



- **About:** National community solar trade association representing over 30 community solar providers, customers, professional service businesses, and utilities
- **Mission:** To expand access to clean, local, and affordable clean energy nationwide through community solar – expanding access to solar for all!
- **Learn more:** www.communitysolaraccess.org, www.facebook.com/communitysolaraccess/ and twitter.com/SolarAccess

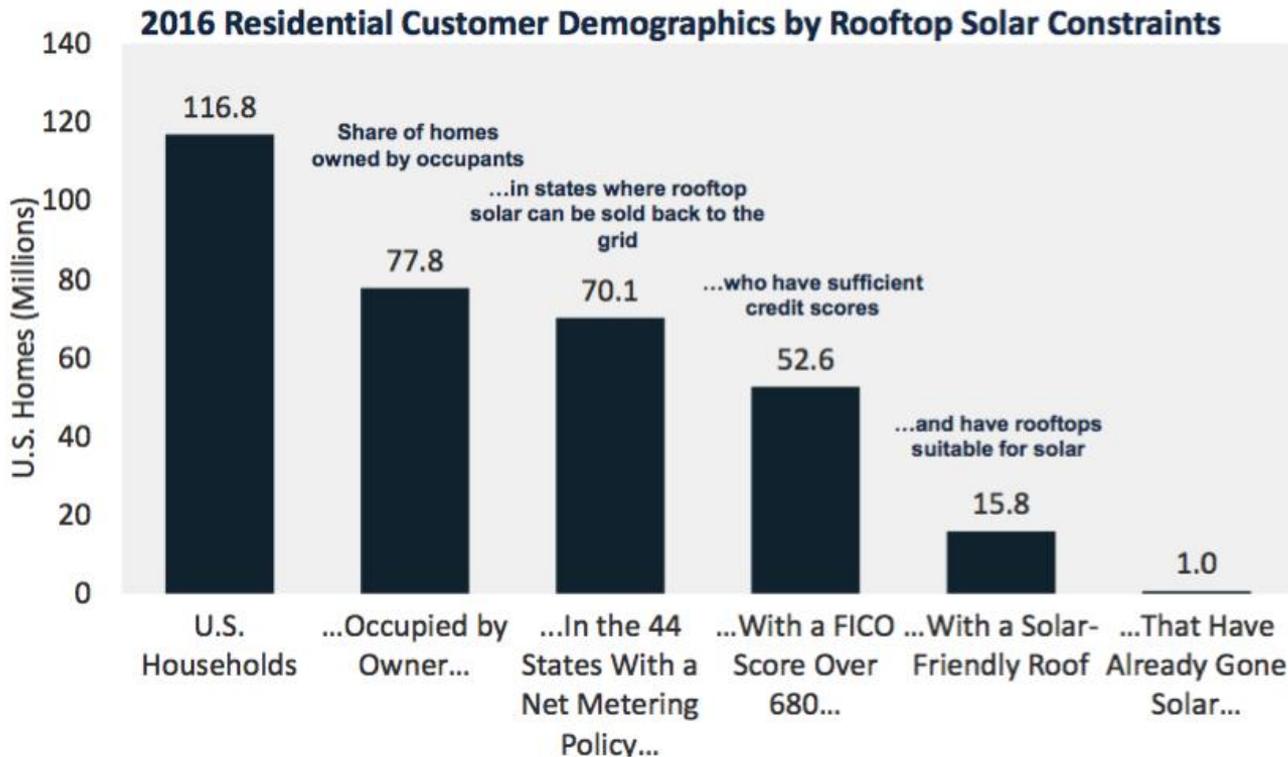


Customers Want Solar. Overwhelmingly.

- 91% of Americans believe U.S. should put greater emphasis on solar (2015) [SEIA Poll](#)
- 59% of customers interested in solar prior to receiving education on benefits, with dramatic increase in interest in community solar in particular after education (2016) [SEPA Report](#)
- 72% of corporations are seeking to purchase more renewables (2016) [Price Waterhouse Cooper Report](#)



85% of customers do not have access to solar

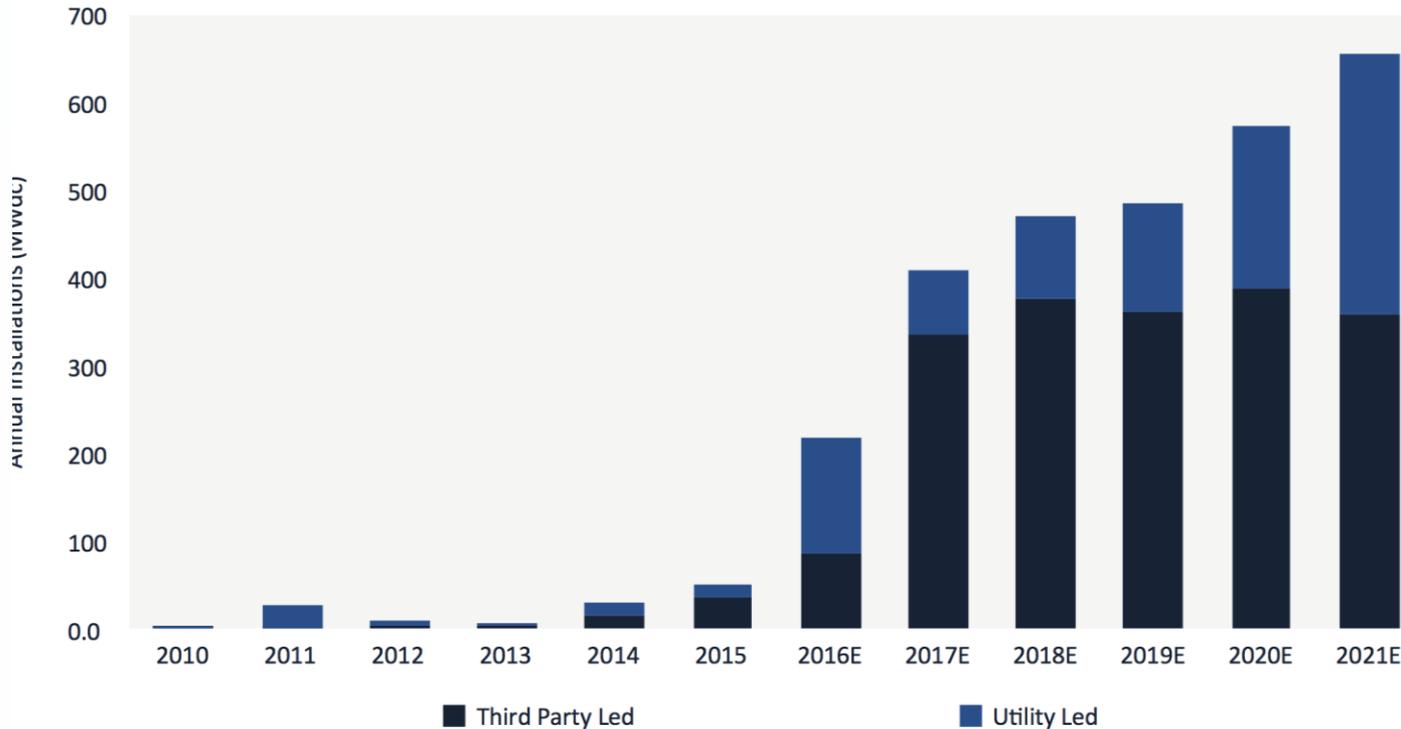


GTM projection:
Community solar's addressable market is more than 7 times larger than rooftop solar

Source: Greentech Media U.S. Community Solar Market Outlook, October 2016



Over 3 GW of Community Solar in Development



The majority of development from 2017-2021 is projected in northeast and Midwest and third-party led

Source: Greentech Media U.S. Community Solar Market Outlook, October 2016



Active Community Solar Markets – Northeast

Massachusetts -- ~60 MW operational, est. 200 MW through 2018

- SREC at full value
- Virtual Net Metering
- Small customer requirements

New York -- *est.* 275 MW through 2018

- Varying credits by utility
- “Market Transition Credit” MTC for residential customers
- Small customer requirements

Maryland: up to 192 MW through 2019

- Pilot project with specific capacity goal of 1.5% of 2015 peak load to animate market
- Full retail compensation for pilot stage
- Small customer requirements
- Program carve outs for small and brownfield projects (30%)
LMI (30%) and (40%) open



Community Solar Markets – Midwest

Illinois – ~ 170 – 300 MW by 2020

- Projects have three revenue streams
 - Energy credit
 - \$250/kW DG rebate (paid upfront by utilities, rate-based)
 - When NEM reaches 3%, ICC will study a new locational value rebate to take its place
 - When NEM reaches 5%, new locational value will take effect
 - Ability to participate in the Adjustable Block Program, which has dedicated 25% of funding to community solar projects.
 - 15-year REC purchase program, paid over the first 5 years of the project's life

Minnesota – Over 400 MW by the end of 2017

- Retail rate with option to sell RECs, with higher comp for residential and small commercial (\$0.10 - \$0.16 / kWh)
- Projects entering today receive VOS rate
- A single subscription cannot exceed 40% of the facility's output.



Community Solar Markets – Colorado, Voluntary, and Emerging

Colorado – 100+ MW today, and 100+ more in next two years

- First major statewide program in the country
- Program tied to Renewable Energy Standard – RECs count toward RES compliance
- Includes a stricter locational component – subscribers must reside in same or adjacent county as facility
- Required a per-project 5% low-income carveout (initially proved difficult)
- CO provided a number of “lessons learned” to the rest of the country

Voluntary

- Projects in over 25 states with IOUs, munis, and coops
- [Recent Utility Dive survey of 600 utility decision makers show 31% of utilities are expecting investments in community solar](#)

Emerging

- Hawaii
- Rhode Island
- Nevada
- Oregon
- Maine
- Connecticut



CCSA Core Principles

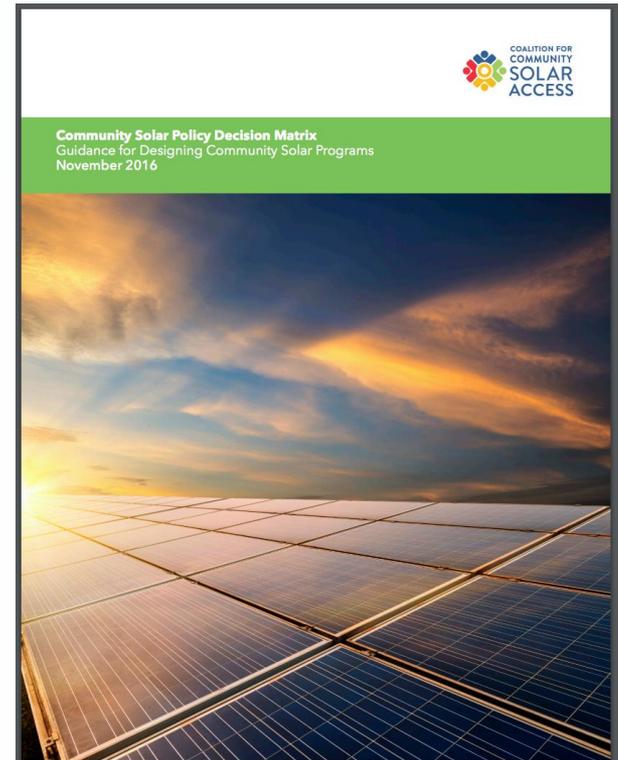
Expanding Access – Consumer Engagement and Protections – Competitive Marketplace

1. Allow all consumers the opportunity to participate in and directly economically benefit from the construction and operation of new clean energy assets.
2. Provide equal access for developers to build and operate community shared renewable energy systems and interconnect those systems to the serving utility's grid.
3. Incorporate a fair bill credit mechanism that provides subscribers with an economic benefit commensurate with the value of the long-term, clean, locally-sited energy produced by community shared renewable energy projects.
4. Support the participation of diverse customer types in renewable energy markets, and encourage customer choice with providers, product features, and attributes to catalyze innovation and best serve customers.
5. Provide assurance of on-going program operations and maintenance to ensure overall quality, that the facility lasts for decades, and that customer participation is protected. Safeguard the continuity of program benefits to protect customers and developers' investment.
6. Ensure full and accurate disclosure of customer benefits and risks in a standard, comparable manner that presents customers with performance and cost transparency.
7. Comply with applicable securities, tax, and consumer protection laws to reduce customer risk and protect the customer.
8. Encourage transparent, non-discriminatory utility rules on siting, and interconnecting projects, and collaboration with utilities to facilitate efficient siting and interconnection.
9. Maintain a 360-degree view of community shared renewable energy market And ensure a beneficial role for all parties in the partnerships forged between subscriber, developer, and utility.



CCSA Community Solar Policy Decision Matrix

- [Community Solar Policy Decision Matrix](#), released November 2016
- Offer policymakers, community leaders, utilities, and stakeholders a guide to navigate key decision points and offer recommendations on how to best develop successful community solar programs state-by-state
- How to use?
 - ✓ Step 1: Establish policy goals
 - ✓ Step 2: Use the Matrix to engage local stakeholders in process to develop programs that best achieve policy goals
 - ✓ Step 3: 2017 – working with a number states to develop programs with Matrix, and update the Matrix with input from policymakers, utilities, local stakeholders, etc.



CCSA Policy Decision Matrix:

Guides policymakers through key considerations

Key Questions to Ask	Options to Consider	CCSA Recommendations	Rationale	Example Language	Notes
What types of entities should be permitted to own and/or manage projects?	Community solar providers	Open, competitive markets with as many ownership options as possible.	Competition and innovation are necessary to drive the market forward, ultimately resulting in lower costs and more options for consumers.	A Subscriber Organization shall be any for-profit or not-for-profit entity permitted by [State] law that (A) owns or operates one or more community solar facility(ies) for the benefit of subscribers, or (B) contracts with a third-party entity to build, own or operate one or more community solar facilities.	In a program where multiple entity types are participating as project owners/managers, specific attention needs to be given to ensure a level playing field and ensure competitive markets. Considerations include equal access to data, financing, among other issues.
	Utility				
	Other (e.g. Customer, retail supplier)				
Who should fill the role of program administrator? (i.e.	State agency (such as the public utilities	A state agency, utility, or contracted third-	Program administration should be	[State agency] shall administer the community solar	If a utility oversees program administration and

CCSA Policy Decision Matrix Covers:

- **Program Structure**

- ✓ Who should own projects? – goal is open competitive markets with diverse ownership options
- ✓ Who should administer program? – state agency, utility, or third party administrator
- ✓ Who should administer bill credits – utility, though third party support may be useful
- ✓ Program size – limits vs. open ended depending on policy goals
- ✓ Project selection and approval – tariff/first come first serve preferred over RFP

- **Compensation**

- ✓ Compensation value – need for predictability, transparency, and consumer benefit
- ✓ Credit mechanism – monetary or volumetric
- ✓ Unsubscribed energy compensation
- ✓ REC treatment

- **Consumer Participation**

- ✓ Minimum subscriber threshold – more than one
- ✓ Subscription sizes – depends on credit methodology

- ✓ Customer class carve outs – yes, dependent on policy goals and local considerations
- ✓ Standard consumer protections – Yes, including existing state law coverage and standardized disclosure checklist
- ✓ Transferability and geographic limitations – Should be transferable and located within same utility districts
- ✓ Rate schedule changes – no new charges or un-vetted changes through stakeholder process

- **Project Characteristics**

- ✓ Project size – typically 2 to 5 MW, but options up to 20 in some markets
- ✓ Licenses – Same for other solar projects

- **Low-to-Moderate Income (LMI) Considerations**

- ✓ Provide differential incentives to ensure participation and cost savings
- ✓ Enhanced financing
- ✓ Leverage existing programs



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Community Solar Potential in CA

- Of the ~5 GW of onsite solar in CA developed in last decade
- 85% nationally, and majority in CA without access to solar – significant demand
- 85% predicted load departure in 2020s
- Community solar should be one of customer choices
 - Clean (GHG reduction)
 - Local (on distribution system enhancing reliability, customer financed reaching GHG goals)
 - Scale (cost efficiencies, more centrally planned)
 - Access (ability to offer access to all customer types)
 - Co-benefits (workforce training, community development, local environmental)
 - Flexible (works across utility models)



Community Solar Today in CA

- Enhanced Community Renewables (ECR) design does not provide sufficient conditions for project development and customer interest
 - Economics: generation rate (~8-10 cents) – potential program fees and PCIA + variability = ~6-8 cents kWh
 - Administrative Requirements: 60 day customer acquisition requirements, securities law, pre-approval of marketing materials, unsubscribed energy



CCSA Recommendations for CA

- Clear policy goals and guidance
 - Finding a solution that works for customers, utilities, and providers alike that leads to *real opportunities for customers*
 - Phased approach ensuring development and market learning at each stage, or
 - Updated program addressing key barriers to scale
- Low to Moderate Income (LMI)
 - Need for dedicated program with support, customer protections, and funding for low-income customers
- Ensuring the program leads to project development and high subscription rates
 - Economic value proposition to customers
 - Access for all customer classes
 - Direct tie to specific projects
 - Competition, Consumer Protection, and Community Engagement





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