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## Bringing solar to the masses

Silicon Valley / San Jose Business Journal - by [Emma Ritch](#)

At least one-third of the housing in San Jose might never get solar power, despite the state's goal of a million solar roofs by 2016.

That's because some developers and landlords say solar is too expensive to provide for multifamily buildings, where installation is complicated by limited roof space and separate electric bills.

But some solar installers see the multi-tenant buildings as an untapped market that simply needs to change its mind-set.

Already, things are changing.

As utilities try to reduce demand and increase alternative energy production to meet state mandates, the Public Utilities Commission has set aside \$108 million for a program to reduce the cost of solar panels for low-income multifamily housing. And building owners are exploring whether being green would improve their chances in the competitive marketplace.

"I know the costs are coming down but whether it's at a point to make it financially viable, I'm not sure," says Regan Avery, co-president of Mountain View-based Avery Construction. "It comes down to a mathematical formula, but if indeed it were a situation where it would reduce significantly, or eliminate, utility costs on the part of the resident, we're certainly in a competitive enough area that it would make a difference among residents choosing between a few properties."

Avery says he's never seen numbers that make the installation of solar panels for electricity generation for multifamily housing seem economical, but he's also never had a solar installer or resident approach him about getting solar for the company's 12 properties with a total of 2,200 units.

The company's first foray into solar -- with solar water heaters for its projects with heated pools -- almost eliminated that electricity demand.

"It's something I like," Avery says. "At the end of the day, if it all would all break even financially and it would be the added bonus of being environmentally friendly, then we would



Dennis G. Hendricks

Ruben Guerrero, property manager for Twohy Lofts, considered installing solar panels on the apartment building roof, but the building owner The CIM Group decided the solar system was too expensive to warrant the cost.

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do it."

There are approximately 100,000 multifamily housing units among the 300,000 total in San Jose, according to 2006 U.S. Census data. The state Public Utility Commission doesn't track how many solar installations are for multifamily buildings.

### **Cost challenges**

Rooftop solar photovoltaic systems can provide enough power in the day to eliminate electricity demand from utilities, as well as produce excess power credited to the user's account to offset their nighttime energy demands. The \$30,000 cost of a solar system to a typical homeowner is slowly paid back by the near-elimination of electricity bills over as many as 10 years.

But multifamily buildings offer several complications to adopting solar that aren't found in single-occupant buildings, whether commercial or residential. First, there's less roof space because of the presence of air conditioning, ventilation and other building support.

For condominium buildings where there are multiple owners sharing a roof, there's typically no clear rules on who is allowed to use the remaining roof space.

For the 40 percent of housing in the San Jose metro area that is rented, landlords have little incentive to purchase solar panels when tenants pay their own electricity bills. Electricity demand for the common areas is often a small part of the building's expenses.

Ruben Guerrero, property manager for Twohy Lofts, considered installing solar panels on the 28,000-square-foot, downtown San Jose apartment building to reduce the annual electricity cost for the 8,000 square feet of common area. He liked the idea of incorporating alternative energy and learned a solar system would have likely increased the resale value of the building.

"It was something I was interested in that I thought would also benefit the company," he says. "Also the edge of having solar and the image of corporate responsibility would help."

But owner The CIM Group decided the \$300,000 system -- reduced to \$150,000 after tax credits and discounts -- was too expensive to justify when the building needed other capital improvements and wasn't generating enough money to warrant the cost, Guerrero says.

Guerrero says he plans to pitch the idea again to the corporation as prices for installation decline.

The building's electricity costs have increased from \$12,000 in 2006 to \$16,000 last year, which could make energy savings a more desirable option. And the building is making more money because the downturn in housing sales helps rental rates, especially downtown where most buildings are above 90 percent occupancy, Guerrero says.

### **Changing the mind-set**

Gene Eagle, construction vice president for The CIM Group, says many multifamily-building roofs aren't constructed to leave enough room for solar panels, so the best chance for adopting is in the building's conceptual design stage instead of as a retrofit.

"They've got to sell it to the builder early. Everybody from the architect to the engineers has to be on board," Eagle says. "You have to design a certain way, and it's got to be in the philosophy of builders. We know the time is coming [when buildings incorporate solar] but we haven't focused on it."

Construction is also a bottom-line business that tries to minimize cost and risk, he says. Federal incentives for renewable energy are set to expire at the end of the year, although state incentives remain.

"You don't know if the incentives are going to be there, the builders aren't aware of all these programs and how they work, and it's hard to get them educated on it," he says. "It's all time-driven and budget-driven, and someone has to process all that stuff."

Matthew Woods, director of sales and marketing for solar installer REC Solar, says it's not as difficult as it seems to decide who uses the roof and how the power is distributed among tenants because they all benefit from the savings in common areas.

Solar for multi-tenant buildings is a growing market, he says.

"It's a small portion -- maybe about 10 percent -- of our business, but as the demand for solar increases we're seeing it more and more," Woods says. "Solar is so much of an untapped market, but yes there are tremendous amounts of opportunities for [providing solar to] commercial building owners, and it's a matter of changing the mind-set."

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