



## **United Kingdom - Financial and Market Framework**

*When considering an energy efficiency retrofit within your national housing market, a wide plethora of consideration needs to be made. Below, we list key findings to facilitate your analysis of the retrofit investment. More details and backgrounds can be found on the website [www.rentalcal.eu](http://www.rentalcal.eu).*

### **The analysis of investment barriers, split incentives and policies in the UK show:**

- In response to the Climate Change Act 2008, the HM Government 2050 Pathways Analysis outlines the steps towards cutting 34% of emissions by 2020 and 80% by 2050 (Department of Energy and Climate Change, 2010). Currently, home and business heating is one of the three areas contributing to 80% of the UK's GHG emissions, emphasising the importance of green retrofit initiatives (HM Government, 2011).
- Many of the barriers associated with energy efficiency retrofit investments can be ascribed to the economic situation in the UK. High unemployment rates, less disposable household income and reduced consumer spending, contributes to the shift from home ownership towards the rental market, from which spending on renovations and retrofits in itself creates a barrier.
- The costs associated with these retrofits are subjected to long payback periods, partial funding plans, large upfront capital requirements and significant maintenance costs, emphasising the need for adequate funding alternatives.
- There is however, a lack of funding in the UK which can be ascribed to high interest rates, the ineffective Green Deal initiative and inefficient Energy Company Obligation (ECO) funding available to home owners, as well as the stop-go history associated with energy efficiency funding grants.
  - These deals are also subjected to very complex financial structures to be viable.
  - Homeowners, wishing to undertake DIY retrofit refurbishments do not qualify, further increasing the barrier towards green refurbishments in UK homes
- There is also a lack of knowledge and awareness of what whole house retrofits actually include, for example; (i) its effect on building structures, as it is argued to be ugly and unattractive, (ii) its contribution towards significant carbon savings and (iii) the solutions and technologies available at both the local and national level.
- The government's legislation revolving around a minimum EPC rating of "E" for rentable homes by 2018 is perceived as too little too late, as these improvements do not apply to the majority of UK homes (HM Government, 2011). The government agenda does not include whole house retrofits, reflecting the lack of legislation and the need for more robust incentives.
- The tools and approaches to analyse and calculate carbon savings and future performance are inaccurate from which differing messages are received by consumers and no accurate benchmarks for comparison currently exist in the UK.
- There is a trade-off between time, money and the opportunity cost of the personal pass-time of homeowners, emphasising the importance of improving the perception associated with the value that energy retrofit investments hold (EEPb, 2014).

### **The analysis of "green-premiums" for energy efficiency in the UK show:**

- Information on empirical rental premium or lower vacancy rates is currently not available in the UK private rented market. Yet a preliminary study by Adan and Fuerst (2016) points to a rental premium of 5.2-5.3% per square metre for B-rated rental units and a rental premium of 4.6-4.9% per square metre for C-rated rental units.
- In terms of value premium, Fuerst et al (2015a) report that dwellings in the EPC band A/B sell for a 5% premium, all else equal; and C-rated dwellings sell for C 1.8% premium.
- Considerable variation in these effects by region and property types is found. For instance, the largest premiums and discounts are found in the region with the lowest house prices — the North East. In regions with the highest house prices (London, South East, South West and East Anglia) there are either lower or no statistically significant price premiums/discounts.
- Fuerst et al (2016), report significant green premiums in the Welsh housing market. For dwellings in bands A and B a premium of 11.3% is found and a premium of 2.1% for dwellings in band C compared to dwellings in band D. An analysis of a subset of private rental properties in Wales shows that buy-to-let landlords do not discount below-average energy efficient properties in the same manner as owner occupiers do. The authors attribute this finding to the split incentive problem.

### **The analysis of grants and other subsidies in the UK show:**

- There is a range of alternatives in the UK that provide support for energy efficiency retrofits.
- The Feed-in Tariffs (FIT) scheme (Energy Saving Trust 2016), allows consumers to receive money from energy suppliers, when energy generating technologies are installed from renewable sources. It replaced grants from the UK government to encourage the uptake (reduce the barriers) of renewable technologies.
- The Renewable Obligation scheme, initiated in 2002, is a support initiative for renewable electricity projects, which requires UK electricity suppliers to generate a portion of their electricity from renewable sources (Ofgem 2016). However, this initiative will completely terminate in April 2017 (IEA 2016). It is being replaced by the Contract-for-Difference (CfD) scheme, which is a private law contract between a low carbon electricity supplier and the government owned company (Low Carbon Contracts Company - LCCC).
- The Renewable Heat Incentive (RHI) was launched on the 9th of April 2014 to encourage the uptake (remove barriers) of renewable heating alternatives and is open to domestic dwellings, homeowners, landlords, social landlords and self-builders (DECC 2016b). The government confirmed the extension of the scheme with a budget increase from £430 million in 2015/16 to £1.15 billion in 2020/2021 (IEA 2016).

***The analysis of financing conditions in the UK show:***

- Several residential retrofit programmes have been implemented mainly via public-sector-led models focused on social housing or community retrofit models in which local authorities and social housing providers work closely with the private sector in delivering large-scale retrofit measures. The aim of these schemes is to generate a positive social return on investment captured through energy saving, reduced CO2 emissions as well as reduced public health costs (ARUP, 2013).
- Market-based models, on the other hand, are relatively new models aiming to deliver retrofit programmes through providing new financing options such as on-bill financing for individual investors (ARUP, 2013). A good example is the UK's Green Deal market-based model (discontinued in 2015) aimed at catalysing the energy efficiency market by creating a financially attractive method for individual investors to undertake energy efficiency retrofit with no up-front costs.
- In practice, there are very little financing options available to investors in residential energy retrofit other than finances provided by high street lenders including unsecured loans, credit cards and top-up mortgages. Overall, there is no significant loan infrastructure targeted on financing energy efficiency measures.
- Turning to financing practices, using the recently scrapped Green Deal financing scheme as a reference point, the durations of financing of energy efficiency tend to be over 10 years, with interest rates up to 9% APR via annuity Loan amortization. For individual investors, top-up mortgages tend to have the lowest interest rates but availability is limited to homeowners with sufficient loan-to-value (LTV). For companies, larger institutional investors and social housing investors, the financing practices tend to also involve bullet loans.
- In terms of interest rate on loans, Lenders and Building Societies tend to offer an interest rate of approximately 3-5% on senior residential loans, 5-15% on junior loans, and 15-30% on mezzanine loans. Considering interest rates on deposits, for individual investors, a 3 months fixed rate interest rate is approximately 0.5-0.6% depending on the saving amount. The 10 year government bond yield is considered as the standard indicator of long-term interest rate, with a 5 year average of 2-3%.

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