

DOES INFORMATION ABOUT NEGATIVE Electricity PRICES AFFECT ADOPTION OF PLUG & PLAY PV AND ACCEPTANCE OF RELATED POLICIES

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Extended Abstract

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Abstract Summary

Negative prices on wholesale electricity markets have become increasingly common. They occur when supply exceeds demand to such an extent that generators are willing to pay to offload electricity from the grid. This typically happens during periods of strong renewable production combined with low demand, as electricity storage is limited and shutting down certain power plants is costly or technically constrained. While still largely unfamiliar to the general public, negative prices are now widespread in European day ahead markets. France, historically less exposed than Germany or the Netherlands, has experienced a sharp increase in negative price hours since 2023.

This paper examines the causal effect of informing individuals about the negative price phenomenon on their willingness to engage in load management measures when installing Plug and Play solar systems (PPSS), as well as on their acceptability of related policies. PPSS are particularly relevant because they are low cost, mobile, and easy to install in multi family buildings, allowing renters and low income households to participate in the energy transition.

The study relies on an online survey experiment conducted in December 2025 among more than 1,500 residents of multi family buildings in France. Respondents were randomly assigned to receive either information about negative prices or neutral information about the French power mix.

The results indicate that information about negative prices increases respondents' stated willingness to install batteries, shift electricity consumption to sunny hours, and adopt smart appliances, while decreasing the likelihood of keeping the same consumption patterns. Moreover, we find suggestive evidence that providing this information lowers the acceptability of subsidies for all PPSS (even those without batteries), while increasing

support for banning PPSS without batteries. Overall, the findings suggest that communicating about negative prices can encourage load management and may increase the acceptability of policies aimed at improving system-level efficiency.

Presenting Author Biography

Dr. Corinne Faure (ESSEC Business School diploma 1988, University of Florida PhD 1995) is full professor of marketing at Grenoble Ecole de Management in Grenoble, France, and scientific co-coordinator of the Chaire Européenne de la Transition du Territoire. She spent her academic career in the USA, Germany, and France. Her recent research interests focus on the adoption of energy efficient technologies and the acceptance of climate policies. Her research has been published in journals such as *Climate Policy*, *Ecological Economics*, *Energy Economics*, *Energy Policy*, *International Journal of Research in Marketing*.