

## Energy Efficiency in the Residential Sector of the European Union: Identification of Promising Policy Instruments and Private Initiatives

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### ABSTRACT

Improving residential energy efficiency is widely recognized as one of the best strategies for reducing energy demand, combating climate change and increasing security of energy supply. However, progress has been slow to date due to a number of market and behavioural barriers that have not been adequately addressed by energy efficiency policies and programmes. This study is based on updated findings of the European Futures for Energy Efficiency Project that responds to the EU Horizon 2020 Work Programme 2014-15 theme 'Secure, clean and efficient energy'. The article draws on five case studies from selected European countries, Finland, Italy, Hungary, Spain, UK, and evaluate the policies and the role of the private sector to stimulate investments in energy efficiency in the residential sector. In order to make a robust assessment and provide an accurate picture of the European Union and the countries under investigation, we first build disaggregated indicators of energy efficiency suggested by the International Energy Agency. By doing so, we provide a strong basis for policy making evaluation and development of effective strategies. Then, we assess the residential energy efficiency policies in force, by identifying best practices, instrument-specific success factors, and policy gaps. Moreover, we analyse the role of the private sector in supporting the investments in energy efficiency and complementing European and national public policies. We conclude by providing policy recommendations in order to strengthen the existing policy packages.

From the analysis of the National Energy Efficiency Action Plans it clearly emerges that there is a wide disparity in terms of content, level of detail in describing, and the level of ambition about the energy efficiency instruments in place and planned for the next years among Member States. When compared to what has been done in the last years in Finland, Spain, Italy, and Hungary, the UK government seems to have implemented a better balanced set of energy efficiency policies targeted at the residential sector, with the participation of diverse private actors. However, its existing conditions appear to be more problematic than other countries. In particular, the prevalence of older dwellings in the national stock built to lower standards of energy efficiency combined with a high share of the private rented sector in the housing market leaves larger untapped potential for improvements than the other countries under investigation. In addition, a confusing number of different measures specifically address the same target; they could probably achieve more with increased flexibility and a continuous funding. On the other hand, the lack of effective and targeted policies in Finland resulted in increased residential energy consumption, while in Hungary, Spain and Italy some interesting initiatives, especially in terms of financial and fiscal incentives, have been found.

Keywords: Energy efficiency policy; Residential sector; European Union; NEEAPs; ESCOs

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