

HOME ENERGY REPORTS

Context matters

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Home energy reports (HERs) provide households with a comparison of their energy consumption to that of their peers. They have been shown to reduce electricity consumption in the US and are viewed as a highly scalable and cost-effective climate-policy instrument. However, little is known about their transferability to other national contexts. To that end, Mark Andor and colleagues in Germany examine the potential impact of HERs in a set of industrialized countries and undertake an HER intervention in Germany similar to those performed in the US.

The researchers start by comparing average electricity consumption and carbon intensity across the ten OECD nations with the highest residential electricity consumption, plus Poland and Sweden as examples of low-consuming but high carbon-intensive and high-consuming but low carbon-intensive nations, respectively. Using previously reported US effect sizes, the researchers estimate abatement costs that render HERs cost-ineffective in all these nations except the US and Australia. The research team then investigate the impact of HERs in Germany using a randomized control trial of 11,630 households and a similar research design to past US experiments. They find an average treatment effect of just 0.7% reduction in electricity consumption — less than half the reduction seen in US surveys. However, the effect is much larger for households with higher baseline consumption. The researchers believe two key factors play important roles in the findings. First, electricity consumption is on average lower in Germany versus the US. Second, meter reading is annual in Germany, so that peer comparisons could not be updated quarterly as was the case in the US. The study thus emphasizes the importance of national context in the potential transferability of peer-comparison interventions from one setting to another.

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