Despite high levels of environmental concern in the EU, domestic energy use continues to rise. A recent study has examined the psychology behind energy usage and behaviour change to help inform energy strategies.

There are two key strategies for changing the behaviour of the public. Psychological strategies aim to change an individual's views and motivations through education, whereas structural strategies such as taxation, legal changes or product development, target the context in which decisions are made, thereby changing the pros and cons of different behaviours. Most information campaigns only inspire small changes, but information targeted at specific groups and structural strategies may be more effective. For example, despite prior surveys suggesting otherwise, the London congestion charging scheme has considerably reduced traffic levels in the city.

The study explains that individuals must be (i) aware of the need, (ii) motivated and (iii) able to change their behaviour. Householders need to be aware of the environmental need for energy conservation policies as well as feeling a greater personal responsibility for tackling the problem.

Policies which increase choice and efficiency are more popular than restrictive or prohibitive policies, and individuals are more likely to adopt new behaviours which require little expense or effort. They will give up the new behaviour if it ceases to be cost-effective. Restrictive policies are unpopular with consumers, and therefore with politicians, who fear reductions in individual freedom and wealth. However, in reality the overall quality of life may change little due to environmental gain, in cases such as transport and energy consumption.

Information campaigns have increased awareness of climate change, but many people still do not fully understand energy consumption. For example, they may believe that all larger appliances use more energy, or they may underestimate the amount of energy needed to heat water.

Trials of smart metering devices have been taking place in the UK, which may reveal whether householders are willing to use them and if increased awareness of energy consumption motivates behavioural changes. Smart meters display more detailed information about energy consumption than standard meters, for example, different levels of usage at specific times of the day. They can help reveal which appliances and which members of the household are consuming the most energy. However, it may be the case that householders still feel unable to conserve energy; factors such as limited availability and the high cost of efficient appliances will over-ride most psychological motivations.

Households consume around 15-20 per cent of total energy in OECD countries, around half of which is used directly, i.e. gas, electricity and fuel used to run appliances or drive cars. The rest is used indirectly, i.e. the energy consumed creating and supplying goods and services. Around 75 per cent of domestic use is for heating homes and water, 16 per cent for appliances, 6 per cent for lighting and 5 per cent for cooking.

There is little detailed information about indirect energy use, but it should be a priority for targeting coherent conservation efforts across consumers and suppliers. Further research into energy conservation strategies is recommended by the study due to the lack of detailed evaluation of previous strategies.

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