



Department for  
Business, Energy  
& Industrial Strategy

# Smart Metering Energy Efficiency Advice Project

Findings from a study piloting energy efficiency  
advice delivered through the smart meter roll-out

Report prepared by Ipsos MORI and Energy Saving  
Trust for the Department of Energy and Climate  
Change

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# Executive summary

## Study background, aims and approach

The Government is committed to ensuring that every home and business in the country is offered a smart meter by 2020. The Smart Meter Installation Code of Practice governs the consumer experience throughout the installation process. Among other things, the Code requires installers to provide energy efficiency advice to domestic consumers. This presents a number of challenges for suppliers, including: the practicalities of delivering advice within the visit; requiring installers to be effective and trusted communicators as well as technical experts; and delivering relevant and appealing advice to a diverse range of households.

Informed by conclusions drawn in the Department of Energy and Climate Change's (DECC) Early Learning Project,<sup>1</sup> Ipsos MORI and Energy Saving Trust (EST) were commissioned by DECC in August 2015 to:

- Create, test and pilot an approach to delivering energy efficiency advice during the smart meter roll-out which leads householders to adopt energy efficient behaviours;
- Explore the most appropriate forms of advice delivery for different types of customer, including vulnerable groups;<sup>2</sup>
- Evaluate the piloted approach using feedback from customer and installers; and
- Generate recommendations for energy suppliers, advice providers and other stakeholders based on findings from the study.

The study developed and piloted verbal and demonstration-led advice, incorporating the in-home-display (IHD) alongside supporting advice materials and 'motivational devices'.<sup>3</sup> Installers from two partnering energy suppliers were trained in the delivery of this advice, including tailoring the advice and approach to the needs of different customer groups. The study, covering customers in England, Scotland and Wales, was grounded in 'action research' with the approach developed iteratively across four phases.

- Phase One explored best practice for the content and delivery of advice via a small-scale evidence review of key literature and a stakeholder workshop (see Annex 1).
- Phase Two developed the draft advice for the pilot, informed by general public discussion groups and depth interviews with vulnerable customers.
- Phase Three trained 13 installers across two suppliers in the delivery of the advice, and piloted advice with over 400 customers across four locations<sup>4</sup> from late December 2015, to February 2016.

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<sup>1</sup> Outputs from this extensive programme of work conducted during the Foundation Stage are available here:

<https://www.gov.uk/government/publications/smart-metering-early-learning-project-and-small-scale-behaviour-trials>

<sup>2</sup> 'Vulnerable' participants are defined throughout this report as social grades D and E; those aged 75 and over; those with a long standing health condition or disability, low literacy or numeracy or those living in hard to heat properties.

<sup>3</sup> Low cost materials reminding customers to take energy saving measures, such as pledge sheets, calendars and boiler /fridge magnets

<sup>4</sup> Customers were not specifically targeted, instead the supplier's standard appointment booking process was used. As a result, some customer groups have not been engaged in depth through this study as they were not included in the smart meter roll-out in the piloted areas (e.g. customers with English not as a first language, households with specific medical equipment needs and PPM customers).

- Phase Four evaluated the piloted approach through follow-up research with installers and 60 depth interviews with pilot customers, and road tested the results through a stakeholder workshop.

## Key findings

### Overall response to the principle of providing energy efficiency advice

Customers participating in the study strongly supported the delivery of energy efficiency advice at the smart meter installation visit. Customers – as well as installers, suppliers and other advice delivery bodies – viewed the smart meter installation as a valuable opportunity for offering this advice. The timing and convenience of the (in-home) setting were seen to suit both the recipients and deliverers of advice, who felt it was an **appropriate and valuable addition** to the visit. Supplier organisations engaged through this study felt it offered **benefits to their overall customer relationships and brand**.

A few pilot participants were less receptive to the advice offered. In some cases, they felt they had ‘already done everything’ related to energy efficiency, or did not feel motivated to reduce their energy usage. These customers were still supportive, however, of the general principle of advice being offered to smart meter customers at the point of installation.

### Overall response to the delivery of energy efficiency advice at the pilot visits

Installers providing feedback on the pilot found the **delivery of the trial advice feasible and manageable** at most smart meter installations within the pilot period and areas. At a small number of visits, installers had not been able to deliver the advice. This was generally due to time constraints, particularly when the technical installation was atypical and challenging; although a few installers explained they had aborted the advice delivery because they felt the customer lacked interest or willingness to receive it.

Pilot participants who recalled receiving energy efficiency advice at their smart meter installation visit were generally positive about this advice when interviewed. Participants particularly endorsed **the delivery of advice alongside the demonstration of the IHD<sup>5</sup>** and commonly cited IHD demonstration as the most prominent feature of the installation visit (often identifying appliances and habits that were unexpectedly energy intensive). When the visit had involved the **installer accompanying the customer around their home giving tailored advice ‘on the spot’** (for example, around lighting or the setting of heating controls) this was also often spontaneously mentioned as helpful.

**Hard-copy information can be an integral part of the advice mix.** Householders appreciated having a reference point, to either confirm existing ‘good’ energy behaviours, or indicate ways in which energy behaviours could be changed. Some householders found it difficult to take in the information they were given verbally at the visit while others did not have time for the discussion on the day and felt confident and capable reading the information themselves at a later point. In both cases, the hard-copy information was valued as a reference for future use.

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<sup>5</sup> For example, demonstrating the advice by showing the display changing when turning appliances off standby, boiling a kettle or switching off lights.

Two main areas of energy efficiency advice included in the factsheets were found most helpful, and best received by householders. These were:

1. Messages providing free and simple ways to save energy by adapting daily habits, for example those presented on the '**Zero-cost ways of saving energy**' factsheet; and
2. Messages that addressed areas in which customers had the most unprompted queries, for example, those presented in the '**Buyer's Guide to Choosing Lighting for Your Home**', and '**Keeping cosy and warm for less – how to set your heating for winter**'.<sup>6</sup>

Areas of energy efficiency advice found to be less interesting to householders were:

1. Energy efficiency measures that householders had already undertaken;
2. Measures that were less feasible for householders given their tenure;<sup>7</sup> and
3. Measures that were not salient for the householder at the time of installation. For example, advice about boilers or energy saving appliances was ignored if it did not apply at this point in time.

However, some participants intended to keep these latter factsheets to refer to them in appropriate circumstances.

### [What is the impact of delivering energy efficiency advice for smart meter customers?](#)

This study demonstrates that providing tailored energy efficiency advice at the smart meter installation visit is feasible, and that the approach shows promise. The follow-up interviews conducted between six and ten weeks after the installation visit revealed early signs of impact for some householders. Impacts reported by customers included examples of changes to habitual behaviours and, to a lesser extent, some new purchasing decisions. The findings cannot, however, be used to draw firm conclusions about the long-term impact of advice delivery on householder attitudes and behaviours around energy use given that the follow-up interviews took place just six to ten weeks post installation.

Use of the IHD was identified as the most common behavioural outcome of the smart meter installation visit. The **IHD was often the prompt for householders to review their household's energy behaviours**. The information provided in the factsheets or verbally by the installer complemented the information available through the IHD. For example, a number of pilot participants stated that the advice given by the installer had prompted initial thoughts or worries about lightbulbs, and when they could see energy use 'in action' on the IHD they were prompted to purchase energy efficient lightbulbs.

### [Strategies to motivate customers reluctant to adopt energy efficiency advice](#)

The following groups of customers in the pilot were among the least likely to be affected by the advice delivered:

- Participants who felt they were already being as efficient as possible, either because they:
  - had done at least some of the suggested behaviours or installations; or

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<sup>6</sup> The timing of the pilot in January -February 2016 means customers may have been more receptive to these areas of advice.

<sup>7</sup> Examples of measures less feasible for renters included Buyer's Guide to Glazing, Draught Proofing, Wall Insulation and Loft Insulation

- felt restricted in their ability to change, for example due to having children or teenagers at home or living with a disability that required medical equipment;
- Participants who were financially comfortable with their energy spend<sup>8</sup> who tended to weigh up financial savings against other preferences, such as comfort, convenience, or aesthetics;
- Reactions to, and the impact of, the advice were mixed across participants in different demographic groups.<sup>9</sup> However:
  - Older research participants tended to be less willing to consider purchasing more energy efficient appliances at higher upfront costs; and
  - Private renter research participants were generally less willing to make changes to either purchasing or behavioural habits.

The reduced impact of advice on householders who were disengaged with energy issues was likely to be compounded by installers picking up on signals that the householder was disinterested, and therefore aborting or curtailing their attempt to offer advice or leave behind the printed factsheets. The follow-up interviews suggested that such householders could often be engaged with lateral approaches, for example, by being asked to consider potential future changes in circumstance, or by appealing to “waste not, want not” attitudes rather than financial savings. Overall, the installer follow-up interviews indicated that it is very hard to generalise about the types of consumers more or less likely to engage with energy efficiency advice.

### Maximising engagement with, and the impact of, energy efficiency advice

The pilot highlighted the following potential opportunities to maximise engagement with advice across all customer groups:

- **Setting clear expectations** that energy efficiency advice would form part of the installation visit, both in advance communications and at the start of the visit;<sup>10</sup>
- **Training installers** to have the confidence and skills to deliver advice, and equipping them with strategies for dealing with different levels of customer interest and types of household;
- **Combining written, verbal and demonstration-led advice** to cater for different customer needs and preferences, and to allow customers to engage at different points in time (during the visit, after the visit, at the time of future purchasing decisions or house renovations);
- **Clearly linking the demonstration of the IHD** to the energy efficiency advice messages delivered and ensuring these reinforce one another. This maximises the potential for householders to gain both motivation and skills for identifying appropriate changes;
- **Tailoring the delivery of advice**, including the selection of hard-copy materials, based on conversations with the customer and observations of their home,
- Ensuring advice content includes the following key elements; an **engaging evidence-based hook** (ideally, estimated financial savings from an independent source), **myth-busting information**, and **guidance in energy know-how** to ensure customers know not just what to do, but how to do it; and
- **Tailoring the approach for vulnerable households** to focus on zero-cost behavioural messages, ensuring printed factsheets or videos are used as a visual aid and considering

<sup>8</sup> It was not exclusively participants describing themselves as financially comfortable who mentioned this reason most often.

<sup>9</sup> It should be noted that while the research considers any differences needed in advice approach for different customer groups, the pilot included a breadth of customers but no single customer group in-depth.

<sup>10</sup> This is stipulated in the Smart Meter Installation Code of Practice (SMICoP), available at <http://www.smicop.co.uk/>

the value of a separate dedicated energy-related visit through either the supplier or another advice channel.

Recommendations based on findings from this study have been shared with energy suppliers, and the wider advice community, via the Toolkit Guide, available at [<https://www.gov.uk/government/publications/best-practice-guidance-for-the-delivery-of-energy-efficiency-advice-to-households-during-smart-meter-installation-visits>].

## Glossary of key terms

**ELP** – Smart Meter Early Learning Project: the government has used the foundation stage of the Smart Metering Implementation Programme to carry out an extensive programme of research into how best to deliver consumer benefits through effective engagement. This has taken the form of a series of research projects, known collectively as the Smart Metering Early Learning Project (ELP) (<https://www.gov.uk/government/publications/smart-metering-early-learning-project-and-small-scale-behaviour-trials>)

**EST** – Energy Saving Trust: an independent organisation providing impartial energy related advice to householders (<http://www.energysavingtrust.org.uk/>)

**HH** – Household: abbreviation used in diagrams within this report.

**IHD** – In Home Display: a portable device that displays current and past energy usage and how much it is costing or will cost. A range of IHDs can be purchased and used independently of a smart meter but as part of the early roll-out customers were offered – free of charge – an IHD to accompany their smart meter.

**SMICoP** – Smart Metering Installation Code of Practice – specifies the minimum standards for energy suppliers to follow in relation to the Customer facing aspects of the installation of Smart Metering Systems. The aim of the Code is for the Customer experience of the installation process to be positive, to protect Customers during the process, for Customers to be given appropriate assurances over what will take place during the installation process, and to deliver Programme benefits, including long term behavioural changes.

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# Introduction

## 1.1 Study background and aims

The Government is committed to ensuring that every home and business in the country is offered a smart meter by 2020, delivered as cost effectively as possible.<sup>11</sup> Smart meters will give consumers near real time information on their energy consumption to help them control energy use, and avoid wasting energy and money. Smart meters will also bring an end to estimated billing, helping consumers to budget better and help make switching between suppliers smoother and faster.

To ensure a positive consumer experience, the Government has obliged energy suppliers to develop and comply with a Smart Meter Installation Code of Practice which governs the consumer experience throughout the installation process, at both domestic and micro-business premises. Among other things, the Code requires installers to provide energy efficiency advice to domestic consumers as part of the visit.<sup>12</sup>

Offering energy advice at the point of smart meter installation presents a number of challenges. The approach must be practical and logistically feasible, and must fit within the planned schedule for installations, bearing in mind that suppliers are responsible for a national-scale roll-out. The approach requires installers to be effective and trusted communicators, as well as technical experts. The advice itself needs to be relevant and appeal to a diverse range of customers, including those with particular needs, either around energy use or receipt and interaction with information.

Ipsos MORI and Energy Saving Trust (EST) were therefore commissioned by the Department of Energy and Climate Change (DECC) to create, test and evaluate an approach to delivering energy efficiency advice at the point of smart meter installation.<sup>13</sup> This included the development of hardcopy materials by Ipsos MORI and EST, and installer training on how to deliver the advice. The aims of this pilot study were to:

- Create, test and pilot an approach to delivering energy efficiency advice during the smart meter roll-out which leads customers to adopt energy efficient behaviours;

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<sup>11</sup> The Smart Metering Programme aims to replace 53 million meters with smart electricity and gas meters in all domestic properties, and smart or advanced meters in smaller non-domestic sites, impacting approximately 30 million premises.

<sup>12</sup> This is stated in the Smart Meter Installation Code of Practice (SMICoP) and stipulates 'It is each Member's responsibility to ensure that Energy Efficiency Guidance is offered to the Domestic Customer at the Installation Visit' and that 'The Energy Efficiency Guidance provides the Customer with information and advice about their Smart Metering System and how they can use their Smart Metering System to improve their energy efficiency. The Customer is also directed to additional, impartial sources of information that might, for example, include generic information about the Green Deal programme and the Energy Company Obligation (ECO)'.

<sup>13</sup> This study applies to households only, and not small businesses

- Explore the most appropriate forms of advice delivery for different types of customers, including vulnerable groups;<sup>14</sup>
- Evaluate the piloted approach using feedback from customers and installers; and
- Generate recommendations for energy suppliers, advice providers and other stakeholders based on findings from the study.

These research objectives were informed by the ‘Smart Metering Early Learning Project’ (ELP) on maximising the benefits of smart meters.<sup>15</sup> The ELP drew a number of wide-ranging conclusions including:

- The importance of developing differentiated strategies for customers;
- The importance of well-designed training for installers and written materials for customers; and
- Identified scope for further support to be given to suppliers to assist in their delivery of energy efficiency advice at the smart meter installation visit.

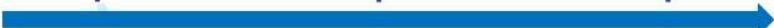
## 1.2 Overview of study approach

Overall the pilot study developed and piloted verbal and demonstration-led advice using the in-home-display (IHD) with supporting materials and ‘motivational devices’ (materials such as fridge magnets offering reminders or tips). The research also explored tailoring advice to meet different information and energy needs.

The study was grounded in ‘action research’, developed iteratively, with findings from each of its four phases (Figure 1) informing the next. The pilot was carried out with two energy suppliers, covering customers in England, Scotland and Wales.

**Figure 1: Summary of study approach**

1. Learning from best practice (Aug – Sept 2015)	2. Creation and testing of pilot advice & supporting materials (Sept – Nov 2015)	3. Delivering advice & support materials in 400+ homes (Nov 2015 – Jan 2016)	4. Evaluating advice & support materials (Feb – Apr 2016)
Stakeholder workshop	Development of draft advice approach & supporting materials	Training sessions for installers	60 follow-up interviews with piloted customers
Small-scale evidence review	Advice & materials testing: 4 customer focus groups & 20 interviews with vulnerable customers	Pilot delivery of advice in 400+ homes	Installer feedback via telephone
Set-up work with project partner suppliers	Feedback on draft materials from suppliers, installers & other stakeholders	8 days of observed pilot visits (16 installations) by Ipsos MORI & EST	Advice, materials & recommendations finalised
		Installer feedback via information sheets	Feedback on recommendations at stakeholder workshop



<sup>14</sup> ‘Vulnerable’ participants are defined throughout this report as social grades D and E; those aged 75 and over; those with a long standing health condition or disability, low literacy or numeracy, living in hard to heat properties or using a Pre Payment Meter (PPM).

<sup>15</sup> Full details of the reporting from the ELP is available here: <https://www.gov.uk/government/publications/smart-metering-early-learning-project-and-small-scale-behaviour-trials>

The main stages of the research and the purpose of each are described below:

**Phase One:** the scoping phase explored best practice for the content and delivery of advice via a small-scale evidence review of key literature and a workshop with thirty stakeholders (including energy suppliers, academics and advice providers). The findings informed the design of the initial approach and materials (see Annex 1).

**Phase Two:** developed and tested the pilot advice, with hard copy materials including, ten factsheets, a folder for the factsheets containing energy information and signposting to other sources of information, and a boiler magnet showing tips to help householders stay in control of central heating. The concept, format and draft design of the delivery of advice and supporting materials were tested using:

- **Four discussion groups** with the general public held in London and Cardiff; and
- **Twenty depth interviews** with customers meeting criteria relating to vulnerability, held in Cardiff, Glasgow and London.<sup>16</sup>

Findings from Phase Two informed the redesign of the advice materials and approach, which were then piloted with customers in Phase Three.

**Phase Three:** piloted the advice with over 400 customers, across four locations in England, Wales and Scotland. Installers were trained by EST in advance of the pilot, in half-day sessions that focused on: the content of advice; building a rapport with customers; and delivering tailored advice. Thirteen installers were involved in the pilot. They were purposively sampled to represent a range of experience and engagement with giving energy efficiency advice. After each installation installers completed a form (“crib sheet”) to record information, such as the nature and length of the installation and which factsheets were given out. The Ipsos MORI and EST research team also observed 16 installations across the two energy suppliers involved in the pilot. The aim of both aspects of monitoring was to gather detailed information on matters such as the logistics of advice delivery, time spent delivering advice and how delivery of advice worked in practice.<sup>17</sup>

The pilot was conducted at all smart meter installations which were conducted within the timeframe of the pilot period by the participating energy suppliers, and in the four selected geographical areas.<sup>18</sup> The pilot did not attempt to recruit participants based on a particular customer typology, or to be representative of the wider population, but followed the supplier’s usual appointment booking processes. Records received from the suppliers show that the pilot incorporated a range of demographic groups, property and tenure types, and groups classified as vulnerable.

**Phase Four** evaluated the piloted approach. Follow-up research with customers and installers explored experiences and views of the trialled approach. Sixty depth

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<sup>16</sup> Sample frames for recruitment were used, defining ‘vulnerable’ participants as social grades D and E; those aged 75 and over; those with a long standing health condition or disability, low literacy or numeracy, living in hard to heat properties or using a pre-payment meter.

<sup>17</sup> In total, 156 self-completion sheets were returned, from 9 installers across the energy suppliers.

<sup>18</sup> Most installations happened in January and February 2016.

interviews with customers were conducted face-to-face and by telephone.<sup>19</sup> These were sampled purposively, using target quotas where possible, from across the total pilot installations.<sup>20</sup> The resulting sample was, as far as possible, reflective (but not necessarily proportionately representative) of customer types included in the pilot. The research explored how advice provision played out in practice for a range of customer types and with a range of installer approaches. Customers' differing information need and preferences were also explored, as well as any issues or gaps in the advice given or the manner of advice delivery. Installers' experiences were fed back separately via group teleconference calls.

### 1.3 Limitations to the study

When interpreting the findings in this report, it is important to bear in mind certain constraints within which the study was carried out.

- Because the energy suppliers involved were prioritising not only end-of-life meter replacements, but also 'early adopters' (customers who had requested a smart meter), the sample of customers in the pilot is not representative of all smart meter installations, or indeed all customer groups. Early adopters may have been more engaged in energy efficiency and more receptive to advice, and those having end-of-life meter replacements may have been less engaged and less receptive. The scheduling of installations – during the day time rather than outside working hours in most cases – also led the pilot to include a larger proportion of older customers than is reflective of the customer profile in the pilot areas.
- Some customer groups, therefore, have not been engaged in depth through this pilot as they are less likely to be targeted for smart meters in the current roll-out phase. This includes customers for whom English is not their first language, households with specific medical equipment needs and pre-payment meter customers are not always available as part of this report. Where findings are relevant to a specific sub-group, these have been reported, but should be treated as indicative rather than conclusive. It has not been possible, for example, to develop recommendations on tailoring advice strategies to specific vulnerable groups.
- Pilot installations took place largely in January-February 2016,<sup>21</sup> meaning advice may have focused on seasonally relevant behaviours and measures, such as controlling the heating, and use of lights during shorter daylight hours. Customers

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<sup>19</sup> 33 interviews were conducted by telephone and 27 were conducted face-to-face.

<sup>20</sup> Permission to re-contact customers who received a pilot installation for the follow-up interviews was collected by the pilot installers at the end of each installation visit. These records were passed back to Ipsos MORI to use as the sample file for recruitment. This included a wide range of customers, enabling customers from different demographic groups and in different property types to be included in the follow-up phase. Where particular customer groups made up only a small number of the installations, this was reflected in the follow-up recruitment, and final interviewed, sample. For example, the small number of PPM customers in the follow-up research was due to this group being very small in the installation group (as these customers were not being targeted for installations in the areas and timeframe of the pilot by the partnering suppliers) rather than due to any difference in permission to re-contact or ability to recruit these customers for follow-up.

<sup>21</sup> The majority of pilot installations took place in January-February 2016, with a small number in late December 2015.

may have also been more receptive to energy efficiency advice than they would have been at other times of year, and advice relating to heating and lighting may have been more pertinent to customers than advice on other energy efficiency topics.

- Follow-up interviews with customers involved in the pilot took place between six and ten weeks after the smart meter installation. The impact of the advice in the longer term could therefore not be evaluated.
- This research is qualitative and used purposive sampling criteria. As such, generalisations cannot be made from the findings to the general population. This was a small scale pilot, with the aim of exploring in depth how energy efficiency advice can best be given to customers during the smart meter roll out, not to make any quantitative inferences.

## 2: Customer experiences of piloted energy efficiency advice delivery

This section of the report describes customer reactions to, and levels of engagement in, the energy efficiency advice delivered during the pilot smart meter installation visits. It also considers what has been learned about the short term impact of advice on household behaviours and purchasing decisions.

### 2.1 Summary of Pilot customer journey

Figure 2 presents a summary of the ‘journey’ that customers experienced. The pre and post-visit stages are based on householder descriptions.<sup>22</sup> The piloted approach to the visit itself is based on that specified in installer training. Section 3.4 discusses the ways in which installer approaches to advice delivery were sometimes modified.

Figure 2: Summary of Pilot customer journey

Pre-installation	Customer responds to an advert or direct supplier comms to request/agree to a smart meter	Supplier contacts customer to confirm date & practicalities of the visit (e.g. length, power supply)	Installer calls on day to confirm installation visit	
Pilot approach to installation visit	Visual inspection of home by installer e.g. type of walls, property age, existing measures	Introduction from installer sets expectations for visit, inc. offer of energy efficiency advice	Installer asks questions to build up picture of household’s energy needs & walk through of the home	Diagnosis of potential energy saving behaviours & measures
	Appropriate advice factsheets given out with explanation of their relevance to customer	Smart meter installation, customer may opt to read advice sheets in case of questions for installer	IHD demonstration, teaching a ‘monitoring’ approach & linking to energy efficiency advice	Return to energy efficiency advice, answering any customer questions
Post-installation	Brief follow-up call by supplier to check installation completed	Customers engage in advice materials & IHD to varying extents with some early signs of behaviour change		

<sup>22</sup> It reflects what was commonly described and so it is possible that some customers may have experienced slight variations on this.

The rest of this section discusses customer experiences of the different elements of this customer journey. When considering these findings, it is important to remember the profile of customers involved in the pilot (including some early adopters), and that findings should thus not be seen as being fully reflective of the entire population (see section 1.3).

## 2.2 Pre-installation: customer motivations and expectations for the smart meter installation

The sixty participants who took part in follow-up interviews were asked about their motivations for getting a smart meter. Whilst the reasons varied, motivations were most commonly linked to the receipt of the in-home display (IHD), which many participants said they hoped would:

- Increase the **visibility** of energy consumed – helping them to see what was being used and why;
- Improve their **control** over energy consumed – including by other household members;
- Help them to save **money** by enabling them to better control their energy use; and
- Satisfy their **curiosity** and be interesting as a technical gadget in and of itself.

*“A relative had one installed and said it was good for seeing what you were using. I wanted that visibility of what we were spending.”*

[F, 33, SEG B, Owner-occupier, England]

*“Because it was on about saving energy, which I think is very important for all of us to do really, and as I said if I can save some money by seeing what I am doing then that’s good”*

[F, 78, SEG C1, Owner-occupier, England]

In addition some participants were motivated by their perception that the smart meter would offer one or more of the following benefits:

- Increasing **bill accuracy** – and identifying possible over-charging by the energy company;
- Removing the need for **meter readings** – and the inconvenience of accessing the meter; and
- Getting the most **up-to-date meter** – and completing the installation now, rather than at an inevitable later point.

*“I’d already changed to water meters and it saved me money, so I thought this could too. It was not about getting more control as such, just that it might be a more accurate billing system.”*

[F, 55, SEG C1, Owner-occupier, England]



*"I know this is the way it's going [installation of smart meters]... [and it] means I don't have to be at home for the meter reader".*

[M, 47, SEG C1, Owner-occupier, Scotland]

The majority of participants mentioned a combination of the above motivating factors, although there were some differences in which types of customer tended to cite specific motivating factors within these.

- **Bill accuracy** tended to motivate direct debit customers, who were generally charged an estimated amount, and sometimes feared they were being overcharged, or were unclear on the reason for bills rising.<sup>23</sup>
- **Curiosity** or technical interest was more commonly cited by male participants than female, despite broadly equal numbers in the sample.
- **Removing the need for meter readings** was exclusively mentioned by those who owned their own home. This may be because those who rent, socially or privately, were more used to third parties needing access to their property.<sup>24</sup>

Some participants mentioned prior awareness of smart meters and IHDs through the experiences of friends and family members. While this did not necessarily mean that they actively called up their energy supplier to have one installed, it made them more positive to receiving one when approached.

A few participants were more passive in their acceptance of smart meters, however, and did not have many expectations about what it would mean for them. These participants felt it was a necessary upgrade to receive the "latest type of meter". This perception may result from descriptions of the installation as an 'end-of-life meter replacement', which was sometimes seen in advance communications ahead of installations. Among these participants, a few had done research after being contacted by their installer and realised some of the potential benefits of smart meter installations.

The trigger for actually booking an installation visit tended to be contact from the supplier in most cases (usually by letter or email, but for a few at the point of calling with another enquiry, for example to check a bill) or seeing online or on TV advertisements in combination with finding out smart meters are provided free of charge.

Nearly all pilot participants recalled receiving some form of communication from their supplier prior to the installation visit. This was usually in the form of a letter, email or

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<sup>23</sup> This said, the majority of participants were direct debit customers, and only some of those interviewed cited bill accuracy as a motivating factor

<sup>24</sup> It should be noted that there were considerably more home owners than renters in the pilot sample overall so further investigation around the extent to which this is a motivating factor may be needed with households in other tenure arrangements.



telephone call and provided them with information about the expected length of the visit, the requirement to turn off the power supply for part of this and for the installer to be able to have access to the meter(s). Participants said they were also usually made aware through this communication that they would be offered an IHD by the smart meter installer. Overall participants were satisfied with the information they received in advance and felt adequately prepared for the visit.

Few customers, however, recalled advance warning that the installation visit would include energy efficiency advice.<sup>25</sup> Despite this, participants were generally open to being offered this type of advice at the visit.

*“It was helpful, especially the thing about the lightbulbs. It was kind of unexpected, I just expected him to install the meters, not all this”*

[M, 55-64, SEG E, Owner-occupier, Scotland]

## 2.3 Customer views and experiences of the installation visit

### 2.3.1 Overall customer experience of smart meter installation and reaction to principle of energy efficiency advice provision

Overall, participant feedback on the smart meter installation visit was very positive. The visits were described by nearly all participants as simple and straightforward. In general, expectations were met with respect to the length of the visit, and logistics, such as the length of time for which power was turned off. The installers were spontaneously described by many as very pleasant, knowledgeable, tidy and professional. This was a very important factor in householder satisfaction with the installation visit, as well as helping householders to feel comfortable asking questions to the installer.

*“They were very thorough and efficient, knew what they were doing.”*

[M, 65-75, SEG D, Social renter, England]

*“It wasn't a question of they ran in, fitted the meters and ran away, if I wanted to know something I asked them, I felt easy with them.”*

[F, 55-64, SEG C2, Social renter, Wales]

In general, participants reported feeling very positive about smart meter installers taking on the role of offering energy efficiency advice during the installation. Commonly cited reasons were as follows.

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<sup>25</sup> It is believed that reference to delivery of energy efficiency advice is included within the advance communications sent out by suppliers. However, the pilot has found that customers are not recalling this.

- **Smart meter installers were considered knowledgeable and trusted experts** by many participants. This was generally informed by participants' own experiences of receiving advice during the installation visit. Where participants did not recall receiving energy efficiency advice this perception was based on other conversation with the installer.
- The **smart meter visit was generally considered a pragmatic and convenient time** to discuss energy efficiency as householders had already put time aside to be at home for the installation. In some instances, householders were busy over the period of the installation doing other things around the home, or looking after children or pets. In these cases, while the timing of advice was less convenient, there was still widespread 'in principle' agreement that installation was an appropriate time to be offered advice.
- **Learning how to use energy more wisely was often a key motivation for agreeing to installation**, so receiving energy efficiency advice was felt to be a natural accompaniment to installation of the smart meter and IHD.

*"Makes sense - you're getting a smart meter for a reason - it expands the idea of energy control and saving, and saving money."*

[M, 55-64, SEG C1, Owner-occupier, Scotland]

Overall, the delivery of energy efficiency advice was felt to fit well into the overall package of the smart meter installation visit by many participants. A few participants spontaneously reflected that offering advice in this way was likely to make it more impactful for them than receiving it through a cold-call approach.

*"I think it is a good thing, because it is free under the government now, so you should have it done, it is definitely a good time to give advice."*

[M, 75+, SEG C2, Owner-occupier, England]

*"He made recommendations about how we can save more energy by looking at the spotlights, I mean I am aware of it anyway, but now, when it is the package; the guy coming in, the factsheets, and him taking the time to run through the house, then it does hit home. But just pushing a leaflet through the door when they have really busy lives, I do not think that will work."*

[F, 65-75, SEG C2, Owner-occupier, England]

While a few participants were uncertain of the value of being offered energy advice,<sup>26</sup> they were positive about advice being offered to customers in general, and

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<sup>26</sup> For example, if they felt they had 'already done everything' related to energy efficiency or if they did not feel motivated to reduce their energy usage

sometimes acknowledged that there could be further information they would be interested in receiving.

*"I think it is useful to know that you are up-to-date on these things. If the government decides to, for example, subsidise solar panels, that would be useful to know."*

[M, 55-64, SEG B, Owner-occupier, England]

### 2.3.2 Customer experiences of advice delivery

Most householders reported that they had received some form of energy efficiency advice from the smart meter installer, although the depth and format of this advice varied. For example, among those who did not recall receiving the printed factsheets, most had received some form of verbal advice and a demonstration of the IHD with reference to energy behaviours.<sup>27</sup>

The following elements of the advice delivery were the most commonly recalled by participants:

- **Demonstrations of the IHD** employing specific electrical appliances, e.g. kettle demonstrations often surprised participants with the sudden increase in wattage shown on the display;

*"[It has been] a shock as to what is using what."*

[F, 71, SEG C1, Owner-occupier, England]

- **Installer observation of, and recommendations for, lightbulbs**, in particular, recommendations around the benefits of LEDs; and
- Most of the participants recalled the **installer generally looking around the home**, and although this was not always directly connected by the participant to the provision of energy efficiency advice. Examples given included **checking the thermostat and setting heating controls**.

Participants spoke positively about this type of advice from the installer, particularly the walk around the home giving tailored advice 'on the spot'.

Installers had employed varying levels of tailoring around the exact **energy efficiency factsheets** given to householders, as well as different levels of verbal description of factsheet content and the rationale for providing them. Most participants were given the factsheets near the start of the installation, but some were handed them at the end. In a few cases factsheets were given out at various stages during the installation visit and home walk-around.<sup>28</sup> Of the participants who

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<sup>27</sup> The reasons that installers did not always deliver energy efficiency advice, or sometimes chose not to provide factsheets, as well as types of customer this tended to apply to, are discussed in section 3.4.

<sup>28</sup> Differences in installer approaches to delivering the factsheets are explained further in the next chapter.

were given a tailored selection of factsheets, many understood that this had been done purposefully by the installer to select those most relevant to them.

*"Chatting with the engineer, he was very good, he chose the factsheets that were appropriate for me."*

[F, 75+, SEG C1, Owner-occupier, England]

*"He certainly gave me the lighting one, yes...I certainly got the house one, the heating one...perhaps he didn't leave me the other ones because he already knew I had it all done."*

[F, 75+, SEG C1, Owner-occupier, England]

A few participants read the factsheets during the visit, however, most stated that they had put them away for later reference. Often this was because participants were busy during the visit doing other things around the home. Very few participants had referred back to the factsheets in the short period between the visits and the pilot study interviews, although most had kept them and knew where to find them in their home. A few participants, who initially did not recall receiving the factsheets, were prompted on further questioning to find them. These participants were nearly always more likely to recall receiving the IHD booklet as opposed to the factsheets themselves.

This pilot did not find any clear demographic or attitudinal patterns in the types of customer who were more and less likely to recall receiving the factsheets. However, there is a relationship between recall of this advice and the manner in which it was delivered to customers. Lack of, or limited, recall was most common when the installer gave factsheets as a complete folder at either the beginning or end of the visit and with no verbal 'walk through', tailoring of the content, or clear hook to make it seem relevant to the participant's specific household.<sup>29</sup>

*"I might have looked at the information, but I probably didn't because it was handed to me at the end of the visit with the customer checklist, his safety checks and the meter readings."*

[M, 55-64, SEG E, Owner-occupier, Scotland]

### **2.3.3 Customer feedback on content of energy efficiency advice delivered**

Figure 3 shows the types of energy efficiency messages, and associated factsheets that were found most helpful and best received by householders. These participants,

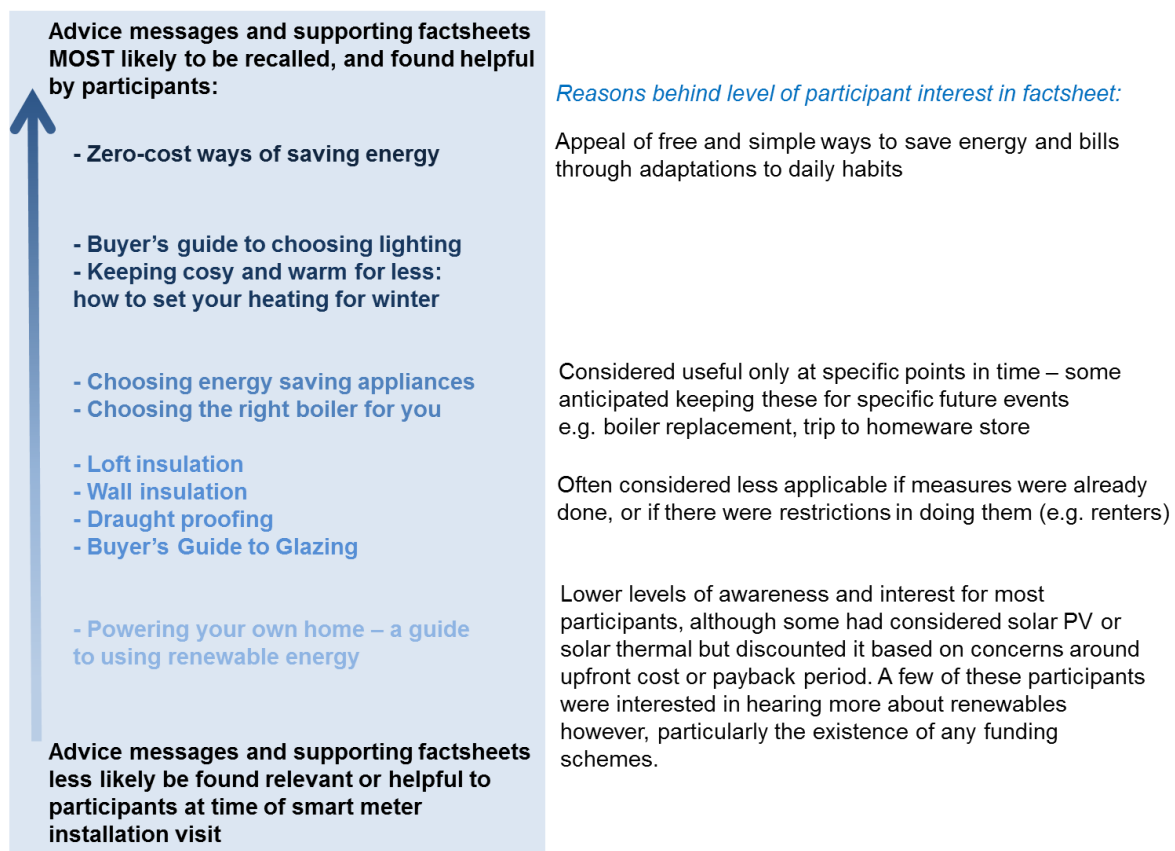
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<sup>29</sup> The impact of different delivery strategies for the advice on the level of engagement encouraged in the customer and their likelihood of being motivated to act on the information provided is discussed in more detail in section 4.4.4.

as well as customers engaged in the testing of the factsheets in Phase Two of this study, identified the following types and styles of content included in the factsheets as particularly helpful:

- **Myth busting** information, answering commonly asked questions and clarifying uncertainties;
- **Financial savings** were considered a good hook to gain interest, and were effective for customers to start thinking about their own energy usage; and
- **Signposting** to further information sources as well as evidence for the financial estimations provided.<sup>30</sup>

**Figure 3: Energy efficiency advice messages found more and less helpful**



Participants were also positive about the style of the factsheets, describing them as catchy and engaging. They were recognised to be information-heavy (particularly by older customers), although the Phase Two testing found this level of detail was preferred by customers to compact versions which were also tested.

<sup>30</sup> Participants in the Phase Three installation visits were asked about their reaction to, and use of, the factsheets as one element of the advice delivered alongside their smart meter installation, but there was not sufficient time in these interviews to explore in depth the different types of content within the factsheet. This was explored in detail during Phase Two, however, and key findings across both stages are discussed here.

*“I like the sheets – the icons are good; the buyer's guide to purchasing with the tumble dryer... Quotes are good, they catch your eye. It doesn't feel like it'll be a lot of effort to read.”*

[F, 37, SEG B, Owner-occupier, Scotland]

### **2.3.4 Customer experiences of IHD demonstration linked to advice**

Most customers received a demonstration of how the IHD works. This was often linked to specific energy efficiency advice – such as the value of turning appliances off standby, switching off lights or only boiling the necessary volume of water in the kettle. The IHD demonstration was commonly mentioned as the most prominent feature of the visit, and was often described as an ‘eye opener’.

*“[The installer] put kettle on. I was very surprised, especially when you see it in pounds and pence.”*

[M, 55-64, SEG C1, Owner-occupier, Scotland]

Other customers recalled only a verbal explanation of the IHD, which they were generally satisfied with. Some of these participants mentioned that it was enough to be given the IHD booklet, which they preferred to read in their own time and teach themselves about the IHD's functionalities. However, during the follow-up interviews it was evident that a couple of these participants were not entirely sure of how to work some parts of the IHD, and that they would have been likely to have benefited from a demonstration.

*“... he gave us the booklet, because they give you quite a lot of information about it, and he said that it would be easier for you to read that [...], but I would not say that he exactly described what the meter had done.”*

[F, 45-54, SEG C2, Social renter, England]

## **2.4 Post-installation: impacts of energy efficiency advice on customer attitudes and behaviours**

Descriptions given by participants of their usual day-to-day routines and purchasing habits suggested that levels of interest and practice of energy efficient behaviours varied widely prior to the smart meter installation visit. Following installation visits, many examples were given of positive changes in both attitudes and behaviours, though a high level of variation in behaviour remained. Most examples given by participants related to changes in day-to-day behaviour, but in some cases involved the purchase of energy efficient materials or appliances.

The exact prompt, or motivator, for these changes varied. For some it was information read in the printed factsheets, whilst for others it was advice given verbally by the installer or evidence seen on the IHD. The rest of this section will

provide further detail about the impacts on attitudes, behaviours and purchasing choices.<sup>31</sup>

#### **2.4.1 Impact of smart meter visit on IHD use**

Use of the IHD to improve awareness and understanding of energy consumption was the most commonly reported behavioural outcome of the smart meter installation visits. Many householders reported that their IHD was still plugged in, located in a visible setting, and was being looked at regularly.

*“Was very much surprised [when shown the kettle and IHD] at how much it uses. Still looking at display - most evenings, it's in a prominent location.”*

[M, 45-54, SEG B, Owner-occupier, Scotland]

There were varying levels of interest, understanding and engagement, with the IHD. These did not seem to be influenced by socio-demographic factors. Most participants looked primarily at the traffic light setting and used it to identify their most energy-intensive appliances and behavioural habits. Some looked more closely at the financial spend and energy usage information. Many of these participants reported that they mentally, or occasionally physically, recorded usage daily, weekly or fortnightly. Some participants could recall their exact daily spend in the interview. There were no clear patterns in the types of customer more and less likely to engage with the IHD in any of these specific ways.

*“I think we are saving around 35 to 40p a day, and bearing in mind sometimes we are only spending 60p a day. The fact that it's there it automatically pushes people to look at what they're using.”*

[M, 55-64, SEG C1, Social renter, Wales]

Others were engaged in target setting (either self or pre-set) on the IHD and used targets to assess energy used over time.

*“Yeah I am more energy conscious now, that is an excellent piece of equipment, I periodically go through it, I can see how much I use, if I have met my target.”*

[M, 75+, SEG C2, Owner-occupier, England]

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<sup>31</sup> It should be noted that this study has not been able to explore the long term sustainability of these behaviours, but instead provides indicators of impact. The impacts described in this section are also self-reported by participants themselves and have not been directly observed or corroborated by secondary evidence (for example, through billing).



The IHD had become a talking point within some households, and it was often identified as a tool, used to encourage others to become more energy aware and efficient. The follow-up interviews also revealed that there were some trickle-down impacts from the use of the IHD, such as trying to nudge family members to reduce their energy consumption.

*“My Mum, as a consequence of getting the IHD, has offered a 50p increase per week in the kids' pocket money if they're seen to be turning the lights off.”*

[M, 35-44, SEG B, Owner-occupier, Scotland]

Participants often identified the information they were seeing on their IHD as a catalyst for change. The following sections discuss the applications of the knowledge gained from the IHD, and verbal and factsheet-based advice, on participant attitudes and behaviours.

A number of householders had either not engaged with the IHD at all since the installation visit or were engaging with it less and less frequently since the visit. These participants are discussed in more detail in section 2.4.5.

#### **2.4.2 Impacts of energy efficiency advice on customer attitudes and household behaviours**

For many customers, the delivery of advice, and the use of the IHD, had reinvigorated an existing interest in saving energy. Some participants reported an intention to be more consistent in their energy saving behaviour following the advice they received; either directly from installers, the IHD, or the factsheets they were given.

*“I think and notice more. It's made me more conscious.”*

[M, 50, SEG B, Owner-occupier, Scotland]

*“[The factsheets were] informative in a simple way - enough to make you rethink what you are doing.”*

[M, 65, SEG C1, Private renter, Scotland]

*“There's things [in the factsheets] you don't think about – the kettle, things you forget.”*

[M, 49, SEG E, Social renter, South Wales]

Even among those who felt it was unlikely they would change their behaviour as a consequence of the installation visit, there were references to the usefulness of the advice and of the IHD, helping to make them more aware of where their energy was going. This was evident for two examples of pilot households with pre-payment meters. These participants felt they were already managing their energy use closely



and were fairly resistant to energy efficiency advice from the installer. However, they recognised the benefit of the IHD in reinforcing the value of their existing energy-saving behaviours, and in reminding them to take action. In another case the IHD had demystified the participant's household energy use, helping them to feel more in control.

*“We used just to put money on the thing [PPM], but since we got the smart meter, you can actually see what you are using, and what takes energy, such as the kettle and that.”*

[F, 50, SEG C2, Social renter, England]

*“So we could see that £25 goes on the meter and see how it goes, rather than it just disappears.”*

[F, 51, SEG C1, Social renter, Scotland]

The majority of householders who described behavioural changes they had made since the installation visit attributed these changes to information they had seen on the IHD. In some cases, however, motivation to change, and understanding of how to change, was informed by the factsheets and verbal advice they received from the installer. For example, the IHD sometimes prompted the participant to notice that they were using a lot of energy carrying out a routine behaviour. This behaviour was then modified using the advice given verbally or in the factsheets.

Another commonly reported impact of advice on household behaviour occurred when a behaviour was flagged by the installer, then flagged again repeatedly by the IHD. The archetypical example of this was use of the kettle, but other examples included use of lights, power-showers, or the tumble drier.

A few participants said that during or since the installation visit they had read the factsheets, and found them useful in thinking about how to save energy. The factsheet most commonly referred to by participants was the advice around zero-cost ways of saving energy.

*“[The ‘zero-cost’ factsheet was] brilliant. There's things you don't think about - the kettle, things you forget, like only heat rooms you're in, turns the radiator valves off or down.”*

[M, 45-54, SEG E, Social renter, Wales]

Other examples of behaviour changes that were commonly mentioned by participants as having been flagged at the installation visit and actioned since include:

- Reducing use of specific lighting, where bulbs were identified as inefficient, turning these lights off when not in use and considering replacement of bulbs with more efficient alternatives;
- Boiling the kettle with only the volume of water required;

*"I do actually [only boil what you need in the kettle] it sound like such a silly thing to do, but it saves you money, doesn't it! The kettle is the most energy consuming appliance in the house, as soon as I put it on, the red light goes on!"*

[M, 75+, SEG C2, Owner-occupier, England]

- Washing up the dishes using a bowl and not under a running tap;
- Limiting tumble dryer usage;
- Fully filling up the washing machine or dishwasher;

*"We used to wash up two cups and a plate, but now we wash up [only] when there's enough stuff to warrant a wash up."*

[M, 55-64, SEG C1, Social renter, Wales]

- Turning appliances off standby; and
- Using TRVs to control temperature of different rooms based on usage, or reducing the heating in general.

*"I have put down the heating from 23-24 to 20 degrees."*

[M, 65-75, SEG B, Owner-occupier, England]

Participants generally recognised these changes in behaviour to have been fairly easy and hassle free. Where adapting routines or lifestyles was felt to involve a greater change to levels of comfort or convenience, participants were more reluctant. For example, turning all appliances off at the wall was a hassle for some if this required moving other things out of the way. This was also felt to be the case where participants felt the financial savings were not motivating enough to justify this extra effort. Consciously shortening the time spent in the shower was a change reported by a few participants, though where this was felt to be a sacrifice it had not been adopted even if the participant was aware of the potential energy and bill saving.

The most commonly reported change to purchasing decisions since the smart meter installation was participants having bought, or planning to buy LED bulbs.

*"He told me if I wanted to change the lights in the kitchen I could get LED lights which in fact I have done."*

[F, 75+, SEG C1, Owner-occupier, England]

*"I will make sure all bulbs are energy efficient now - I didn't realise until pointed out by energy advisor. I think I want to be more energy efficient, it was just having the facts pointed out to me."*

[M, 55-64, SEG D, Owner-occupier, Scotland]

It was much less common for participants to have purchased, or thought about purchasing, any other appliances in this time period (between six and ten weeks after the installation visit), although some participants felt they were likely to consider this in light of the advice received, and the information they could see on their IHD.

*"We have a normal kettle, and when we put it on, it goes into the red, and we are aware that the kettle uses quite a lot of energy, and that's where we thought that we could invest in a more economical kettle."*

[F, 65-75, SEG C2, Owner-occupier, England]

Participants were unlikely to consider replacing larger and more expensive appliances with more efficient versions until their current appliance reached the end of its life. Some participants felt that they would then draw on the advice given when considering purchases in future, including referring back to the factsheets they had stored away since the visit. Stated intention to return to the factsheets at a later date seemed most likely to be realised when linked to a specific future event, for example, replacing an ageing boiler.

*"Sometime in the future, I know I need to look at the loft insulation again."*

[M, 55-64, SEG B, Owner-occupier, England]

In the case of purchasing a new large appliance, a few felt they would take greater note of the energy ratings, although a few admitted that other factors such as style, brand and functionality would continue to be more important to them.

#### **2.4.3 Reasons for reluctant attitudes to adopt energy efficiency advice by piloted participants**

While a majority of participants reported having made at least some minor changes to their daily routines, or to the amount of thought they put into their energy use,

some felt unaffected by the advice and IHD. This section describes the types of participant that tended to fall into this category and why they felt this was.<sup>32</sup>

Participants who felt that they were already being as efficient as possible, or had done at least some of suggested behaviours and renovations, were those least likely to report impacts from the advice given. Participants who felt there were other restrictions preventing them from taking action, or felt that they were already doing as much as they could within the context of their life and home, were also unlikely to report changes. These tended to be participants with specific reasons for having high bills; including families with children, participants with a disability that required medical equipment, or participants with large and spacious houses. These participants were not usually dismissive of the IHD of energy advice, however, with some noting they still had the IHD plugged in and referred to it for “interest purposes”.

*“So I would want to see it always in the green. But that’s not to say I’ll do anything differently - if it’s red, it’s for a reason and I’m only using the tumble dryer for example out of necessity. If it was red it would make me think, I shouldn’t use this, but I wouldn’t stop - I would only use the tumble dryer for example if there was no alternative. I can’t have damp in the house with my husband’s respiratory problems.”*

[F, 55-64, SEG C1, Owner-occupier, England]

*“I think it’s all very interesting... But it won’t change our behaviour. If something shows up on the monitor, it’s because we’re using something.*

[M+F, 75+, SEG B, Owner-occupier, England (joint interview)]

Other participants who felt they had not made any changes as a result of the installation visit and advice provision had not done so because they were comfortable with their energy usage and their spending on energy. These participants tended to weigh up financial savings against other preferences, such as enjoyment of long showers, the convenience of tumble-drying or preferences for the light quality from traditional rather than low energy lightbulbs. Although participants in more financially comfortable circumstances mentioned this reason more often, this response was not exclusive to this sector.

*“I did go out and buy some LED lights because he [the installer] said they use a lot less energy, but my wife doesn’t like the light off them, so that’s that.”*

[M, 55-64, SEG E, Owner-occupier, Scotland]

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<sup>32</sup> Section 4.4.4 considers the lessons learned for devising and delivering advice that is most likely to succeed in engaging the groups of participants discussed here.

*"If we think we have a lot on we have a look at it, but it doesn't tell you much because if you want to watch TV you're going to watch it anyway."*

[F, 65-75, SEG D, Owner-occupier, Wales]

Some of these participants mentioned that, if they experienced a significant increase in bills or a change in their financial circumstances, they would re-consider making changes to their lifestyle.

There were also two demographic groups of participant who were less likely to have been impacted in specific ways.

- **Older participants**, especially those aged 70+, were less willing to consider purchasing more efficient large appliances. Higher upfront costs were weighed against lower running costs, and concerns about the length of payback periods won out.
- **Private renters** were generally less engaged in wanting to make changes to their household or behaviours. This was particularly the case if they knew that they were not going to live in their current property for a long period.<sup>33</sup>

Interest in saving energy to cut down on bills was not exclusive to those in lower socioeconomic groups, but instead was spread out evenly across the sample. The concept of being in control of bills and energy consumption was the main motivation behind wanting to reduce bills, and this was seen across a range of householders. Concern over energy spend was cited by some, while a general aversion to wasting energy or money was cited by others.

There were also a few specific reactions to the IHD that were characteristic of specific groups of participants. A small number of participants found the IHD quite stressful, a finding which is in line with findings from the Early Learning Project. This sometimes related to the IHD traffic light system and the red light demonstrating high energy use, and sometimes related to financial information displayed on the device. One participant mentioned that the daily energy 'target' function had created stress for her, as she had set the target and then been unable to reduce her energy use sufficiently in order to meet it.<sup>34</sup>

*"You're panicking when you see you've already spent £2.50 before you've got out of bed. I did find it stressful, so I unplugged it and turned it off. When I put a measurement in or a target for our energy use, we kept going over it, so it kept*

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<sup>33</sup> However, it should be noted that the private renters interviewed for this study were often younger, and their attitudes may be partly attributed to their age, as younger participants were generally less likely to engage in the changing of habitual behaviours.

<sup>34</sup> In the smart meter Early Learning Project examples were seen of households in which the IHD traffic light display was consistently green or consistently red, which led to a conclusion that IHDs would be more useful if they could be 'calibrated' to specific households. This issue was not specifically raised in the Phase Three interviews, however, this may be because of the primary focus of interviews being on energy advice rather than the qualities of the IHD itself.

*beeping at us. I was trying different things... but didn't seem to be making a big difference."*

[F, 33, SEG B, Owner-occupier, England]

Others changed the way they used energy, but not the amount of energy used, in order to avoid peaks in use which triggered the red signal. In some cases this was because the red light was found to be stress-inducing. In others, avoiding the red light was more of a 'game.'

*"I'm delaying putting appliances on at the same time because I don't want it to go into red - if I don't go into the red I don't feel bad. So I delay putting the dishwasher on until the washing machine has finished."*

[F, 37, SEG B, Owner-occupier, Scotland]

A common theme among participants with children (usually of teenager or young adult age) was that they use the IHD to encourage these other household members to adapt their behaviours to use less energy.

*"I am constantly bothering the kids about switching the light off, and they're slowly starting to do that as well."*

[F, 57, SEG C1, Owner-occupier, Wales]

## 3: Installer experiences of piloted energy efficiency advice delivery

This section of the report presents installers' views collected during the follow-up research in Phase Four. The findings are structured in terms of installers' views of: the training they received; the principle of giving energy efficiency advice to customers during the smart meter installation visit; the advice content; delivery approach; and strategies for tailoring this for different types of customer.

### 3.1 Installer training

Prior to the pilot installation visit, installers attended training sessions delivered by EST which focused on four main topics:

- A step by step delivery approach to engaging customers in energy efficiency advice (including sequencing of advice delivery and the technical installation – 'when to do what');
- The content of energy efficiency advice to be given;
- How to deliver the hard copy materials, including selecting only the relevant factsheets for the customer in order to tailor the advice given;
- Practising giving energy efficiency advice in role-play scenarios and addressing frequently asked questions or 'energy myths' held by customers.<sup>35</sup>

During the training, installers were advised to base their visits on the 'journey' depicted in Figure 4.

Before the EST training, installers had received internal training from their employer on the provision of energy efficiency advice and had been doing this as part of their previous installations. The purpose of the training session for this study was to explain the approach to be used in the pilot, answer questions on the materials and refresh some knowledge around the content of advice. Training was delivered through a mix of presentation slides, scenario-testing and discussion sessions. Installers were encouraged to share previous experiences of smart meter installations and customer engagement.

Installers who were engaged in the follow-up research<sup>36</sup> expressed very positive views about the training content and its delivery.<sup>37</sup> Where installers commented on

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<sup>35</sup> This was informed by the customer research in Phase Two which identified common misperceptions or misunderstandings, such as the perception that all energy saving lightbulbs are 'dim'.

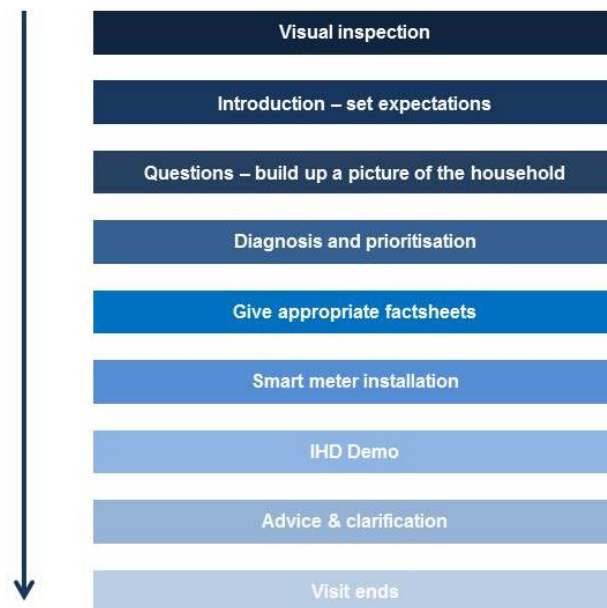
<sup>36</sup> Most, but not all installers who took part in the pilot were available to give their views in the follow-up research (Phase Four). Telephone calls were arranged at the most convenient time, for those installers available.

<sup>37</sup> Quotes from installers have not been attributed to ensure anonymity of responses.

this, they noted that the length, scope and pitch of their training session was appropriate, even if some of its content was information they already knew or had been trained on.

*“It was lots of stuff I already knew anyway, but it was good. It took the right amount of time – it wasn’t too long.”* [Installer]

Figure 4: installer training model



The training was also felt to leave the installers well-equipped to fully explain the energy efficiency advice to customers in their own words. This was spontaneously mentioned by two installers as particularly important, both to help customers with a lower level of understanding of the advice (rewording advice in simpler language, for example), and to reinforce the messages in the hard copy materials.

*“The training was really beneficial. To understand what you’re talking about is really important. And to explain it to customers...If they can’t understand the sheets, you can explain it yourself to them to help them understand.”*

[Installer]

This supports findings from the customer research which showed installers’ verbal reinforcement of the advice contained in the factsheets to be important in helping convince customers of the validity of the recommended behaviours or measures (particularly if they held strong misconceptions about aspects of their energy use).

One installer also spontaneously noted the value – in the training sessions – of explaining how to teach customers how they themselves can learn whether their home is energy efficient. In other words, training the installers to pass on the ‘know-



how' element of encouraging energy efficient behaviours rather than basic energy literacy (for example explaining to the customer *how* they can identify the type of loft insulation they have, rather than simply looking in the loft and telling them). This installer considered this to be a new approach he had not thought about before.

*“Loft and cavity wall insulation – it let them see what people need to look for. Before that, they might not be able to easily determine whether they’ve got it, what year it was done, what they should have, how they should get it done... They could learn how to work out whether they should have cavity wall insulation or not. The information was good.”* [Installer]

The installers who gave feedback did not suggest any improvements or changes to the format and delivery of the training, including its scope and the level at which it was pitched. Many of those involved in the pilot felt that they had a good level of knowledge about energy efficiency prior to the training – some were former heating engineers, for example – and therefore were very comfortable with giving advice (for example, around boilers). Despite this, the installers involved in the feedback calls felt they had learned something new and did not consider the training repetitive or redundant in light of existing supplier training.

### 3.2 Installer reactions to the principle of delivering energy efficiency advice

All seven installers who gave their views on the pilot felt well-placed to deliver the advice and recognised the smart meter installation as an opportune moment to do so. One installer felt, for example, that the smart meter and the advice delivery shared the common aims of enabling customers to better control and modify their energy use. Another saw a clear link between the delivery of the advice and the IHD.

*“I think realistically, what’s the benefit of the customer having a smart meter if it doesn’t allow them to make more informed decisions about where their money’s going and how they can cut down?”* [Installer]

*“I think it goes hand in hand [with the IHD]... We’ve got an ideal opportunity by putting in the smart meter, and being able to give the customer information on energy saving.”* [Installer]

Two installers were, however, doubtful that the model of advice delivery they had been trained to carry out would be possible at scale. This was due to time constraints (and not because of the perceived appropriateness of installers giving advice, or their capability to do so, for example). These installers simply felt the time pressure they were already under in their work would be exacerbated and make advice delivery impossible. Other installers also mentioned time pressure may be imposed by customers (as opposed to the job itself), who may be waiting to leave the house, for example.

*“It’s not difficult, but the process as a whole – giving verbal advice and giving the paperwork – just isn’t always going to be possible... Workload is a major issue.”* [Installer]

*“It was straight forward really, we’re just inundated with work. It only takes 10-15 minutes [to give the advice] but you can’t always guarantee you’ll do it on every job.”* [Installer]

### 3.3 Installer views on the content of advice delivered

Installers were trained to give advice verbally, supported by hard copy materials (the factsheets and the folder) and linked to the IHD demonstration. The domains of energy advice were defined in part (but not necessarily limited to) the content of the factsheets (where each factsheet focused on an energy topic, for example, energy efficient lighting, controlling central heating, draught proofing).

Installers who commented on the content of the advice felt the factsheets were pitched well (they were not too complex or conversely, too simple), gave good coverage of energy ‘topics’ and did not omit any useful information. One installer noted, for example, that the content was clear, and gave helpful pointers on measures that customers, in his experience, were less likely to be aware of, such as the most up to date energy efficient lightbulbs and the quality of light they produce.

*“A few good pointers about how much you save by changing lighting, using your thermostat – a few more things that people weren’t clued up on.”*  
[Installer]

Other installers spontaneously described the ‘energy myths’ as useful content they were trained to give, because it addressed gaps in information (or areas of misinformation) that chimed with conversations they had with customers during the pilot. This was often the case when discussing energy efficient lightbulbs (when customers held the perception they produce dim light), cavity wall insulation (which some customers believed always caused damp walls) and setting the heating on a timer (rather than keeping it ‘on low’ all the time, which some customers believed to be more energy efficient than setting the timer). In these cases, the factsheets reinforced the installers’ advice, and vice versa. These myths were also revealed in the customer follow-up research, where some participants referred back to their factsheets to address questions around heating, for example.

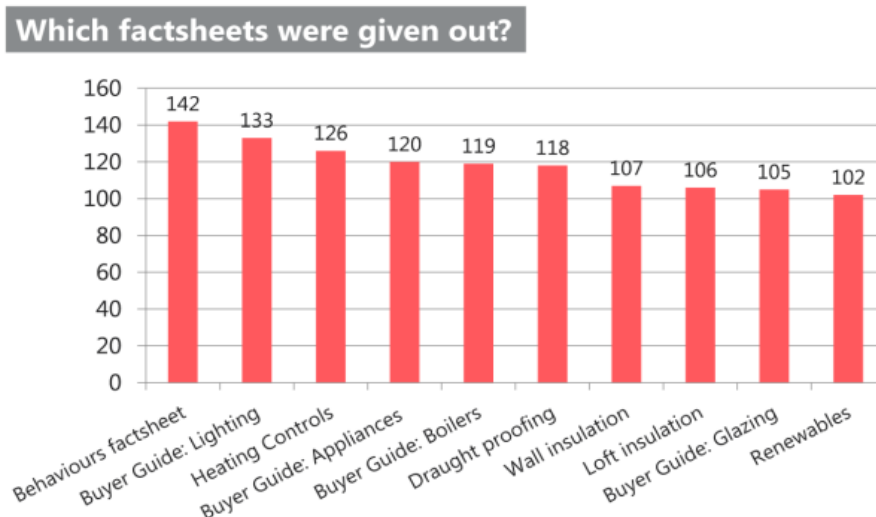
Installers were asked which factsheets they gave more readily and less often to customers. Those installers who took part in follow up research said they gave the following factsheets out most often.

- ‘Zero-cost ways of saving energy around your home’
- ‘Draught proofing – it’s a breeze’
- ‘Buyer’s guide – choosing lighting for your home’
- ‘Buyer’s guide – choosing energy-saving appliances’
- ‘Keeping cosy and warm for less – how to set your heating for winter’

This is broadly in line with the information in Figure 5 (overleaf), which shows the data collected in installers’ self-completion sheets (boxes were ticked to indicate which sheets were given out at each installation). It is also notable that in the follow-up research, many customers recalled seeing the ‘zero-cost behaviours’ first, before any other factsheets.

When probed on their reasons for giving out some factsheets more and less often, installers explained that they found the behaviours’ factsheet based on zero-cost measures most likely to engage customers and capture their attention because of the inclusion of monetary savings – a hook they could use to draw the customer into a conversation about other ways of saving energy.

Figure 5: factsheets given out by installers, where recorded



Ipsos Public Affairs

Based on: 156 visit records returned from 9 installers

*“That was the one I thought [was best] – the initial cost savings you could see. They seemed to go to that straight away. Just having the pound signs on it and seeing what you could save.” [Installer]*

*“I gave that out to everybody. I thought that was very useful.” [Installer]*

*“For me it was all about cash savings. Once you started talking about money and how much they could save, they were all over it.” [Installer]*

Some of the installers who gave out the factsheets relating to heating controls and lighting explained they did so in response to questions customers asked them on these topics, and because these were two areas in particular in which customers held energy myths.

*“... The heating controls, where it speaks about how to set your heating for winter. A lot of customers have got these fantastic boilers but haven't got a clue how to set their heating efficiently.”* [Installer]

*“The one I got quite a bit was that cavity wall insulation causes damp, and the other one was ‘I keep my heating on all the time, because the boiler's not going from cold to hot and then hot to cold’...”* [Installer]

One installer felt the delivery of factsheets was related to customers' upcoming purchases or material changes to their home. In other words, customers were interested in certain factsheets if the timing of their delivery was relevant. This was the case for the factsheet 'Buyer's guide – choosing the right boiler for you' (which tended to appeal to customers considering upgrading their boiler) and for the 'Buyer's guide – choosing energy-saving appliances' (such as a new washing machine). This reinforces the importance of combining hard copy advice with verbal advice: customers may not find the factsheets relevant at the point of smart meter installation, but it may be useful to keep and refer back to them if later purchasing an appliance, lightbulb or boiler for example.

As shown in Figure 5, and according to installer feedback gathered through the follow-up research, the factsheet on renewable energy (air-source and ground-source energy) was given out the least readily. When probed on the reasons for this, some installers seemed to feel less confident that customers would be receptive to this type of advice.

*“I never gave out the regeneration one – it never came up in conversation with customers.”* [Installer]

Other factsheets used less frequently were those suitable for certain types of property, such as the sheet on loft insulation, which is unsuitable for those living in flats.

A key aspect of the training was to link the advice delivery with the IHD. Installers were trained to revisit the energy efficiency advice in combination with the IHD demonstration, after the technical installation. In nearly all cases, installers talked through the IHD with customers, and in most cases provided a demonstration of it. Installers felt that the IHD was a useful tool for linking together the smart meter installation and the energy efficiency advice.

*“I thought they reinforced each other actually.... Things like that where they can see how much it’s costing them...”* [Installer]

Often installers felt the IHD demonstration offered a good opportunity to talk through the factsheets, especially ‘zero cost ways of saving energy’. For instance, they demonstrated how to use the IHD by boiling the kettle and then linked this to the advice on the factsheet about saving money by only boiling the necessary volume.

*“The usual one is you get them to turn the kettle on. They see the monitor hiking up to amber. A way of getting them to see how they work, and they can understand how much it’s costing per hour.”* [Installer]

With reference to the content of advice, installers also raised some minor cautions, namely that the advice may be less relevant to customers living in new builds, particularly those which are fully furnished with new (energy efficient) white goods. A point to include in the installer training, therefore, could be to remind installers that some factsheets will still be relevant, such as the zero-cost behaviours to save energy, and the renewables factsheet.

Another installer raised the point that suppliers should check for duplication of content between existing training and new measures for the obligation to deliver energy advice, and integrate the content.

### 3.4 Installer experiences of the advice delivery approach

Installers providing feedback on the pilot found the process feasible and manageable for most smart meter installations carried out, and did not find the advice delivery itself a burden. Where installers had not been able to deliver advice, this was due to time constraints, particularly when the technical installation was atypical and challenging. Some installers noted that they aborted the advice delivery when it became clear the customer was disengaged, and they did not feel comfortable continuing.

*“The customers on a couple of occasions weren’t interested in energy efficiency, in saving money. On the occasions it’s not for them – they didn’t want it.”* [Installer]

*“I gave the sheets out and offered to explain it through but some just took it and said they’d read later on... They were at the point where they just wanted to get on with their day.”* [Installer]

It is worth noting the installers providing feedback may have been more engaged in giving energy advice, while it is possible that other installers were doing this less proactively. Findings from follow-up interviews with customers suggest not all installations in the pilot included the delivery of advice, though it did become clear in

some of these interviews that this lack of recollection was due to recall failure and advice had in fact been offered.

Findings from the follow-up research with installers do suggest that several different models of advice delivery took place. Although the training presented a particular sequence of advice delivery, installers described divergences from this model. In such instances, this was attributed in some cases to the following factors:

- Reacting to the customer's reception to the advice (where customers may have been keen to hear more, or conversely, disinterested);
- Working around the available time if the technical installation proved more challenging;
- The presence of an apprentice (freeing up more time for the installer to deliver advice); and
- Taking advantage of 'natural pauses' in the installation visit, where the installer felt it was more pertinent to give the advice or at a point where they felt more confident they had the time to deliver it (for example, after the electricity meter switch and before the gas meter switch, or taking advantage of the time taken for the meter to connect, if this took longer than usual).

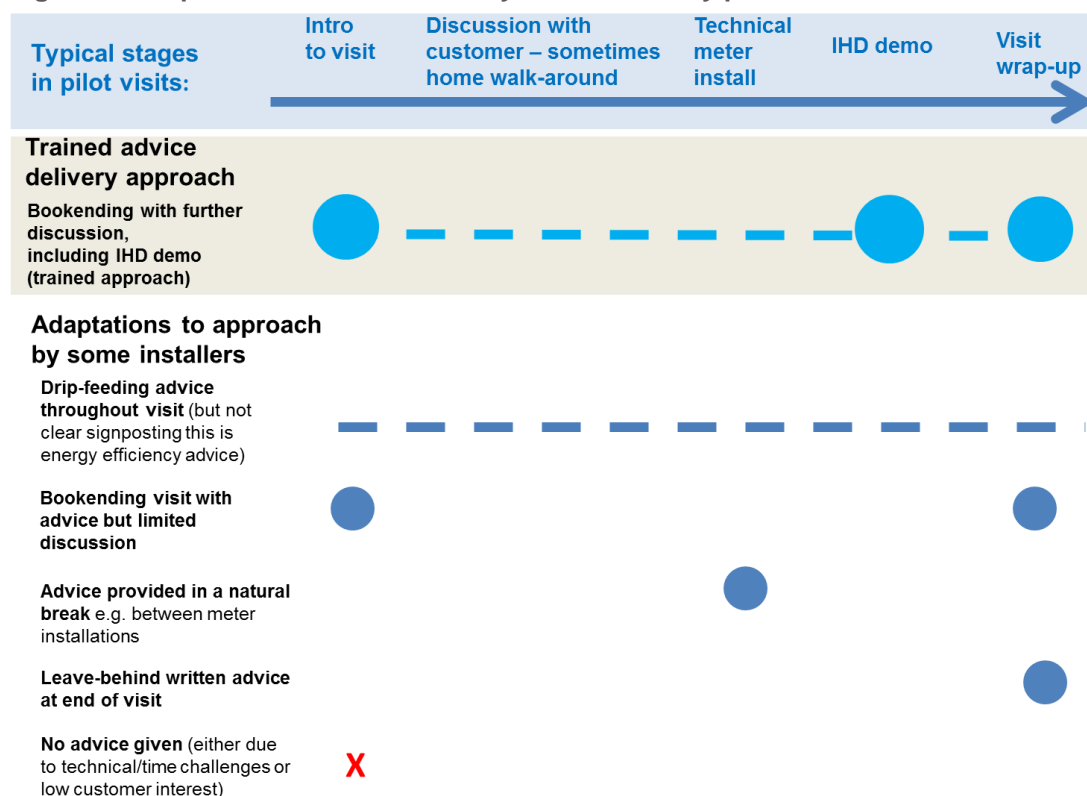
Figure 6 shows the range of different 'delivery models' adopted among the pilot installers providing feedback on this. The circles and lines in the diagram indicate the points at which installers were providing or discussing energy efficiency advice with the customer at various stages in the installation visit. It is notable that some are consistent with the experiences described by customers in follow-up interviews. The delivery models presented in Figure 6 are ordered from the most commonly reported by installers to the least commonly reported. The figure shows that the most common approach taken was the trained approach (i.e. introducing the advice at the start, drip-feeding advice throughout the visit on the basis of ongoing discussion and observation around the home, and ensuring it ties in with the IHD demonstration and is returned to at the end before finishing the visit).

*"At the start of the visit you'd explain what you're going to do, explain about the smart meter... factsheets that might be relevant, hand them out, then go and do the job and give them a chance to look through it. Then at the end of the job try and find out what else might be relevant... At the start give brief detail, and at the end, more detail."* [Installer]

*"I'd give it to them at the start of the installation and say 'if you'd like to read through it'... Then half way through I'd say 'have you got any questions on it?' and try and have a little discussion."* [Installer]

*"It wasn't a case of saying 'we'll give you energy advice today' and doing that. It was more subtle – you were giving that advice all the way through the visit."* [Installer]

Figure 6: Adaptations to advice delivery model made by pilot installers



Installers who had provided some form of introduction to the energy efficiency advice at the start of the visit felt it helped to engage customers and ward off any suspicions around marketing.

*“If you set out your stall at the start and explain you’re there to talk about energy efficiency advice... it helps. If you don’t mention it, then mention cavity walls, they think you’re trying to sell them something.” [Installer]*

In general, communicating advice verbally (as opposed to handing over factsheets) did not pose problems for the interviewed installers; they felt well equipped to do this, especially having had the training. Where installers chose not to give advice, though, they explained this was due to the customer not being interested, receptive, or engaged (as mentioned above, lack of time was also a constraint in some cases which prevented advice delivery).

The time spent giving the advice ranged from 6-7 minutes to 15 minutes in total (though as described above, the conversation was sometimes split with part happening at the start and the remainder at the end of the visit). The variation in time spent depended partly on the installer and their style, partly on the interest of the customer, and partly on how time consuming the installation itself was.



*“I think it was manageable.... Some jobs take longer than others. You’d give yourself a bit more time [to give advice] if the job was quicker. And you don’t want to overstay your welcome!” [Installer].*

In principle, using hard copy materials to support verbal advice was seen by the installers providing feedback as a good idea. However, the pilot did highlight some logistical challenges with the format of the materials. In particular the way the information was compiled – as loose A4 factsheets in a folder – was found unwieldy by some installers, who felt it may be easier if hard copy advice was contained in one document. These installers added that this would avoid wasted paper as a result of selecting (and discarding) the different factsheets. Some also felt that A4 was too large. When probed, these installers referenced the smaller (A6) size of the supplier’s IHD manual.

### 3.5 Engaging different types of customer

Installers were trained to tailor the delivery of advice as much as possible using observation of the property upon arrival and conversation with the householder, to gauge their energy advice needs. Tailoring was then to be achieved via the selection of relevant factsheets from the full set. The majority of installers providing feedback had followed this approach.

*“[I] only gave out the factsheets which were relevant – so whether they needed loft, cavities, a new boiler. I tried to tailor it to what I thought would benefit the customer the most... Not bombarding them with all the factsheets... Tailoring it to their needs.” [Installer]*

It should be noted that across the different delivery models described above there were some also instances of householders being given the whole folder of factsheets. In some instances, where the customer was given all the sheets, the installer did tailor the verbal advice by only talking through the most relevant. The stated reason for giving the customer even those that were recognised by the installer to not be relevant was that they could be useful to other family or friends, or be of relevance to the customer in a new property in the future.

*“I gave out all of them, but only talked through the relevant ones for the customer. Then left the rest of them for family and friends – they might benefit from them, so that we’re including everyone in it.” [Installer].*

Installers involved in the follow-up research also fed back that, in their view, customer engagement with the advice varied. Some installers stated that customers’ reception to advice was unpredictable and difficult to judge at first.



*“Completely random. Sometimes you walk into a property and expect them not to be interested, and [then] they’re reading the factsheets and trying to drill you down on how to get their bills down.” [Installer].*

When probed, some installers found it difficult to identify any particular demographic, customer type, property type or any other driver to determine the level of engagement. Meanwhile other installers identified certain ‘engaged’ groups, but this was not consistent across installers: one felt that older and younger customers were most likely to show interest, while another suggested middle aged customers were more likely to be interested.

## 4: What can be learned from the pilot delivery of energy efficiency advice?

**Drawing on customer, installer and stakeholder feedback, this section summarises what has been learned through this pilot study about the feasibility of delivering energy efficiency advice alongside the smart meter roll-out. It considers the most appropriate and effective ways of delivering this advice to maximise its ongoing impact.**

### 4.1 Levels of support for, and likely impact of, delivery of energy efficiency advice alongside the smart meter roll-out

Customers participating in the study strongly supported the delivery of energy efficiency advice at the smart meter installation visit. The smart meter installation is also viewed by customers – as well as installers, suppliers and other advice delivery bodies – as a valuable opportunity, and a convenient and beneficial time, to offer this advice.

The pilot visits provided evidence of some customers being positively influenced by the delivery of advice (which included the demonstration of the IHD). These early signs of impact varied across pilot customers. Self-reported behavioural changes made by participants as a result of the information provided included turning off lights, only boiling the required volume of water, and using a washing-up bowl. A few participants also attributed their recent purchase of energy efficiency lightbulbs to the advice delivered. As the follow-up engagement with pilot participants was in the weeks following the installation visit and advice delivery, conclusions have not been drawn on the longer term impact of this information.

This section considers how the impact of the advice may be maximised by preparing and training customers and installers (respectively) ahead of the installation visit, using advice delivery strategies during the visit and follow-up engagement after the visit. Considerations for different customer groups are presented where these strategies may vary accordingly.

### 4.2 Effectively training installers for advice delivery

In order to effectively deliver energy efficiency advice, this study demonstrated the value of training installers in:

- The content of advice and how to tailor the information provided;
- How to engage a range of customers in the advice; and
- How to deliver the advice within the installation visit through a mix of verbal, hard-copy and demonstration-led approaches.

The study highlighted customers’ trust in installers as credible sources of information on energy efficiency and smart meters. It also demonstrated that customer engagement in, and understanding of, energy efficiency advice is significantly aided by the IHD demonstration, showing the benefits of linking installer training to the IHD demonstration.

### 4.3 Effectively preparing customers for advice delivery

Figure 2 presented the customer journey for pilot participants. While customer participants fed back that the advance communications about the installation provided helpful information about the logistics of the visit, they could not recall being provided with information leading them to expect to receive any type of advice from the installer (beyond how to use the smart meter and IHD). In light of the pilot findings and drawing on discussions of these with stakeholders, Figure 7 revisits the pre-installation phase, showing in green ways in which suppliers’ advance communications may be enhanced to maximise customer preparation for, and engagement in, the energy efficiency advice offered.

**Figure 7: Lessons learned around effective preparation of customers in advance**

Pre-installation	1. Customer responds to an advert or direct supplier comms to request/agree to a smart meter	2a. Supplier contacts customer to confirm date & practicalities of the visit (e.g. length, power supply)	2b. In advance comms, consider terminology e.g. ‘smart energy experts’ and ‘advice & installation visit’
	2c. Emphasise in advance comms offer of energy efficiency advice at visit & opportunity to ask installer questions	3. Consider sending copies (e.g. electronically) of energy efficiency advice materials in advance	4. Installer calls on day to confirm installation visit

There was a positive reception to the offer of energy efficiency advice among most pilot (customer) participants, even where prior expectations around the provision of advice had not been set. However, the pilot did demonstrate the following barriers to greater engagement and impact of the advice, which could be addressed through these strategies.

- The level of interest in the advice (and sometimes the installer’s delivery of it) was heavily dependent on the member of the household present for the installation visit. Stakeholders engaged in this study suggested that it may be possible to influence the person electing to be at home through advance

communications prior to the visit. These would be aimed at setting expectations around the offer of energy efficiency advice.

- Pilot participants were often occupied with household tasks or responsibilities during the visit, which reduced their ability to engage with the installer and the advice delivery. Again, stakeholders suggested that customers may be more willing, and potentially able, to engage in a discussion about energy efficiency advice if they know to expect this as part of the visit.

## 4.4 Effective design and delivery of energy efficiency advice

This section presents key lessons about the most effective ways of engaging householders in a discussion about energy efficiency, based on installer and customer feedback about the advice delivery strategies taken by pilot installers (described in section 3.4).

Energy efficiency advice was most successfully delivered during the pilot where installers explained to customers at the start of the visit that this advice would form part of the information they would be given, and invited customers to consider any questions they may have. Installers, in particular, felt more comfortable providing energy efficiency advice when they had set this expectation as they considered it to reduce customer suspicions about marketing supplier-based products.

### 4.4.1 Effectively combining written, verbal and demonstration-led advice

The pilot study demonstrated that a mix of verbal, written and demonstration-led advice is likely to be most effective in providing energy efficiency messages, because it takes into consideration different customer needs and requirements (discussed further in sections 4.4.3 and 4.4.4 around tailoring).

Hard-copy information was valued as part of the advice mix by customers. This was because some customers found it difficult to take in the information they were given verbally at the visit (both in relation to the energy efficiency advice and the use of the IHD), while others did not have time for the discussion on the day or feel confident and capable reading it for themselves

The pilot also reinforced conclusions from DECC's Early Learning Project that the IHD is an essential tool in engaging customers in their household energy use and, specifically to this study, in discussions around energy efficiency.

Burchell's work around energy know-how<sup>38</sup> suggests that for advice content to be acted upon it needs to provide customers with the know-how to follow the recommendations. This is content that teaches and shows customers *how* to do things, rather than just what to do – for example, how to use heating controls rather than just recommending they are installed. In relation to the IHD, providing energy know-how might include showing customers how to diagnose their energy use with

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<sup>38</sup> [http://www.psi.org.uk/docs/ECEEE\\_paper.pdf](http://www.psi.org.uk/docs/ECEEE_paper.pdf).

the IHD by understanding what is shown on the screen and ensuring they know where they can find weekly totals and how to set targets.

Providing an evidence-based demonstration of the advice through the IHD is more challenging in the case of advice around gas use as this information is not displayed in real-time (unlike electricity use information). This reinforces the value of using a mixture of information formats so that gas-based recommendations are presented in hard-copy materials. This study highlighted that engaging customers in their gas-based energy habits was particularly important, as there was a tendency for (customer) participants to spontaneously focus on their use of electricity.

The study also explored the potential value of providing customers with low-cost motivational devices (particularly magnets, as other devices proved less useful in the initial testing phase of the study). However, follow-up research with pilot customers found that whilst a minority had kept the magnet on their boiler and could recall the tips, overall this was not found to add a great deal of engagement or impact to the advice delivery. Delivering the magnet alongside the hard-copy materials also added to the logistical burden of the visit for installers and is not therefore recommended, on the basis of this pilot's findings.

#### **4.4.2 Designing engaging and effective advice content**

Findings from the development and testing of energy efficiency advice content through this pilot show the importance of including three key ingredients: a hook to initially engage customers; information that fills gaps in existing knowledge and addresses incorrect assumptions or myths; and framing that enables and motivates customers to act on the information and to sustain changes over time. Critical to all three elements is tailoring this content to be as relevant as possible to the specific customer and their household (further discussed in sections 4.4.3 and 4.4.4).

The pilot found that advice providers are likely to benefit from appealing to the following mix of messages as an advice hook:

- The potential **financial savings** achievable through taking action;
- Appealing to a “**waste not, want not**” attitude by reducing unnecessary energy usage;
- **Keeping warm and cosy** for less; and
- **Social norms** – what other people are doing and how they are benefiting from this.

Information about the following types of behaviours and measures was found most useful by participants and addressed common information gaps and myths:

- How to set **heating controls**, challenging myths and misunderstandings about how to control and set heating, particularly whether it is better to have heating on low all the time, or to use a timer;

- **Lighting choices**, overcoming widely held perceptions that all low energy bulbs provide a low level of light, take a long time to brighten and are expensive (without knowledge of relative running costs);
- Low cost **alternatives and additions to insulation**, such as draught proofing and heavy curtains, as well as simple behaviours such as door shutting; and
- **Major energy users in the home**, particularly the relative energy consumption of heating and hot water compared with electrical appliances. Many participants assumed that appliances such as televisions and laptops (rather than gas-based energy uses) were the major cause of energy expenditure.

This pilot also suggests the potential value of including information about energy efficient habitual and purchasing behaviours that customers may already have undertaken. Providing this information (particularly via readings on the IHD) helped these customers to see the value of their day-to-day energy efficient habits (which were often unconscious), in some cases making them more likely to be spread to others in the household. The actions identified in this pilot that could form this type of advice included: fully loaded washing machines/dishwashers; boiling only required volume of water in kettle; turning lights off and switching appliances off standby; and installation of combi boilers (and when known, often identified as condensing boilers), double-glazing, loft insulation (but not necessarily top-up) and cavity-wall insulation.

#### 4.4.3 Tailoring advice content and delivery for specific households

This study also found that customers need to understand the nuance of energy efficiency advice in relation to the context of their own homes: how and where it applies, and what benefits it brings for the householder.

Although for logistical reasons installers stated a preference for a singular booklet, and indeed some handed over the full folder of factsheets (as opposed to selecting the relevant factsheets within it for the customer), evidence from the pilot showed that participants were more likely to disengage if there was no tailoring of advice via the selection of relevant factsheets. To enable a tailored approach and reduce the administrative burden on suppliers and installers, stakeholders engaged in this study proposed that the number of factsheets available to be selected is reduced,<sup>39</sup> as well as limiting the number of other additional hard-copy materials.

The pilot identified the following tips for catering for some specific groups of customers who tended to have particular energy, and energy use information, needs.

- **Older customers**

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<sup>39</sup> Although the renewable technologies factsheet was the least commonly given out during the pilot visits and may be considered for removal from the wider pack, the pilot found having this information to hand was useful for those few that were interested or who had already made other major energy efficiency improvements and wanted to know more about further options.

Pilot participants aged 70 and over were found to be less willing to purchase more efficient home appliances or take measures due to concerns about upfront costs and payback periods (section 2.4.3). Advice materials targeted at this group of customers should therefore include strategies and measures that do not involve a significant upfront cost and which provide instant improvements in warmth, and ideally energy and financial savings. This could include advice on how to set the heating correctly (timer, thermostat and TRVs), and draught proofing.

Some of these pilot participants were also reluctant to purchase a new boiler as they felt comfortable using their current model, which had often been in place for a number of years, and did not have expectations around it working less efficiently, or breaking down in future. It may therefore be useful for visits to these customers to include a check that the boiler is up to standard as these may be old or out-dated (and this could also apply to levels of insulation which may be assumed to be of adequate thickness). Advice on payback periods may be effective if accompanied with explanations that it may be more cost effective to replace a low-energy-rated appliance or boiler now, than waiting until a 'crisis point' later on.

Stakeholders engaged in this study have emphasised the importance of providing energy know-how to customers, and pilot participants themselves have responded well to these elements of the advice materials. Among the older customer group, therefore, if householders are unable to fix or check these measures themselves, signposting should be given pointing to where customers might find an engineer and how to know that they are trustworthy.

Importantly, advice provision to more vulnerable customers among this group should be careful not to encourage under-usage of appliances and heating systems. This pilot study, as well as the ELP, suggests that explanations of the information shown on the IHD, reassurances that the IHD itself cannot affect their overall energy usage (aside from a minimal running cost) and strategies to prevent it 'flashing red' are also likely to be helpful.

- **Large households**

The pilot study found that customers living in larger households were among the most likely to feel restricted in the actions they could take to increase the efficiency of their home's energy use (section 2.4.3). While for some this also led them to be more ambivalent about the value of the information shown on the IHD, for others it was evident at the follow-up interviews that the IHD had been a useful way of identifying the largest energy uses in the home. For a few, it had become a talking point and 'game' among the household.

In larger households, therefore, it may be helpful to focus on how the IHD can be used to help track day-to-day running costs, to set targets for usage, and encouraging use of it by different household members to see the relative costs of their energy use habits.



- **Renters**

Pilot installers were trained to adjust the energy efficiency advice they delivered to renters to focus on behavioural strategies and low cost simple measures, such as efficient lighting, heavier curtains or draught proofing. This was to account for their tenure arrangements which stakeholders advised were likely to create greater restrictions in their ability to change the fabric of their home. This was the case among the renters involved in the pilot, although they also tended to have lower levels of engagement than owner occupiers in the tailored behaviour-based advice they were given. This appeared to be the case particularly for customers with a short tenure period, where they subsequently did not feel motivated to take on new daily habits.

The IHD was sometimes a hook to help overcome this disengagement. Advice materials for the rental sector may benefit from focusing strongly on the use of the IHD to help control running costs, whilst linking this to the potential cost savings of low cost measures that they do have control over.

- **Customers already taking energy efficiency measures or who are comfortable with their energy usage and spend**

Pilot installers found these customers the most challenging to deliver advice to. Follow-up interviews did, however, suggest that often these participants could still be engaged, e.g. considering potential future changes in circumstance, or appealing to “waste not, want not” attitudes rather than financial savings. The follow-ups also found that some of these participants held outdated perceptions of energy advice (for example, around the setting of heating controls or not realising the relative energy consumption of different appliances).

As installers were commonly seen as a trusted and credible messenger, the ‘belt and braces’ approach of offering advice to all customers, and backing up verbal advice with hard-copy information, helped to validate the advice and encourage customers to act on it.

- **Off-gas grid properties**

Although none of the pilot participants were off-gas grid customers<sup>40</sup> previous research for DECC around the heating of off-grid homes<sup>41</sup> suggests that these customers may benefit from focusing on measures that keep the heat in – such as insulation, draft proofing and loft insulation – given the often high expense of heating these properties. It is also likely to be important to give suggestions around the range

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<sup>40</sup> This was because the profile of customers involved in the pilot reflected those receiving smart meter installations in the geographical areas involved and during the two-month pilot window.

<sup>41</sup> <https://www.ipsos-mori.com/researchspecialisms/socialresearch/specareas/environment/DECC-Heating.aspx>

of heating options as these customers may not be aware of alternatives to their current systems, and this should include renewable energy sources.<sup>42</sup>

#### **4.4.4 Tailoring advice content and delivery for vulnerable customers**

The nature of the smart meter installations in this study (working with two energy suppliers and in specific areas) meant that vulnerable consumers did not comprise a large proportion of the customers receiving smart meter installations (and the energy efficiency advice). This is because many current smart meter installations are pragmatically focusing on ‘early adopters’ i.e. those customers who have either requested a smart meter installation or are households where smart meter installations may be more straightforward. Nevertheless, the study identified a few vulnerable households<sup>43</sup> where specific barriers and enablers around receiving energy efficiency advice for this group were explored. It is worth bearing in mind, however, that the findings are only based on a limited number of vulnerable households, thus restricting the generalisations and recommendations that can be made.

Strategies to help overcome the concerns of older vulnerable customers (largely around financing energy efficiency measures) and the energy myths they are more likely to hold (such as around the lifespan of their boiler) have been discussed in section 4.4.3 above. Some of these more vulnerable pilot participants, as well as those of other ages, were also less engaged in the advice if they felt they were already doing as much as they could to use energy wisely and tightly controlling their energy spend. The responses of these more vulnerable households to the trial advice provided the following insights on how it may need to be tailored. These recommendations would benefit from further research to understand the nuances of how they can be applied to specific customer groups with varying types of vulnerability.

- A focus on zero-cost behavioural measures that are easy to adopt with potential cost savings highlighted may be effective. For example, the inclusion of estimated cost savings was found to be vital for engaging the interest of these customers, i.e. lower energy bills, but without a loss of essential levels of comfort, was a key motivator for them.
- Care must be taken not to encourage under-heating or under-use of energy. To avoid inappropriate recommendations, and to overcome potential resistance to messages suggesting using less energy, advice should be framed around using energy more wisely, helping spend on energy to go further and staying warmer for longer.

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<sup>42</sup> In DECC's More Efficient Heating Study (2012), off-gas grid customers were found to be among those most likely to consider purchasing a renewable heating system

<sup>43</sup> This included customers living on low incomes, with long-term conditions or disabilities as well as those with particular communication needs (for example, due to low levels of literacy and/or numeracy).

- Using printed factsheets (or videos<sup>44</sup>) as a visual aid – pointing out images and explaining and reading the content: the pilot follow-ups found visual aids helped to jog customers’ memories later when revisiting the advice, as did reading the text out, demonstrating that the information is simple and easy to understand.

In some cases, however, providing energy efficiency advice to vulnerable customers may be more appropriately delivered through an alternative to the smart meter visit, as discussed in the next section. This was suggested by one pilot participant who had very low levels of literacy and comprehension and who did not feel that the pilot installers had sufficient time to explain the advice to her in the level of detail and at the pace that she needed. This customer suggested that a separate dedicated visit solely to discuss energy efficiency advice would have been more appropriate as she hoped this would allow a longer amount of time to work through the advice. It may have also allowed the opportunity for repetition of the advice in order for her to absorb it and be able to recall and act on it at a later point when the advice provider was not in the home. Maximising engagement in the advice for all types of customer following the initial installation visit is discussed in section 4.5.

## 4.5 Maximising engagement in advice through follow-up

While this study has focused mainly on advice delivery at the smart meter installation visit, this is only one touch point in a much longer customer journey with new smart meter customers. Follow-up activity was raised in the ELP as an important means of ensuring ongoing customer engagement with the IHD and increasing the likelihood of sustained behaviour change. During the stakeholder workshops and follow-up interviews with pilot participants, ideas and preferences for potential follow-up to the advice delivered at the visit were explored. Figure 8 summarises (in red boxes) additional follow-up elements to the customer journey that suppliers and other advice providers may wish to consider in order to sustain customer engagement and behaviour change in the longer-term.

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<sup>44</sup> Although not tested during this pilot study, a few customers – including more vulnerable customers – suggested that demonstrating the advice through a video format could be useful for them, both at the time of the visit and also to re-watch at a later date.

**Figure 8: Lessons learned around potential advice follow-up post-installation visit**

Post-installation	1a. Brief follow-up call by supplier to check installation completed	1b. Extended call from the supplier a few weeks after the visit to discuss advice adoption and to answer any further questions	2. Customers engage in advice materials & IHD to varying extents with some early signs of behaviour change
	3. Additional supplier channels (e.g. online tools, apps, videos) used to drip feed advice to promote sustained changes	4a. If applicable, supplier uses its extended network to provide follow-up visits for vulnerable customers	4b. Alternative support channels (e.g. HAs, care worker) reinforce messages to vulnerable groups

Evidence collected during this study highlighted the following areas of potential follow-up.

- During the follow-up interviews with pilot participants, some customers wished to clarify their interpretation of information they had seen on their IHD or wanted further information about how to use it. Improved understanding and ongoing use of the IHD may be encouraged through follow-up engagement with the customer, helping address these types of queries.
- A few pilot participants spontaneously raised the value of ongoing linking of the energy efficiency advice to apps. In one case, a participant did not monitor her energy consumption from the IHD but through the supplier’s app, demonstrating potential value in integrating advice into this device.
- Participants were asked whether there were alternative channels through which they would like to receive energy efficiency advice, either instead of the smart meter installer, or as an additional follow-up option. Some participants named other potential sources of advice such as housing associations, councils, Citizens Advice and Age UK.
- Follow-up interviews with the small number of vulnerable customers included in the pilot highlighted the potential value of alternative, and additional, approaches particularly for this group. These participants said they would appreciate having the advice messages reinforced through channels such as their support and care workers or energy advisors at their Housing Association (where applicable).

## 4.6 Final reflections

The above findings from the development and testing phases of this research, followed by the pilot study, have shown the delivery of energy efficiency advice at the smart meter installation visit in this way to be both feasible and widely supported among the customers, installers and stakeholders engaged in this study. This report has presented lessons for the most appropriate and effective ways of delivering this advice both in terms of its content, and strategies for what might happen before, during and after the installation visit to maximise the impact of advice.



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<https://www.gov.uk/government/publications/best-practice-guidance-for-the-delivery-of-energy-efficiency-advice-to-households-during-smart-meter-installation-visits>