

Home energy efficiency - review of evidence on attitudes and behaviours

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Executive Summary

1. Purpose

Low Carbon Scotland: Meeting our Emissions Reduction Targets 2013-2027: [The Second Report on Proposals and Policies](#) (RPP2) included a proposal for the Scottish Government to consider regulating energy efficiency in private housing. To support the process, ClimateXChange reviewed the evidence on people's attitudes and behaviours around home energy efficiency. This document summarises our findings.

2. Conclusions

Draft regulation on home energy efficiency should consider the wide range of Individual, Social and Material actors that influence attitudes to and uptake of home energy efficiency measures. This review highlights the ways in which these factors interact to produce particular challenges with respect to the private rented sector and the rural housing stock in Scotland. Material factors pose particular barriers to energy efficiency improvement in these segments of the housing stock. For example, many rented properties are in tenements and high-rise blocks, where agreement by multiple parties is needed for improvements to communal infrastructure. Also many rural homes are constrained by a lack of connection to the gas network and/or traditional solid stone wall constructions. Furthermore, the motivations and barriers associated with financial costs and benefits of adopting energy efficiency measures operate differently in the rented sector to owner-occupied homes. Despite these challenges, the evidence suggests that there is considerable potential in targeting the 'trigger points' identified in the report, as these are times in the life of the home when many of the Individual, Social and Material barriers to uptake of energy efficiency measures may be weakened. Although there is evidence of public support for a stronger policy approach to energy efficiency in the private sector, many people are protective about the private domain of the home and so may remain hard to convince of the need for a regulatory approach.

2.1 Knowledge and awareness of home energy efficiency measures

Householders' awareness about double glazing and loft insulation measures is high, with only 4% and 8% of UK householders, respectively, reporting never having heard of or never having thought about adopting these. At UK level, more people report unawareness of cavity wall insulation and condensing boilers; 16% report that they haven't heard/ haven't thought about these. **Awareness regarding solid wall insulation and underfloor insulation is much lower** - over 40% have never heard of/never thought about these measures.

2.2 Uptake of home energy efficiency measures

Scottish data indicate that:

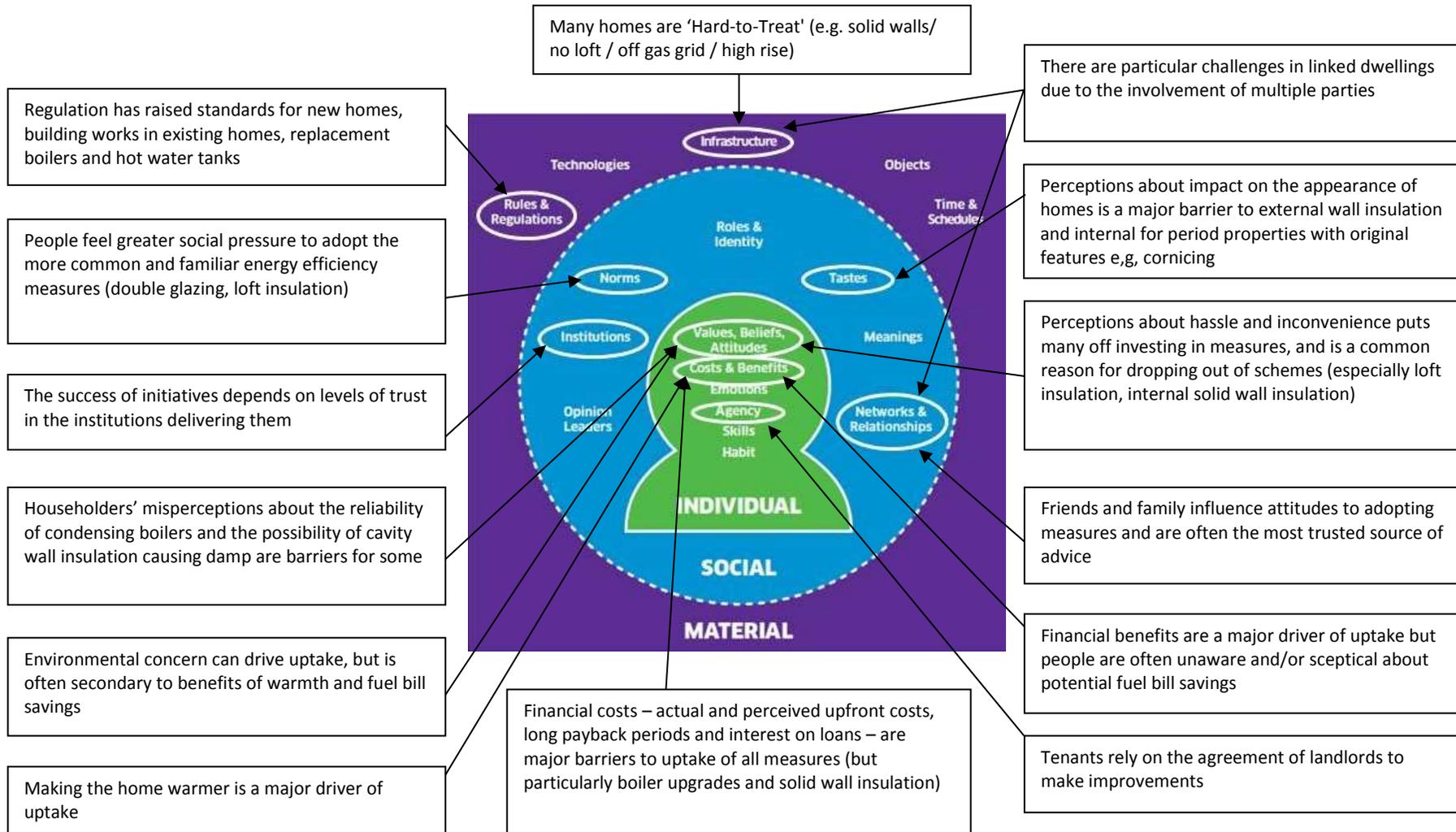
- 92% of homes have double glazing.
- 88% of lofts have 100mm+ of loft insulation, but only 17% have 300mm+, so many lofts would benefit from top up insulation.

- 66% of cavity walls are insulated, however a substantial proportion of those that are not are classed as hard-to-treat.
- Only 22% of boilers are condensing types, however 69% of all central heating systems have time and temperature controls.
- Just 11% of solid/ other walled homes have wall insulation installed.

Investment in energy efficiency measures tends to be higher amongst older people, rural households, and households with more than one occupant. The uptake of home measures also varies depending on housing tenure. Analysis of data on the Scottish housing stock shows that the **social sector outperforms the private sector** (which includes both owner-occupied and private rented homes) in the uptake of many measures. Energy efficiency improvements in the social sector have been driven by the Scottish Housing Quality Standard (SHQS). The SHQS was introduced in 2004 and sets minimum standards for the energy efficiency of housing let by local authorities and Registered Social Landlords. Evidence from elsewhere in the UK suggests that, within the private sector, **uptake of energy efficiency measures is lower in private rented housing than owner-occupied housing**. One of the key challenges to increasing uptake of measures in private rented housing relates to what is referred to as the 'split incentive' for landlords and tenants. Whilst meeting the costs of investing in energy efficiency may be seen as the responsibility of landlords, it is tenants who experience the benefits of investment (e.g. reduced fuel bills, increased warmth).

The key ISM factors influencing uptake are isolated in the diagram on the following page. These are based on the literature reviewed and the authors' interpretation of this evidence base. For any one individual or household there may be a number of different factors that interact in influencing home energy efficiency behaviour.

2.3 Key factors influencing the uptake of home energy efficiency measures



2.4 Trigger points

Evidence suggests that homeowners may be more positive towards investing in energy efficiency measures at key **'trigger points'** when the Individual, Social and Material contexts in which they act are changing. These trigger points include:

- Moving to a new home
- Undertaking renovations or refurbishments in existing home
- Replacing failing infrastructure such as central heating systems

Policies targeting these trigger points may therefore help to increase uptake of energy efficiency measures. However, these trigger points may arise infrequently so impacts of such policies would take time.

2.5 Awareness of and attitudes to policy interventions on home energy efficiency

The evidence suggests that:

- Awareness about the availability of grants and support schemes for improving home energy efficiency is fairly widespread, however around **1/3 of people in the UK remain unaware that help is available** (section 6.1).
- **Awareness about Energy Performance Certificates (EPCs) is high**, yet many people (particularly tenants) do not recall having received one.
- While many people believe the EPC to be a useful document that is easy to understand, there is **little evidence to suggest that EPCs have a strong influence on actions**.
- There is evidence that **a significant proportion of the public are in favour of a stronger policy approach to increasing home energy efficiency**, even if this involves an element of compulsion. However research on attitudes towards changes to Buildings Regulations also shows that **many are fiercely protective about the private domain of the home** and resist what is seen as being government interference.

3. Review methods

A desk-based review of literature was conducted. Both academic and 'grey' literature were included in the review. The review focused primarily on evidence dating from 2008 onwards, and from research conducted in Scotland and the rest of the UK. The analysis of the evidence was guided by the Scottish Government's [ISM \(Individual, Social and Material\) tool](#). Section 2.2 of the report explains the ISM tool.