

Houses With Solar Panels Sell for 3.5 Percent More

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Two studies offer new motivation for homeowners looking to go green, but are daunted by the high cost of solar systems: The units raise the value of houses when they're sold.

Houses with solar panels sell for an average of 3.5 percent more, or roughly \$17,000, than comparable houses without the energy-saving devices, a pair of recent studies said.

The results published by the National Bureau of Economic Research and the Lawrence Berkeley National Laboratory rewrite the financial calculus of residential solar panels, suggesting they add value in much the same way as other home improvements, like new bathrooms and kitchens.

Previously, the case for adding solar rested on a customer's concern for the environment and savings on electric bills.

Now there's a chance homeowners can make back the money spent on solar.

"It (the study) addresses the fears that they'll (homeowners) get stuck with the cost of the solar if they sell," said Terry Clapham, distributed generation manager for the nonprofit California Center for Sustainable Energy.

The median cost of a solar system in San Diego County, before federal and state subsidies, was \$30,224 for a 3.6 kilowatt system, according to an analysis of data from the California Solar Initiative.

California has a declining subsidy currently at 35 cents per watt in San Diego Gas & Electric territory and \$1.10 per watt in Southern California Edison territory, and the federal government has a tax credit for 30 percent of the value of the system. On a typical system, those reductions would cut the price to \$19,896 in San Diego County and \$17,196 in Riverside County.

Until the publication of the NBER study in December, the only way solar panel buyers knew for sure they'd get some money back was through electricity savings. Extra power generated by residential solar during the day gets credited to customers to offset power they consume from the grid at night. Solar systems took a long time to pay off, typically 10 years, said Tim Treadwell, manager of research and analysis for the center.

The two studies found that home sellers with solar panels on their houses could expect a premium of about \$17,000 compared to other, similar houses in their neighborhoods, which suggests most of the price of a solar system would be paid for by the buyer. The NBER study found that most of the houses



with solar tended to be larger and come with other amenities, like pools. The houses with solar and their comparable houses had an average value of \$668,000, said Sam Dastrup, a researcher at New York University who worked on the study while he was a doctoral student at UC San Diego.

His study looked specifically at houses in San Diego County sold between 1999 and 2009. By looking at party registration as well as the number of Toyota Priuses -- a hybrid car with high gas mileage -- the study was able to identify neighborhoods with a strong interest in environmentalism, and found that the solar premium was largest in these neighborhoods, averaging 6.6 percent. Given that residents in these neighborhoods had enjoyed a higher state subsidy, some of these sellers turned a profit on their solar installation.

The reverse is also true.

"If you're not a very green neighborhood, you're not going to get as big of an effect," Dastrup said.

His study also found that it's cheaper for buyers interested in solar to purchase a house with solar in place than to install a new system.

The study from the Lawrence Berkeley Lab looked at solar panels on houses in all of California and found a very similar premium on house sales.

"There isn't a 'lock-in effect,'" Dastrup said. "You don't have to stay in the home to realize that financial benefit."

