

## 15: Behaviour change within buildings

### What is 'behaviour change within buildings'?

It is now widely recognised that the energy consumption of buildings is influenced significantly by occupants. If we are to achieve the target of an 80% reduction in CO<sub>2</sub> emissions by 2050 both large-scale reductions in building energy consumption and changes in our behaviour will be required.

The way buildings are designed and the feedback provided to occupants can influence behaviour and reduce environmental impacts. Informing occupants of their resource usage has proved most successful and has resulted in savings of 4-15%. Competition and comparative feedback has also proven savings of between 4.6-7.6% (see Abrahamse et al., 2005 for details of studies).

The influence that individuals have on the behavior of others should not be under-estimated as it can have a powerful effect. In buildings or neighbourhoods where there was a strong sense of community Van Vugt (2001) found financial incentives were relatively unimportant in motivating behaviour change.

One issue is ensuring these changes in behavior are maintained in the medium to long term. There is still a lack of data available from long-term studies, as most trials are less than four months. Therefore more active control and management of energy by users is thought to be more persistent than the provision of feedback and information alone.

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### Key Issues

- Engaging and motivating occupants to change their behaviour
- Informing occupants how they can influence building energy performance
- Measuring and maintaining any changes in behaviour
- Current research is heavily-focused on the domestic sector and needs to expand into the commercial sector
- Within office environments people often feel that they have less opportunity/responsibility to save energy
- Large scale changes in individual behaviour are required to make impacts

### Web Links

- [Design with Intent by Dan Lockton](#)
- [DECC report on behaviour change and energy use](#)
- [RSA report on transforming behaviour change \(Rowson, 2011\)](#)
- [Journal paper \(Abrahamse et. al., 2005\)](#): A review of intervention studies aimed at household energy conservation, *Environmental Psychology*, 25(3), pp. 273-291

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