



The Relevance of Energy Demand Behaviour in the Light of the Current Surge of Interest in Sustainable Energy

Sven Hallin*

Department of Architecture, Loughborough University, Leicestershire, UK

*Corresponding author: Sven Hallin, Department of Architecture, Loughborough University, Leicestershire, UK, E-mail: hallinsf@hotmail.co.uk

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Introduction

This review looks at domestic energy demand in two countries, Britain and Australia and the motivation of two case study groups, one in the UK and one in Australia, to change their energy use so that it is more efficient and sustainable.

Britain and Australia are both developed countries, but very different in their natural resources. The UK is a net importer of energy while Australia is blessed with a surfeit of different energy sources.

Despite this, the research in question, (A comparison of residential energy demand behaviour in Britain and Australia), shows that common ground was found across research participants relating to factors that they believed would encourage them to alter their energy demand behaviour. This included the ability of large organisations, such as governments, to alter heuristic behaviour, both through the path of advertising and government regulation, along with financial incentives.

Sustainable energy

People of a certain age in the UK will remember the influence of the government campaign to induce citizens to use seat belts (Jimmy Savile, now disgraced, “clunk click every trip”) [1]. It was a great success and is a testament to the power of large organisations such as government to influence human behaviour. However, cultural behaviour is learned behaviour which takes time [2]. For example, the seatbelt campaign began in 1970 but compulsory seatbelt use in a vehicle only came into force in 1983 in the UK [3].

Another point of interest in comparing residential energy demand behaviour in Britain and Australia is the similarity of energy use per

capita between the two countries. The research estimates Australian domestic energy use as approximately 0.5 toe (tonnes of oil equivalent) per capita, with UK domestic energy use approximately 0.6 toe per capita [4]. Electricity is however a far greater component of Australian domestic energy use and a large proportion of this, around 90%, is generated using fossil fuels, particularly coal (68%).

The research wanted to understand more clearly the motivation residential energy users would have to use more sustainable forms of energy [5]. Occupancy behaviour with regard to energy use is a complex area and previous research did not provide clarity in this regard. Instead, studies tended to focus on one aspect of residential energy behaviour, with attribution ranging from poor cognitive choice, sub optimal decision-making, financial incentives, lifestyle choices and a lack of including the cost of externalities in the fuel source [6].

Another finding in the study with regard to both countries is that financial incentives can be very important. While this may seem obvious, what has become apparent from this research is that financial incentives need to be quite significant to be effective. They also need to be modified at the individual level. Disparities in wealth will lead to some extent to disparities in motivation.

Conclusion

In the research in Australia and the UK, participants agreed that people do not always behave rationally (it is a reasonable, rational assumption to expect that people’s attitudes influence their behaviour). However, there can often be a disconnect between intention and behaviour with regard to domestic energy use. For example, on a cold day a person who wishes to use energy more sustainably may experience more comfort turning the heating up rather than putting on a jumper (despite either choice resulting in equivalent thermal comfort). This insight is important as it makes devising energy policy more complex.

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