

Solar gardens nourished by Xcel incentives set to bloom in Colorado

Posted: 07/15/2012 01:00:00 AM MDT

By Mark Jaffe
The Denver Post



David Amster-Olszewski, chief executive of SunShare, shows off some of the panels that homeowners can buy into in his solar garden near Fountain. (*Helen H. Richardson, The Denver Post*)

Solar gardens are poised to sprout across Colorado — from Fort Collins to Leadville to the Paradox Valley near Utah — and some are already taking root.

Looking to take advantage of a new incentive program from Xcel Energy, the state's largest electric-utility company, community groups and developers are crafting garden proposals.

Solar gardens enable people who don't have a sunny roof or the money to buy a full array to buy or lease a piece of an array — in some cases for as little as \$1,000.

"This is a way to make solar available to all our customers," said Robin Kittel, Xcel's director of regulatory administration. "We are also looking for creative low-income projects."

More than a dozen

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states — including Massachusetts, Washington, Illinois, Arizona, Nevada and California — are promoting solar gardens, according to the Interstate Renewable Energy Council.

But Colorado could set the pace for the nation. The state has a solar-garden law, developers specializing in the collective solar installations and innovative private financing.

"There are a lot of elements that just come together in Colorado," said Jesse Morris, an analyst with the Rocky Mountain Institute, an energy consultant in Snowmass.

In Leadville, 20 residents and a private school are proposing a small, 50-kilowatt solar garden near the base of Mount Elbert.

Just off Interstate 70, at the Garfield County Airport near Rifle, the country's largest community solar garden — 858 kilowatts — is up and running.

About 200 people have bought a piece of the garden's 3,575 panels. The complex was built by the Carbondale-based Clean Energy Collective, a private developer specializing in solar gardens.

"This is a big, untapped market," said Paul Spencer, the collective's president and founder. "We've worked to develop a business model without subsidies, but the Xcel program will open up solar gardens to 55 percent of the state."

The collective is hoping to use the Xcel incentive program to build a solar garden in Denver's Lowry neighborhood.

But even without the Xcel incentive, the company is building a 1.2-megawatt garden in the Paradox Valley desert, in southwest Colorado, in cooperation with the San Miguel Power Association, and it has a contract with Colorado Springs Utilities for a garden.

There are already two other solar-garden projects in Colorado Springs by SunShare LLC, a 1-year-old startup.

One 575-kilowatt garden went into operation in December at Venetucci Farm, and the other 573-kilowatt project is under construction at a church.

"I had seen solar gardens in Europe and wondered why we didn't have them here," said David Amster-Olszewski, 25, president of SunShare. "The answer was that there were regulatory and financial roadblocks, but those are being removed."

Xcel will be offering incentives for 9 megawatts of solar gardens in 2012 and another 9 megawatts in 2013, divided among small systems (10 to 50 kilowatts), medium-size systems (50 kilowatts to 500 kilowatts) and large systems of 500 kilowatts to 2 megawatts.

Operators will get paid on a sliding scale — 14 cents to 10 cents — for each kilowatt-hour the garden produces. Residents will get a credit on their bill of about 6.8 cents a kilowatt-hour.

"There is a lot of interest," said Amster-Olszewski. "It looks like it is going to be somewhat of a raffle."

There are, however, obstacles: The cost of the systems runs into the millions of dollars, and finding a piece of land large enough for a garden may be difficult in urban areas.

"There is a lot of organizing and politics," said Jeff Evans, sales manager for solar installer Simple Solar.

Simple Solar tried and failed to put together a garden project in Grand Junction.

Still, groups and individuals across the state — from Aurora to Fairplay to Saguache County — are trying to organize solar gardens, said Joy Hughes, founder of the Westminster-based Solar Gardens Institute, a nonprofit advocacy group.

"There is huge interest because this is a way that people who would never have access to solar power can participate," Hughes said. "It is a way to bring communities together."

Only about a quarter of the nation's rooftops are big enough and sunny enough for rooftop solar, according to the National Renewable Energy Laboratory in Golden.

And with the price of a rooftop array ranging from \$12,000 to \$180,000 in Colorado, not everyone can afford one.

While sharing panels might sound simple, the details are complex. Issues include whether individuals can sell their shares and how they will be credited for the energy produced.

The Colorado Community Solar Garden Act — sponsored by Claire Levy, a Boulder Democrat, and passed in 2010 — sought to address those issues.

The act directed the Public Utilities Commission to include gardens in the state's renewable-energy plans. Xcel's new incentive program for 18 megawatts of gardens in the next two years came out of that effort.

In Leadville, the High County Conservation Center organized the local group and was able to get a site on county land 7 miles from town.

Solar Panel Hosting, a for-profit spin-off from the Solar Gardens Institute, is set to develop and manage the garden.

If the project is selected, Xcel will pay the developer and its financial backers, under a 20-year contract, 14 cents for every kilowatt-hour the garden generates — as small gardens get the highest incentive.

Residents will buy into the garden at \$2,000 to \$3,000 a kilowatt — depending on financing and construction costs, according to Lynne Greene, energy director at the conservation center.

"I'm buying 1 kilowatt, which covers about a third of my electricity use," said Greene, who is a Leadville resident.

Homeowners will get a credit on their bill for their share of the garden equal to Xcel's base residential rate, minus transmission and renewable-energy charges.

The payback on the investment is estimated to be about 10 to 15 years, Greene said.

Finding financing for solar gardens is a new challenge, since it is a new and expensive product.

The energy collective has worked with private investors, who gain some federal tax credits as well as a return, and also JPMorgan Chase, Spencer said.

But financing for homeowners looking to buy into a solar garden remains a challenge.

Sooper Credit Union, which initially served King Soopers employees and now operates in four states, has jumped into that market as the first solar-garden lender in the country.

Working with the energy collective, the credit union is offering three- to 10-year loans with interest rates of 2.25 percent to 6.5 percent to consumers and businesses.

"At the outset, you are paying a little more than the benefit, but at some point you catch up," said Don Kester, the credit union's chief executive.

"Our main business is car loans, but this looks to be a promising market — and it's green," Kester said.

Mark Jaffe: 303-954-1912 or mjaffe@denverpost.com

A breakdown of the incentives associated with Xcel's solar-garden program

Xcel's program will provide incentives for 9 megawatts a year of small and medium-size solar gardens, and the opportunity for large solar gardens (up to 2 megawatts) to competitively bid for Xcel's business.

Small installations up to 50 kilowatts (kw): The first 3 megawatts worth of projects will get 14 cents for each kilowatt-hour generated. If that goal is reached, the next 1.5 megawatts will get 13 cents a kilowatt-hour. Projects will be awarded on a first-come, first-served basis, provided they have financing in place.

Medium installations of 50 kw to 500 kw: 3 megawatts worth of projects will receive 11 cents a kw-hour, and the next 1.5 megawatts will get 10 cents a kw-hour.

Large installations 500 kw to 2 megawatts: Developers will have to submit bids to Xcel on a competitive basis.

To learn more about solar gardens, see the Solar Garden Institute site: solargardens.org.

Mark Jaffe, The Denver Post

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