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Alternative Energy

By Barbra Murray, Contributing Editor

Solar energy is a growing favorite electricity generator; photovoltaic installations skyrocketed in 2012, increasing 76 percent year-over-year, according to a report by the Solar Energy Industries Association. But while it may be logistically and financially feasible for some private single-family dwellers to erect a solar panel overhead, it could be less so for a multifamily community. It's not every apartment building that can accommodate a sufficiently sizeable set of photovoltaic panels atop its roof. Placement can be an issue in more ways than one, but not an insurmountable one these days with shared renewable energy arrangements.

"Shared renewables are simply a solution for people who don't have a roof," says Lee Barken, CPA, Energy and Cleantech practice leader at accounting and consulting firm Haskell & White L.L.P. "They are for renters, they are for people who don't have a southern orientation or have too much shading."

They are for people who want to avail themselves of clean energy but don't have direct access to the requisite hardware. In the solar energy arena, shared renewables provide energy subscribers access to off-site solar power plants. It's hardly brand new, but the concept is spreading. Twelve states presently have shared renewable energy projects—34 projects in total. In the West, Arizona, California, Colorado, New Mexico, Oregon, Utah and Washington make the list. The participating states in the East are Florida, Massachusetts, North Carolina and Vermont. And Minnesota rounds out the group as the only Midwestern state with a shared renewables option.

Colorado leads the pack with 11 facilities, including the Garfield Community Airport Solar Array in Rifle, which is the largest community-owned shared renewable arrangement in the country.

And policies for the implementation of "community solar" are popping up as projects multiply. Virtual net metering, a billing mechanism, is one such policy. VNM allows for a single solar PV system to service not just the electricity load of an apartment property's common areas, but that of individual residential units as well, without the excess hardware that would normally be required. "Because of VNM, they can virtually allocate a fraction or a percentage of the generation to each of the meters across the property without having to run wires to each one," Barken says. "You feed the electrons into one meter, and then the electric company virtually allocates the generation and gives an energy credit to all the other meters. It's a great concept."

And it's a concept that the State of California found so successful when utilized for its Multifamily Affordable Solar Housing developments, that, in 2011, officials expanded VNM to embrace all multi-tenant buildings, from market-rate apartments to commercial office destinations and qualifying multi-unit property types in between.

The climate for shared renewables is heating up and it's evident in the legislative arena. LB 557 in Nebraska proposes the authorization of community solar gardens. Georgia's HB 657 would allow for the certification of an independent community solar provider. SB 699 in Maryland calls for the development of a pilot program on community energy-generating facilities. In California, two bills, SB 43 and AB 1014, that would establish new programs providing clean energy access to a wider audience through shared renewables, are currently circulating.

"Once you have that policy mechanism in place, it opens up all sorts of very interesting business model possibilities," according to Barken. "One area that folks haven't been talking about is a scenario like a condominium community. If

you think about the way condos are titled and deeded, you have a parking space that is physically separated from the unit. Well, why would that be any different than if you had, say, a small parcel of land belonging to the condo community that was located a mile away, where you could get cheaper wind? There are already disturbed lands in urban infill sites—freeways, tops of landfills, unused places where you're not going to build—in the load center. Imagine if you virtually allocated a solar ray panel off site as part of your deed."

And then there's the financing issue.

Options for the method of use of alternative energies abound and more are on the horizon—but nothing comes for free. That's not new; but some financial resources are. "The really exciting areas right now are probably on the financing side where there are options like PACE," Barken notes.

PACE, or Property Assessment Clean Energy, is a financing mechanism to facilitate energy efficiency upgrades for private commercial and residential properties. "The basic concept of PACE is that a government creates a special district which then, under the various laws of promoting economic development, gives that district special powers to issue bonds at very preferential rates," explains Evan A. Evans, vice president of engineering design and environmental consultancy WSP's Sustainability and Energy Division. "The bonds are sold in the conventional bond markets. That money then creates a fund that is used to essentially make loans to individual property owners."

PACE allows property owners to sidestep an initial lump investment to commence the energy-efficiency upgrades. The borrower repays the loan over a designated 10- to 20-year period, but not in cash. Payments are made through tax payments that will increase incrementally as the local government assessor assigns a higher value to the property as a result of the upgrades.

"On day one the property owner is realizing savings and doesn't have to put up any capital up front," Evans notes. "That's a big take away because with commercial loans, they're usually only for 70 or 80 percent of project value; there's no upfront capital with PACE so that removes that barrier to participation. So far the experience has been that the energy cost savings are greater than the increased property tax so that the property owner doesn't get hurt by a marginally higher property tax."

And the allowable upgrades can run the gamut, from the installation of solar water heaters to the mounting of solar panels to any number of energy-efficiency improvements. "[Local] governments want to do this kind of thing for environmental reasons but probably more importantly, it's for economic reasons," says Evans. "These kinds of programs promote new economic activity."