

Abstract #: 456

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**Abstract Title: Domestic comfort practices and energy use: case studies of fourteen households**

Abstract Text:

This study examines occupants' comfort practices and domestic energy use. The domestic sector accounts for nearly one third of total UK energy use, and building energy demand per household in this sector remains flat despite large increases in energy efficiency. The main reason may lie in occupants' increased level of comfort. The research utilises a user-centred approach based on practice theory within the sociotechnical system to analyse empirical evidence from fourteen households living in Cambridge, UK. Adopting a socio-technical approach, the paper uses both qualitative and quantitative methods to collect household data on comfort and energy consumption patterns, utilising a series of observations, photo records, diary records, data logger monitoring, questionnaire surveys and interviews. The results show that, occupant comfort is a complex assemblage of sociotechnical aspects, dimensions related not only to physical environments, but also to psychological feelings and social factors. In addition, occupants do not always seek to maximise their comfort, but adapt to less comfortable environments as a compromise. The results suggest that energy use may not always be directly relational to occupant comfort. Energy is consumed not only through occupants' comfort practices, but also in the areas that might be seen as waste.