program</a>	NY	2018	State	Active (2018)	NYSERDA announced that nine community solar projects throughout New York have been awarded contracts through the “Solar For All” program. This is the first in a series of awards under the program to provide access to no-cost community solar to 10,000 low-income New Yorkers
<a href="#">NY Affordable Solar Predevelopment and Technical Assistance Program</a>	NY	2017	State	Active (2017) Closed to new applications	Provides incentives to LMI community solar customers. As of Q3 2019, 21 projects (26 MW total, or 21 MWac) projects have been approved

State Program	State	Year	Level	Program Status (Launch Date)	Program Structure
<a href="#">Oregon Community Solar Program Low-Income Participants</a>	OR	2016	State	Active (2016)	The Oregon Community Solar Program is designed to expand solar access for low-income utility customers. 10% of the program's capacity has been reserved for low-income customers
<a href="#">Oregon Senate Bill 1547 Community Solar</a>	OR	2016	State	Active (2016)	The community solar legislation and rules require that 10% of the program capacity serve low-income customers. The initial PUC guidance suggests a requirement that each project have 5% allocated to low-income customers
<a href="#">Rhode Island Community Remote Net Metering</a>	RI	2016	State	Active (2016)	Incentives to LMI developers: \$200/LMI subscriber bonus to the developer that is passed on to LMI subscribers
<a href="#">Duke Energy Shared Solar Program</a>	SC	2018	Program	Active (2018)	Duke's 5-MW community solar program involves 1 MW of shared solar, of which 400 kW are carved out for low-income customers in the company's South Carolina territory
<a href="#">South Carolina Electric &amp; Gas (SCE&amp;G) Program</a>	SC	2017	Program	Active (2017)	The SCE&G program, which reached full subscription for all customers (both LMI and non-LMI) in October 2017, includes 1 MW of capacity specifically for LMI customers
<a href="#">Austin Energy La Loma Community Solar farm</a>	TX	2018	Project	Active (2018)	Austin Energy, with the completion of La Loma Community Solar farm in East Austin, is providing 100% local solar to 440 participating customers, including 220 low-income households
<a href="#">Virginia Shared solar programs</a>	VA	2020	State	Active (2020)	Under the new statute, the commission is to approve a shared solar program of 150 MW with a minimum requirement of 30% low-income customers. Low-income customers shall be exempt from the minimum bill.
<a href="#">Community Solar for Community Action</a>	VT	2019	Project	Active (2019) Closed to new applications	This innovative project will consist of a 150-kW ground- and roof-mounted solar array sited on Southeastern Vermont Community Action's property in Westminster, VT. Approximately 70 of SEVCA's low-income clients with high energy burdens will become subscribers to the solar project and receive virtual net metering credits as a form of energy assistance
<a href="#">Affordable Community Renewable Energy</a>	VT	2021	Program	Active (2021)	The ACRE program offers Vermont distribution utilities to use community renewable energy projects to provide economic assistance to low income customers by reducing their electric bills. Each utility has designed their own program with total \$10 million fundings available.

State Program	State	Year	Level	Program Status (Launch Date)	Program Structure
<a href="#">Solar Deployment Grant Program - Clean Energy Fund</a>	WA	2019	Program	Active (2019). Closed to new applications by Dec 2020	This program is for the deployment of solar projects in Washington state. Applications are now open for a new grant solicitation focused on Low-Income Community Solar Deployment (LICSD)

For additional information, see: <https://www.nrel.gov/docs/fy19osti/71652.pdf>

**Table A-3. Community Solar Caps and LMI Carve-Outs by State**

State	LMI Minimums	Community Solar Cap	LMI Capacity (If Carve-Out)
CO	5% capacity by project	Uncapped	Unsure
CT	50% of output (10% of output to low-income customers; 40% to a combination of LMI customers, affordable housing facilities, and/or customers who qualify as low-income service organizations)	150 MWac	75 MWac
DC	100,000 customers; all solar projects are dedicated to low-income customers	30–60 MW (phase 1)	30–60 MW
HI	Require developing carve-out for phase 2	8 MW (phase 1) 235 MW (phase 2)	Unsure
IL	Specific funds are applied to LMI community solar, but not capacity-based. This refers to the Adjustable Block Program community solar categories. Community solar funded through Solar for All is in addition to that capacity.	426 MWac (delivery year 2022–2024)	TBD based on funding. Total \$53.2 million for low income community solar from 2022–2024
MA	N/A	3200 MWac for entire program (of which community solar is a part)	1120 MWac for off-taker-based solar, including LMI community solar
ME	N/A	750 MWac (Net Energy Billing, of which community solar is a part)	Unsure
MD	30% capacity	418 MWac (phase 1) 165 MWac (phase 2)	52.5 MWac

State	LMI Minimums	Community Solar Cap	LMI Capacity (If Carve-Out)
MN	5% capacity by project	Uncapped	Unsure
NJ	40% year 1 projects for LMI	78 MWdc (year 1)	31.2 MWdc (year 1)
	51% year 2 projects for LMI	165 MWdc (year 2)	84.15dc (year 2)
NM	30% of each project	200 MWac	60 MWac
NV	25% of customers	10 MW	Unsure
NY	The old Solar for All (SFA) program set 20% of customers (10,000 SFA subscriptions); the new proposed 10-GW SFA does not have detailed info regarding LMI	10 GWdc (SFA, of which community solar is a part)	Unsure
OR	10% of total capacity	160 MW	16 MW for first tier
SC	400 kW of each program	3 MW (Duke Energy Carolinas), 1 MW (Duke Energy Progress)	0.8 MW
VA	30% Dominion	150 MWac (Dominion)	45 MWac (Dominion)
FL	Florida Power & Light (FP&L) specified the dedicated LMI capacity	4,028 MWac: 1490 MW (FP&L phase 1), 1788 MW (FP&L phase 2), 750 MW (Duke Energy)	37.5 MWac (FP&L phase 1)