

Policy Instruments for the energy efficiency sector: enabling mechanisms for a "FIT for 55" efficient transition (PIREES55)

The goal of PIREES55 is to shed light on the enabling mechanisms needed to reach the proposed targets of the European Commission's "Fit for 55" legislative package in the energy efficiency field.

Environmental policies research group

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She is also a Fellow at Queens' College Cambridge, a Centre Fellow at Centre for the Environment, Energy and Natural Resource Governance (C-EENRG) and an associate researcher of the Bennett Institute for Public Policy. Her research lines bring together multidisciplinary research in environmental economics, innovation policy and energy economics in green and energy efficiency technologies, with a focus on the evaluation of policy instruments enabling the transition to decarbonised economies.

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As trained economist (habilitation with Technical University of Darmstadt), his research focusses European energy and climate policies, notably the impacts of the European Green Deal and a comparative assessment of the « Fit for 55 » legislative package.

Cooperation partners:

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- Roberto RODRIGUEZ (CEE, Sciences Po)
- Yamina SAHEB (PSIA)

Project framework and structure:

The project analyses up streamed and down streamed mechanisms foreseen in the energy efficiency legislation of the "Fit for 55" legislative package. It investigates how these can be translated into national policy guidelines and strategies.

This concerns two strands of research:

- (1) Cross-cutting implementation of the revised energy efficiency Directive (EED). Here stakeholder feedback on the final negotiation outcomes is assessed and compared to earlier input for the start of the negotiation of the EED. This will lead to a gap analysis that allows to derive recommendations for supporting guidelines for national transposition.
- (2) Energy efficiency in buildings and the revised Energy Performance of Buildings Directive: The overall goal of this research strand is to understand the factors both human, technical, political and policy-related to foster the successful implementation of policy instruments oriented to improve EE in residential buildings in Europe and in the UK. See Fig. 1 for a graphic summary of the connections between regulations at the European Level.

Methods:

The project applies a **mixed method approach** combining qualitative surveying of stakeholders (European actors, large-scale surveys of households in the UK, France and Germany), followed up by expert interviews. The project is set in an interdisciplinary perspective, combining methods from economics, political and other social sciences.

Project status:

In December 2022 a **pre-kick-off workshop** was held jointly with the EIB in Brussels to gather field experts' guidance for the project. It emerged that experts still see a strong **need for better European coordination of energy efficiency and clean energy policies**. Especially the linking of energy efficiency and renewable energy policies is seen as crucial for updating the present legal framework.

Regarding energy efficiency in the building sector, the workshop confirmed the strong **need to gather further data and insights on household renovation decisions beyond pure economic incentives**. A paper on *The Role of National Policy Instruments and Social Barriers in UK Energy Efficiency Adoption in households* has been submitted as a first step in understanding one of the most difficult cases in the OECD in regards to energy efficiency in the residential sector (See Fig. 2). Results confirmed the importance of policy mixes and policy instruments oriented to ease administrative barriers to apply for support schemes. A survey has been designed to explore the same results in France, Spain and Germany.

The EPBD was just approved in March 2024. This will allow us to expand the conclusions extracted from a survey on the effectiveness of the new EED with stakeholders (23 responses) and 9 in depth interviews that we conducted and are currently analysing.

Initial results:

1. Insights into **persisting gaps** in the European legislative framework on energy efficiency and subsequent guidelines for policy implementation at national level
2. Large-scale data on **household renovation decisions with information from FR, ES and DE**
3. The research highlights that the provision of financial incentives, including grants and subsidies, plays a crucial role in persuading households within the UK to improve their energy efficiency. Importantly, streamlined administrative processes are key to encouraging household energy efficiency upgrades

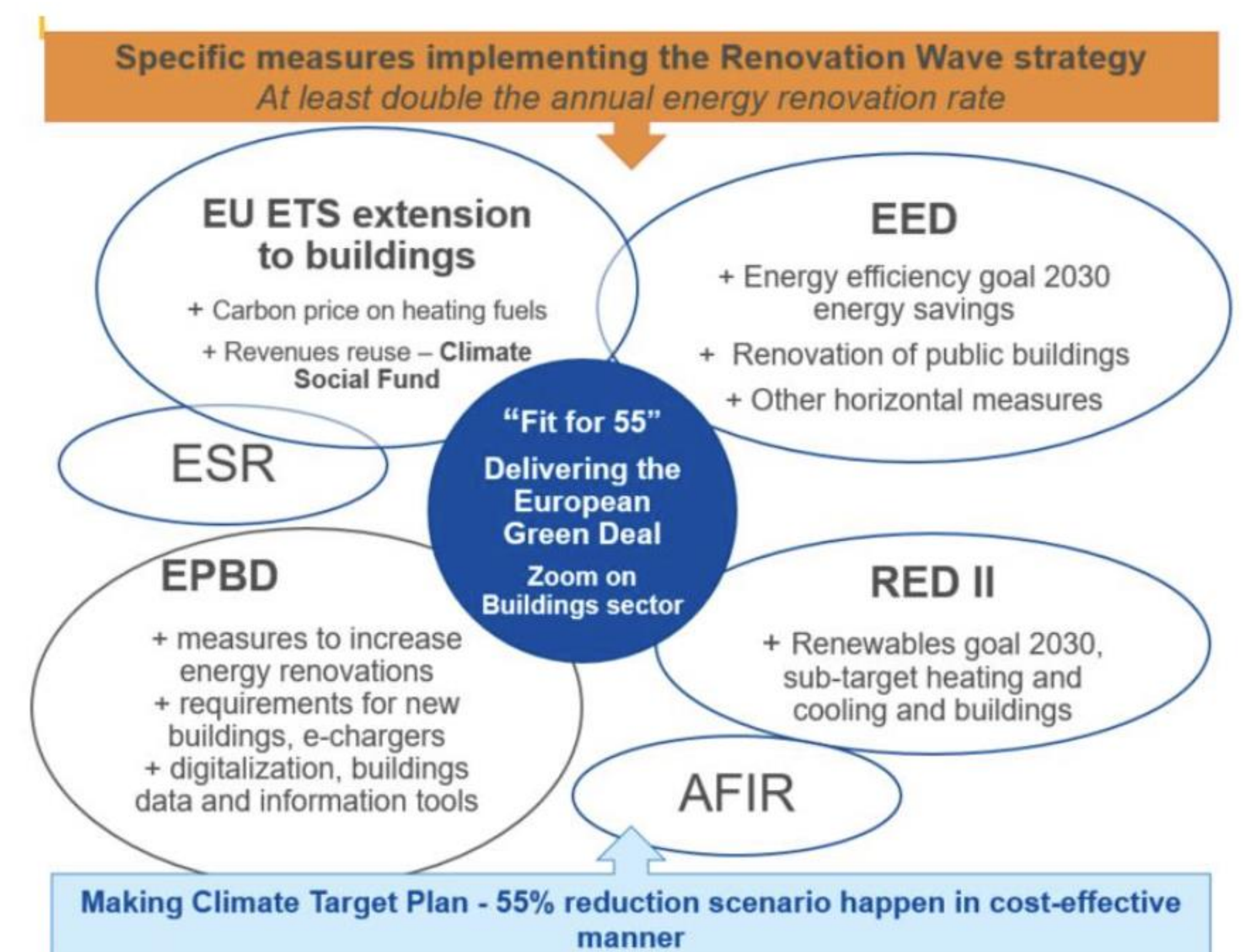


Fig. 1. Interactions among with other key legislation affecting the energy performance of buildings in Europe. Source: SWD(2021) 453 final

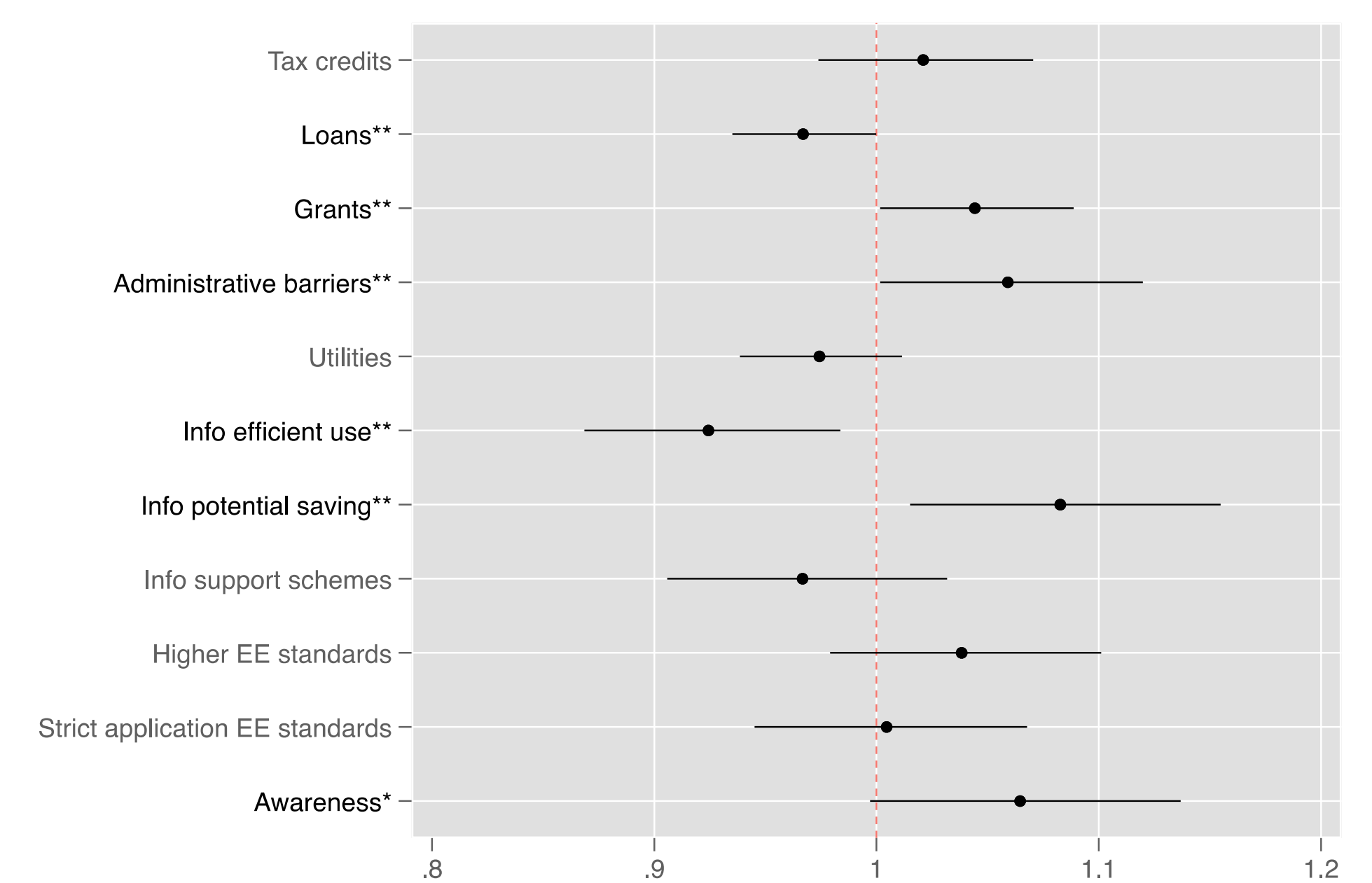


Fig. 2. Odds-ratio for policy drivers in UK households. Note: The variables in bold are statistically significant and the stars shows the level of significance in the baseline estimation (* p<.10, ** p<.05, *** p<.01). Source: Peñasco (2024) – Submitted.