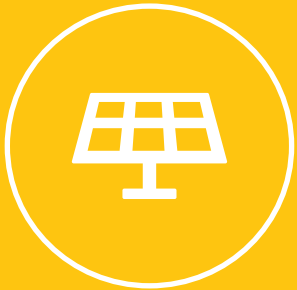


INDUSTRY ANALYSIS

The four P's of Community Solar



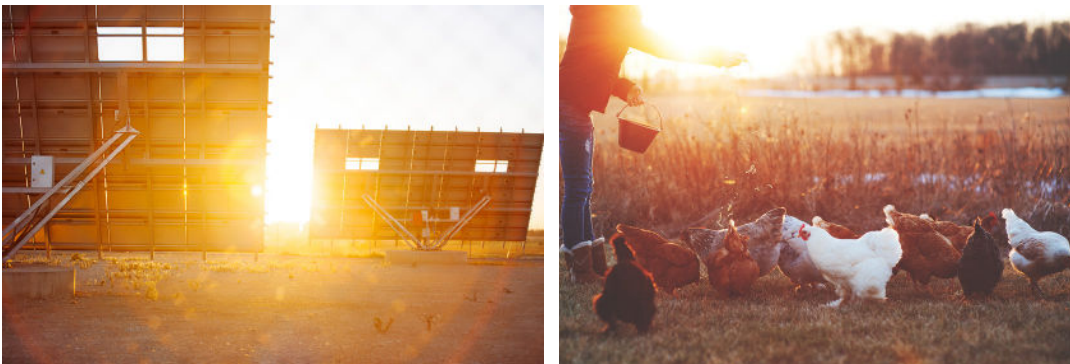
Introduction

The first community solar programs were started nearly a decade ago, led by communities – neighbors, small towns, places of worship – in each case, a group of people dedicated to building solar systems and sharing the benefits of the electrical output.

Community solar programs have grown and evolved to include many different design structures – in fact, some programs now use the moniker “shared renewables” to reflect the fact that the concept needn’t be limited to individual communities or only to solar.

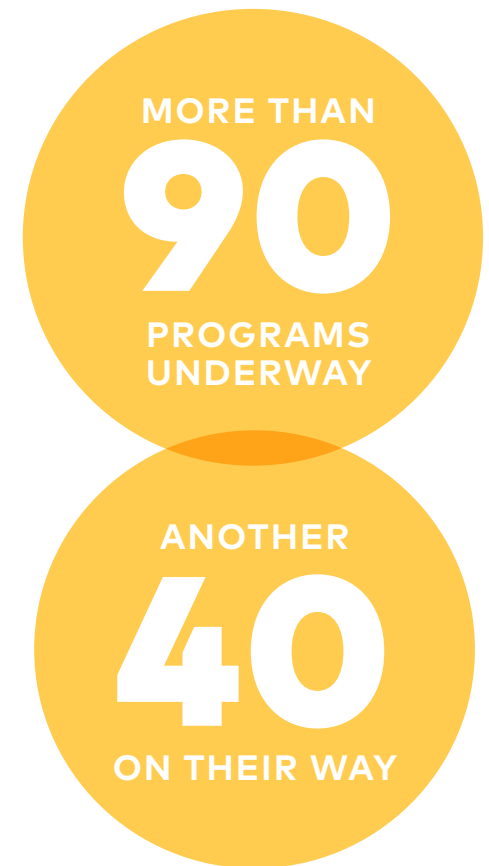
One of the reasons community solar is growing so quickly is that there is a large market of customers, both residential and commercial, who are not good candidates for rooftop solar. In some cases, they don’t own the building, in others, the roof is too old or in deep shade. As more customers become interested in having solar, utilities are looking to meet that demand through new community solar offerings.

The content of this white paper is focused on assisting utilities that voluntarily choose to implement community solar programs, not those that have been directed to do so, such as utilities in Minnesota, Colorado, or, more recently, New York.



“It’s a small, but fast growing market, experiencing growth over 25 times since 2010.”

SOURCE: [NREL](#)



SOURCE: [SEPA](#)

A planning framework for Community Solar

Launching a new utility offering (such as community solar) is similar to launching a new product. As utilities develop these new offerings, it is useful to think about how all of the elements reinforce each other and can lead to success. The classic four P's of marketing – Product, Place, Price and Promotion are a useful framework for thinking about how to design and launch this new offering to your customers.

In the case of community solar:



1. PRODUCT

Or in this case *program* includes program attributes, features and options.



2. PLACE

In this case refers to the place of the physical renewable energy system. In the classic definition, place can also refer to distribution channels, but as a service that is less relevant in our discussion of community solar.



3. PRICE

Includes the cost to the customer along with the terms and conditions.



4. PROMOTION

All the activities in the market that encourage people to sign up for the program.

As we walk through each of these in turn, they allow us to identify key issues that will need to be evaluated and decided on for a successful Community Solar program.



PROGRAM ATTRIBUTES

Facility ownership

This may not be important (or obvious) to most customers, but it is very important to utilities and will impact the final price and risk profile of the program.

Project ownership is perhaps the first question a utility should consider, because the answer will drive decisions about countless other program design points. There are three fundamental approaches:

1. UTILITY-OWNED

In this case, the utility builds and owns the renewable energy facility that supplies a community solar program that can be operated with internal resources or by a third party. This option is most likely to appeal to investor-owned utilities (IOUs) seeking a rate of return on the solar asset used for the program. It may also appeal to electric cooperatives and municipal utilities that have a strong history of asset ownership.

PROS: Potential to earn a return on the asset

CONS: Inefficient way to monetize tax credits and not clear whether state commissions will approve asset ownership

So far, programs operating today have utilized a mix of these options, but as more IOUs seeking a return on investment begin to voluntarily launch programs, and as programs grow in size and importance to the utilities, we expect the market to tilt toward models in which the utility owns the solar facilities.



2. POWER PURCHASE AGREEMENT

Under this option, the utility sources the program supply from a solar facility owned by others, via a power purchase agreement (PPA). The utility can operate the program with internal resources, or by hiring a third party. The right to purchase the asset over time may be included in the PPA. This option is likely to be easier and faster to execute due to the lack of upfront capital constraints. In addition, this option can be appealing in that it exposes utilities to lower technology and operational risks and may be the most efficient way to monetize available tax credits. While this option presents many benefits, the utility should consider the risks associated with third party ownership.

PROS: May be easier or faster to execute, easier to take advantage of tax credits

CONS: Third party facility ownership reduces utility control and there is no potential to earn a return on the asset

3. THIRD-PARTY TURNKEY PROVIDER

This model differs from the other two in that the third-party provider not only owns and operates the project but also designs the community solar program, acquires customers, bears program risk, etc. Legislation in Colorado and Minnesota has supported this turnkey program design as part of a larger policy prescription to drive development of distributed solar. This model has also proven very popular with electric cooperatives, but less so with IOUs.

PROS: Reduce utility risk and strain on internal resources by outsourcing all aspects of program

CONS: Third party often controls all aspects of the program, no potential to earn return on asset, risk that utility brand is diluted





PROGRAM ATTRIBUTES

REC ownership

Early in program design, it will be important to determine how to treat the Renewable Energy Credit (REC) that is generated by the project. This decision will impact the finances of the product as well as program marketing.

A community solar facility will produce two value streams – energy and a Renewable Energy Credit. Industry best practices suggest that both of these value streams should be delivered to a customer participating in a community solar program. Most consumers will expect that if they participate in a community solar project, one of the benefits they get in return is the environmental benefits associated with that participation.

If a utility plans to use the REC for other purposes, it is important to make sure that program marketing does not lead customers to believe they are buying or consuming solar energy, because without the REC they categorically are not. Here’s the key point: The question is whether a reasonable customer believes he or she is buying solar power. No utility wants to risk misleading consumers, being accused of misleading customers, or being the subject of a complaint filed with the FTC.

Our recommendation: Retire the RECs on the participant’s behalf.

- + Reduces utility risk
- + Delivers value to the participants
- + Makes marketing the program easier



WANT TO KEEP THE REC?

What you can say in marketing materials

To make sure that you are not misleading customers, The Center for Resource Solutions has some specific suggestions on the type of marketing claims that can be made if you retain the REC.

“Our new flat-rate program enables customers to sell solar power back to the utility.”

OR

“Do your part to help Utility X meet the state’s renewable energy goals.”

Although clear, these marketing messages will probably not compel many customers to sign up. This limitation in marketing claims should be carefully considered when determining how handle REC ownership.

SOURCE: [CENTER FOR RESOURCE SOLUTIONS, “GUIDELINES FOR RENEWABLE ENERGY CLAIMS”](#)



PLACE

Location of facility



For utilities with small service territories, it is clearly appealing – though not always the right decision – to have the system sited within the service territory and close to customers. For utilities with larger footprints (for example, many IOUs), this issue is complicated by the fact that supply can't technically be “local” for everyone, though it can be relatively closer and more visible to a high percentage of customers.

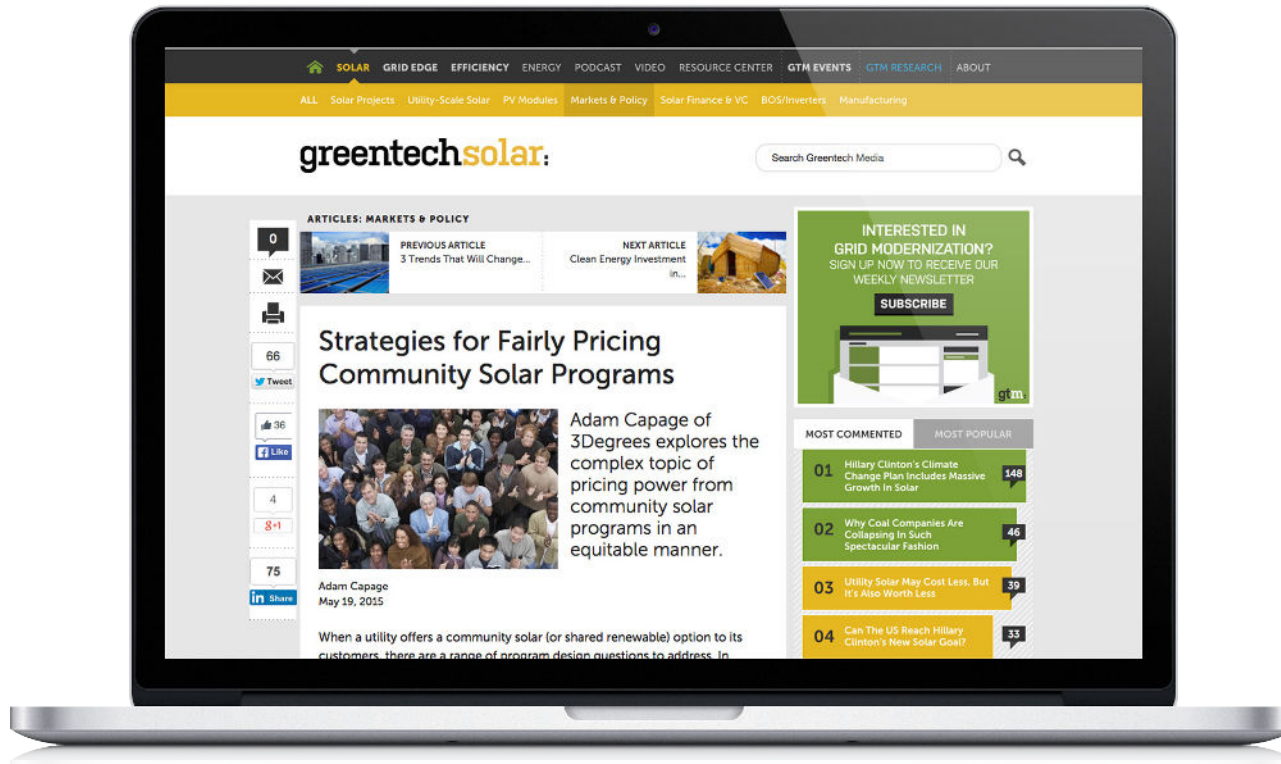
LOCATION	PROS	CONS
Local <i>(within an urban area)</i>	Marketing: People connect to a project they can see	Most expensive option (up to 50% more costly)
Regional <i>(further from population centers, but still within service territory)</i>	Lower capital and operational costs	Much less visible to customers

In many cases, 3Degrees recommends utilities pursue a combination of these supply options for community solar programs. In our experience, customers often verbalize a desire for extremely local supply, but when forced to act, they assign higher priority to a lower-cost option. Therefore, it will not be surprising to see community solar programs designed around a larger, cost-effective, regional project with other small projects located within population centers to provide visibility to the effort.

PRICE



For community solar, there are a number of components that combine to help determine the final price to customers. The cost of the solar energy itself is fairly easy to define. But it is also important to account for the fact that as a purchaser of community solar, the customer will not be using system resources – traditional energy as well as transmission and distribution – that has already been rate based. Defining the appropriate credit can be contentious and many stakeholders will weigh in on the correct formula. A number of potential options were discussed in a [recent article](#) in GreenTech Media.



REFER TO: [GREENTECH MEDIA - "STRATEGIES FOR FAIRLY PRICING COMMUNITY SOLAR PROGRAMS"](#)





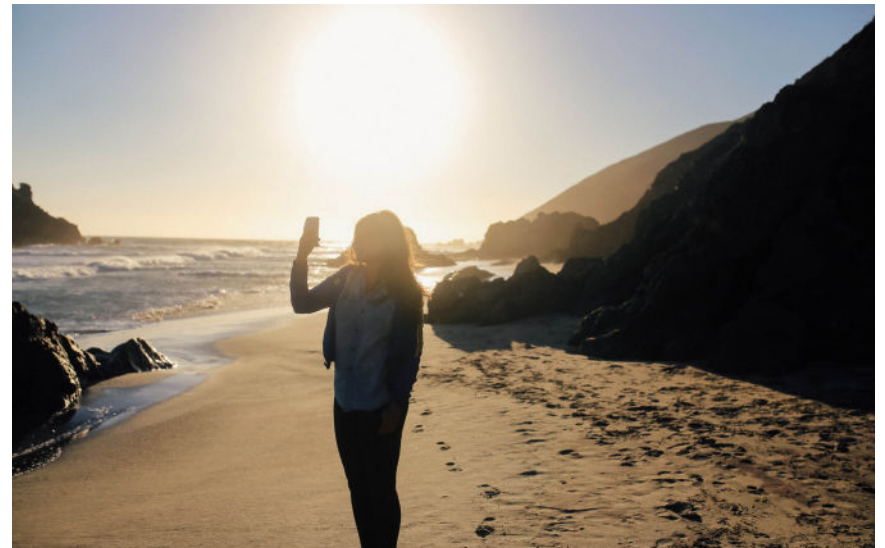
PRICE

Terms and conditions

In addition to the fee that utilities will charge to participate in community solar, the terms and conditions of the offer can also be viewed as making the offering more (or less) costly from a customer's point of view.

For example:

- + **Sign-up fee:** Will there be a fee just to get started on the program?
- + **Size of share:** What is the minimum (or maximum) amount of solar that an individual customer can purchase?
- + **Cancellation options:** What happens if a customer no longer wants to participate? Can they cancel at any time? Is there a cancellation fee?
- + **Portability:** What happens if I move? Can I take the product with me? Do I have to? And, does the answer change if I move out of the utility's territory?



Ultimately, we caution that fees and mandatory commitment periods represent barriers to customers' decision to participate. Not only is this counter to the spirit of a program to engage customers with solar, but it's likely to lead to higher sales costs and a longer sales cycles. The benefit these strategies ostensibly offer – reduced risk of unsold program supply – can be more easily attained using the other strategies discussed in depth in this article, published on GreenTech Media: [“Designing Community Solar Programs to Manage Risk”](#).



PROMOTION

Building program demand

Our final “P” – promotion – is often what people think of when they hear the word marketing. Given that this is a new product concept in most areas, and will be a premium product, a good promotional plan will be key to the success of any community solar program.

OUR RECOMMENDATIONS:

- + ***Define a realistic launch schedule:*** Many of us are tempted to rush a new offering to market. We love it, and can’t wait to see how customers respond. Additionally, we may be getting pressure from senior leadership to launch quickly. However, before rushing to market, make time to develop a comprehensive marketing plan, so that efforts are coordinated and efficient.
- + ***Assume a longer sales cycle:*** Most likely, this will be a premium contract that requires a contract signature. As a result, you should anticipate a longer sales cycle than for a traditional green pricing product. And speaking of other renewable energy programs....
- + ***Program portfolio:*** In order to minimize customer confusion, carefully consider how this program aligns with other utility programs, especially other renewable energy programs.
- + ***Market segmentation:*** This product will be attractive to a small subset of your customers. Develop a profile of this customer type and target your marketing. This will allow your marketing budget go much further than a general campaign would.
- + ***Align with Green-e Energy:*** If you want your product to be Green-e Energy certified (highly recommended), make sure your marketing messages are in compliance with Green-e Energy requirements. It is much more efficient to do this from the start rather than try to correct marketing pieces following an audit.





PROMOTION

Managing program demand

Small scale solar programs sell out easily, but for those that want to pursue a larger program with thousands of customers, and for those offering programs where the financial benefits of participating take longer to realize, it's important to create a marketing plan designed to meet specific participation goals. For example, in some cases it will be necessary to flexibly ramp marketing up or down depending on program performance; in other cases it will be necessary to use marketing to help you build and maintain a waitlist that can address turnover as customers move out of the service territory.

The other component of managing demand is managing attrition. When developing your marketing promotion plan, be sure to include budget and activities designed to keep program participants engaged and to build advocates for the program.



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Conclusion

Community solar is fast evolving. As more programs are launched into the markets across the country, models are being refined and are maturing. As a result, if you are reading this white paper a year from now (or maybe even sooner), some of the information may be out of date. For this reason, it is important to find a partner that can help you develop and launch your community solar program using the latest approaches and best practices. With our hands on experience developing and launching community solar program across the country, we are here to help. Give us a call when you are ready to get started or if you've already gotten started and have questions.



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About us

We work with organizations like yours to deliver positive energy choices across the nation – and the globe – that make a difference for our planet and communities.

We consider every aspect of our business an opportunity to do good. When you decide to work with us, we'll help you make positive environmental impact a reality. We have exceptional working relationships with our clients and that leads to exceptional programs.

We are here to connect people with cleaner energy on a massive scale. And we can't do it without you.

