Energy and Buildings, vol.295, pp.113289-1-113289-13, September, 2023.

Evaluating the impact of energy efficiency strategies on households' energy affordability: a Spanish case study

R. Barrella; J.I. Linares Hurtado; J.C. Romero Mora; E.M. Arenas Pinilla

Abstract-

The low energy efficiency of the European building stock is both a social and environmental issue. However, plans and studies on energy retrofitting interventions do not usually evaluate the impact of these measures on households’ energy affordability.
This paper analyses and compares the effect of alternative retrofitting strategies on energy poverty in winter (WEP) and summer (SEP) and carries out both a ‘social cost’ and a cost-benefit analysis.
**The dwelling’s thermal-enclosure retrofitting stands out as a very WEP-reduction and social-cost effective measure. Instead, replacing old thermal systems with more efficient ones would have a higher impact on SEP. Combining both kinds of **

Index Terms- Energy efficiency; Building retrofit; Energy poverty; Building stock model; Cost-effectiveness; Spain

Citation:
Barrella, R.; Linares, J.I.; Romero, J.C.; Arenas, E.M. "Evaluating the impact of energy efficiency strategies on households' energy affordability: a Spanish case study", Energy and Buildings, vol.295, pp.113289-1-113289-13, September, 2023.