

# Under Pressure! Nudging Electricity Consumption within Firms. Feedback from a Field Experiment

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The development of behavioral economics has raised interest for non-price energy conservation policies. The impact of nudges on households' pro-environmental behaviors has been studied in this perspective. Originally conceived as a public policy, nudges have recently been developed in the private business sphere to influence employees' decision-making. We seek to address this issue with the help of a field experiment on employees' energy use.

Our field experiment was conducted at 47 French office-sector companies located in the PACA Region. All participating companies were equipped with a Building Management System, allowing us to obtain their daily energy consumption distinguishing electricity consumption for heating from electricity consumption for other uses. The field experiment lasted 12 weeks. During the 4 first weeks, the companies' electricity consumptions were simply observed. Then, 3 treatments were tested during the 8 remaining weeks. Each site was randomly assigned either to one of the 3 treatment groups or to the control group. Each treatment was tested alone during the first 4 weeks. During the last 4 weeks of the experiment, the first treatment was maintained alone, and the last 2 treatments were coupled with the first one.

The first treatment provides information on good energy consumption practices with the help of stickers. The other two treatments were intended to activate two different social norms in employees' electricity conservation decisions. The second treatment, using a "descriptive social norm" (i.e. "what others do"), consists in weekly reports comparing the electricity consumption of the site with the consumption of the other sites participating in the experiment. The third treatment, using an "injunctive social norm" (i.e. "what others praise"), delivers weekly messages linking electricity consumption to the natural and human consequences of global warming.

Using more than 3,700 observations, our difference-in-difference econometric analysis suggests that private environmental nudges have no significant impact on workers' energy conservation when implemented alone. However, they become significant as soon as they are combined with another nudge. In particular, the combination of injunctive norms and stickers had significant effects on the consumption of electricity at company sites participating in the experiment. We interpret this result as follows: moral appeal and social comparison nudges raise individuals' awareness but (unlike stickers) do not necessarily provide the necessary means or knowledge to act and improve energy conservation.

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