

APRIL 21, 2011, 7:12 PM

Study Finds Solar Panels Increase Home Values

By **FELICITY BARRINGER**

Jack Smith/The New York Times When Bill and Suzann Leininger put solar panels on their Escondido, Calif., home a few years ago, they most likely enhanced its resale value, a new study says.



All those homeowners who have been installing residential solar panels over the last decade may find it was a more practical decision than they thought. The electricity generated may have cost more than that coming from the local power company (half of which, nationwide, comes from burning coal), but if they choose to sell their homes, the price premium they will get for the solar system should let them recoup much of their original capital investment.

That is the conclusion of three researchers at the Lawrence Berkeley National Laboratory, who looked at home sales — both homes with photovoltaic systems and homes without — in California over an eight-and-a-half-year period ending in mid-2009. The abstract of their [study](#) states, “the analysis finds strong evidence that California homes with PV systems have sold for a premium over comparable homes without PV systems.”

The premium ranged from \$3.90 to \$6.40 per watt of capacity, but tended most often to be about \$5.50 per watt. This, the study said, “corresponds to a home sales price premium of approximately \$17,000 for a relatively new 3,100-watt PV system (the average size of PV systems in the study).”

And the bottom line: “These average sales price premiums appear to be comparable to the investment that

homeowners have made to install PV systems in California, which from 2001 through 2009 averaged approximately \$5/watt.”

If the California findings can be extrapolated nationally, it would mean that the owners of 139,000 homes can collect a premium at resale time. For those who promote photovoltaic systems, it is a second line of defense against the argument (and reality) that the initial cost of installing the solar means using it for many years before the savings on electricity are enough to pay back the investment.

But there is a caveat. Homeowners who install solar on existing houses get nearly three times the premium of homeowners whose house came with solar panels. The study speculates about the reasons, suggesting that “new home builders may also gain value from PV as a market differentiator, and have therefore often tended to sell PV as a standard (as opposed to an optional) product on their homes and perhaps been willing to accept a lower premium in return for faster sales velocity.”

Residential solar installations have been growing at an average 51 percent rate annually for the last five years, according to Larry Sherwood, a consultant to the [Interstate Renewable Energy Council](#), a nonprofit group that works on helping interested parties navigate various legal, technical and economic aspects of renewable energy. As of 2010, the total capacity of these systems was 677 megawatts, he said. (His most recent report can be found [here](#).)

And Jared Blanton, a spokesman for the [Solar Energy Industries Association](#), reports that in 2010, the residential market was 30 percent of the national solar PV market, above the utility market (28 percent) but behind commercial installations (42 percent).

A [news release](#) on Thursday from Lawrence Berkeley National Laboratory said that over all, approximately 2,100 megawatts of grid-connected solar photovoltaic systems (residential and nonresidential) have been installed across the country, almost half of this total in California.

The growth in residential solar systems, of course, is taking place on a tiny base. About a tenth of a percent of all households have photovoltaic systems, and all solar systems combined — industrial and residential and everything else, as well as concentrated-solar plants in the California deserts — amount to about two-tenths of 1 percent of all renewable electricity in the country, according to the federal [Energy Information Administration](#). Renewable electricity, in turn, makes up about 8 percent of the electricity used in this country.

But the backers of solar power might talk about thousand-mile journeys beginning with a single step.