

Datamining

Visible Energy

Business Challenge

The Visible Energy project, funded by Carbon Connections, is intended to examine the changes in energy behaviour patterns of households when provided with immediate visual and quantitative feedback. The main aim is to generate a greater depth of understanding of behaviour in household energy usage that will complement current energy monitoring and smart metering trials, resulting in an expected reduced carbon footprint for those households recruited.

Our Solution & Expertise

The project is a partnership between the University of East Anglia, SYS Consulting Ltd and Green Energy Options (GEO). GEO has developed the Home Energy Hub, a device which monitors and displays home energy usage and whose key design concept is to engage people by making the information it portrays striking, fascinating and captivating.

The full system can monitor up to 100 sensors per household and includes a colour touch screen to be used in a main living area. The Home Energy Hub also measures oil or gas boiler usage and is web enabled so that information can be downloaded to GEO. 210 homes will trial the hub, 140 of these with feedback display. The project will monitor whether providing people with more detailed information generates greater and more lasting changes.

The project itself is innovative because for the first time it applies behavioral and change management to the implementation of technology in meeting policy objectives. The project also addresses intelligent metering because an added feature of the equipment is a feedback/control element which has the ability to automatically switch appliances off, a function which depends on identifying 'normal' usage.

The expected outcomes are direct savings by changing energy use behaviors and reducing energy wastage. Potential carbon savings are between 5% and 20% from changing behaviors and a similar number for reducing wastage. The project is now in pre-production phase with anticipated full production within the next 6 months.



Business Benefits

It is anticipated that if the project achieves 5% penetration in 5 years (approximately 1 million homes) and assumes a 20% reduction per home at an average of 5 tonnes CO2 emissions per home, this equates to 1m tonnes CO2. The Home Energy Hub calculates the savings, which will be collected over the internet and used to estimate the total savings.

