Researcher identifies strategy to guide consumers to green energy choices

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Convincing people to buy into green, renewable energy plans could be as simple as making it their default option, suggests a new study co-authored by a Stanford behavioral economist.

The economists – Sebastian Lotz, a research fellow at Stanford, and

Felix Ebeling, of the University of Cologne in Germany – conducted an experiment in behavioral decision design to examine whether nearly 42,000 German households were more or less likely to purchase green energy depending on how the service was pitched to them.

In one group, the consumers were given the option to "opt in" to a plan that provided their electricity from renewable sources, at an increased cost of just $.03 per kilowatt-hour, or roughly $15 per year. (The authors note that green energy in Germany is relatively affordable compared to fossil fuels.) The second group had the green energy option pre-selected in the price structure, but was given the option to opt out.

The effects of "nudging" consumers toward a choice were surprisingly strong. While about 7 percent of the opt-in group eventually purchased green-energy plans, an estimated 70 percent of the opt-out group elected to stay with their renewable energy sources. While the researchers were expecting that the opt-out "nudging" would perhaps double green-energy contracts, it led to something closer to a tenfold increase.

"We believe that the choice is being driven because it's inconsistent with one's image as a green person if you actively say no to a good cause, such as helping to mitigate climate change," Lotz said. "While it is relatively easy to find excuses for not actively choosing green energy, it is harder to find a reason to actively negate a personally important belief."

The researchers think they have tapped into a powerful mechanism for steering environmentally conscious behaviors, which they plan to test with consumers from other countries.

"We have to be careful not to over-interpret this result, as green energy was extremely cheap in our case. We don't know if these results translate to more expensive countries, such as the United States," Lotz said. "But we have preliminary results that show that the general mechanism

translates to the U.S. – we replicated it with U.S.-based online-study respondents – but we used the German price structure."

Lotz and Ebeling are also interested in investigating how financial incentives paired with a network of intelligent energy management devices could streamline energy usage. Currently, the researchers are working alongside high-tech start-ups and energy suppliers to nudge consumers toward smarter energy consumption by conducting energy-intensive tasks during off-peak energy demand times.

"For instance, maybe one day my washing machine will only start after it has received the 'go' from my neighbor's one with the goal to lower peaks in energy consumption," Lotz said. "This could help us to prevent outages in summer or even reduce the total CO2 footprint of a country."

The study is published in the current issue of *Nature Climate Change.*

More information: "Domestic uptake of green energy promoted by opt-out tariffs." *Nature Climate Change* (2015) DOI: 10.1038/nclimate2681

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