Energy project briefs background

Project statement

"To identify opportunities for new energy services for London "Able to pay" owner occupiers which could substantially reduce Carbon dioxide emissions".

Background

Residential households make up a significant part of total energy demand and CO_2 emissions – about one third in the UK as a whole, and up to 45% in London.[1] Domestic energy use is therefore of major importance to the success of the Climate Change Programme and the longer-term imperative of cutting emission sharply to avoid damaging climate change.

Clearly, reducing energy use through efficiency gains has a crucial role to play. According to the 2003 Energy White Paper: "The cheapest, cleanest and safest way of addressing our energy policy objectives is to use less energy".[2]

Most domestic emissions do not come from fuel poor households, but from the "fuel rich" or "able-to-pay" sector. In London the non-fuel poor sector (both owner occupied and rented) accounts for 38% of all CO_2 emissions - about 16 million tonnes a year. This represents the great majority of domestic emissions.

The crucial fact about this sector is that they are able to invest in their own energy efficiency and home generation. Unlike the fuel poor, where the task is to identify eligible households and undertake free measures, the aim with the fuel rich is to motivate and support investment by householders themselves.

Design Council RED team

The Design Council is a publicly funded body tasked with making UK managers the best users of design, and has a track record in making social and economic change through the application of design. The RED team within the Design Council uses design methodology and the creativity of designers to produce new approaches and solutions to intractable problems. Through focusing on users and combining this with expertise from within appropriate fields design provides a space for innovation. Previous projects have included; investigating how the interaction between citizen and state could be redesigned to enhance a sense of nationality; and most recently developing new approaches to the question of public health focusing on chronic condition management and prevention.

The team is led by Robin Murray, and includes a core team of designers and policy experts.

For further information on RED and the work that we are doing please look at our weblog at: http://www.designcouncil.org.uk/red/

[1] Environmental Change Unit (2005) *40% house* Oxford University, p 11; GLA (2004) *Green Light to Clean Power: The Mayor's Energy Strategy* p 13

[2] DTI (2003) *Our Energy future – Creating a low carbon* economy p 32

BRIEF B; Ambient Energy Display

"If you can't measure it, you can't manage it..."

This truism is attributed to management consultancy McKinsey - at the RED team, we like the distortion;

"If you can't see it, you won't care about it…"

Our initial user research has pointed us to considerable interest for our target user group in better understanding their own energy usage. The only currently available product that does this is the energy meter – which is largely invisible to the householder. Most electricity meters being a largely forgotten product, tucked away in a cupboard or hallway, out of sight and out of mind.

There is a design challenge to rethink this scenario, with the potential for solutions that use more ambient or orthogonal approaches to displaying measurements of home energy usage.

In our research so far, users have likened this to designing a "dashboard" for the home. Taking a less instrumental approach to this explicit need has led the RED team to think of this more as designing the "heartbeat" for the home. This is more like a way for householders to maintain a peripheral awareness of the on-going energy usage of their homes, and introduces something new that might "fit" their personal expression or choice of home lifestyle.

The display – which would need to have (or be connected to) a method of measuring energy usage or carbon emissions - could take any possible form. A few that the RED team have thought of include;

- A visual display object, that sits on a table or mantelpiece…
- Lighting effects that illuminate a wall or ceiling…
- A soundscape that is audible in specific home locations…
- An outdoor item, on the window or roof, or even in the garden…

Domestic renewable energy technology is moving out of the laboratory and into everyday life. As these advanced technology services become increasingly mainstream, design will have increasing leverage in differentiating one technology provider over another. Brand communication, retail, service and product design will each have a greater role to play.

In considering this challenge there are a number of related or adjacent issues that might be worth thinking about;

- What effect could this have on the household's patterns of behaviour?
- Is there a new, aspirational aesthetic for home energy products?
- How could this display integrate or co-operate with existing household items or products?
- What enhanced functionality would make people more aware of household CO_2 emissions?
- How might energy utility companies harness this approach to help their customer relationships?
- Is there scope for new retail approaches to selling energy technologies for homes?