

Race for 2030

Funded by Race for 2030 Limited



The project explored two pivotal themes: H3, aiming to enhance energy practices for grid support through home energy technologies, and H5, focusing on smart algorithms to optimize household energy use and reduce costs for both consumers and the energy system. While emphasizing smarter energy utilisation like load shifting and dynamic export limits, it also sought real-world trials for these innovations.

The assessment revealed critical insights into household energy distribution, with 40% used for heating/cooling, 30% for appliances, and 25% for hot water. Despite the popularity of rooftop solar, installed in over 30% of homes by 2022, only 19% of households expressed interest in new energy-efficient technologies to manage costs.

However, the assessment pointed to potential solutions. Engaging consumers through education and tailored approaches showed promise, with a third of households considering adopting smart tech in the next five years. Challenges like housing tenure, motivational barriers, and distrust in energy providers hindered tech adoption.

Strategies to ease grid energy load included financial mechanisms and tariff variations. Yet, research gaps existed in strategy effectiveness, urging practical recommendations and robust educational campaigns. Accessible energy data, addressing consumer scepticism, and enabling user-friendly smart technology emerged as crucial aspects.

The assessment illustrated challenges and opportunities, advocated for tailored solutions, education initiatives, and the importance of accessible data and user-friendly tech for a successful energy transition.

19% of households expressed interest in new energy-efficient technologies to manage costs

One third of households considered adopting smart technology in the next 5 years
