

# Science for Environment Policy

## Greater emphasis of cost savings could reduce home energy use

**New insights** into energy saving behaviour in the home could help inform measures to ensure the EU meets energy efficiency targets. A new study shows that younger and more educated households have more positive attitudes towards energy conservation, and suggests that greater emphasis of the financial benefits associated with energy savings could help reduce energy use in households that are less-motivated to save energy for environmental reasons.

**Europe is on track** to meet its target of a 20% reduction in greenhouse gas (GHG) emissions by 2020. The European Environment Agency estimates that GHG emissions in the EU-27 fell by 2.5% in 2011 relative to 2010 levels<sup>1</sup>, continuing a downward trend since 1990. However, the EU has set a further target of reducing energy use by 20% by 2020. Current estimates suggest this target will not be met without new measures.

As households account for a quarter of the EU's energy usage, efficiency savings made through better home insulation and purchasing of energy efficient appliances will be key to meeting the target, but developing effective policies to reduce energy use at home depends on understanding more about energy efficiency behaviour.

With this in mind, the researchers drew together survey data from nearly 5,000 households in 11 EU Member States and Norway, to try to identify factors that influence home energy conservation behaviour and attitudes. The study focuses on conservation of operational energy, for example used in appliances and heating, as opposed to the total energy needed to produce all the items in people's home.

The researchers found that families with young children were more likely to use energy efficient technologies and to try to conserve energy at home for GHG reductions. Households composed of elderly people had lower levels of knowledge about energy usage and were more likely to want to save energy for financial rather than environmental reasons. The study also refers to the fact that house size is a factor that impacts on energy usage.

Based on these insights, the researchers suggest that highlighting the cost savings associated with energy conservation could help reduce energy consumption in older households. For instance, labels on energy efficient appliances could show estimated running costs based on electricity usage.

Measures to increase awareness of the potential cost savings could help reduce energy use more broadly, as the researchers found that less educated households were more likely to be motivated by financial rather than environmental benefits. Those living in Eastern Europe were also more financially and less environmentally motivated.

Other financial incentives for buying energy efficient products, such as targeted discount vouchers and rebates could help to reduce energy usage, according to the researchers. They say the key to designing successful financial instruments is to target people who would be unlikely to buy energy efficient products otherwise, rather than subsidising those who will buy them anyway.

Energy expenditures for the households included in the survey were not available. Therefore, it is not yet known whether positive attitudes towards energy conservation – or emphasising financial savings – translate into measurable reductions in energy use. In addition, data about household income would have provided further insights, particularly as some lower income countries, such as Greece and Portugal, appeared to be less well informed about household energy use.



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1. [www.eea.europa.eu/publications/approximated-eu-ghg-inventory-2011](http://www.eea.europa.eu/publications/approximated-eu-ghg-inventory-2011)