



Community Solar

Webinar – July 10, 2019

Defining Community Solar

Also known as shared solar, community solar is a business model where **multiple customers (residential and/or commercial) pay for a share** of a specified offsite solar project and **receive credit on their electricity bill** for their portion of power produced.

Options for customers

1. Own a share of the solar project
2. Subscribe for a share of the project*

Community-scale solar (CSS) ownership models:

1. Community-owned
2. Utility-owned
3. Third-party ownership*

Project size: typically between 0.5 and 5 megawatts (MW), electricity is fed directly into local distribution grids and consumed locally

Diversity of community solar programs: community solar program characteristics, regulations and revenues vary from one state to the other and from one participating utility to the other.

Community Scale Solar (CSS) allows residential or commercial customers to bundle together to purchase electricity from an off-site solar.

Why Standard Solar Entered the Community Solar Market

New market

- Standard Solar entered the community solar (CS) space and has taken a large market share rapidly by utilizing its low cost capital and large balance sheet backing.
- The CS is a relatively new segment and fewer financiers are active.
- CS comes with its share of risks and benefits.

High growth market

- CS has more than doubled every year in the past 3 years. It will account for 30% of the distributed PV market space by 2020.

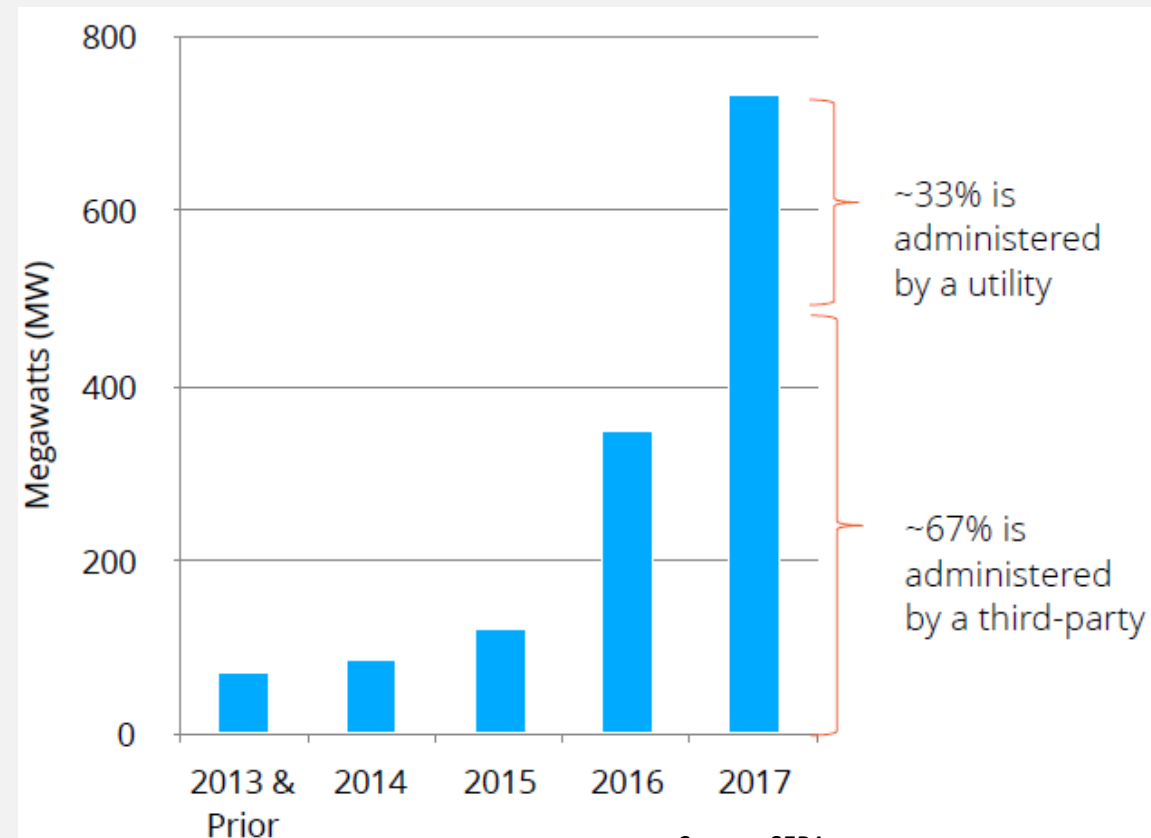
Engaging with the community

- Developing and operating CS projects is a great way for Standard Solar to engage directly with end users.
- Positive impact on community and engagement of stakeholders.

Opening to other markets

- Potential model for other provinces and states.
- Storage: NY VDER program would opens the way to solar + storage.

Cumulative Community Solar Installed Capacity



Source: SEPA

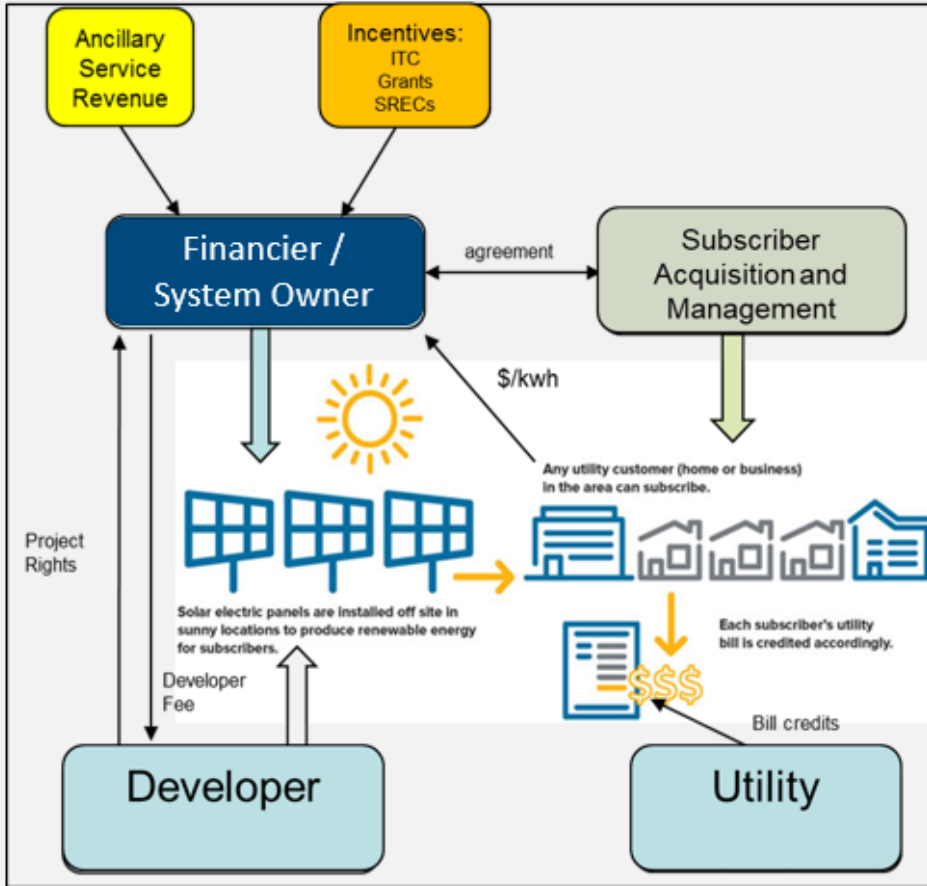
Community Solar is growing very fast and cannot be ignored as it will account for over 30% of the distributed PV market by 2020

General risks associated with CS

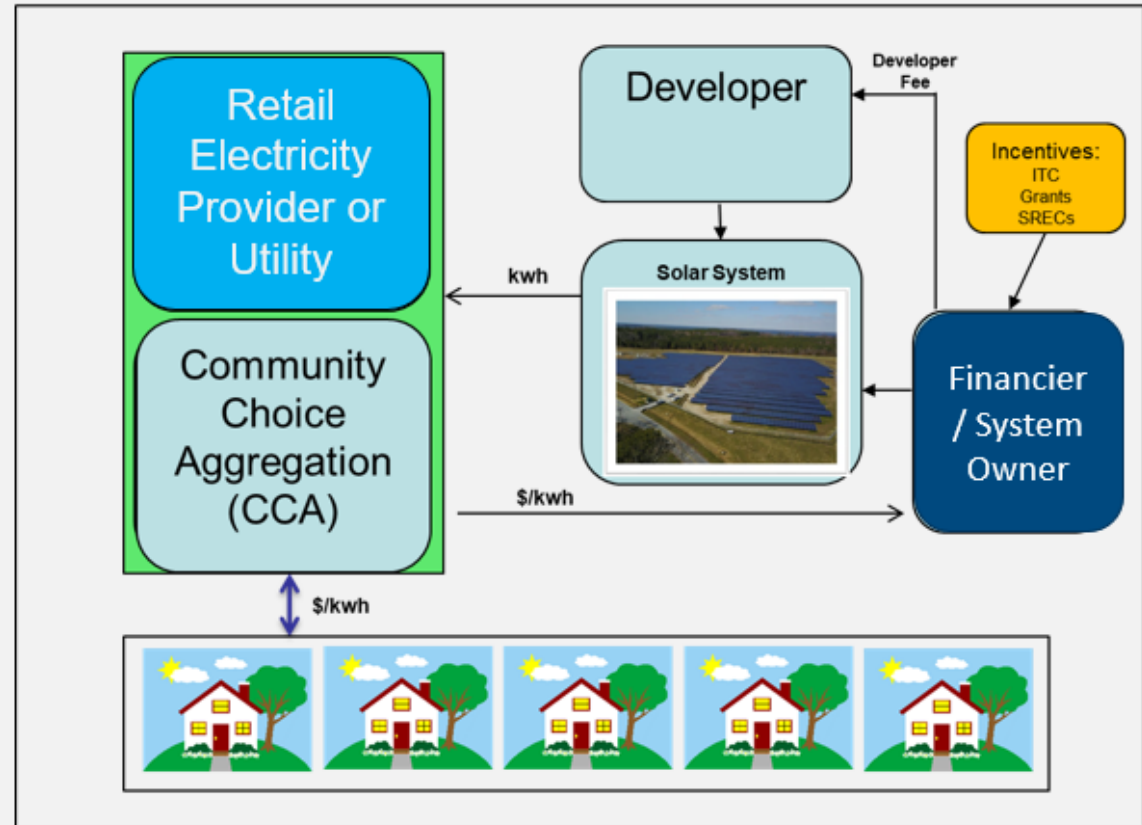
Risk	Description	Potential mitigations
Subscription Management	Some CS programs/states allow for 20-year fixed price PPA with anchor tenant(s) (ex. CO). Other programs require a minimum level of retail customers (ex. NY). These agreements may have additional risks such as: renewal of agreements, collection, credit and additional efforts to manage the subscribers	Subscribers are managed by the aggregator. The subscription level is kept over 100% and subscriber can be replaced rapidly. Cost of management is factored in.
Energy price, market risks	Certain programs have a portion of the income linked to market prices for energy and capacity (ex. NY), others are linked to VNEM, also variable.	Other fixed sources of revenue. Variable portion of income must be modeled to guarantee achieving minimum expected returns.
Energy Volume	Risk of energy allocation not being fully subscribed at COD or during operation	Over subscribe and offer sought after subscription plan. Most programs allow for energy banking or default offtake at a discounted price by utility.
Legal	Compliance with all regulation, SEC and consumer protection laws.	Comply and Due Diligence.
Regulatory	Changes in regulation or program caps being reached leaving some projects stranded in development phase.	Proper planning from the developer or protection in the commercial terms for the investor.
Financing	Tax equity and debt financing are very difficult in this space. Internal capital and/or large balance sheet required to get deals done.	Fix large portion of revenue and use conservative assumptions for energy prices and financing conditions
Interface with Utility	Delays in credit application to customers, transfer of obligations to replace subscribers or any other interface issues.	Hire competent Aggregator

Community Solar Sample Structures

Community Solar Option

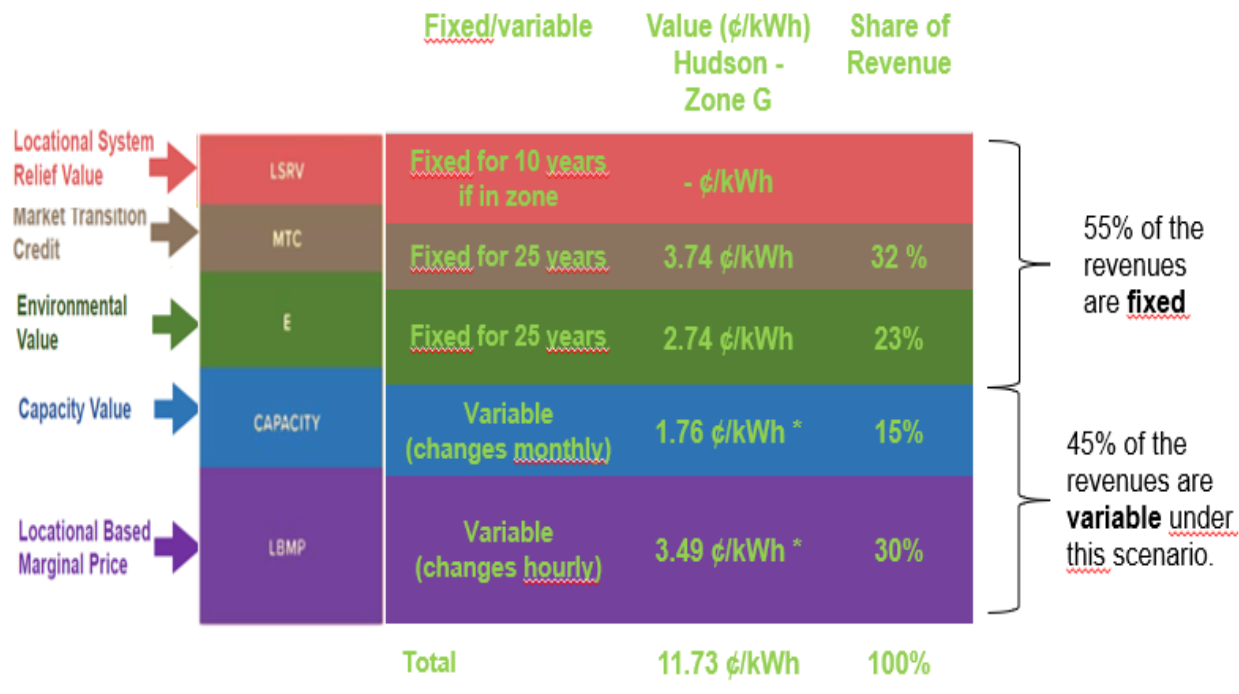


PPA Option to Single Off-Take



New York - A look at the value stack

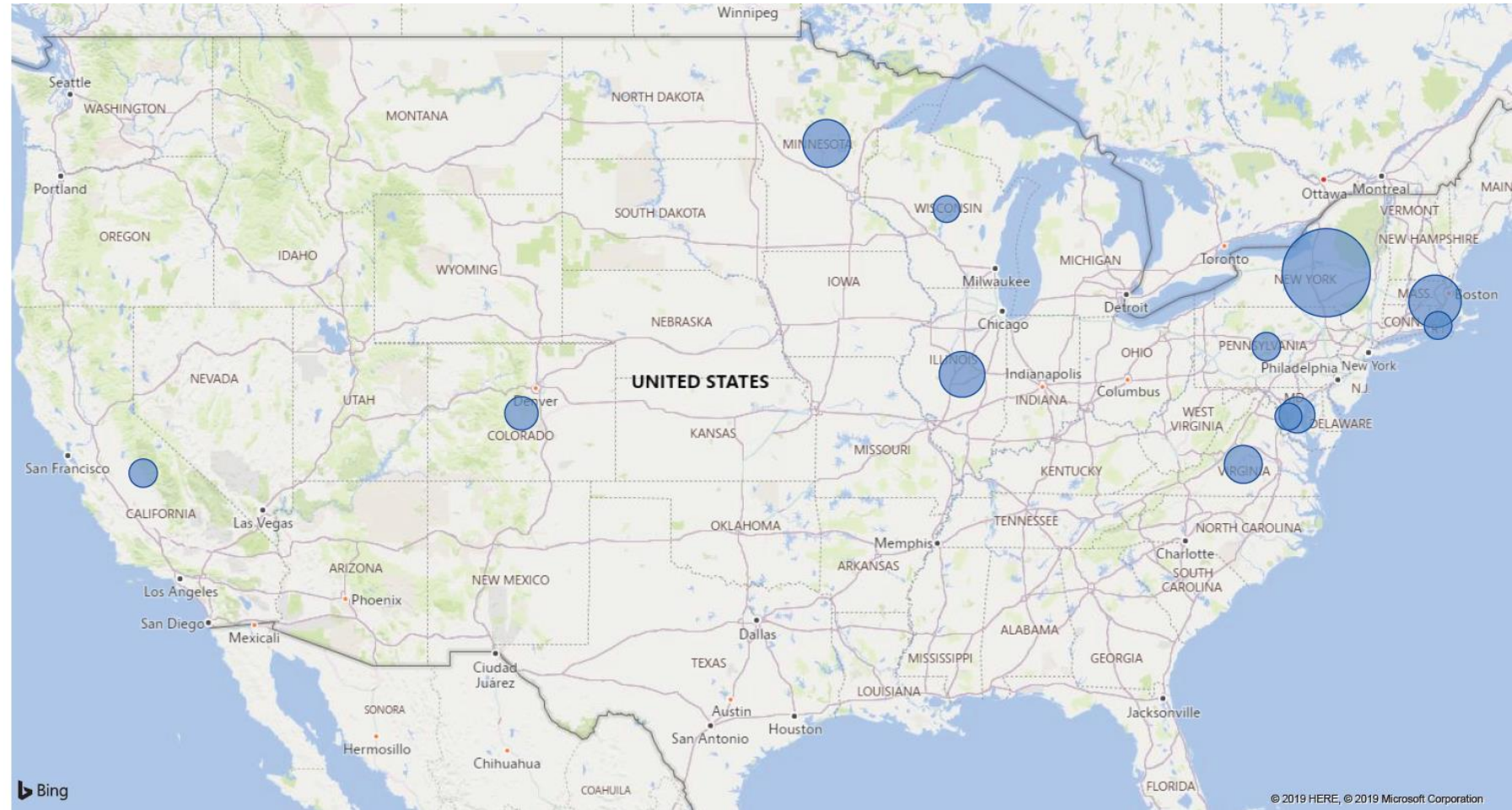
Example of value stacking in New York:



Category	Assumption tested	Var	Comments
PRICE - LBMP	Base Case		
PRICE - LBMP	MAX - 2014	5.48%	
PRICE - LBMP	MIN - 2016	-4.59%	
PRICE - LBMP	Avg. 24 months	-0.83%	
PRICE - LBMP	Avg. 36 months	1.75%	
PRICE - LBMP	Avg. 48 months	-1.11%	
PRICE - LBMP	Avg. 60 months	3.73%	
PRICE - LBMP	Avg. 72 months	4.16%	
PRICE - LBMP	No inflation	-4.12%	Base Case @ 2%/year (last 7 years CAGR @ -0.3%)
PRICE - CAPACITY	Capacity pricing less 10%	-0.93%	
PRICE - CAPACITY	Capacity pricing less 25%	-2.26%	
PRICE - MTC	Tranche #4 - G-Hudson Territory	-4.35%	If MTC is at 3¢
QUANTITY	Not fully subscribed 1 month, 1st year, 10%	-0.01%	Lost of MTC for unsubscribed portion
QUANTITY	Not fully subscribed 1 month, all years, 10%	-0.17%	Lost of MTC for unsubscribed portion
QUANTITY	Not fully subscribed 1 year, 1st year, 10%	-0.11%	Lost of MTC for unsubscribed portion
TIMING	Not fully subscribed COD delay (6 months)	-4.87%	Time value of money

States where Standard Solar is active with CS projects... and expanding

- Standard Solar is always looking for good development partners to expand our growing portfolio
- Standard Solar has low cost of capital and intends to be the long term owner of these assets



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Town of Emmitsburg, MD – 2.4 MW