

TENDRIL®



COMMUNITY SOLAR:

BRIDGING THE GAP BETWEEN
UTILITY AND CUSTOMER

| UTILITY PLAYBOOK

Why utilities need to rethink their community solar programs

As the world continues to explore clean energy alternatives, the role played by solar has grown exponentially. There is now enough solar capacity in the United States to power more than 4 million American homes and a new solar project is being installed every 2.5 minutes.¹

According to officials at the National Renewable Energy Laboratory (NREL), speaking about the US Department of Energy's SunShot Initiative, the cost of using solar will continue to plummet. According to the NREL, "there is a wide-range in analysts' photovoltaic (PV) pricing estimates, however a number of analysts are now projecting long-term pricing in line with the targets set by the SunShot Initiative for 2020. At these pricing levels, PV is expected to reach widespread grid parity in the U.S. without federal or state subsidies."²

Impressive numbers, but the growth of solar is limited by several factors— some physical and others by consumer preference. "A majority of the people who would like to add solar are essentially locked out of the market," says Adrian Tuck, CEO of Tendril, a leading, energy services management company based in Boulder, Colorado, "this is a very addressable market experiencing fairly explosive growth."

¹ SEIA. (2014). Solar Energy Facts: 2014 Year in Review. Retrieved from <http://bit.ly/1dhR3pm>

² NREL. (2014). Photovoltaic System Pricing Trends. Retrieved from <http://1.usa.gov/1CNdeAA>

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CEO of Tendril*

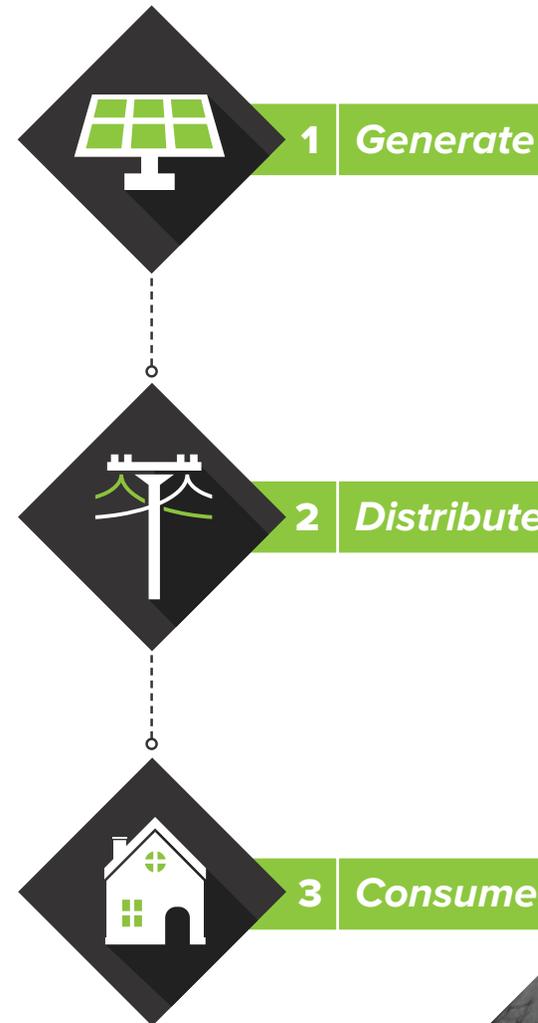
THE RISE OF COMMUNITY SOLAR

Community solar or sometimes “shared solar,” is a promising solution for utilities eager to tap into the renewable energy market and remain competitive. “Think about the word, ‘community,’ in terms of the shared economy movement,” says Tuck, “think about Uber and Airbnb, and then think about applying these same methods to solar power. That is where we’re heading.”

The basic concept is fairly simple. A “solar farm” or “solar garden” of photovoltaic panels is installed in a location that will maximize efficient energy production from the sun. The farms may be set up in unused sections of public land or on the roofs of public buildings— including convention centers or churches. Members of the neighboring community are allowed to “buy-in” to the system in exchange for a reduction in their energy costs.

NREL research suggests immense opportunity for utilities interested in breaking into the community solar market. According to their most recent study, “by opening the market to these customers, shared solar could represent 32%–49% of the distributed PV market in 2020, thereby leading to growing cumulative PV deployment growth in 2015–2020 of 5.5–11.0 GW, and representing \$8.2–\$16.3 billion of cumulative investment.”³

³ NREL. (2014). Shared Solar: Current Landscape, Market Potential, and the Impact of Federal Securities Regulation. Retrieved from <http://1.usa.gov/1HL2AfW>



Tom Hunt, vice president of Clean Energy Collective (CEC), says, “community solar is the best mechanism for the utilities to transition farther into solar because it allows them to maintain their customers.” Based in Carbondale, Colorado, CEC has partnered up on several projects with industry giant, Xcel Energy, while also working with multinational energy corporations and small electric co-ops. “Our first community solar project was with Holy Cross Energy, an electric co-op not regulated by public utilities,” Hunt says.

Since partnering with CEC in 2010, Holy Cross Energy (HCE) has successfully transitioned 20% of its power to renewable energy including community solar.

Community solar is especially popular in forward thinking pockets like Colorado and New England, thanks to legislation and interest from the utilities serving the area.⁴ According to Mark Stutz, senior media representative for Xcel, “community solar, which we know as solar gardens in Colorado, helps us give more energy choices for a certain niche of customers, namely those who can’t access solar because they don’t own their homes, live in a location not conducive to solar collection or do not want to install solar panels on their roof.”

⁴ Brewster Community Solar Garden. (2014). The First Community Shared Solar in Massachusetts. Retrieved from <http://bit.ly/1KEE8jv>



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THE UTILITY-CUSTOMER RELATIONSHIP

Although a certain segment of utility consumers are predisposed to buying into community solar, progress depends on how quickly utilities can address the customer relationship beyond use by early adopters. Fortunately, identifying and targeting customers interested in achieving a solar lifestyle has reached a new level of sophistication, using analytics to weigh factors like a home's size and age, HVAC usage, and local weather patterns.

“We compile more than 300 data points to understand the ideal solar customer,” says Ashish Agarwal, senior director of client solutions at Tendril. “We can analyze this data for all residential customers and identify the best prospects for both types of solar customers— rooftop and community.”

Essentially, utilities can leverage hundreds of data points to determine what an ideal solar candidate looks like. Once potential solar customers are identified, utilities can then use those same data points to craft custom messages, offers and products aimed at specific segments of the population.

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Bridging the gap between utility and customer doesn't end with analytics. Successful community solar programs educate consumers beyond the impact of a "green-power" bumper sticker. This means educating customers by looking right into dollars and cents.

Proponents of community solar urge utilities to broaden the appeal by providing practical benefits for everybody who plugs in. One such method entails offering flexible payment plans with financing. A recent paper by the Solar Electric Power Association (SEPA) outlines this strategy in action at Grand Valley Power in Colorado.⁵ After transitioning to a low-cost \$15 per month, five year, on-bill installment plan, the utility "doubled program subscriptions within six months."

Utilities also need to be prepared to advise consumers on how to buy into a community solar plan— which remains a vexing question due to the numerous financing models available. "You need to help them decide on the best way to buy— whether with friends, as part of a Power Purchase Agreement, the length of the agreement, etc.," says Agarwal. "There are different financial models so they need to figure out the best way to become involved."

⁵ SEPA. (2014). Expanding Solar Access Through Utility-led Community Solar. Retrieved from <http://bit.ly/1dMMXNW>



SIMPLIFYING **CUSTOMER DIALOGUE**

The sharpest tool spurring the evolution of the power grid is the same one that's changing technology all around us— the Internet of Things as piped into our tablets and smart phones. Interactive apps, tools and dashboards designed to connect solar customers with utilities and other participants, allow solar users to see how much power their systems are generating and how much money they are saving in real time.

Improving the interface between utilities and their customers doesn't need to be complicated. Utilities should share information with their customers in a way that is easily understood and personalized on their terms. "In the utility world we talk about kilowatts and kilowatt hours and nobody knows what that means," Tuck says. "The cell phone industry doesn't do that, they put a series of bars in the corner of your phone and everybody knows what that means - it's very easy to understand."



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*- Ashish Agarwal
Senior Director of
Client Solutions, Tendril*

CEC agrees that utilities need to communicate the long-term benefits of solar to consumers in a manner that is more approachable and accessible. “We offer what we call a RemoteMeter to all of our customers,” says Hunt, “it’s a customer-facing dashboard with lots of metrics consolidated into easy to understand charts and graphs.”

Agarwal adds, “traditionally, community renewal projects centered on a billing relationship– the utility customer paid to get green energy but had little to show for it. But now utilities can employ personalized communications using real time portals and individualized solar reports to further engage customers. The ability to see how much they generated versus how much they consumed in real time gives community solar customers a sense of pride on par with rooftop solar customers.”



ADVOCATING COMMUNITY **SOLAR PROGRAMS**

While consumer interest in community solar is growing, much of the development burden plugs back into the walls of the utilities themselves. To that point, setting up a community solar program is not without risk. Hunt says, “some of the common mistakes made in the past are programs that weren’t providing actual benefits, creating risks with regard to existing security laws and signing up people that don’t stay with the program.”

Cost savings and customer engagement, offered through a variety of channels, keep people subscribed to the program. Utilities are already moving into social media and seeing results for their non-solar customers— forty-nine of the fifty largest utilities are now on Twitter, all of them are on Facebook, and 15 have their own mobile apps.⁶ Utility companies are also spending more resources to keep in touch with customers— partially due to legislation, like New York’s Reforming the Energy Vision initiative, that legally requires utilities to reduce carbon and better inform customers.⁷ Earlier this year, Navigant Research found that utilities plan to spend an estimated \$37 billion globally over the next decade on customer information systems (CIS) and analytics alone.⁸ With increasing competition, there is no doubt that utilities are starting to realize the crucial role engagement plays in the future of their business.

6 Northeast Group. (2014). Benchmark Reveals Top 50 U.S. Utilities Leveraging Social Media and Mobile Apps to Improve Smart Grid Benefits. Retrieved from <http://goo.gl/s2oMK1>

7 Clean Technica. (2015). A look at New York’s Reforming the Energy Vision Rev Initiative. Retrieved from <http://bit.ly/1HL2CEw>

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“It’s all about the need to become a trusted energy advisor,” says Agarwal. “Utilities need to consider making up for lost revenue through enhanced products and services like high bill notifications, energy saving calculators and personalized energy saving recommendations. Engaging with consumers on an individualized level provides a strong base to provide those new services. Those [customers] that are engaged are also more likely to refer family and friends. And the lowest cost of customer acquisition is usually achieved through referrals.”

Professionalizing the approach to community solar isn’t a question of ‘if’ as much as a question of ‘when.’ Tuck still believes the most logical connection from the sun to the home is through utility companies. He says, “there’s always been a group of utilities that are willing to embrace change, a second group who are waiting to see what happens and a third group that’s in complete denial. The big decision about expanding community solar is, will the utilities be doing it or will it be up to Amazon and Home Depot?”

8 Navigant Research. (2015). Electric Utility Billing and Customer Information Systems. Retrieved from <http://reut.rs/1IdWffM>



TENDRIL®

Tendril delivers personalized energy experiences to consumers around the world. Pioneering energy providers that want to establish a competitive advantage rely on our software and solutions to better acquire, engage and activate their customers. To do this we employ the latest in science and data analytics to unveil a complete understanding of the individual consumer, including their unique needs and propensities to act. With this granular understanding, we help our customers unlock the true value of energy interactions.

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