Do Energy Labels on Buildings meet Expectations?

Danish and Belgian researchers have recently interviewed homeowners to understand if energy labels on their homes provide them with good incentives to reduce their energy consumption. The survey reveals that in addition to the payback time of renovation, relevant criteria that homeowners take into account in their investment decisions are aesthetic, convenience as well as ideas and habits of all the persons connected to the renovation project. The authors suggest that substituting information on payback time with information on cost of investment could enhance the effectiveness of the labelling system.

In Europe, household use accounts for about 30% of energy consumption. Households have therefore been the focus of several measures such as taxes, subsidies, information campaigns or labelling schemes aiming at stimulating energy savings. The European Directive 2002/91/EC on the Energy Performance of Buildings requires that every building sold after the 4th January 2006 has to be labelled in accordance with its energy performance.

In this regard, Danish and Belgian researchers have investigated to what extent energy labels on buildings provide households with the right information and incentives to reduce the energy consumption of their homes. To this end and as part of a broader study, they made qualitative in-depth interviews with 10 households in Denmark and 10 households in Belgium. In both countries, energy labels and recommendations on how to improve the building are delivered by energy experts. Since 1997, in Denmark, energy labels have to be established prior to selling a house and the new owners do not therefore interact with the energy expert. In Belgium, houses that have not been sold since 4th January 2006 are still not subject to the label. Belgian interviewed householders volunteer to accept the visit of an energy expert who establishes a label on their dwelling.

The survey shows that personal contact and oral communication with the expert (as is the case in Belgium) enhances trust in the labelling system and means the label is better understood. In Denmark, recommendations are sometimes too obvious (e.g. to replace the old windows) and are shown to devalue the reputation of the system. An awareness of environmental issues is seen to facilitate trust in, and acceptance of, the label.

Even if Belgians trust their energy expert more than Danes trust their label system, both groups do not follow the advice: the researchers also investigated how households take into account recommendations on how to improve the energy efficiency of their homes. In both countries, interviews reveal that homeowners prioritise criteria such as the aesthetics, identity and convenience of their homes as well as consistency with their social networks ideas, despite the fact these may be in contradiction with energy savings. The practical precision of instructions on how to improve energy efficiency appears to be important drivers in carrying out these changes. Moreover, payback time is given a high priority in both the Danish and the Belgian labelling systems whereas for householders, energy savings works are seen as other expenses of time and money, so saving money is more relevant than payback time for households.

The authors conclude that the idea of rational households that renovate their homes in an energy efficient manner once they have received relevant information has to be abandoned. In addition to economic criteria, other factors such as support of family members and acquaintances, convenience in daily life and the duration of the required renovations play a major role in explaining their behaviour. As revealed by Danish interviewees, a house's label is not a purchasing criteria but rather an indication of which improvements will need doing once the house has been purchased. The authors recommend substituting information on payback time with information on cost of investment and possible savings. They also suggest that performing similar studies in other countries would consolidate the results of their investigation.

Overall, this study helps us to understand why energy labels do not necessarily provide households with the right incentives to renovate their homes.


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