



Community Solar

AQPER – February 6, 2020

About Standard Solar, Inc.

- Founded in 2004
- Headquartered in Rockville, MD and offices in California, Florida, New Jersey, South Carolina and Texas
- Leading Distributed Solar Developer and Owner/Operator
- Nearly 1500 PV installations around the country
- Full service support includes design, engineering, installation, financing and operation & maintenance
- Subsidiary of Énergir



Standard Solar was named one of the Fastest Growing Private Companies in America by Inc. magazine for four consecutive years.

About Standard Solar, Inc.

What We Do



Ground Mounts



Parking Structures



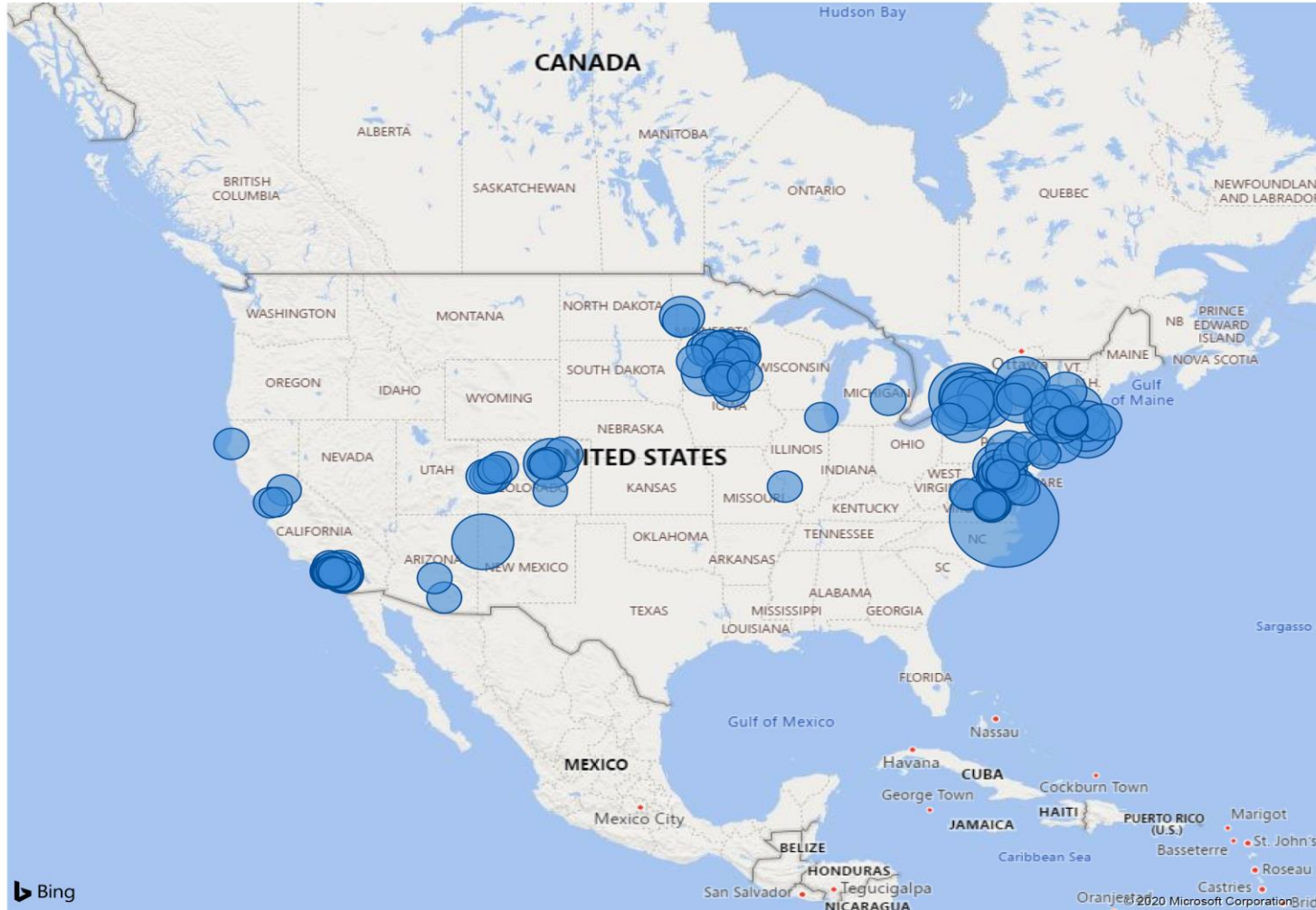
Roof Mounts

Customer Types and Services Offered

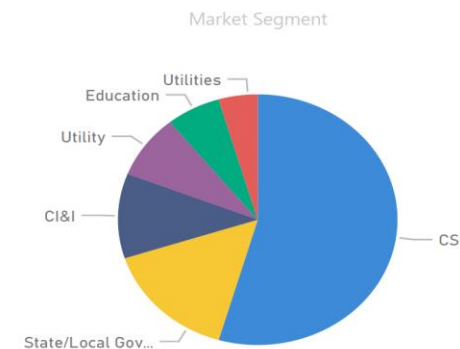
Utility DG	Commercial/ Industrial	Government	Educational	Agricultural	Nonprofit
<ul style="list-style-type: none"> • Turnkey Development • Interconnection Management • Financing • Cash • PPA • Incentive Mgmt • O&M 	<ul style="list-style-type: none"> • Turnkey Installation + Project Mgmt • EPC • Financing • Grants • PPA • Cash • Incentive Mgmt • O&M 	<ul style="list-style-type: none"> • Turnkey Installation + Project Mgmt • GSA Contract Member • ARRA • DOD Relationship • O&M 	<ul style="list-style-type: none"> • Turnkey Installation + Project Mgmt • Financing • PPA • Cash • Educational Programs • O&M 	<ul style="list-style-type: none"> • Turnkey Installation + Project Mgmt • EPC • Financing • Grants • PPA • Cash • Incentive Mgmt • O&M 	<ul style="list-style-type: none"> • Turnkey Installation + Project Mgmt • EPC • Financing • Grants • PPA • Cash • Incentive Mgmt • O&M

About Standard Solar, Inc.

Where We Are



State	Number of Projects	MW
Arizona	13	1,900.50
California	47	16,617.77
Colorado	16	18,285.85
Connecticut	5	1,242.44
District of Columbia	1	1,996.40
Illinois	14	10,846.45
Maryland	21	32,240.68
Massachusetts	2	9,407.16
Michigan	7	956.80
Minnesota	46	56,445.10
New Jersey	2	1,084.00
New Mexico	1	9,824.00
New York	17	106,800.63
Pennsylvania	5	6,961.61
Rhode Island	4	16,987.75
Vermont	1	3,291.57
Virginia	15	29,669.35
Total	217	324,558.06



Our Process

Standard Solar provides a turnkey solution throughout the project lifecycle

- Solar system planning
- Financing (PPA and traditional financing as needed)
- Equipment supply chain
- Engineering design
- Project construction
- Operation, maintenance, and system monitoring



- System design
- Financial analysis
- Grant and incentive analysis

- Cash turnkey solutions
- Power purchase agreements
- Traditional financing

- Final PV array design with calculations
- Drawings with Electrical and Structural stamp

- Permitting and Interconnection
- Project management, site management, and QC
- Provide racking, modules, inverters, wiring, and connectors

- Testing and commissioning
- Web-based monitoring and trending
- Operation and maintenance
- SREC management



Community Solar Overview



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*

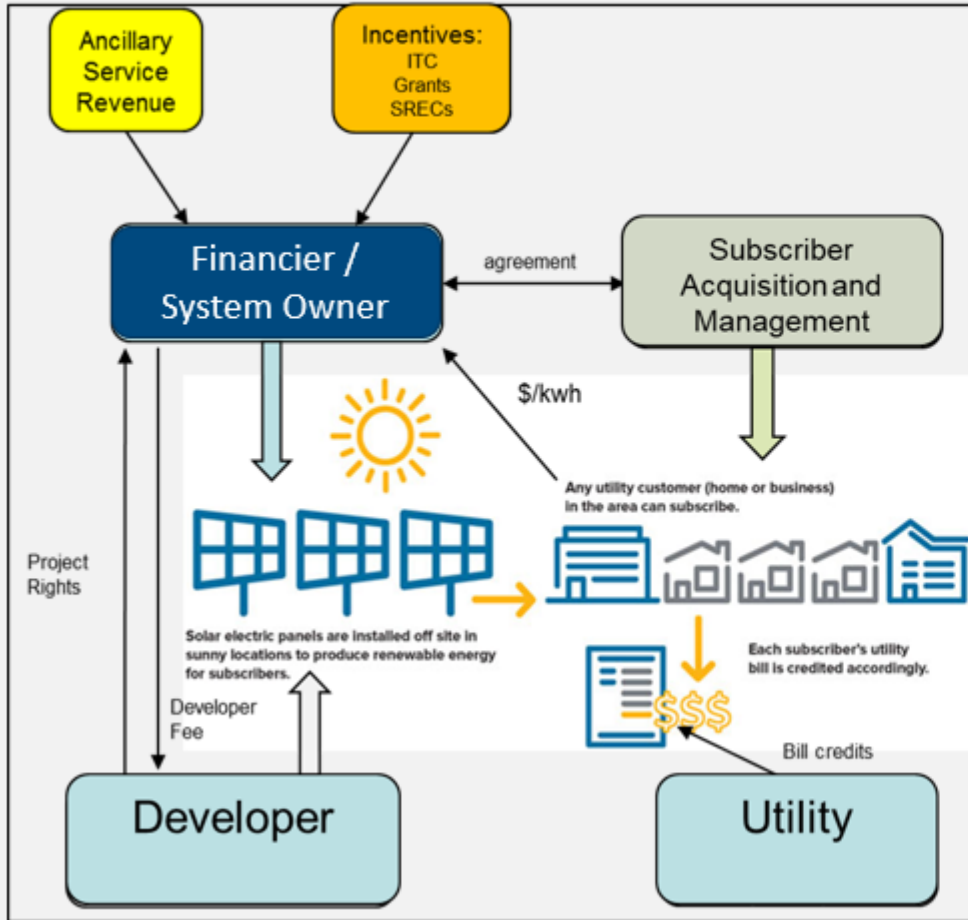
Project size: typically between 0.5 and 5 megawatts (MW), electricity is fed directly into local distribution grids and consumed locally

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.

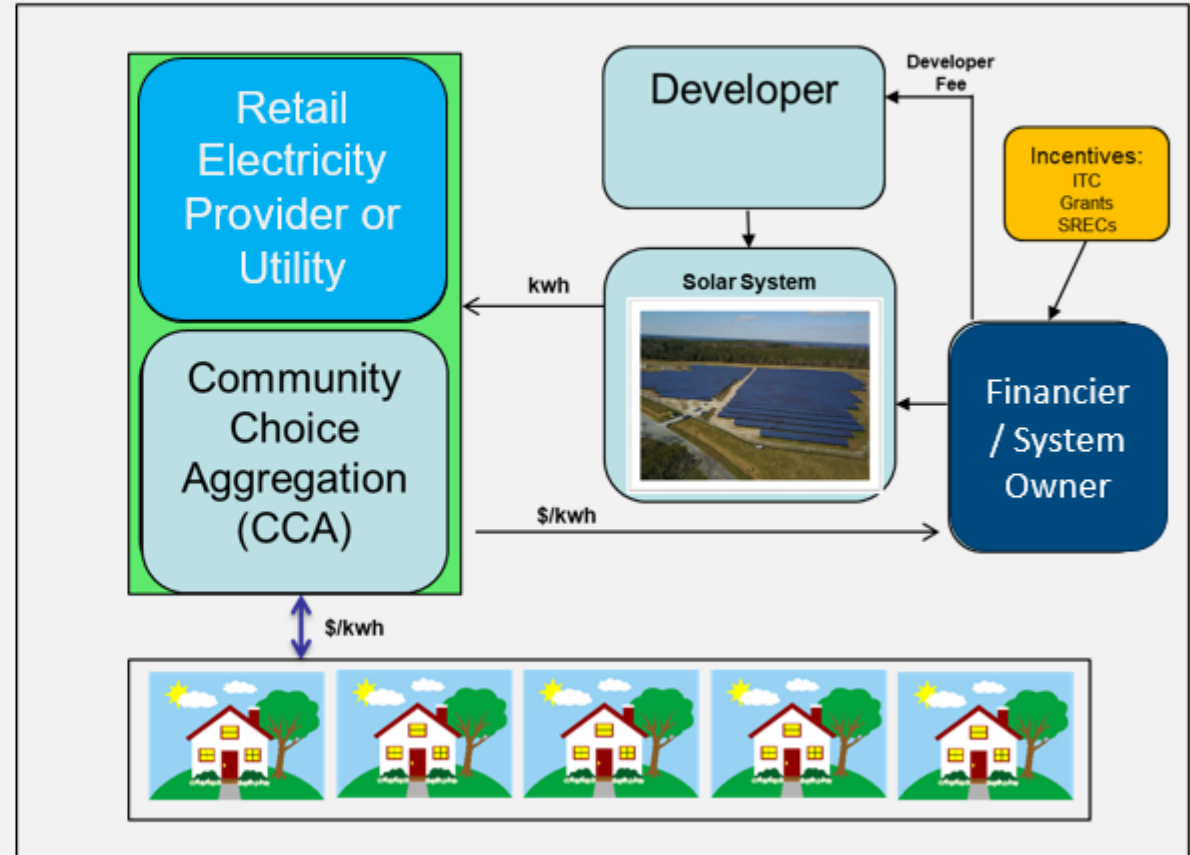
Community Scale Solar (CSS) allows residential or commercial customers to bundle together to purchase electricity from an off-site solar.

Community Solar Sample Structures

Community Solar Option

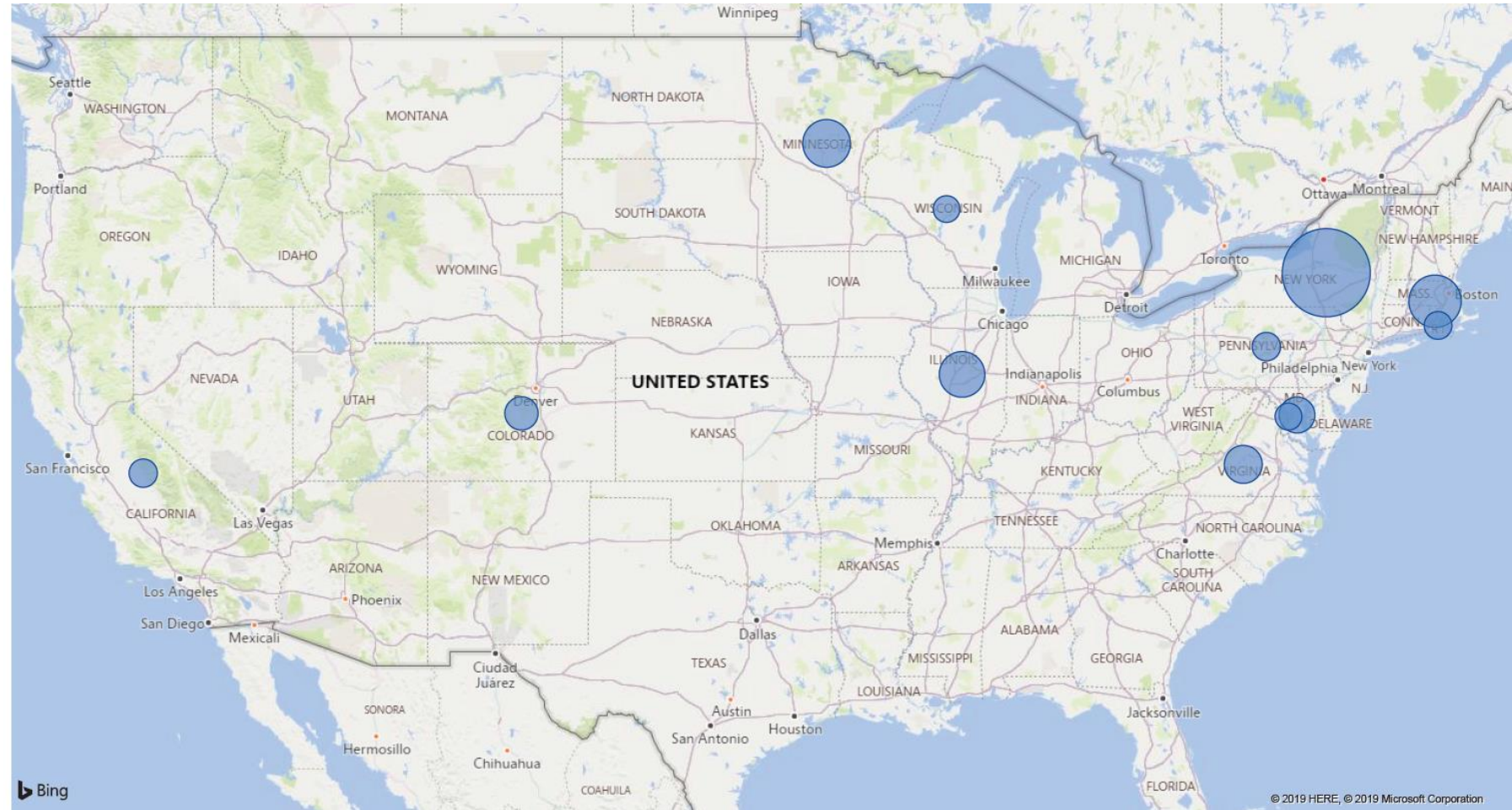


PPA Option to Single Off-Take



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



New York - A look at the value stack

Example of value stacking in New York:

	Fixed/variable	Value (¢/kWh) Hudson - Zone G	Share of Revenue
Locational System Relief Value →	LSRV	Fixed for 10 years if in zone - ¢/kWh	
Market Transition Credit →	MTC	Fixed for 25 years 3.74 ¢/kWh	32 %
Environmental Value →	E	Fixed for 25 years 2.74 ¢/kWh	23%
Capacity Value →	CAPACITY	Variable (changes monthly) 1.76 ¢/kWh *	15%
Locational Based Marginal Price →	LBMP	Variable (changes hourly) 3.49 ¢/kWh *	30%
	Total	11.73 ¢/kWh	100%

55% of the revenues are **fixed**

45% of the revenues are **variable** under this scenario.

Value of Distributed Energy Resources (VDER)

“VDER compensates projects based on when and where they provide electricity to the grid. To determine a project's revenue under VDER, [use the Solar Value Stack Calculator](#). The calculator combines the wholesale price of energy with the distinct elements of DER that benefit the grid: the avoided carbon emissions, the cost savings to customers and utilities, and other savings from avoiding expensive capital investments.”

In New York, Community Solar Project owners receive a credit, at the calculated VDER rate, for the energy produced. Individual subscribers receive a credit for a portion of those credits and then receive a bill from the solar project owner. There is currently an effort to have the distribution utility provide these back-office services.

Sugar Hill Solar Farm - NY

7 MW

- Clifton Park, N.Y. | Completed: October 2019
- Partner: US Light Energy
- First community solar farm developed in Clifton Park.
- Ground-mounted project encompasses nearly 20,000 solar module on 40 acres of land
- Expected to produce more than 8.6 million kWh of clean energy annually – enough to power up to 600 homes and businesses.



Colorado - Xcel Energy Solar Rewards Community Program

Program Overview

Implementing Sector:	Utility
Category:	Financial Incentive
Incentive Type:	Performance Based Incentive
Administrator:	Xcel Energy
Budget:	30MW 2016/2017 ~60—100MW 2018-2019 ~100MW 2020-2021
Utilities:	Public Service Co of Colorado
Eligible Renewables:	Solar Photovoltaics
Applicable Sectors:	Commercial, Local Gov't, Nonprofit, Resi, Installers/Contractors, Low Income Resi
Incentive Amount:	Determined through competitive bid (winning bids have been NEGATIVE)
Eligible System Size	2MW maximum through 2018 5MW currently
Ownership of RECs:	Subscriber Organization



Xcel Energy Solar Rewards Community Program Specifics (*updated from the Xcel site by SSI)

- Subscribing customers purchase or lease interests of a solar garden operation. These are offered by one of the above for-profit or nonprofit entities, including but not limited to solar developers, municipalities, or other organizations in the community.
- The Solar Garden operator is responsible for services such as signing up and offering support to their customers.
- Subscribers in a Solar Rewards Community garden must be Xcel Energy residential or business electricity customers in Colorado.
- Subscriber must live in the same county as the solar garden or an adjacent county. **(This requirement was suspended in 2019)**



Western Slope Community Solar

10.3 MW

- **Completed: October 2018**
- **Contractor(s) Involved: Pivot Energy (developer, subscriber organization), Konisto Construction (onsite construction), Standard Solar (owner).**
- **Standard Solar and Pivot Energy partnered to develop six sites along the I-70 corridor in Colorado – including multiple towns, school districts and housing authorities and serving low income residents – that now benefit from 10.3 megawatts of new solar capacity.**



Get in Touch With Us

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Town of Emmitsburg, MD – 2.4 MW