

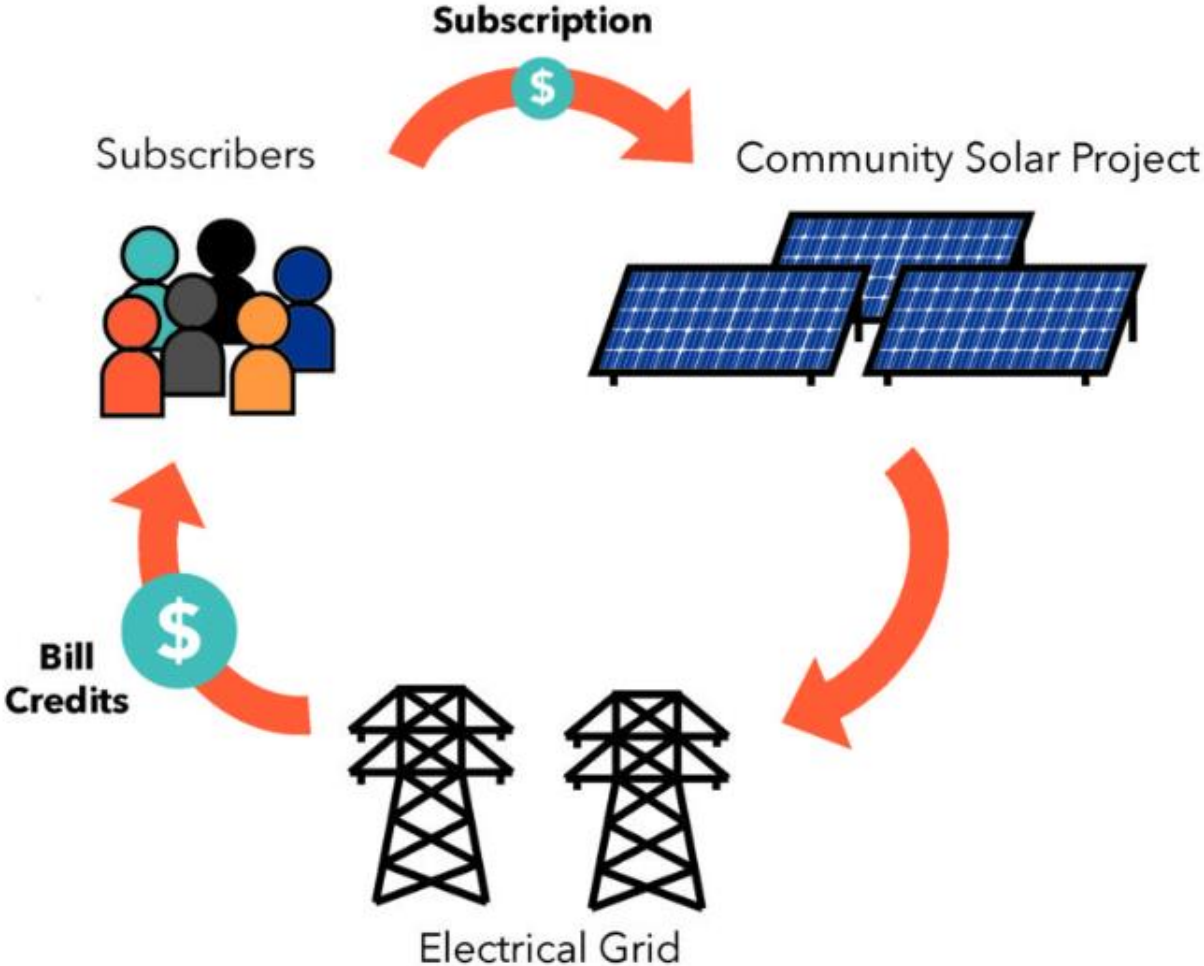
Community Solar: The Push to Service Low-Income and Communities of Concern

IEEE Phoenix Tech Conference
December 8, 2023
Phoenix, AZ

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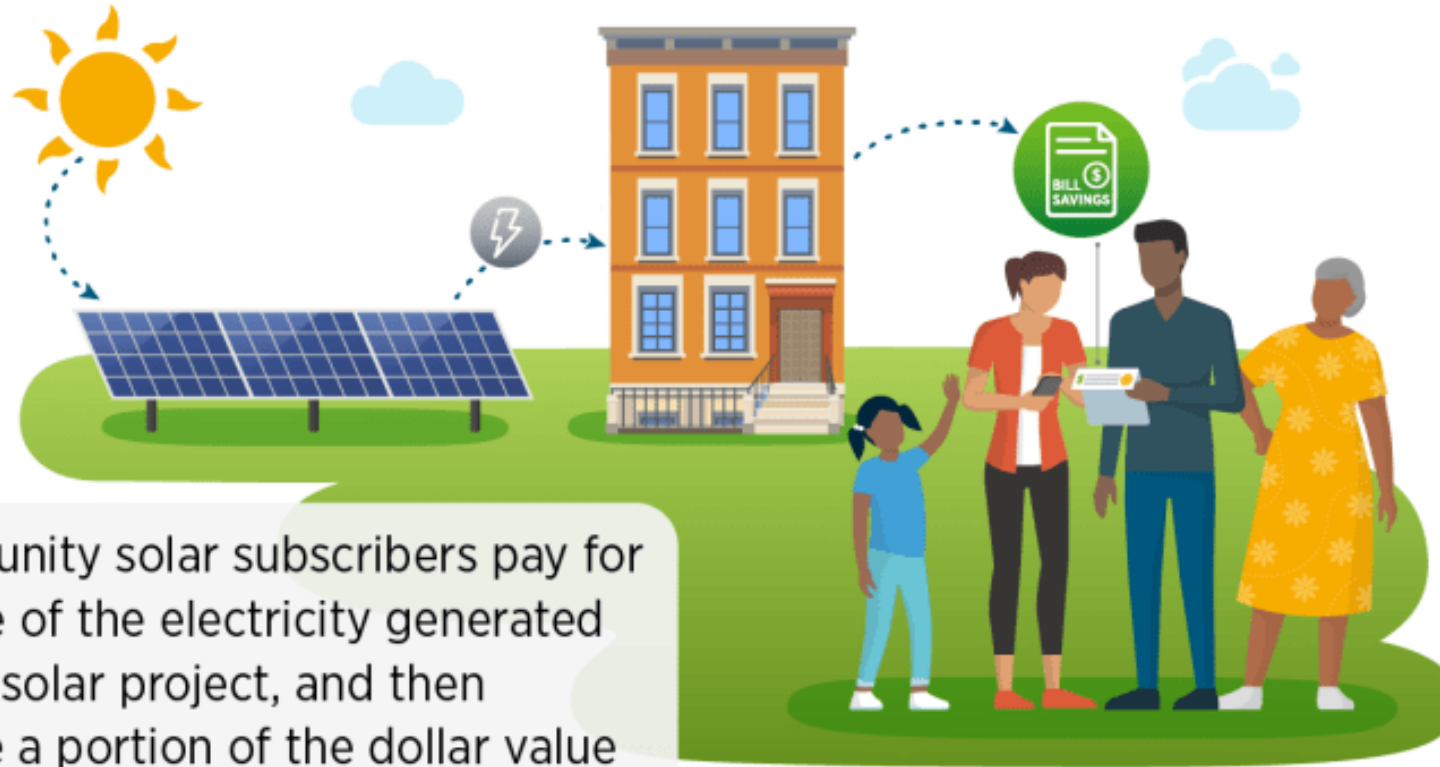


Source: Institute for Local Self-Reliance

Community Solar: DOE Definition

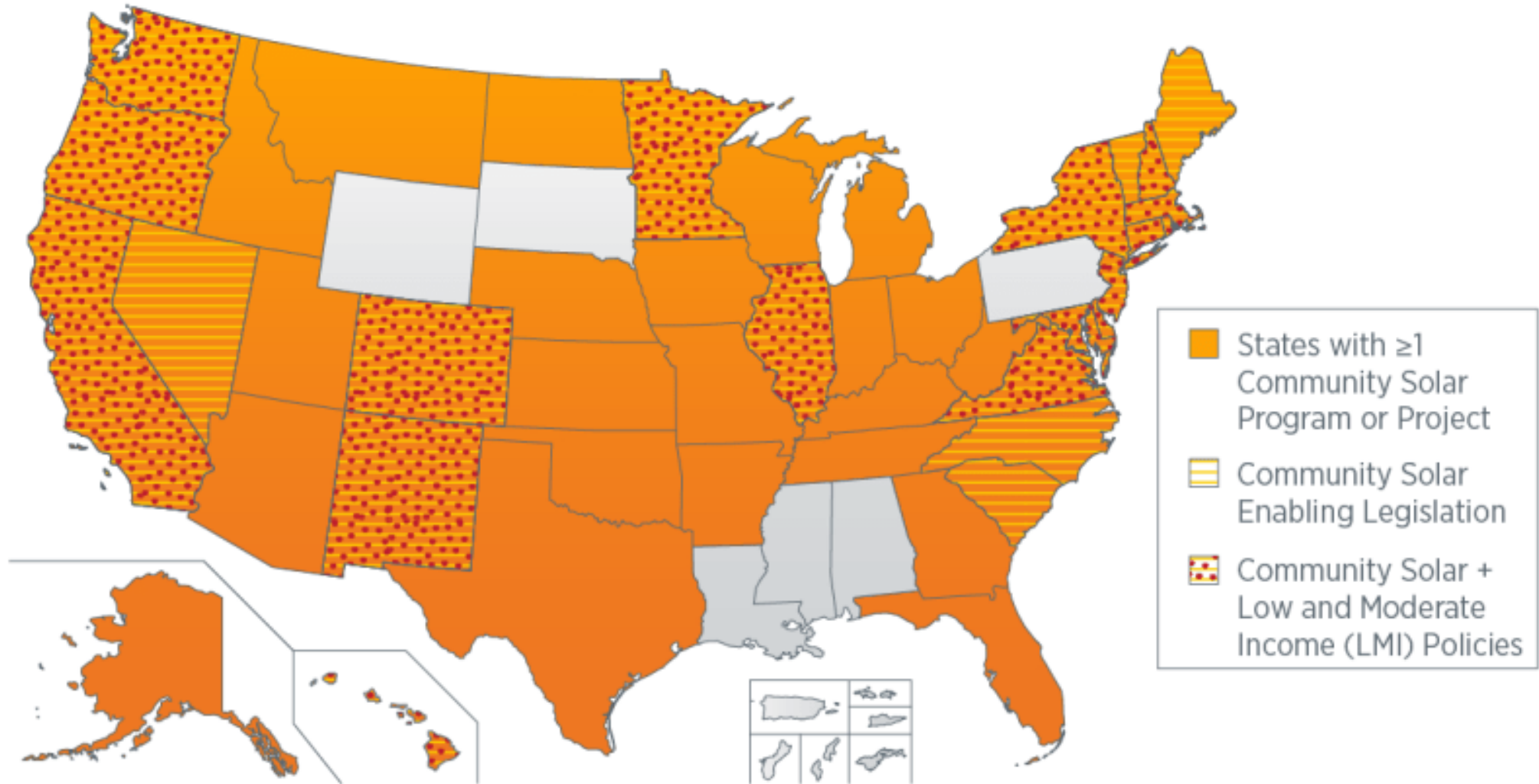
How does it work?

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



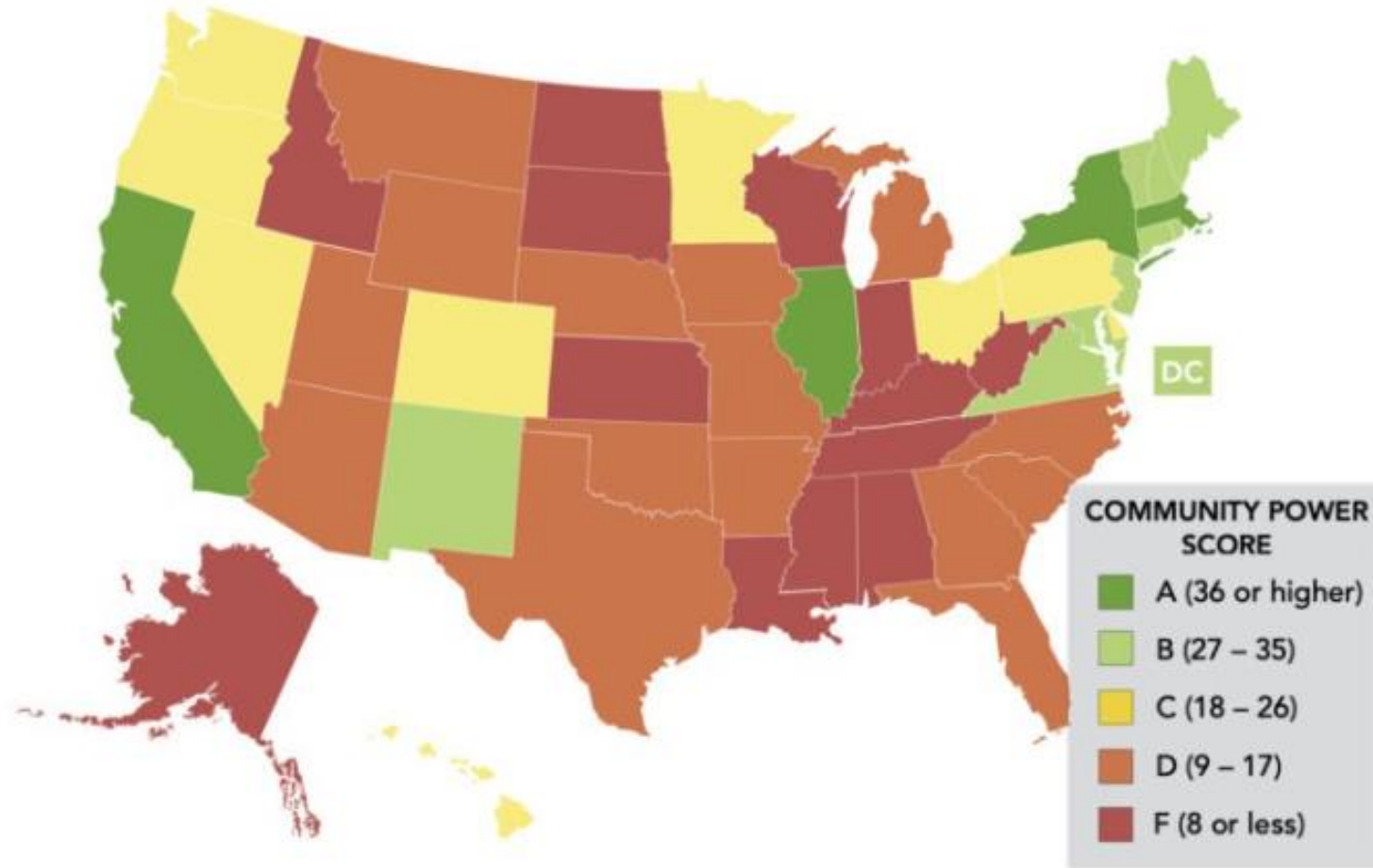
Community solar subscribers pay for a share of the electricity generated by the solar project, and then receive a portion of the dollar value generated by the project as a credit.

Where is Community Solar Available



Source: U.S. Department of Energy

2022 COMMUNITY POWER SCORECARD



February 2022

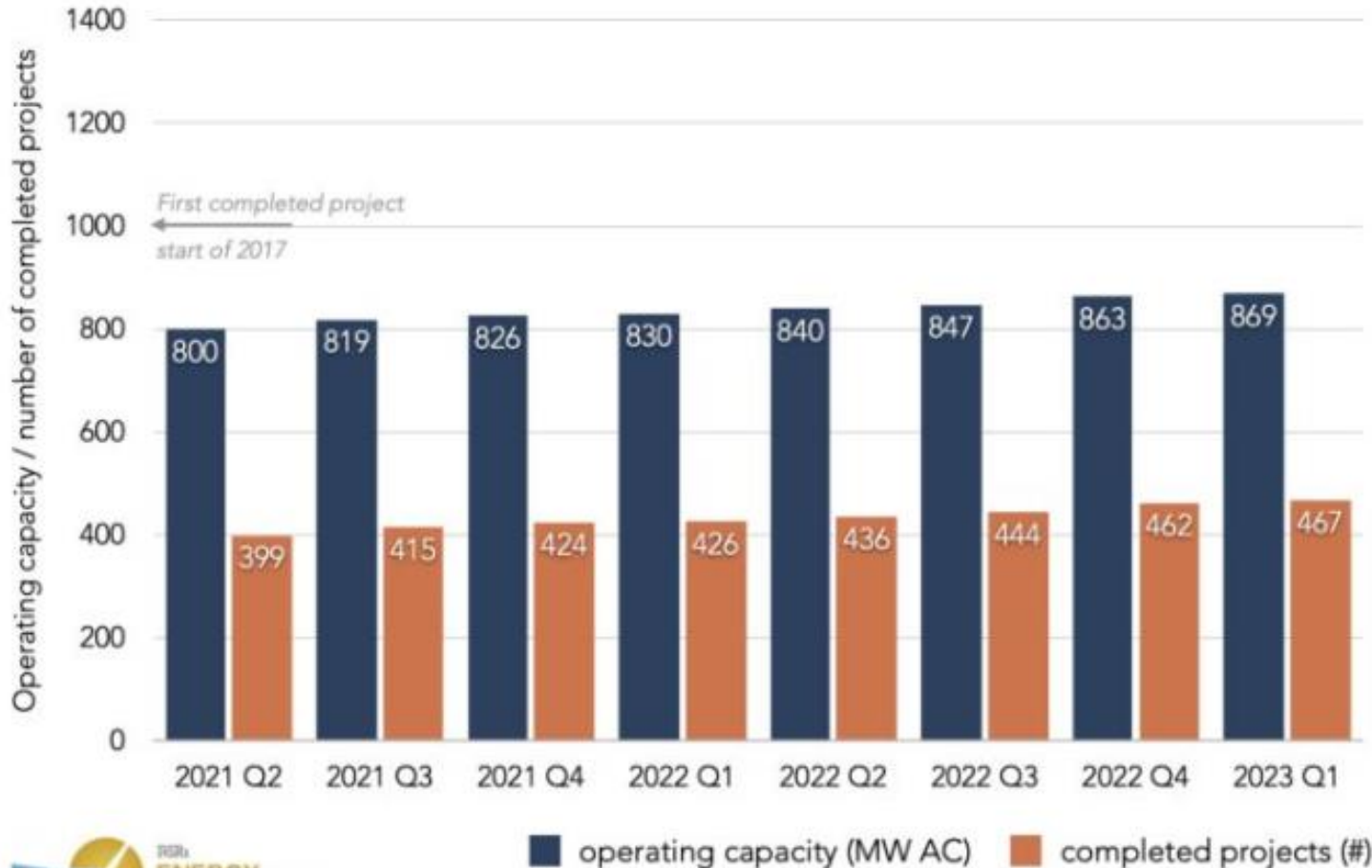
ilsr.org/community-power-map



Source: Institute for Local Self Reliance

Community Solar in Minnesota

PROGRESS OF THE MINNESOTA COMMUNITY SOLAR PROGRAM



- Project Size < 5 MW (up from 1 MW)
 - **Annual Capacity Caps**
 - > 30% of project capacity must go to Qualified Low-Income participants
 - >55% Low- moderate-income subscribers, public interest subscribers, or affordable housing providers*
 - Average Subscriber Savings of 5-10%
 - No subscriber > 40% of project
- *Current program 82% Commercial Participants

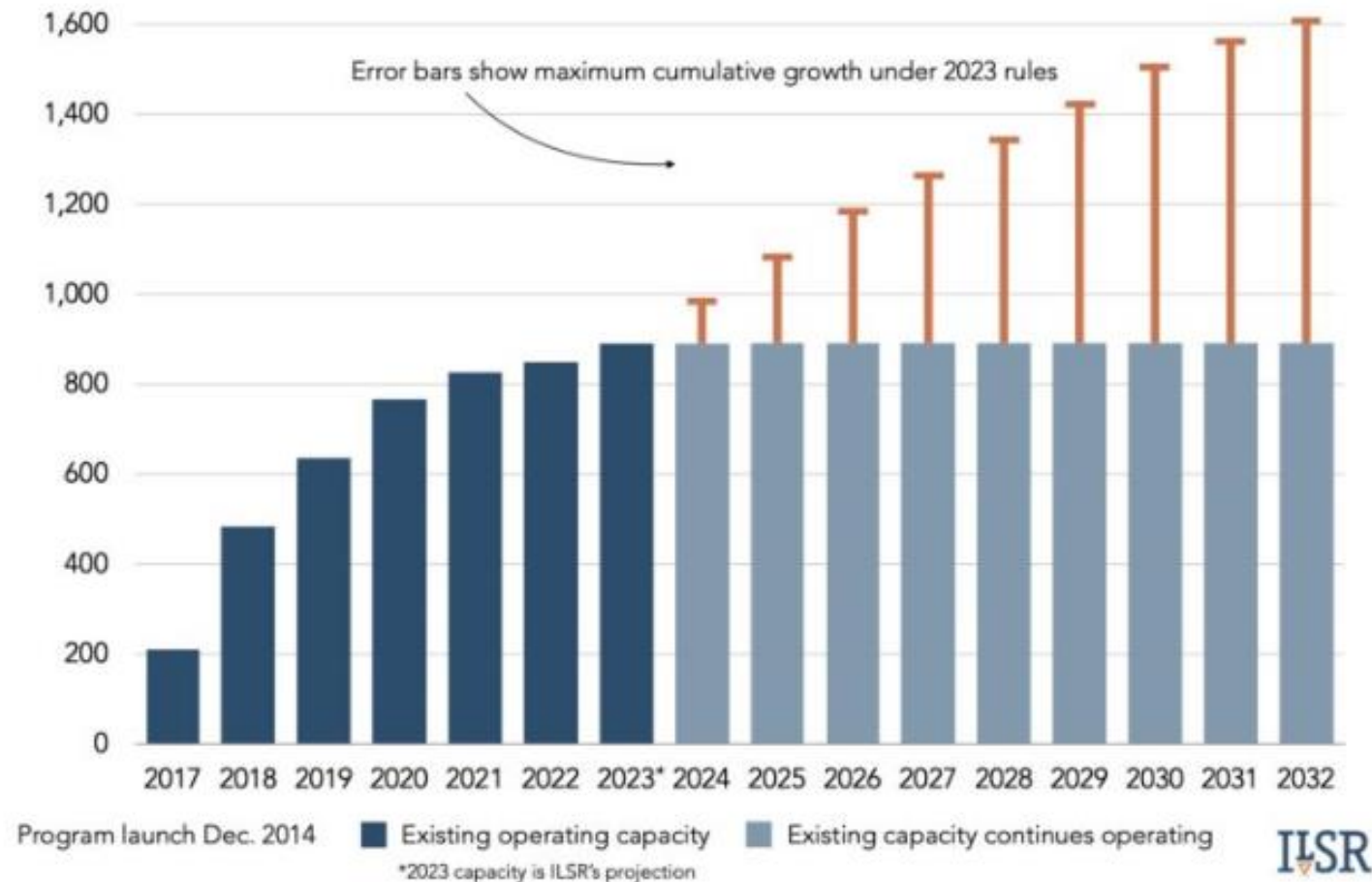


data from Xcel Energy compliance filings

Impacts of 2023 Changes to Minnesota Community Solar Program

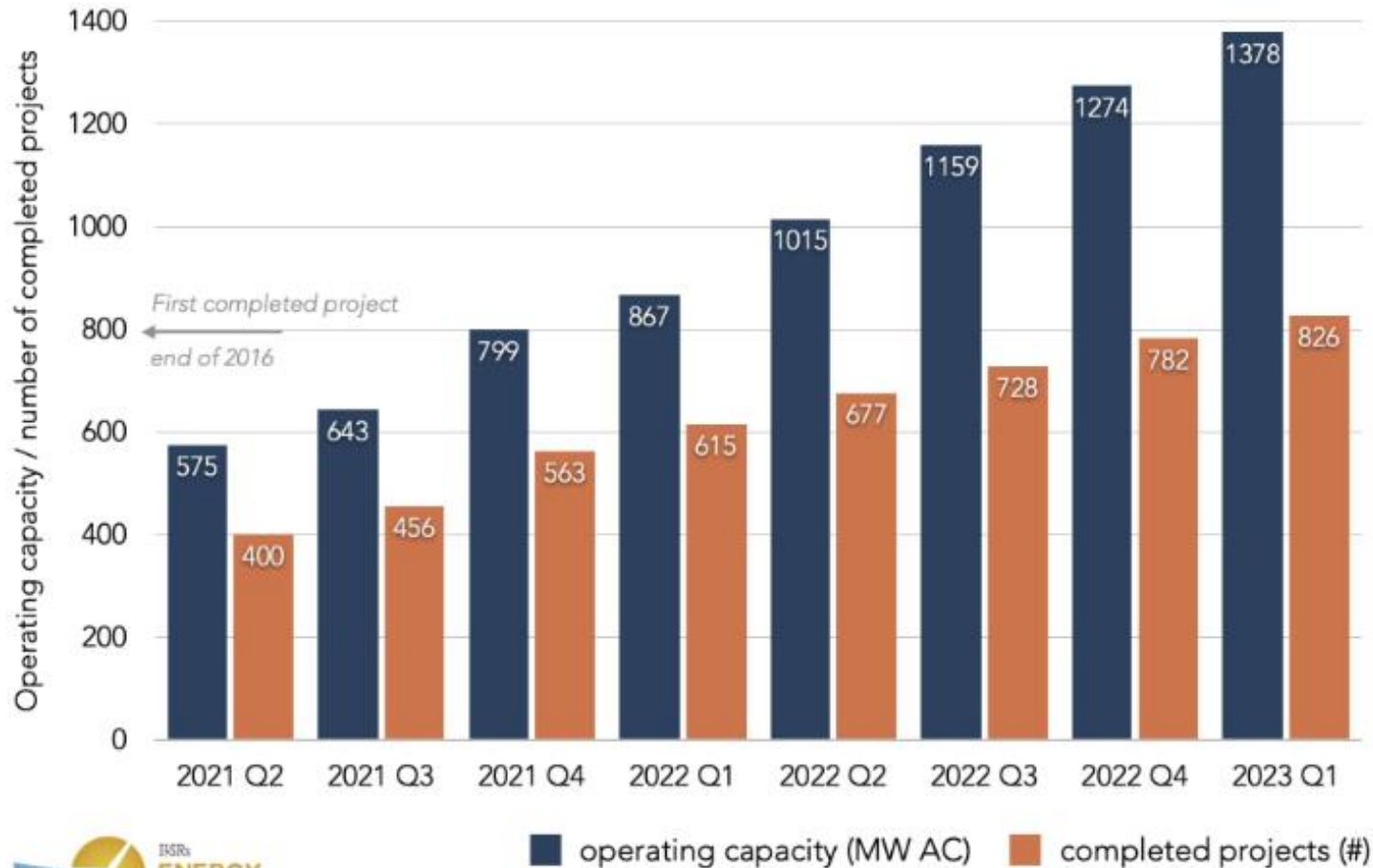
Minnesota Community Solar: Historical and Projected Growth

Community solar generation capacity in Minnesota could nearly double by 2032 under the annual capacity limits adopted in 2023.



Community Solar in New York

PROGRESS OF THE NEW YORK COMMUNITY SOLAR PROGRAM



■ operating capacity (MW AC) ■ completed projects (#)

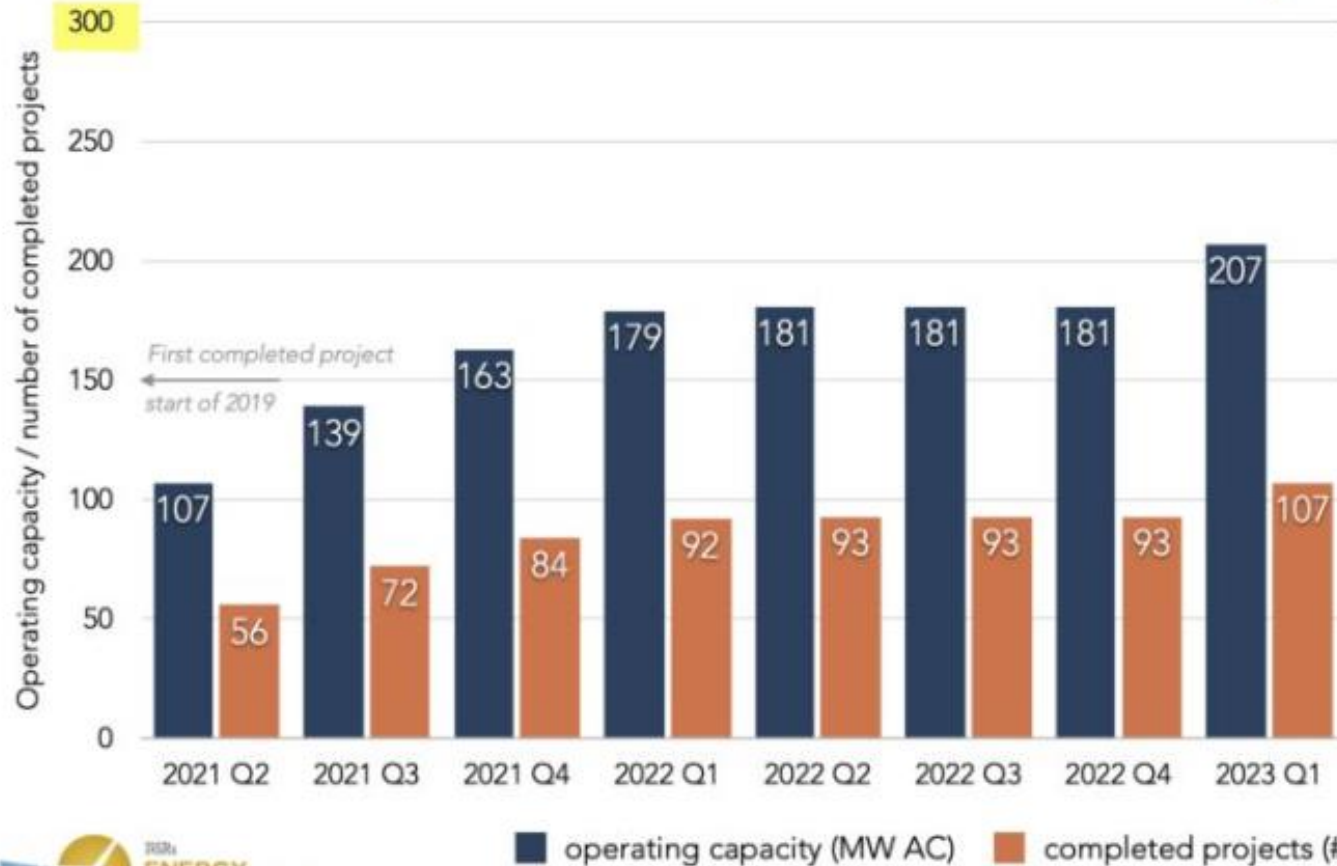
data from NYSERDA



- Project Size < 5 MW
- Project must have > 10 Subscribers;
- < 25 kW per subscriber; < 40% of overall project; 60% of overall subscribers mass market, small subscribers
- Generous Compensation
 - Based upon NY State established Value of Distributed Energy Tariff
 - Falls as capacity allocation is filled up
- Flexible Ownership Project may be owned by cooperative
- > 40% Allocation to Low-Medium Income Customers
- **Large % of population rents their dwelling**
- Average Subscriber Savings of 5-10%

Community Solar in Illinois

PROGRESS OF THE ILLINOIS COMMUNITY SOLAR PROGRAM

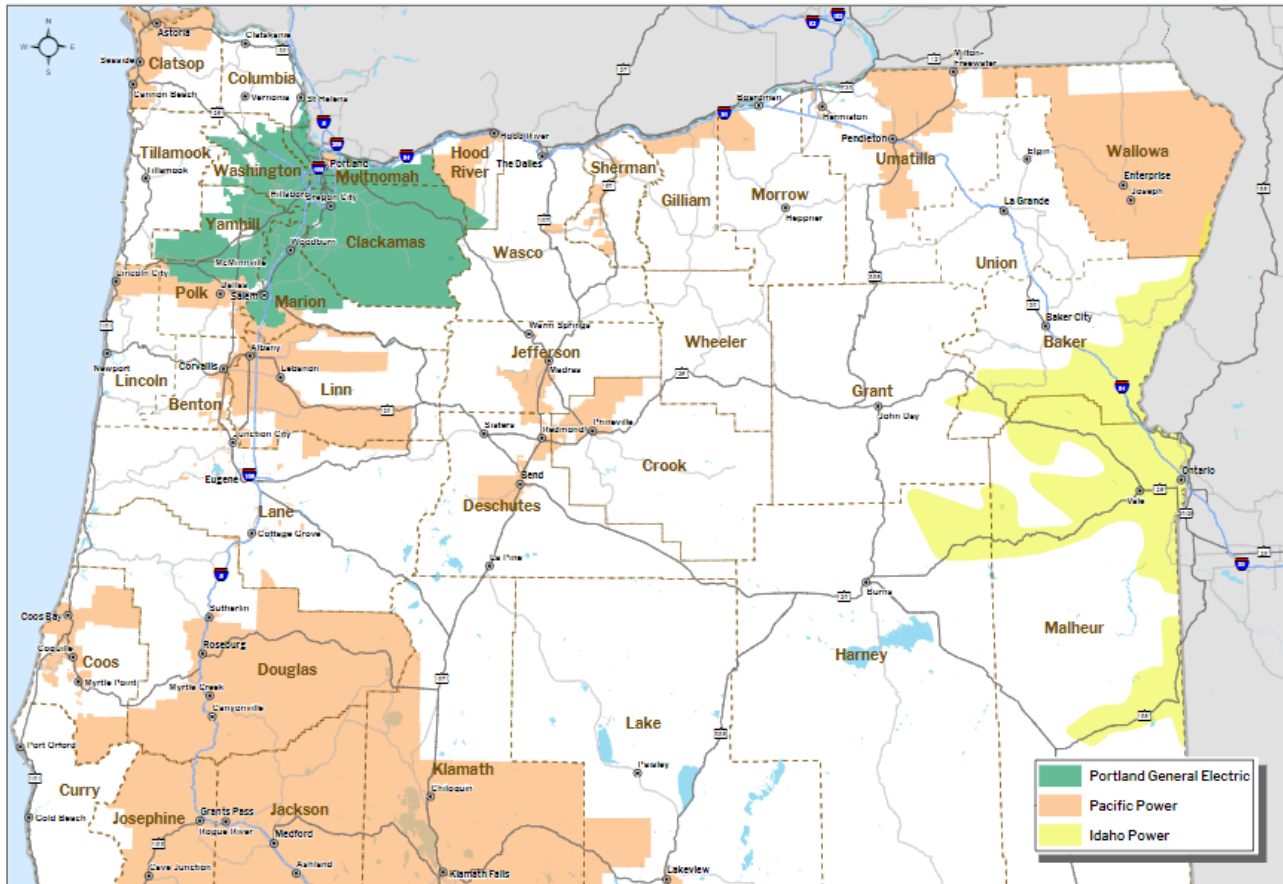


data from Illinois Power Agency's Adjustable Block Program

- Most recent annual capacity allocation 250 MW across multiple customer sectors
- Capacity allocated uniquely (price, amount) based upon IOU service territory characteristics
- Project Size < 5 MW
- Flexible Ownership (inc. developers, coops, CBO's)
- 20% Developer Cap in Aggregate Program
- 40% cap per project for individual subscribers; > 50% subscribed capacity per project from residential and small commercial
- 25% of budgets for Environmental Justice Communities
- 20% Developer Cap in Aggregate Program
- Developer applications must include Workforce Development Programs
- Utilities must purchase unsubscribed electricity at avoided cost

Oregon

Oregon Community Solar Program Service Territory



1.800.481.0510
www.oregoncsp.org

- Project Size .25 kW to 3 MW
- Capacity Allocations by Tier
- Qualified Low-Income participants receive financial discounts (>10% participation by project from LI)
- Residents, businesses, non-profits, government customers eligible
- General Targeted Rate Reductions of 5%
- Developer to Utility PPA 20 year term
- No subscriber > 40% of project
- Developer bears primary responsibility for subscription

Oregon

Oregon Community Solar Program Capacity Snapshot

Date Updated: 12/01/2023

All numbers are in units of MW-AC.



Initial Offering (Tier 1, now closed in PGE and PAC)				
	PGE	PAC	IPC	Total
Total Program Capacity				
General	33.967	19.840	3.280	57.087
Carve-out	0.040	2.373	-	2.413
Total	34.007	22.213	3.280	59.500
Capacity Allocated to Projects				
General	33.967	19.840	2.950	56.757
Carve-out	0.040	2.373	-	2.413
Total	34.007	22.213	2.950	59.170
Capacity of Projects in Operation				
General	24.652	0.882	-	25.534
Carve-out	0.040	1.014	-	1.054
Total	24.692	1.896	-	26.588
Unallocated Program Capacity Remaining				
General	-	-	0.330	0.330
Carve-out	-	-	-	-
Total	-	-	0.330	0.330
Capacity of Waitlisted Projects				
General	-	-	-	-
Carve-out	-	-	-	-
Total	-	-	-	-

Second Offering (Tier 2, now open)				
	PGE	PAC	IPC	Total
Total Program Capacity				
General	35.883	28.610	-	64.493
Carve-out	23.250	13.777	-	37.027
Total	59.133	42.387	-	101.520
Capacity Allocated to Projects				
General	33.913	28.448	-	62.361
Carve-out	0.300	-	-	0.300
Total	34.213	28.448	-	62.661
Capacity of Projects in Operation				
General	1.998	0.567	-	2.565
Carve-out	-	-	-	-
Total	1.998	0.567	-	2.565
Unallocated Program Capacity Remaining*				
General	1.970	0.162	-	2.132
Carve-out	22.950	13.777	-	36.727
Total	24.920	13.939	-	38.859
Capacity of Waitlisted Projects				
General	-	6.325	-	6.325
Carve-out	-	-	-	-
Total	-	6.325	-	6.325

* In PAC service territory, the size of the first waitlisted general market project exceeds the amount of available capacity remaining. Any subsequent general market project applications received in PAC will be added to the waitlist regardless of size.

High Level Key State Comparison

STATE COMMUNITY SOLAR PROGRAMS STATUS UPDATE: 2023 Q1

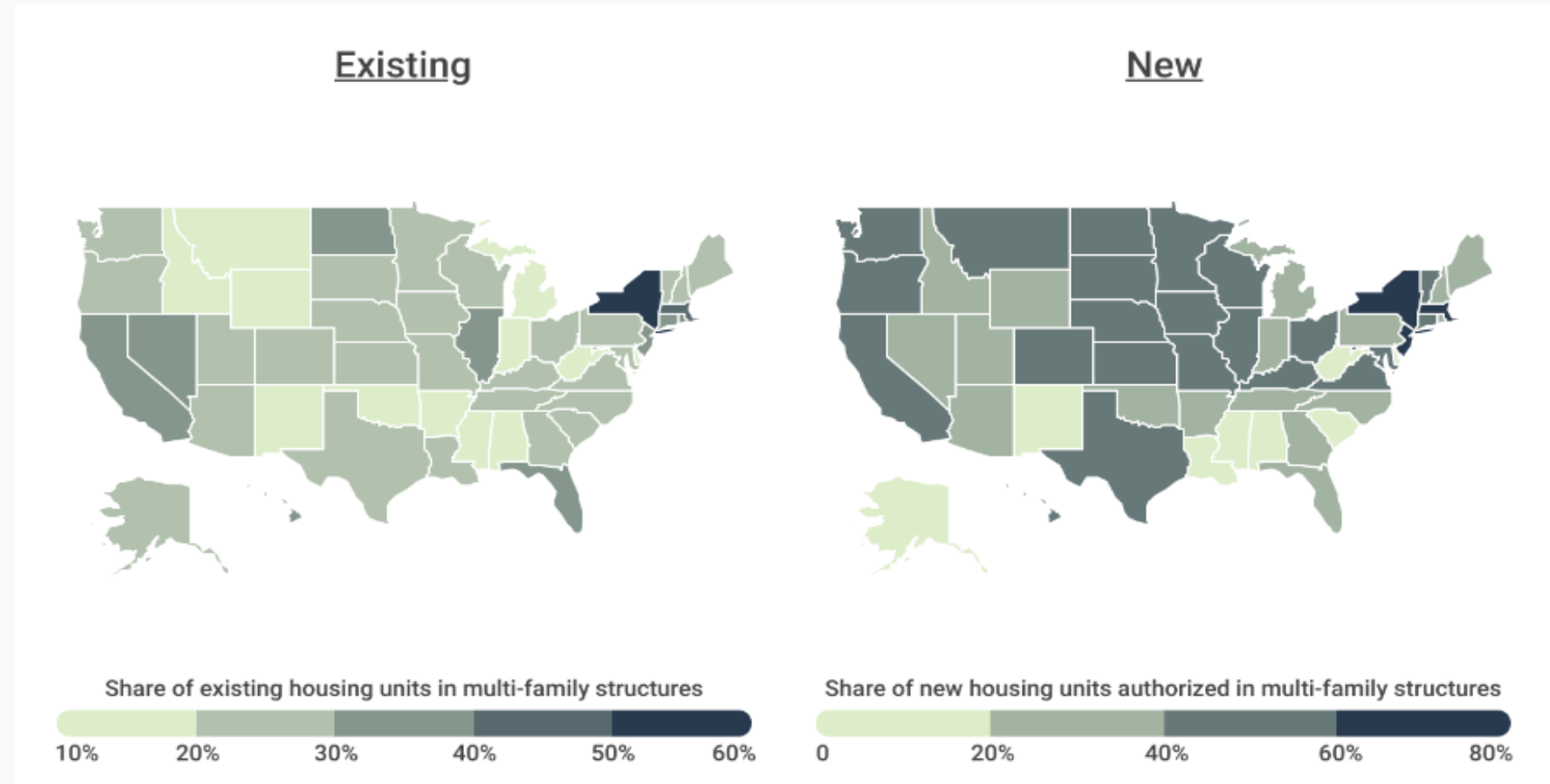


■ operating capacity (MW AC) ■ completed projects (#)

*Colorado data from end of 2021

The Popularity of Multi-Family Housing by State

The Midwest & West are investing far more in multi-family housing than in the past



Source: Construction Coverage analysis of U.S. Census Bureau American Community Survey and Building Permits Survey data | Image Credit: Construction Coverage

Catalysts and Inhibitors to Community Solar

Catalysts

- Consistency
- Material Economic Gain for Stakeholders
- Material Capacity Allotments for eligible geographic areas
- Strong and Broad Community Engagement and Support
- Low Administrative Costs and Hurdles
- Concentration of multi-tenant dwellings and businesses
- Flexible Project Ownership Terms (Host, Third Party, Utility)

Inhibitors

- Uncertainty
- Dispersed Subscriber Base & High Subscriber Acquisition Costs
- Low Electricity Costs
- High Up-Front Hard Costs, Administrative Costs, Opportunity Costs, and Time Costs
- Lack of Transparency and Visibility to Projects
- Rigid or cumbersome contracts

Thank You!

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