



International Conference on Sustainable Design, Engineering and Construction

Valuing energy performance in home purchasing: an analysis of mortgage lending for sustainable buildings

Ian Hamilton^a, Gesche Huebner^a, Richard Griffiths^{b*}

^a*UCL Energy Institute, University College London, WC1H 0NN, UK*

^b*UK Green Building Council, 26 Store St, London, WC1E 7BT, UK*

Abstract

Many UK lenders consider energy costs, but only as it relates to information about the customers and not the energy performance of the building. Lenders could include more detailed energy costs estimates that reflect energy performance alongside other major household expenses when assessing customer affordability. At present, energy performance ratings required for all homes sold in the UK are of dubious quality and generally do not accurately reflect the likely energy costs. However, if lenders were to include energy performance in their mortgage calculations this might have the effect of improving the accuracy of energy performance ratings through market pressure. It may also have the consequence of increasing the value of more efficient homes, which would have lower energy costs and improve its affordability for customers. It may also offer an opportunity for lenders to extend mortgages to improve the dwellings energy performance due to the potential increase in value. In this work, we set out the implications of mortgage lenders using the dwelling's energy performance as part of their energy cost calculations. We also illustrate how improving the accuracy of ratings can achieve more precise estimates of energy costs. The implication of including energy performance ratings when providing mortgages could result in £billions for lenders in terms of loan extensions and more accurately property values. It could also help potential purchasers understand the real costs of the properties they purchase.

Keywords: mortgages; lending; fuel bills; energy performance certificates; UK

1. Introduction

Currently, median housing-related energy costs accounts for 7% of a household's weekly expenditure in Great Britain, which means that over 50% of households spend more [1,2]. These costs are related to the energy efficiency of the property and energy-related services (i.e. hot water, cooking, lighting and appliances) sought by the occupants.

* Ian Hamilton. Tel.: +44-203-108-5982.
E-mail address: i.hamilton@ucl.ac.uk

Yet, UK households remain resistant to undertaking energy efficiency improvements to their home that would help reduce the cost of fuel expenditure [3]. Wilson et al. suggests that this is due in part to the limited understanding of the potential benefits the retrofits might bring, such as warmer homes and lower bills, but also the risk or challenges associated with the retrofit. Ultimately, this has meant that energy performance remains a lower priority when seeking to purchase a dwelling compared to other motivating purchasing factors (i.e. neighbourhood, commute, local schools, access to services). The Energy Performance Certificate (EPC), a measure of the relatively energy efficiency of a dwelling, which is required for all rentals or sales of dwellings in the UK, is seen mostly as a regulated requirement with little real worth [4]. Given the relatively high cost of energy, and the need for mortgage lenders to consider both earning potential and major expenditures, what impact would there be on mortgage lending if lenders were to make use of energy performance ratings? What might happen if the energy performance of a dwelling was reflected in their value? If such an outcome could be achieved, there may be an opportunity that property owners would see energy efficiency along a similar nature to valuing kitchens and bathrooms, whereby investing in energy performance could result in a higher sales price for their home.

There is emerging evidence that the energy performance of dwellings is resulting in tangible increases in dwelling value at the point of sales. Research in the UK found that higher energy performance ratings were associated with higher purchase prices; approximately 5% and 1.8% for the higher bands (compared to the middle band) [5]. However, the research highlighted that there were risks of over attributing this relationship as it was possible the analysis was also finding associations with latent factors. Yet there may be other benefits, in particular to lenders, of being involved in selling more energy efficiency dwellings. Kaza et al. found that dwellings in the US with higher energy performance levels had lower risk of default [6].

As UK Government climate change policies begin to take hold and the requirements for improving energy performance of the building stock become more pressing, such as in the private rental sector when the Minimum Energy Efficiency Standards (MEES) come to bare in 2018, there may be even more potential for a shift in both institutional and public attitudes towards valuing energy performance. However, future regulatory requirements could be supported by involving a key part of the property market, i.e. the finance sector, in the near term.

An opportunity to increase the importance of energy performance in the lending and purchasing process in the UK has arisen as the result of the Mortgage Market Review (MMR). Under the MMR, lenders are required to assess how much loan a customer can afford and therefore to determine what their potential incomes and outgoings are. Therefore, mortgage lenders must now consider to a greater extent the prospective borrowers' outgoings when calculating the affordability of the expected repayments. The median UK energy costs are approximately £1,300 (£729 for gas and £577 for electricity) [7], and the ONS estimate the median after tax income is £18,000 (£20,300 before tax)[2]. This means that half of all households spend at least 7.2% of their after tax income on housing heating and electricity. Although the past year has seen a drop in energy prices globally, the trend over recent years has been a rapid increase in fuel costs as compared to income (see Figure 1). Therefore, responsible lenders should better account for this growing area of household expenditure when determining how much to lend.

In order for mortgage lenders to assess the merits of including energy performance as a part of the lending calculation, it is necessary to first determine how much improvement there might be of including such information compares to existing methods for calculating fuel expenditure.

As a ready source of information on the energy performance of dwellings that are sold or rented in the UK, the use of the EPC in mortgage calculations would be a reasonable resource for lenders to draw on. This paper therefore looks at how lenders currently account energy costs; whether and how the accuracy these calculations could be improved; and the impact this could therefore have on lenders' risk profiles. First, we provide a brief background to EPCs and their limitations. We then go on to outline how EPCs might be used to estimate actual energy demand and how these might be used in a mortgage calculation. We also discuss the role of EPCs, and the long-term implications that their inclusion in mortgage affordability calculations could have for their accuracy and quality.

Download English Version:

<https://daneshyari.com/en/article/853683>

Download Persian Version:

<https://daneshyari.com/article/853683>

[Daneshyari.com](https://daneshyari.com)