

Want to nudge others to install solar? Actions speak louder than words

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Over the past several years, a Yale-led investigation has illustrated the key role of social networks—particularly of trusted community leaders—in promoting the adoption of solar technologies.

A new study confirms that when it comes to convincing consumers to install solar panels, one factor stands out above all others: whether those community leaders practice what they preach.

Writing in the journal *Nature*, an interdisciplinary team from the Yale School of Forestry & Environmental Studies, including Prof. Kenneth Gillingham, the Yale Department of Psychology and the Massachusetts Institute of Technology, reports that community leaders who have actually installed solar systems on their own homes were able to recruit 62.8 percent more residents to install solar than leaders who did not.

That trend, they found, was true regardless of whether they'd adopted solar for environmental reasons or for economic reasons.

The findings, which build upon Gillingham's long-term research on solar adoption in Connecticut, offer [empirical evidence](#) of a long-held theory about the power of so-called "credibility-enhancing displays," or CREDs, whereby one's actions provide more information about one's beliefs than their words alone.

The theory holds that if an individual observes a peer engage in a given activity, they are thereby providing a clear signal that they believe the action is beneficial—particularly when it comes to promoting "non-normative goods," or, products that have not become widely accepted or entered the "mainstream" of American life.

"It's a new contribution to the theory of cooperation," said Gillingham, an associate professor of economics at F&ES. "But it's also a new contribution to understanding what influences households to adopt solar energy."

The corresponding author was David Rand, an associate professor at the Massachusetts Institute of Technology, and formerly of Yale's

Department of Psychology.

For the new study, the researchers examined data from the Yale-led "Solarize CT" campaigns, run by the non-profit SmartPower. That project, funded by the U.S. Department of Energy, utilized the power of social networks—including civic and religious organizations—to promote the installation of solar panels in 58 Connecticut towns.

A key piece of that fieldwork has been the designation of so-called solar "ambassadors" who volunteer to promote awareness of the benefits of solar adoption. These ambassadors were asked to help based on their leadership roles in the community, rather than on whether they had even installed solar themselves. In fact, only about 32.7 percent had installed panels through the program.

And those that had adopted [solar energy](#) did so for a variety of reasons; while some were interested in promoting sustainability or renewable energy, others simply saw it as a sound economic decision.

In an analysis of how different factors affected the effectiveness of these ambassadors—from environmental preferences to income—the researchers found that one factor stood out: the ambassadors were most likely to convince others to adopt solar if they did so themselves.

"These results make a very strong case that in the case of non-normative public goods, in which people are asking others to make altruistic social decisions, actions speak louder than words," Gillingham said. "This is a powerful force that is relevant not just in terms of the theory of human behavior, but also in terms of the dissemination of renewable energy technologies."

The psychology researchers were particularly interested in this collaborative research because the data on solar adoption provided rare

empirical evidence of CREDs, as well as new insights into how to promote non-normative behaviors, which though not mainstream serve the greater good.

Understanding how leading by example might promote these behaviors—whether it's adopting [solar panels](#) or buying carbon offsets for flights—will be particularly important in the coming decades, said Gordon Kraft-Todd, a Ph.D. candidate in the Yale Department of Psychology.

"As the urgency of climate change becomes ever more apparent, there are going to be new technologies that address the problem," he said. "But they're going to be new, and so there won't be 'norms' about how to promote them.

"The idea that we're going to have to get people on board with these non-normative behaviors which are in the public good is something we're going to have to understand better."

More information: Gordon T. Kraft-Todd et al. Credibility-enhancing displays promote the provision of non-normative public goods, *Nature* (2018). [DOI: 10.1038/s41586-018-0647-4](https://doi.org/10.1038/s41586-018-0647-4)

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