

Financing energy efficient retrofit schemes in housing: evaluating the potential contributions from private and public sources within revolving funding models.

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Poster Research Background

Policy support for the energy efficient retrofit of buildings typically involves a funding mechanism which offers financial support to private households from public funds, in the form of non-repayable grants or repayable financing. A key variable of the different funding mechanisms is the level of private investment leveraged with the use of limited public funds. Funding mechanisms regularly prioritise retrofit measures in terms of cost-effectiveness, while there is evidence from many countries that recent levels of retrofit implementation have resulted in much of the most cost-effective measures being implemented. With long term carbon reduction targets in mind, as the cost-effectiveness of remaining retrofit measures changes, and effectively necessary retrofit measures are no longer necessarily economic, the relative contributions to retrofit activity from the private recipient, and from publically funded sources needs to be considered carefully.

Meanwhile, as retrofit activity has increased in recent years there has been an increasing interest in and attempts to quantify its perceived multiple benefits. Conventional benefits are often considered to be those that are most able to be quantified, but increasingly attempts have been made to attach a value to previously unquantified benefits from retrofit, such as impacts to public budgets, and to private property values.

This poster will depict the findings of analysis that considers what the balance of future costs and benefits from retrofit activity may look like, between private and public actors. The analysis is based on a modelling exercise for a retrofit scheme that considers a comprehensive set of perceived costs and benefits contributions. to implementation costs from the private and public sectors and envisages the expected private and public benefits that might arise from the different funding scenarios.

Poster Outline

Contributions to costs: the poster will begin with a selection of scenarios that demonstrate the potential different contributions to costs for a retrofit funding scheme. The scenarios will cover the full spectrum to contributions from a publically funded grant scheme where no contribution from the private recipient is required, to a scheme which uses public funds to create more attractive financing conditions and requires almost all costs to be covered by the private recipient. 6 scenarios will be displayed in graphical form.

Receipt of benefits: the share of benefits from the investment in retrofit will then be displayed. The modelling considers a variety of different public and private benefits, monetising these benefits to compare the overall balance between private and public costs and private and public benefits.

Discussion and conclusions: the research uses the best available data on the costs and benefits of retrofit to model the operation of a variety of different funding mechanisms. It models the potential overall investment of different grant and financing schemes, from the highest ratio of public funding to the lowest. Ultimately all funding schemes require participation to achieve their goals, but what this paper demonstrates is the relationship between the public and private costs and benefits. The different possible relationships between costs and benefits of future retrofit funding could help to inform the design of funding mechanisms.