

The Smart Energy Savings (SENS) Innovation Competition

What is SENS?

Smart meters are replacing traditional gas and electricity meters across Great Britain as part of an essential infrastructure upgrade that will make our energy system cheaper, cleaner and more efficient.

The Department for Business, Energy & Industrial Strategy (BEIS) has committed £6.25m to drive innovation that will harness smart meter data to deliver energy savings for households across the country.

Phase 01

Develop

New innovative technologies that use smart meter data to help households change the way they use energy

Phase 02

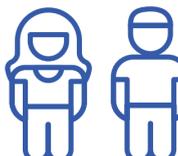
Pilot & Evaluate

Through large scale household trials to understand energy consumption impacts

What do we want to achieve?



Reductions in household energy use



Energy feedback products that consumers value and want to use



Support the development of a market for these products and services



Improved knowledge of how to reduce energy use through behaviour change



Better engagement between energy suppliers and their customers



Improved household budgeting



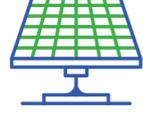
Increased thermal comfort



Lower greenhouse gas emissions



Savings on energy bills



Greater use of renewable technologies

What has been developed?

A range of products have been developed that make it fun, engaging or easier to save energy at home.

- Mobile and web applications that provide **ongoing, tailored energy feedback and advice to the household** using half hourly smart meter data.

- Mobile applications that provide **near real-time insights taken from Consumer Access Devices**.

- Integrated smart thermostats that can access smart meter data to provide **feedback on the costs of different heating patterns**.

- Local energy clubs that **integrate local energy generation (e.g. hydro power) with new smart tariffs**.

How will they work?

To drive behaviour change, these products and services offer new functionality, along with a range of techniques, including behavioural insights, tailored analytics and advice designed to build households' ability to act on energy advice.



Gamification



Nudges



Near real-time social comparison



Showing households how they use energy



Personalising the style and tone of advice and feedback



Targeted periods of change (e.g. when bills are higher than usual)



Advanced feedback and diagnostics



Advice which focuses on easy-to-change or longer-term behaviours



Integrating energy use data with other technology in the home (e.g. heating controls)



Matching advice to householders' motives and circumstances so they are more likely to act



Tailoring advice to the customer or home

How are we testing if they work?

Ipsos MORI, in partnership with the Energy Saving Trust, the University of Manchester, the University of Edinburgh and the Smart Energy Research Lab (SERL), were commissioned by BEIS to undertake a robust independent evaluation of the SENS competition, including separate trial evaluations for each of the individual projects.

The trial evaluations vary in methodological approach and use the most robust and practicable evaluation design available to each project. These vary from randomised control trials, to matched control design evaluations to theory-based evaluation. The trials are open to a wide range of household types to test how behavioural insight techniques vary in their impact on energy consumption choices between different demographics across the GB population.

Our primary research question is the impact of the product on electricity and gas consumption (where relevant), though we will also explore a range of other impacts. We have therefore designed these trials to test whether any observed energy consumption changes can be directly attributed to the innovation products and if so, how, for whom and in what circumstances. This will be done by analysing energy consumption data and conducting longitudinal telephone surveys and qualitative interviews.

All funded Competition Partners must secure informed and opt-in consent from individual households to participate in the SENS evaluation, including the provision of their energy consumption data for analyses purposes.