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GREEN TECH | 12/30/2011 @ 10:03PM | 2,673 views

## How New Financing Models Could Make Solar the Facebook of the Energy Industry

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Rapidly dropping polysilicon prices over the past year have inspired several utility-scale solar developments to move forward after many months' pause. At the same time, those in favor of distributed generation (placing solar on every available rooftop to supply energy locally) have also made strides in improving the business case for small-scale solar, particularly with respect to what is being called "community solar"—centrally located solar projects that enable those who can't necessarily put solar on their own roofs to support and benefit from solar energy.



Eight Faces To

Now, two emergent financing mechanisms are shaking up the energy business case, creating models that could work for a variety of renewable energy sources. Berkeley-based [Solar Mosaic](#) has taken a crowd-funding approach to solar. Much in the way that [Kickstarter](#) enables average citizens to fund creative projects, Solar Mosaic enables citizens to support local solar development. The difference is that those citizens earn back their investment once the solar has been installed.

The [solar garden](#) approach also enables those without the option of putting solar on their roofs—renters, people who live in historical buildings, people whose homes are in a Homeowners Association, or people whose roofs aren't positioned to make efficient use of the sun—to reap the rewards of solar energy. The idea is to use marginalized or un-used land to install solar panels, creating community solar gardens. Much the way community-supported agriculture operates, community solar gardens would enable local residents to pay to be members of the garden. Rather than fresh local produce, those members would receive credit from the local utility for generating solar energy.

The first such project in the country is [currently underway in Colorado Springs, Colo.](#), where an old landfill is being given a second life as a community solar garden. Three-and-a-half acres of the 40-acre site will soon host 500 kw of solar panels, all owned by local residents who will be seeing an average 10-percent reduction on their energy bills (the panels cost \$550, with a minimum purchase of two panels). Recent changes to legislation in Colorado and Massachusetts have made solar gardens possible in those states, and California is currently considering legislation that would do the same.

The California Public Utilities Commission (CPUC) already allows [virtual net metering \(VNM\)](#)—the mechanism through which someone can receive credit on their utility bill for solar power that is not generated on their roof—for the [multi-family affordable solar housing \(MASH\) program](#). Previously, solar installed on apartment buildings would just be used in common areas, because



*Photos: Intersolar  
2011*

extending solar to the units themselves would require separate panels and meters for each apartment. Using VNM, the developer and utility can take an entire solar array, feed it into one meter and then send that out to several virtual meters (e.g., 1/56th goes to this bill, that bill, and so on). The currently proposed legislation ([SB 843](#)) would extend that capability to community solar projects.

**The solar garden idea isn't just about making everyone feel like they're a part of the solar energy push, it also makes small-scale solar developments less risky for banks.**

“ One of the real challenges we have when we have conversations with potential solar investors is the collateralization of the underlying asset,” says Lee Barken, [Energy](#) and Cleantech practice leader at accounting and consulting firm [Haskell & White, LLP](#) and a member of the board of directors of [CleanTECH San Diego](#). “With the traditional solar leasing model, if you approach a typical institutional investor they'll say what happens when Bob the homeowner defaults on his lease, what's the salvage value? And they'll assume zero. I know those solar panels are still worth something, but from an investor perspective they see a lack of a secondary after-market, and the cost of removing the panels from Bob's roof, and those panels are valued at zero. The elegance of the solar garden approach is that people buy in and pay a share, so if Bob stops paying his subscription, you don't have to go remove his solar panels, you just sell his share to the next person. That means the collateralization of the loan could be secured by the underlying asset because it's not on Bob's rooftop.

**Solar Mosaic co-founder Daniel Rosen is similarly enthusiastic about the crowd-funding approach to solar. Rosen is a passionate advocate of solar energy, but beyond that he is a big believer in innovating business models.**

“ Solar lends itself to an innovative financing model, such as Mosaic, that is decentralized, democratized, and agile,” he says. “These are the business models that matter in the 21st century. Look at what Facebook did literally overnight to the media industry. It empowered every person to be their own media clearinghouse. A similar trend will happen with “clean-web” or where energy meets IT/ web/ mobile innovations. And we think it will be an even bigger opportunity than Facebook, because energy and finance are the largest markets in the world. The Age of the Internet has transformed nearly every other industry on the planet, but we are still trapped and constricted by 19th century energy sources and business models.



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