

Understanding how homeowners make decisions about energy efficiency

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Credit: Alex Snyder

European homeowners remain resistant to undertaking efficiency measures. Widespread incentives, regulations and policies concerning energy efficiency are making modest gains. In the U.K., for example, just one in 10 renovations are undertaken for the explicit purpose of improving energy efficiency, despite a huge policy drive over the last four years centered around energy-saving improvements.

Recent research suggests that policymakers would benefit from analyzing further how homeowners think about renovation.

Charlie Wilson, a lecturer at the Tyndall Center for Climate Change Research at the University of East Anglia, led a study published in 2015 in the journal *Energy Research and Social Science* concerning homeowner decision making with regards to renovations. The study included interviews with homeowners, an extensive review of published articles and reports, and a survey of 1,028 homeowners in the U.K.

Traditionally, companies or authorities seeking to encourage homeowners to undertake [energy efficiency](#) measures identify three groups of barriers that must be overcome: Financial barriers such as capital availability; information barriers such as uncertainties about contractor reliability; and decision making barriers including the reluctance to make complex and irreversible decisions.

However, Wilson says that this approach may not accurately describe how homeowners consider renovation decisions.

"I'm not a major fan of thinking about this in terms of barriers," he says. "People aren't sitting around the kitchen table saying 'I want to make my home more [energy](#) efficient but these barriers are getting in the way, if only there was a good policy that would remove these barriers.' People are more saying, 'It would be good if we could make that room more air-tight, or that room a bit less damp and draughty so we can make it a child's playroom.' People are asking how they can best adapt their home to meet their needs."

Wilson explains that many policies designed to encourage [energy efficient home](#) renovations miss an opportunity by treating them as discrete, one-off renovations. He believes the key to increasing energy efficiency measures is for them to accompany more general renovation

projects.

"The challenge is how can we 'piggyback' energy efficiency measures into that vast amount of home renovation activity which is going on every day in Europe," he says.

"Imagine that you are going ahead with a 10,000 pound kitchen refurbishment and the supplier or builder says 'By the way, there is this new scheme that means while we do your whole kitchen we can do a bunch of insulation measures and put in new windows so your home will be more energy efficient—this will go on to your energy bill and you pay it back over time.'

"The research that we did showed that people were far more likely to go for that kind of policy support."

Karine Laffont, an engineer and consultant at French innovation management firm Technofi, agrees that attempting to bundle efficiency measures in with general renovations would prove successful.

"Energy does not cost enough—at least in France—to put energy issues at the top of the agenda for households," she says. "And I don't think raising environmental concerns is enough to make people renovate."

"If people are already planning on making some home improvements to increase their comfort in terms of living space, acoustics, aesthetics or humidity for example, and if there is a business model that is in place that can help them make those renovations in an energy efficient way that will not cost much, then I think they will do so."

Laffont also points to energy contracting as a further way to increase energy retrofits on a larger scale, such as targeting whole apartment blocks. She is collaborating with BRESAER, a European project that is

developing a retrofit design that aims to deliver near zero energy performance to existing buildings via the use of building envelope technologies including dynamic windows, insulation panels and photovoltaic modules integrated into a structural mesh.

"We had a look at what kind of business model would mitigate [financial barriers] and what we identified is the energy contracting model," Laffont says.

Through agreements between housing associations, builders and manufactures, energy contracting models—such as EnergieSprong in the Netherlands—can deliver energy retrofits to groups of houses or apartment blocks with no upfront payment for occupants.

"The contractor takes over the commercial, technical and operational risks of the project," Laffont says, "And the contractor will also guarantee the performance of the outcome."

While zero energy new builds are now commonplace, existing buildings will make up an estimated 70 percent of Europe's building stock in 2050, indicating that encouraging homeowners to undertake energy efficiency measures is a crucial part of a low-carbon future.

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