

Smart Meters: the customer's view

How smart meters will affect the
supplier-customer relationship, and
what to do about it

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1 About Foolproof

Foolproof is an experience design consultancy. We gather consumer insight and help our clients design and deploy more valuable customer experiences in digital channels. Our mission is to find the win-win between what customers want and what businesses want from digital.

We are based in the UK but busy all over the world. Our clients include famous names from the travel, financial, media and utilities sectors.

Foolproof also publishes the Online Shopping Survey (OSS) research series which looks at shopping and decision-making in digital channels by following a large group of consumers through the shopping process. In 2009 we published OSS Utilities creating a customer's-eye view of the shopping experience for energy supply.

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2 Summary

This paper summarises findings from consumer research conducted in November 2009. Fieldwork consisted of two focus groups which introduced the concept of smart meters and explored various potential applications of smart meter data.

The introduction of smart metering should be seen by the energy supply industry as a fork in the road.

If handled deftly, smart meters create an opportunity to re-energise the relationship between provider and customer. Improved data resources can be used to restore trust in the fundamentals of supply, as well as creating opportunities for value-added services that will improve consumer sentiment and increase loyalty.

Alternatively, smart meter data could be exploited by third parties (like comparison sites, environmental or community groups) in order to further commoditise supply and destroy brand equity.

How the industry reacts to this latter threat is important. Recent history tells us that trying to control data and prohibit its use by third parties will probably not succeed. Our research shows that customers consider smart meter data to be 'their data' and, one way or another, the genie will find its way out of the bottle.



We suggest showing a more creative leadership in the smart metered world: making usage data the heart of the relationship between supplier and customer, using it as the foundation of a richer and more valuable customer experience.

The UK financial services sector has some useful lessons. Chasing short term sales, insurance companies allowed comparison sites to make pricing data the only serious differentiator in consumer decision-making. By contrast most of the UK's retail banks are now making major investments in internet banking infrastructure in order to exploit the power of the transaction data that they hold, and build, value-added experiences for their customers.

In short, better pricing data has the power to weaken customer relationships while usage data has the power to strengthen them. Energy suppliers need to make sure the rear-guard action against the former doesn't blind them to the possibilities of the latter.

The implication of this is that energy suppliers need to think and act now about how they will use smart meter data to strengthen and deepen customer relationships. Some of the ideas we tested in our study give clues about where to start. But there is also an organisational challenge: Customer Experience needs to be promoted quickly to being a senior discipline.

3 Background

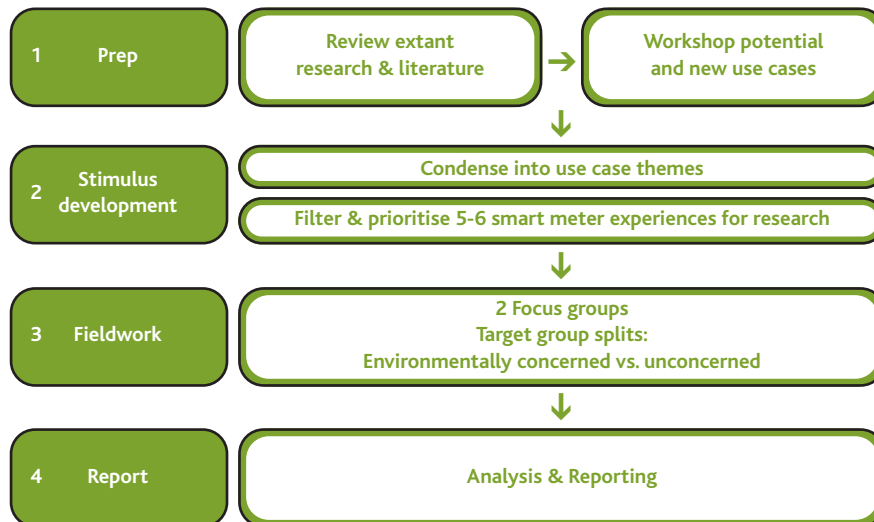
The policy decision by the British Government to mandate the installation of smart meters in every UK home by 2020 will have a number of major technological and social impacts.

Much attention (and commentary) has already been given to the massive operational and regulatory effort this move will entail: Who does what? Who owns what? But there seems to have been relatively little exploration of the consumer-side impacts of smart meter implementation. In particular we were interested in how smart meters - and specifically customer consumption data - might be used by suppliers or third party organisations to change their relationship with energy consumers.

In November 2009 we conducted two focus groups with typical UK energy consumers to discuss smart meters and explore their potential impact.

4 Research Approach

The project had four stages:



4.1 Prep

The project began with a review of public domain research and opinion about consumer attitudes to smart meters. We also talked to industry experts including people from energy supply companies, business technology providers and NGOs.

We then convened an ideation workshop to generate scenarios for smart meter customer data usage. These ranged from the relatively mundane to the downright edgy: we wanted to provide focus group participants with a spectrum of potential use cases to assess how far they could imagine (and support) the application of their energy consumption data.

The ideas we generated fell into two categories:

A. Inside the supplier-customer relationship

Using data to enrich the b2c relationship e.g.

- Graphical displays
- Commentary/advice from the supplier about energy usage
- Supply & outage alerts.

B. Outside the supplier-customer relationship

Use of smart meter data by third parties e.g.

- Comparison sites
- NGOs & community groups.

4.2 Stimulus development

We worked the ideas up into some simple stimulus boards which portrayed some of our ideas as user-end web interfaces. We also created a number of written scenarios around future price and scarcity of home energy as a market 'backdrop' to various stages of the discussion.

4.3 Fieldwork


We developed a discussion guide for the focus groups which included seven subject areas:

i) Introduction to smart meters

What is a smart meter? Question to the group followed by an explanation using the stimulus card shown below.

What is a Smart Meter?

- Records your energy use real time and sends it to your provider - an end to 6 monthly readings
- Monitor your energy consumption in real time via displays in your home, online or on your phone
- Allows remote connection and disconnection of the supply to your home
- The UK government are committed to putting one in every home in the country starting in 2012 and completing by 2020



Explored reactions to smart meter concept.

ii) Higher prices, supply and demand

Posed a near-future scenario where energy prices are significantly higher and demand outstrips supply at peak demand. Explore consumer attitudes and who is responsible for this state of affairs.

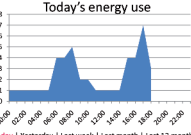
iii) Basic site

Power Co. Home energy | Renewable energy | My Power Co. | About Power Co.

Home Energy | Smart Energy | Renewable Energy | Customer service | Moving home | Contact Us

Welcome back Dave

Today's energy use



Your energy
Yesterday you used: **128kW**
Peak use was: **4pm to 6pm**
This cost you **£5**

Between midnight and 6am you used 15kW
This cost you **£5**

Tip:
Turn off your TV and appliances before you go to bed and look at our **Energy 500** tariff

Energy optimiser

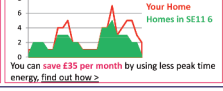
Your energy rating is **1 (High user)**

To improve your rating:

- Complete the quick and easy questionnaire [Start >](#)
- Start our **tariff tuner** to make sure you are on the best tariff
- Set an energy monitor to warn you when you are using excessive energy

Homes like yours in SE11 6

Your home uses **above average** energy levels compared to similar homes in your area

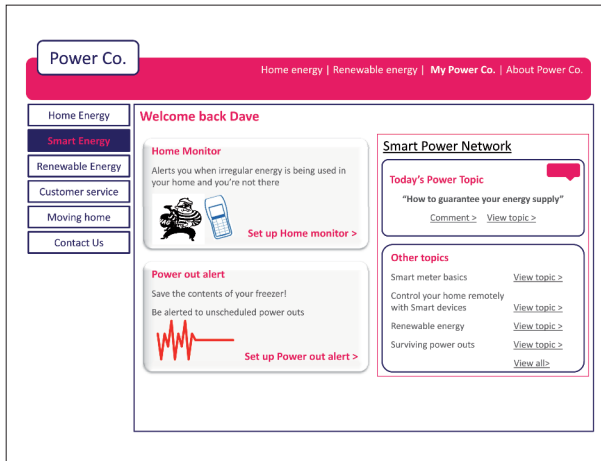


You can **save £35 per month** by using less peak time energy. [Find out how >](#)

Stimulus card of a mocked-up web page illustrating basic features smart meter data may enable:

- Graphical displays illustrating consumption
- Commentary on consumption – Peak usage and associated costs with hints and tips for reduction for cost and units
- An energy optimiser – personalisation feature to tailor site feedback and recommendations
- Homes like yours – a comparison tool to show anticipated energy use and differences to a norm to encourage consumption awareness.

iv) Advanced site



Stimulus card of a mocked-up example web page illustrating advanced features and social interaction smart meter data and active communities may enable:

- Smart meter discussion board for consumers with similar consumption patterns to exchange thoughts, advice and information
- Power outage alert: advises customer of planned or unplanned outages in supply
- Home monitor: alerts the user to unusual usage patterns e.g. fluctuating consumption alerting customer to unusual activity in the home.

v) Price comparison

Written stimulus about sharing smart meter data with third parties like price comparison sites.

vi) Community

Written stimulus about data pooling and group activities (community energy-saving drives and discounted bulk energy purchase) was used to understand consumer attitudes to data ownership and sharing.

vii) The future

Finally, a very bleak picture of the future was painted in order to elicit consumer reactions and concerns:

- High energy costs
- Intermittent supply – scheduled and unscheduled blackouts and brownouts
- Energy rationing and credits
- The meter as a monitor and supply control device.

5 Findings

5.1 Current attitudes to energy supply

Customer attitudes to energy utilities are of expectation and necessity. Consumers in the UK have come to expect an uninterrupted supply of energy to their homes. The home itself is filled with items that rely on this continuous supply. Consumers see energy supply more as a form of taxation than a service that facilitates a higher quality of life.

Providers of energy are not held in high regard and there appears to be little empathy on either side between consumer and supplier.

5.2 Smart meter awareness

Very few respondents were familiar with smart meters in terms of what they are or what they do. When the concept was introduced to the group, there was strong approval for the idea of more accurate readings and the ability to personally monitor, and more importantly, understand, their consumption. The backdrop to this at present, is that bills are not that easy to understand.

"Finally I might be able to understand what it is I am paying for".

Coupled with the notion that energy prices will continue to increase well above inflation, there was general agreement that the ability to more closely monitor and control consumption was a positive development.

The only theory offered by the groups about why homes are being fitted with smart meters is that it would promote energy conservation. The Government's commitment to reduction in carbon emissions was voiced in the groups as the main driver. There was no spontaneous suggestion that the move was to reduce energy bills for consumers, or to protect energy consumption as it becomes a more scarce and costly commodity. The link to environmental issues potentially creates a positive point of leverage as supply companies promote roll out. Vodafone reacted to the EU directive to reduce call roaming costs across Europe by presenting the change as their own initiative; there seems to be an opportunity for energy suppliers to do the same.

The only negativity in the groups pointed to the cost and installation of the meter.

"If the government are making every home have one they, and the utilities, should pay for them".

There was a sceptical view that payment would eventually fall at the feet of the consumer. Payment would ultimately be raised through taxation or higher bills.

5.3 The customer relationship

The current supplier-consumer relationship is tense. Contact revolves around billing cycles: receiving bills, querying bills and unprompted changes to direct debits.

Essentially the majority of contact with supply companies is perceived as strained and, for the most part, a negative experience.

“Whole years can pass with no contact and all of a sudden a massive bill arrives”.

Meter readings are an expected part of the relationship and, alongside bills, one of the most frequent contact points. Typically considered quite a simple task, consumers appear to understand the inherent value in accurate readings and are motivated to provide and facilitate collection.

Consumers anticipate dialogue only when there are problems.

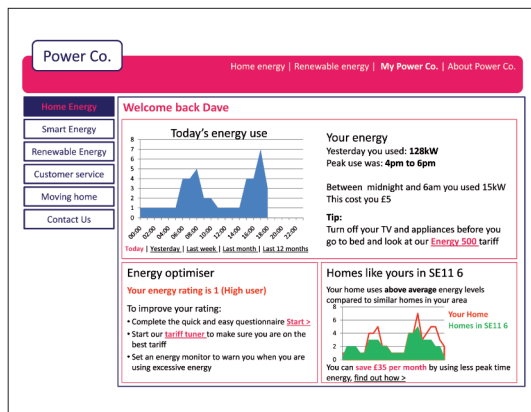
“When things are quiet, it means there are no problems”.

When they initiate contact customers are typically already frustrated by: issues experienced when moving or registering, bills they don't understand, inaccurate estimated meter readings and poor experiences with customer services.

Overall, our respondents painted a picture of a 'grudge' relationship: a steady increase in prices, unclear bills, unpredictable or unfair payments – and with infrequent contact episodes that result from, or result in, dissatisfaction.

Both groups rejected the idea that energy suppliers were in any way concerned with reducing either consumption or cost.

5.4 Basic data applications



Generally the stimulus was well received. Respondents understood very little about their current energy use, energy cost or their tariff. Most could immediately see how they could be informed and empowered by graphic visualisation and simple data tools.

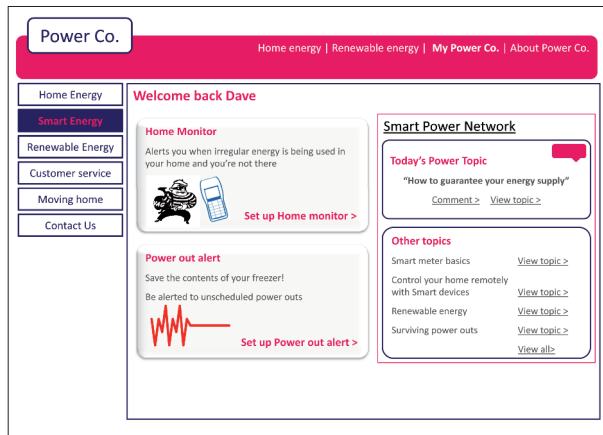
The suggestion of commentary, tips and advice from their supplier were all also of interest – the first suggestion of the potential to reappraise the current adversarial relationship with their supplier. There was also some support for the idea that information of this depth and quality might provide a competitive

edge for suppliers; no-one suggested that they would switch suppliers solely on the basis of this information being available, but it would be considered a benefit within decision-making around switching.

There was limited support for the 'Homes like yours' comparison data. Respondents had difficulty understanding how this data would be produced and therefore questioned its potential accuracy.

Pushing our scenario further, several respondents remarked that they would be interested to see consumption data for particular household devices enabling them to make better decisions around usage.

5.5 Advanced data applications



Initial reaction to this stimulus was cautious on the basis that the Home Monitor and Power Alert ideas could be premium services, which might attract an additional charge. This does at least reveal the potential for premium services to be added to the customer relationship – although clearly more investigation around features, benefits and pricing would be necessary.

The Home Monitor idea drew mixed reactions. Some saw the service at face-value: using data remotely to monitor the home with potential security benefits. For others it opened up

uncomfortable thoughts about the level of knowledge their supplier (and its thousands of staff) would have about their home life.

The Power Out Alert got wider support. Respondents with fish tanks, freezers and complex audio-visual set-ups could see the value of alerts about power outages while away from home.

There was little support for the idea of user-generated content and discussion strands.

"It's like Martin Lewis: helpful and useful to share. It can be really powerful – but would the utilities allow open discussion like this? If they did they would look very good, but I doubt they would in case anything negative was said".

We got a sense that consumers now see the natural home for this sort of content to be on third party review sites or social networks like Facebook.

One group felt that user-generated content would become more valuable in a future where energy scarcity and higher costs would force closer attention.

Overall we reflected that this stimulus pushed many of our respondents too far into unfamiliar concepts around data. It would seem sensible to stage the exploitation of usage data: adopting some of the simpler graphic display and analysis tools shown in the first stimulus board, then potentially extending specialist services to targeted user groups.

5.6 Use of consumption data by third parties

We presented the groups with two scenarios relating to third party applications of customers energy consumption data:

- A. Quarterly review of data by a comparison site like uSwitch or Moneysupermarket to review costs and tariff choice against the market and recommend a change of supplier if relevant
- B. Community projects which harness energy consumption data. For example a community (like households with children at a certain school) might set a target for reduced energy consumption in competition with other groups nationwide.

Comparison sites

Both groups quickly understood this concept and saw the benefits of having better information available to help them decide whether to switch.

The main barrier to switching is that the time and hassle associated with the switch might not counterbalance possible savings. No other significant barriers to switching were raised: again respondents painted a picture of a low-value, low-engagement relationship with their supplier.

When we asked if any of the data features shared earlier in the session would affect propensity to switch we got a mixed reaction. Some respondents said that they would expect all supply companies to offer these sorts of services, so they would present no barrier to switching. Others suggested that if their supplier offered these features it might make them less likely to switch: partly because another supplier might not offer these features; partly because the presence of such features would increase their sense of transparency and trust in the supplier.

Community projects

The scenario we painted around community use of energy consumption data for a school project seemed entirely plausible to both groups. It's clear that children are widely seen as interested in environmental concerns and would have the power to encourage parents to participate in community projects of this sort.

When the discussion moved on to group or community purchasing of energy (using collective power to negotiate lower costs) there was less support. We got the sense that, at present, householders prefer to be free to act independently to manage their fuel supply, rather than be restricted through cooperation in a group.

This phase of the discussion also allowed us to explore attitudes to data ownership. It was clear that consumers saw smart meter data about energy usage in their home as their property. They expect the data to be accessible and portable – allowing them to share it with whomever they see fit. Our suggestion that supply companies might restrict access was over-ruled.

5.7 The future

In the final stage of the groups we presented a bleaker picture of the future of energy in the UK: energy costs taking a much bigger share of household income; planned and unplanned outages as a regular event.

The resounding reaction to this was incredulity:

"Preposterous, they wouldn't let that happen".

"There would be riots in the street".

It took us some time to even get the groups to consider the proposition seriously. When they did respondents pointed at energy suppliers, or the Government, to shoulder the blame. Only a couple of respondents could see consumers as contributing to the problem through increasing consumption.

We suggested that in this future scenario the smart meter might start to be perceived as foe rather than friend. Would the meter become a spy in the home? While there was consensus that more reliance would be placed on meter data to monitor consumption the groups did not accept the 'Big Brother' idea.

6 Conclusion

At face-value some of the findings from our research are discouraging: consumers see little or no value in their current relationship with their supplier; the most compelling application of smart meter data appears to be informing switching decisions; consumers will expect free access and portability of 'their' usage data; consumers feel little engagement with, or responsibility for, impending problems with supply and higher prices.

But our research also gives some clues that smart meter data could be used to revitalise customer relationships - building value and increasing loyalty. To do this, supply companies need to engage in their own conversations with customers about how their relationship can develop.

Supply companies need to start work today on developing value in the customer relationship. The digital channel – enriched with smart meter data – seems to be the obvious centre of gravity for this.

If you would like to discuss this report in more detail, or if you would like to explore any implications our findings might have for your organisation, please contact Tom Wood (tom.wood@foolproof.co.uk).