

Project Lead: EDF Energy R&D UK Centre Ltd

Funding:

Partners: EDF Energy Customers Ltd, Kestrix Ltd, Barclays UK

£486,154.77



The problem: Consumers have a low understanding of retrofitting options and limited access to funds to pay to retrofit their property

The UK energy efficiency sector is hampered by 2 major factors: an information gap for homeowners around retrofitting options, and a lack of financial support for energy improvements. Energy retailers face high acquisition costs for heat pumps, whilst green mortgage providers see low uptake of green financial products.

70% of UK residents interested in retrofitting their homes cited uncertainty about where to start as their main barrier. Barclays UK research suggests that, with the right financial proposition, 15% of additional customers would enter the “net zero journey”

The solution

Project Sojourner is an interactive tool that performs a comprehensive analysis of a property’s thermal efficiency without the need for a site visit, using this to provide personalised advice on energy-efficient upgrades and accompanying financial propositions. This will enable homeowners to estimate their home’s heat loss with more confidence, better understand heat pump location, review recommended insulation requirements and view an action plan, quotes and finance options – all before the property is visited.

Project Sojourner is a clear and engaging platform to help customer transition to net zero by offering them a personalised digital roadmap, ensuring home suitability for future heat pump installations. The project combines interactive 3D interfaces, comprehensive property analysis, advanced analytics and machine learning, all with a range of affordable, innovative financial solutions for recommended upgrades. We are committed to helping customers achieve an energy-efficient, future-proof home, giving them the control to map out their personalised journey to net zero.

Rebecca Rosling

Head of Future Energy Systems, EDF R&D UK Centre



Delivering an occupant-centric, personalised, and fully digitised 'Homeowner's Roadmap to Net Zero'

What are we going to do?

The project's roadmap includes advanced analytics and machine learning algorithms to analyse and interpret data, ensuring personalised and accurate recommendations. Additionally, the project intends to integrate a dynamic grant finder engine to help homeowners identify potential funding opportunities for their energy efficiency retrofits.

Why is this an improvement on current solutions?

The project integrates a visual 3D model of the user's property into an interface that highlights areas in need of improvement. This approach, combined with actionable insights and financial guidance, sets the project apart from existing solutions that are often costly and less engaging. It is also unique in its ability to provide accurate and personalised analysis using actual data and predictive analysis, a marked improvement over generic advice from existing market offerings. The integration of external home scans and predictive modelling offers a direct route to property-specific solutions.

What would success look like?

Through its technological advancements and existing understanding of the residential energy market, the project aims to create a unique platform that is not only a leader in digital innovation but also a catalyst for sustainable ecological change in UK housing.

Towards this goal, the project aims to deliver a centralised platform which seamlessly presents information to consumers as a coherent single journey; deliver the staged releases as planned for Alpha, Beta and MVP/Live; and demonstrate a path to wide-area coverage of Kestrix 3D heat loss models by commercialising through heat pump readiness assessments.



How will this project help towards the target of installing 600,000 heat pumps per year by 2028?

Project Sojourner will facilitate the installation of heat pumps by removing behavioural and technical barriers. By increasing homes' energy efficiency, it will increase the number of heat pump ready buildings and avoid the use of high temperature heat pumps. This solution presents a cost advantage to the customer and aligns with the government's heat decarbonisation strategy, prioritising low temperature heat pumps.

The Optimised Solutions Development stream of the Heat Pump Ready programme supports the development of innovative tools, technologies and processes to overcome specific barriers to heat pump deployment in the UK. Wave 2 of this stream supports solutions aiming to improve the ease of heat pump deployment in homes that are 'complex to decarbonise', develop innovative solutions to enable heat pumps to be deployed in 'distress purchase' situations, improve performance of domestic heat pumps with low-GWP refrigerants and improve the domestic consumer experience of using and living with a heat pump.

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