

Solar power is contagious, study finds

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People are more likely to install a solar panel on their home if their neighbors have one, according to a Yale and New York University study in the journal *Marketing Science*.

The researchers studied clusters of [solar installations](#) throughout California from January 2001 to December 2011 and found that residents of a particular zip code are more likely to install solar panels if they already exist in that zip code and on their street.

"We looked at the influence that the number of cumulative adoptions—the number of people who already installed solar panels in a zip code—had on the probability there would be a new adoption in that zip code," said Kenneth Gillingham, the study's co-author and assistant professor of economics at the Yale School of Forestry & Environmental Studies. "Our approach controls for a variety of other possible explanations, including clustering of environmental preferences or marketing activity."

They calculated that 10 extra installations in a zip code increase the [probability](#) of an adoption by 7.8 percent. If there is a 10 percent increase in the total number of people with solar panels in a zip code—the "installed base"—there will be a 54 percent increase in the adoption of [solar panels](#).

"These results provide clear evidence of a statistically and economically significant effect," said Bryan Bollinger, the other co-author and assistant professor of marketing at New York University Stern School of Business.

The study also shows that the visibility of the panels and word-of-mouth led to larger installations. "If my neighbor installs a solar panel and tells me he's saving money and he's really excited about it, it's likely I'll go ahead and do the same thing," said Gillingham. "Then there are others who'll install because they don't want to be one-upped by their neighbors."

The researchers found that white males between the ages of 45 and 65 who have a 30-minute commute and home repairs were associated with higher adoption rates. Gillingham suggested that a disproportionate number of engineers working in Silicon Valley may explain the result. In addition, larger households and people with longer commutes were more exposed to solar installations, thus more likely to adopt the technology, compared to people who carpooled and lived in smaller households.

"These findings have clear implications for marketers who are striving to reduce the high cost of consumer acquisition in the solar photovoltaic market," said Bollinger.

In January 2006 the California Public Utilities Commission established the California Solar Initiative, a \$3.3 billion, 10-year rebate program encouraging the installation of 3,000 megawatts of solar infrastructure over the ensuing decade. These subsidies, according to the authors, have increased the number of solar installations to 17,000 in 2010 from fewer than 1,000 in 2001. The authors used the 85,046 requested residential installations during that time in their calculations.

"Our finding of an increasing effect of new installations in a zip code suggests that targeting marketing efforts in areas that already have some installations is a promising strategy," said Gillingham.

More information: The paper, "Peer Effects in the Diffusion of Solar Photovoltaic Panels," is available at mktsci.journal.informs.org/con...c.1120.0727.abstract

Provided by Yale University

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