research highlights

ENERGY CONSUMPTION Social dilemma of shared costs

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Wasteful energy consumption may increase personal comfort, but can be detrimental to the greater good. This social dilemma may be particularly acute when metering is communal, such that financial costs are shared, but individual contributions to those costs are anonymous. Nurit Carmi and Noga Mostovoy from Tel-Hai College, Israel, tested whether perceived billing group size influences energy consumption in student dorms with 29 apartments, each housing four students.

Students in two dorm buildings were told that, due to a metering failure, bills for the following month would be equally divided between all students living in the building, rather than based on individual apartment metering. Pre-intervention, there was no difference in building-level energy usage between the three dorms in the experiment. However, students who were told that their energy bills would be pooled at the building level used 29% more energy than students in the control dorm. As soon as students were told that apartment-level billing would resume, energy consumption was again identical between control and treated dorms. Thus, the mere perception that energy costs would be shared amongst a larger group (116 students versus four students) had a significant impact on behaviour, resulting in substantially more energy consumption.

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