

Panel or Check?

Assessing the Benefits of Integrating Families in Fuel Poverty to Energy Communities

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Abstract

This research raises the possibility for households in energy poverty to participate in energy communities to alleviate their energy costs, having their investment costs paid by public institutions. The study starts from the current solution for vulnerable households based on public subsidies to reduce energy costs, which neither addresses the problem's causes nor improves the residential energy systems' environmental profile. It compares the business-as-usual solution, energy checks, with the participation of vulnerable households in energy communities. We simulate a renewable energy community composed of vulnerable households to calculate the usefulness of this solution. The chosen vulnerable households are doubly vulnerable because they are older people experiencing

social isolation and loneliness. The results show that participating in energy communities can be a better economic option for public institutions than paying energy subsidies. Moreover, most households increase their savings, and in all cases, it results in a net reduction of GHG emissions, engaging households unable to participate in their current situation in the energy transition.