

Low carbon behaviours in office buildings and the behaviours' activation attributes

ABSTRACT

Operational carbon emissions from buildings are well known to be one of the prominent contributors to Greenhouse gases (GHG). One of the solutions to reduce operational carbon emissions of buildings is to have occupants with low carbon behaviour (LCB). However, a number of initiatives and research to lower buildings' carbon emissions have mostly focused on the occupants' behaviour in residential buildings rather than in office buildings. The objectives of this paper are to systematically review the available research on behaviour that could be adopted or adapted as low carbon behaviour in office buildings, to identify the behaviour's activation factors by relating it to the Norm Activation Model (NAM) and to formulate a conceptual framework by highlighting their complex interactions. Literature related to the research was carefully selected according to low carbon behaviour-related keywords. The review results were then categorised by authorship, year published, journal, researched building and location, research method, behaviour change theory used, analysis used and low carbon behaviour and its activation attributes. Forty-two studies have met the authors' inclusion criteria. A LCB conceptual framework was proposed at the end of this paper highlighting the factors antecedent to one's personal norms, intentions and attitudes towards a holistic LCB framework.

Keyword: Low carbon behaviour; Office building; Behaviour change