Smart Meter Customer Experience Study

Post-Installation Survey Report

Smart Metering Implementation Programme

Smart Meter Customer Experience Study: Post-Installation Survey Report

Produced by Ipsos MORI for the Department for Business, Energy & Industrial Strategy

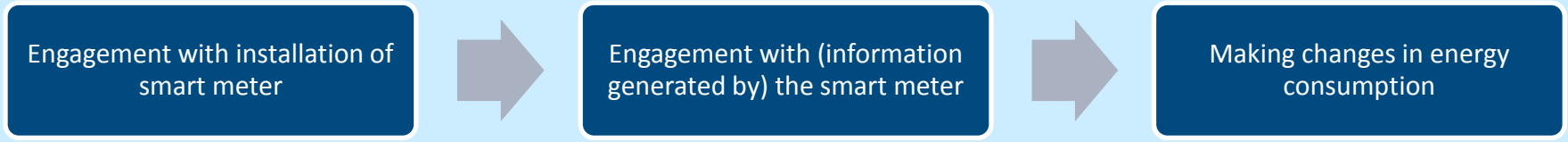
August 2017

Department for Business, Energy & Industrial Strategy

Introduction

The Government is committed to ensuring that every home and small business in the country is offered a smart meter by the end of 2020. 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.

The Department for Business, Energy & Industrial Strategy's (BEIS) Early Learning Project (ELP, 2015)[1] drew on a range of customer research to evaluate residential customer experiences of meters installed in the initial phase of the roll-out. The ELP research identified three transition points that consumers must journey through in order to make lasting changes to their energy consumption:



This interim report is the first output from a new programme of research including post-installation and follow-up surveys, and qualitative research with smart metered households. The project will update and review the ELP, providing evidence for policy learning and development, and informing BEIS's engagement with suppliers and other delivery partners involved in the roll-out. The surveys will validate the transition points identified in the ELP, tracing experiences, attitudes, and outcomes at different points in the smart meter customer journey. This research programme will also capture new developments in the roll-out, including implementation of the Smart Meter Installation Code of Practice (SMICoP)[2], communications and marketing activities by Smart Energy GB and the developing population, with smart pre-payment meters now being rolled out at scale and included in the survey.

This report presents initial findings from the post-installation survey, focusing on consumer experiences before, during and immediately following the smart meter installation visit. Further findings, including changes in energy consumption activity and behaviours, will be reported following completion of the follow-up survey and qualitative research.

[1] **ELP, 2015**: https://www.gov.uk/government/publications/smart-metering-early-learning-project-and-small-scale-behaviour-trials
[2] **Smart Meter Installation Code of Practice**: http://www.smicop.co.uk/SitePages/Home.aspx

Reading this report

Methodology

The post-installation survey interviewed 2,015 smart meter customers on average 10 weeks after the installation of their smart meter. Interviews were conducted by telephone with the householder who was present when the installation was carried out. All installations included in the study were carried out between 3 January and 6 February 2017, and sampled from two energy suppliers.

This report covers the following areas:

- Overall customer satisfaction with smart metering
- Customer awareness and attitudes to smart metering prior to installation
- Customer experiences of the installation visit, including energy efficiency guidance and demonstration of the system provided by the smart installer
- Early post-installation experiences, including usage of and engagement with the In-Home-Display (IHD)

Notes on interpreting findings

- The survey data is based on a representative sample of the customers of two suppliers during a particular period of the roll-out in early 2017.
- The data have been weighted to be representative of the installations conducted by the two suppliers within this time period. The research is focused on shared customer experiences, rather than the engagement strategies being employed by the two suppliers.
- All base sizes presented are unweighted.
- Where differences between subgroups have been reported, they are statistically significant at the 95% level.
- Key Drivers Analysis (KDA) has also been carried out to test the relative importance of aspects of the smart meter customer journey in explaining various behavioural and attitudinal outcomes. Findings from this analysis are included where relevant.
- The lag between the smart meter installation and the survey taking place was between 4 and 14 weeks, as a result the survey reports customer recollections of the both the installation visit, and any customer engagement taking place before or after it.

A more detailed summary of the methodology used is provided in the technical annex.

Summary of findings

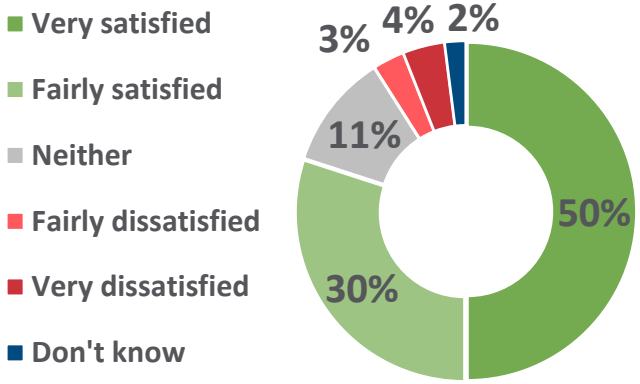
- **High levels of satisfaction** were recorded overall for both the smart meter itself (80%) and the installation visit (89%). Pre-payment customers, those who proactively requested an installation and those who recalled receiving energy efficiency guidance at the visit were among the most likely to be satisfied and be highly likely to recommend their smart meter (score 9/10 out of 10).
- **Making energy use visible was the primary motivation** (33%) among respondents for having a smart meter installed, as well as **being able to top-up in different ways** for those on pre-payment meters (33%).
- **Respondents most commonly recalled receiving information in advance of the installation from energy suppliers** (66%). Friends, family and/or colleagues (33%), Smart Energy GB (29%) and TV adverts (25%) (which can include Smart Energy GB TV adverts) were also commonly recalled sources of prior information.
- **92% recalled being offered an In-Home Display (IHD)**, and of those, 95% agreed to receive one at their installation visit.
- **82% of respondents with an IHD reported having used it to look at how much energy they are using or their credit balance** and 67% of these households reported doing this at least once a week since installation – this was higher among those told to expect an IHD in advance of the install. Key Drivers Analysis showed that the strongest driver of using the IHD in an applied way (such as to set a baseline) was receiving a demonstration of how to do this from the installer.
- Though in only a minority of cases follow-up contact was to provide further information or advice (8%) or to see if customers had questions about their smart meter (12%) or IHD (11%), **Key Drivers Analysis found that follow-up contact, and in particular being given further energy efficiency guidance, was a driver of respondents being highly likely to recommend their smart meter (score 9 or 10/10) of smart meters, frequent IHD usage and using the IHD to set a household baseline**. Most follow-up contact was for satisfaction surveys (29%) or to check the installation occurred (37%)**.**
- **Two thirds (67%) of respondents were unsure or did not recall being asked about sharing half hourly data with their supplier.** Where respondents did recall a discussion with their supplier, the majority (94%) provided consent. There was an appetite for further information on storage of and access to smart meter data (36%).

Overall customer satisfaction

Four in five (80%) respondents were satisfied with their smart meter, and half (50%) were very satisfied. This is comparable with satisfaction levels recorded at an earlier stage in the rollout (ELP, 2015), suggesting positive customer experiences are being maintained as the rollout expands. When asked how likely they would be to recommend a smart meter, two-thirds (66%) gave a score of 8 or above.

Pre-payment respondents were more likely to report being satisfied (84%) and very satisfied with their smart meter (61%). They also reported higher likelihood to recommend a smart meter, with 77% giving a score of 8 or above.

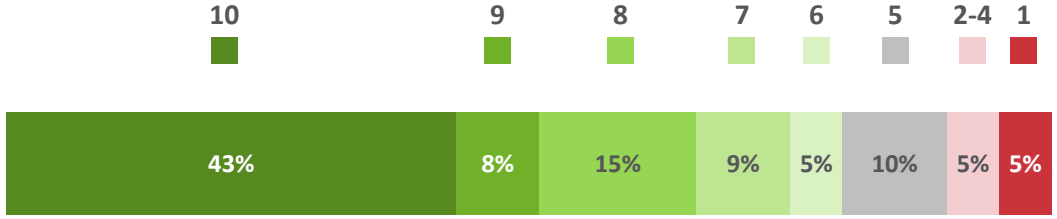
Overall satisfaction with smart meter



Base: 2,015 smart meter customers

Likelihood to recommend a smart meter

10 = definitely would recommend, 1 = definitely would not recommend



Base: 2,015 smart meter customers

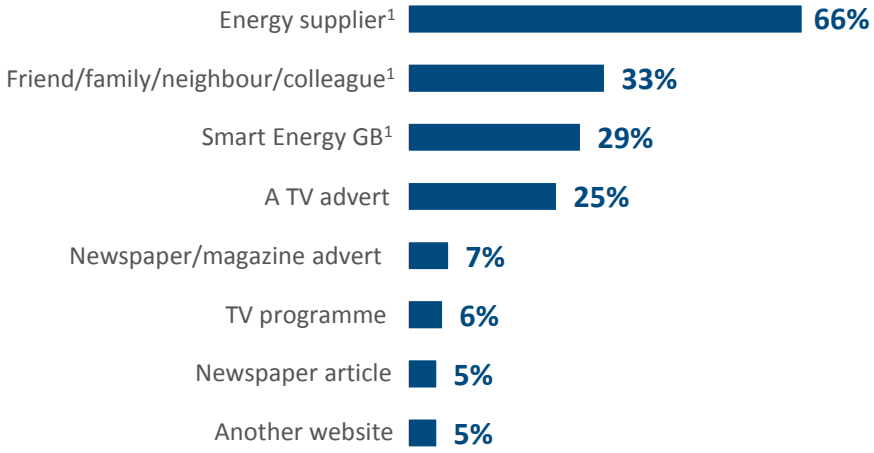
- Key Drivers Analysis found that a respondent having contacted their energy supplier to request a smart meter was the strongest driver of being highly likely to recommend a smart meter.[1]
- Personalisation of advice was also shown by this analysis to be an important driver – for instance, being shown how to set a household baseline on the IHD or being asked questions about your home and habits to provide tailored energy saving guidance were both drivers of respondents being highly likely to recommend a smart meter.

[1] In the Key Drivers Analysis, 'highly likely to recommend a smart meter' was defined as those who gave a score of 9 or 10 out of 10 for whether they would recommend a smart meter.

Pre-installation information & motivations

Prior to the installation, respondents most commonly recalled receiving information about smart meters from their energy supplier (66%). Word-of-mouth (through friends, family or colleagues) was another commonly recalled source, as well as Smart Energy GB (when prompted) and TV adverts in general. Key motivations for having the installation varied by payment type –33% of pre-payment customers reported they wanted to be able to top up in different ways, whilst other respondents wanted visibility of their usage. A quarter (24%) of respondents had contacted their supplier to request a smart meter (customer-led), whereas 71% were supplier-led.

Recalled sources of information pre-installation



Reasons for getting the installation (multiple choice)

Pre-payment customers	Non-PPM customers
Being able to top up in different ways (33%)	Being able to see how much energy I'm using (34%)
Being able to see how much energy I'm using (26%)	Not having to submit meter readings/ more convenient (31%)
It's more convenient (14%)	Accurate bills (17%)
Save money on energy (12%)	I was told/ thought I had to (14%)
Seeing my energy account balance (11%)	Necessary/ part of a general upgrade (13%)

Base: 2,015 smart meter customers / 469 PPM / 1,546 non-PPM

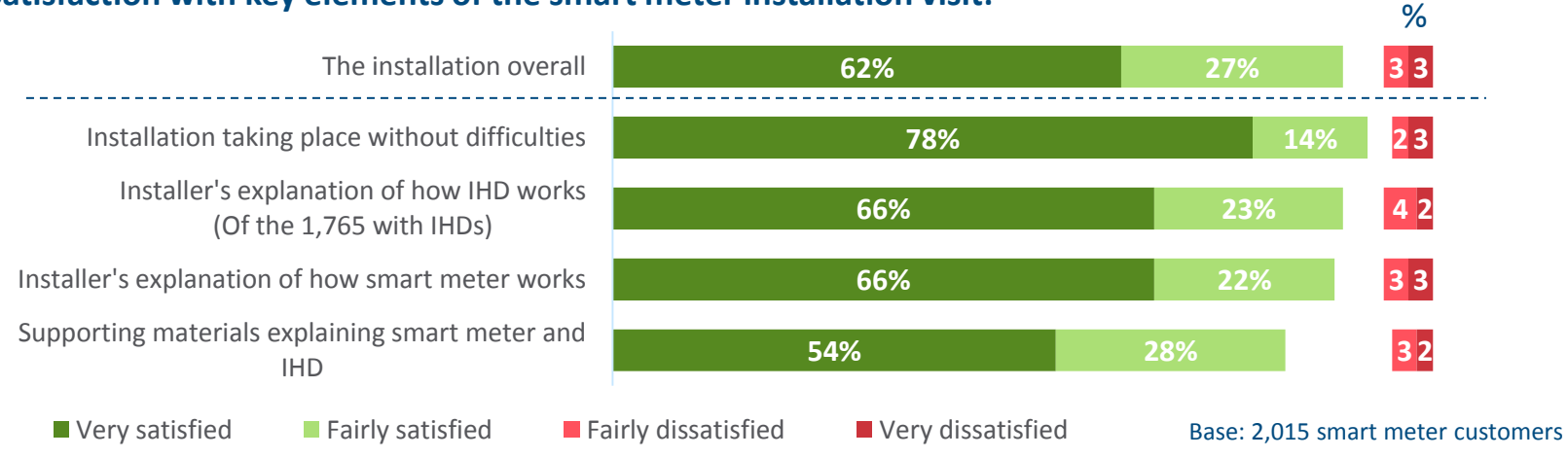
- Those who were highly likely to recommend their smart meter (score 9/10 out of 10) were more likely to recall receiving information in advance of the installation through word-of-mouth (37% vs 27%), as were those whose installation was customer-led (41% vs 31%).
- Respondents who requested their installation were also more likely to recall hearing via SEGB (33% vs. 27%) or TV adverts (29% vs. 24%).
- It should be noted that initial spontaneous mentions of Smart Energy GB specifically were just 1%, although there were also 27% spontaneous mentions of TV or radio adverts.

[1] Combines unprompted & unprompted awareness. Other more general channels were unprompted only.

Satisfaction with installation visit

Nine in ten respondents (90%) reported their smart meter installation to have been successful first-time i.e. it did not require a repeat visit.[1] There were high levels of satisfaction overall with the installation visit (89% satisfied, with 62% of all respondents 'very satisfied'). Again, this is comparable with satisfaction levels recorded at an earlier stage of the rollout (ELP, 2015: 89% satisfied, with 55% 'very satisfied'), suggesting positive customer experiences of installations are also being maintained as the rollout expands. Respondents were most satisfied with the installation taking place without any major difficulties (93%), followed by the explanation provided around how the smart meter or IHD works (88% and 89% respectively).

Satisfaction with key elements of the smart meter installation visit:



- Satisfaction with the installation, and specific aspects of the visit, was broadly consistent across most respondent groups.
- Overall satisfaction with the installation visit was, however, lower among those who reported that their installation was not successful first time (64%).
- This group was also less likely to be 'very satisfied' with the installation (34%, vs 66% of those whose installation was successful first time).
- Recipients of energy saving guidance were more likely to be satisfied overall with the installation (93% vs. 78% for non-recipients).

[1] All who were surveyed were those who had a successful smart meter installation. It did not include those who had an attempted installation, but whose smart meter was not successfully installed during this time period. Therefore, it may not be the case that 90% of installations attempted during this period were successful on the first attempt.

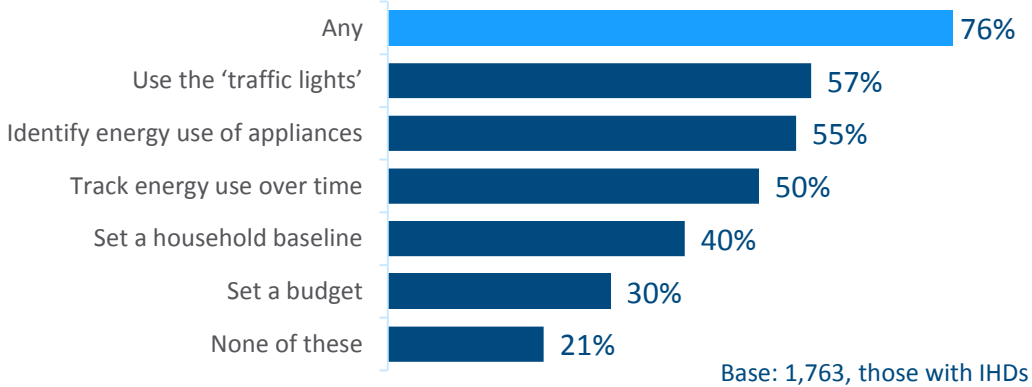
Offering and demonstrating the IHD

Nine in ten respondents (92%) recalled being offered an in-home display (IHD), and 95% of these said they accepted the offer (meaning 88% of all respondents reported having an IHD). The majority recalled being told about the offer of an IHD in advance of the installation visit (59%). The IHD was explained to customers through information in a range of formats (most commonly a printed booklet, although most received multiple types) and through different demonstrations, such as how to use the traffic lights[1], set a baseline[2] or identify individual appliance use. Overall, three quarters (76%) of all respondents recalled receiving any demonstration of the IHD.

Information on how to use the IHD was provided in range of formats:

- Given a booklet **87%**
- Given general advice **81%**
- Shown each screen **77%**

Installers demonstrated the IHD in a variety of ways, showing customers how to:



Base: 1,763, those with IHDs

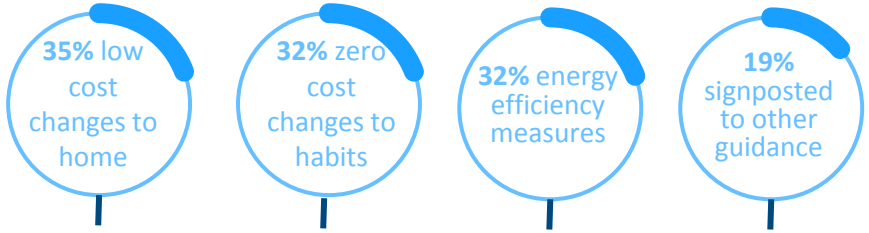
- The Key Drivers Analysis found that being told about the IHD in advance of the installation was not a driver of choosing to have one.
- There were few demographic differences in the recall of the delivery of the IHD, although respondents aged 65 and over were less likely to recall being given a demonstration of the IHD (69%) or being shown through each screen (72%) than those aged under 65 (79% and 80% respectively).
- This is similar to findings from the ELP, which found that older people were less likely to recall any demonstrations or information about the IHD provided by installer at the installation stage.

[1] Traffic lights on the IHD show whether the household's current electricity use is high (red), medium (orange) or low (green).
[2] Setting a household baseline refers to a customer using the IHD working out how much energy their household uses in a typical day, week or month

Recall of energy efficiency guidance

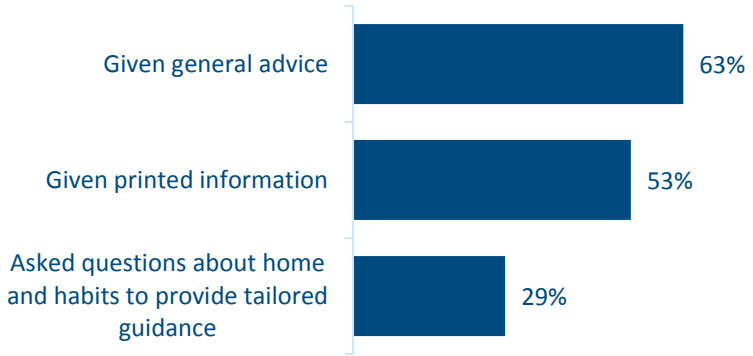
Half (51%) of the smart meter customers surveyed recalled receiving advice or information from the installer about a range of energy efficiency measures and/or low or zero-cost changes that could be made to their home or habits (referred to overall in this report as 'energy efficiency guidance'). One in ten (10%) recalled being given all four types of guidance asked about in the survey (shown below). There were high levels of satisfaction with energy efficiency guidance among those who recalled receiving it (81%, with 45% 'very satisfied').

Type of guidance recalled at installation visit:



Base: 2,015 smart meter customers

Format of guidance provision:



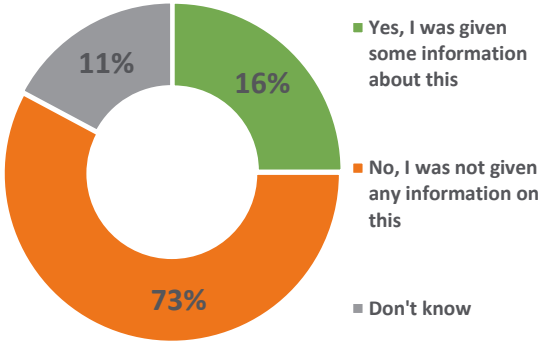
Base: 1,424 customers who received any guidance

- Some age groups were less likely to recall receiving energy efficiency guidance: 18-24 year olds (42%) & those aged 75+ (39%) compared to 51% overall.
- Non-PPM customers were more likely to recall being given guidance about energy efficiency measures (32% vs 27% PPM), but PPM customers were more likely to recall the installer asking specific questions about their habits and home to provide tailored advice (36% vs 28% non-PPM).
- Satisfaction with energy efficiency guidance was more likely among respondents who received tailored guidance, and those who recalled being told in advance that this guidance would be offered. However, this may reflect this sub-group having higher levels of engagement with smart meters than others.

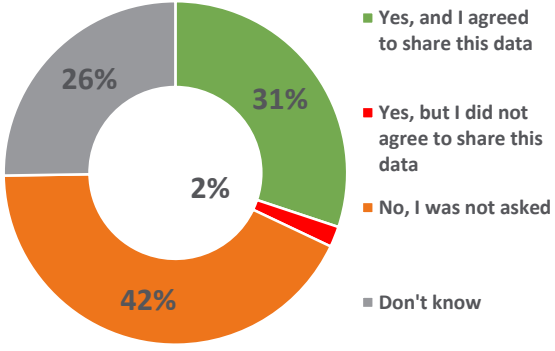
Recall of discussions about data

One in six (16%) respondents recalled receiving information about how their energy supplier stores consumption data from their smart meter.[1] A third (33%) of all respondents recalled their supplier asking whether they wanted to share their half-hourly consumption data – and of these 94% agreed.[2] 36% reported wanting to receive further information about 'what happens to the data that is stored in your smart meter and who can access it'.

Recalled receiving information on storage of energy use data by energy supplier



Recalled being asked whether they wanted to share half-hourly data with supplier



Base: 2,015 smart meter customers

Main reasons agreed to share data (multiple choice)

All customers who agreed to share data
Didn't see any reason not to (30%)
I think it will benefit me (17%)
I think it help my supplier predict provision (13%)
I think it will help me get a better plan (11%)
It will benefit my supplier (11%)
I think it will reduce the bills (9%)

Base: those who agreed to share half-hourly data (642)

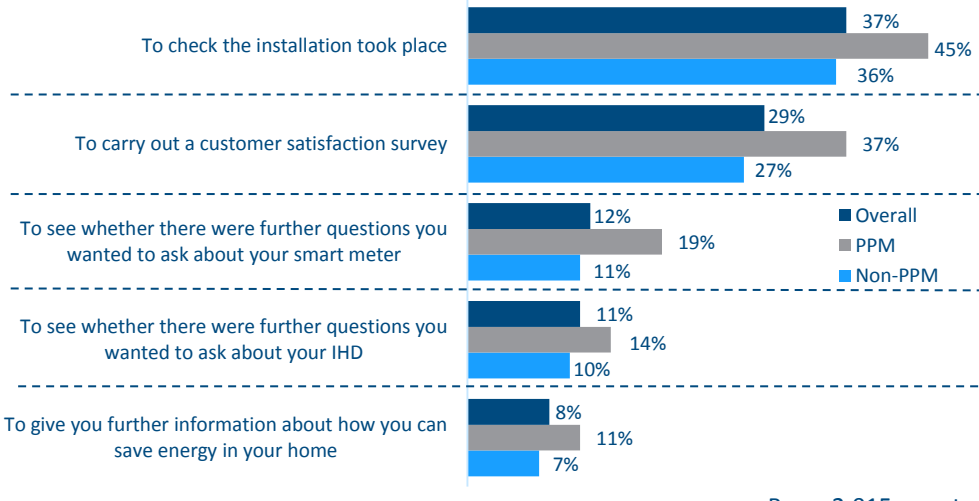
- 18-24 year olds were more likely to recall receiving information on how their energy supplier stores consumption data from their smart meter (26% vs. 16% overall).
- The 18-24 year old age group was also more likely to recall their supplier requesting their permission to share half-hourly consumption data from their smart meter with them, and were more likely to have agreed to share this data (45% vs 31% overall).

[1] This finding is particularly susceptible to recall bias, as this information is likely given in advance of installation and may be provided via documentation or a 'data guide'. Suppliers are required to provide customers with information about how their data will be accessed/used and what choices they have about this. SMICoP requires information about data storage to be provided before the installation.
[2] If a supplier wants to access half-hourly data from a customer, they must ask for consent. If a supplier does not wish to do this, they need not ask this question.

Recall of follow-up contact

Nearly half of customers (47%) recalled receiving some form of follow-up contact from their supplier – most commonly a check that the installation had taken place (37%) or a customer satisfaction survey (29%). A minority of respondents recalled being contacted with the offer of further information about their smart meter (12%), IHD (11%) or energy saving guidance (8%). Follow-up contact was mainly carried out by phone or email, with some energy saving guidance sent as direct mail. Six in ten (59%) of those who recalled receiving follow-up contact were satisfied with it, whereas 10% were dissatisfied.

Recalled follow-up contact:



Contacted via:

	Email	Phone	Post	Home visit
To check the installation took place	30%	63%	5%	4%
To carry out a customer satisfaction survey	45%	48%	5%	1%
To see whether there were further questions you wanted to ask about your smart meter	37%	54%	8%	4%
To see whether there were further questions you wanted to ask about your IHD	37%	55%	8%	2%
To give you further information about how you can save energy in your home	39%	47%	13%	4%

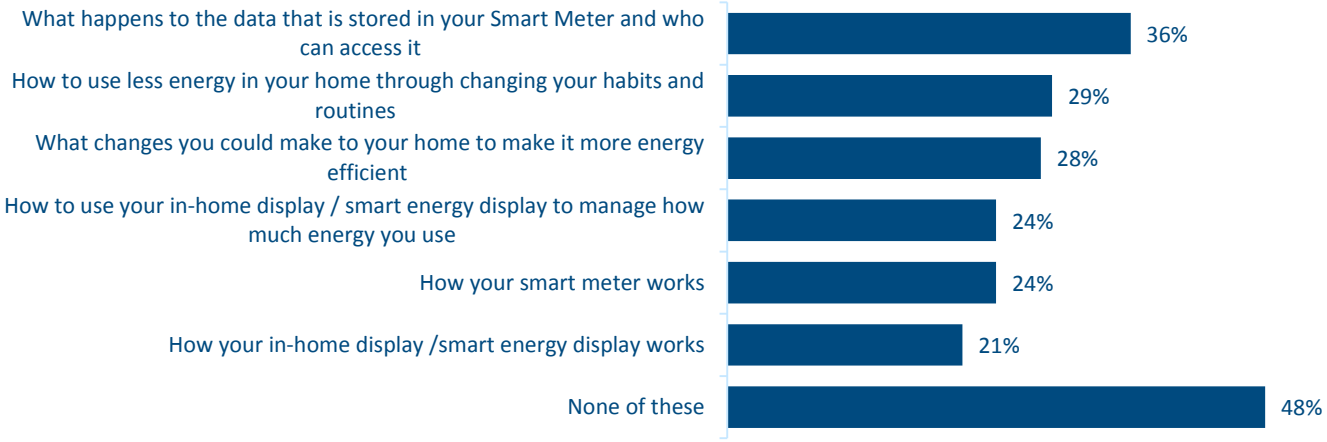
Base: 2,015 smart meter customers

- PPM respondents were more likely than non-PPM respondents to recall receiving each type of follow-up contact, as shown on the chart above.
- The Key Drivers Analysis showed that follow-up contact, in particular being given further energy efficiency guidance, was a driver of being highly likely to recommend their smart meter (score 9/10 out of 10), of being a frequent IHD user and of using the IHD to set a household energy baseline.

Further information needs

Half (52%) of respondents said they would like to receive more information about at least one of a list of topics shown to them during the survey. They were most interested in finding out more about the data stored on their smart meter (36%), how to use less energy in their home by changing habits and routines (29%) and changes they could make to their home to make it more energy efficient (28%). The remaining half of respondents (48%) did not want to receive more information about any of these topics.

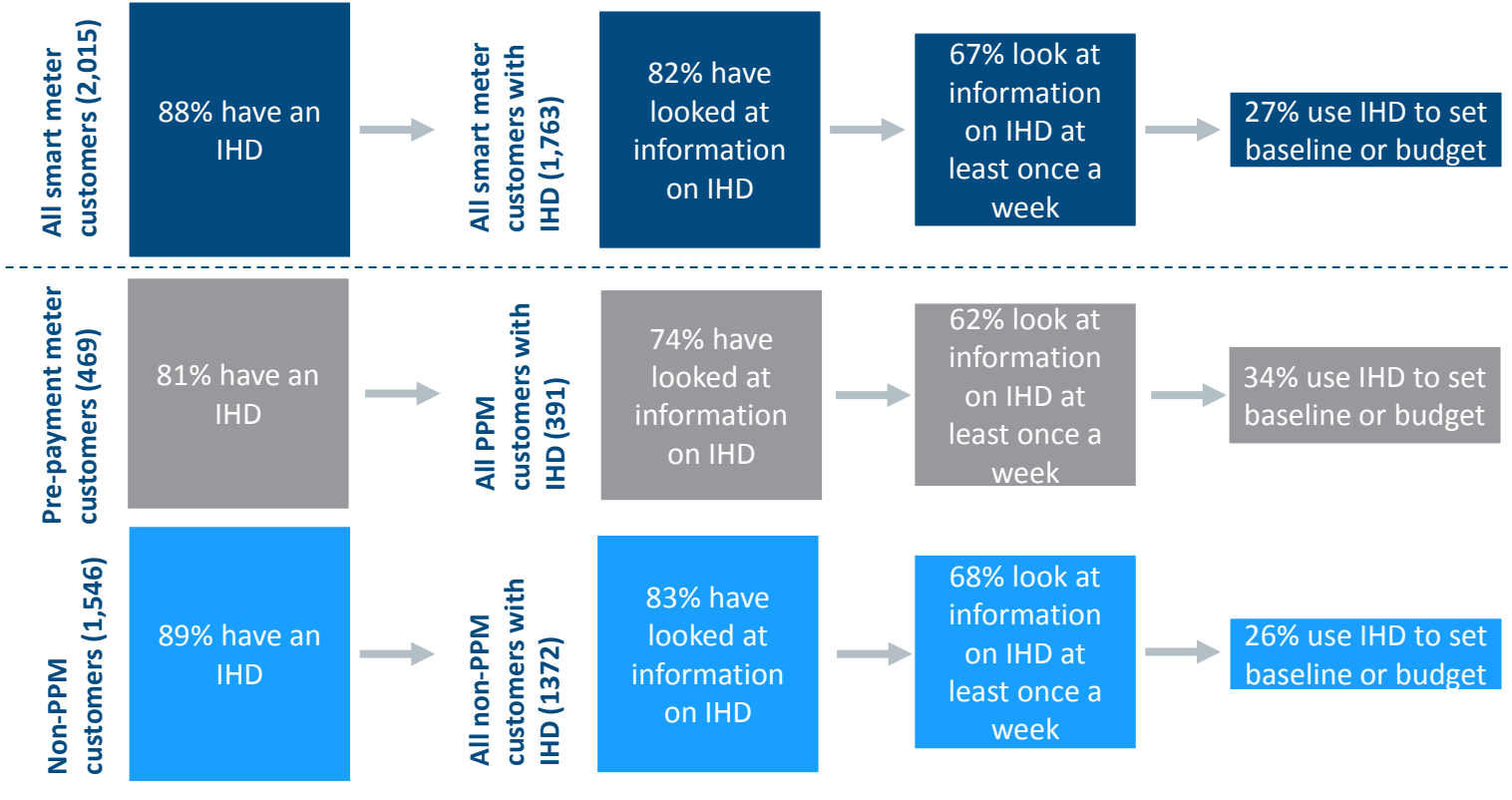
Topics about which respondents would like to receive more information:



Base: 2,015 smart meter customers

- PPM respondents were more likely to want to receive any of the types of further information shown above (62% vs. 50%). In particular, they were more likely to be interested in receiving further information about changing their habits and routines (46% vs. 27%) and changes they could make to their home (45% vs. 26%).
- Respondents who had requested a smart meter installation were more likely to want to receive information than those whose installations were supplier-led (57% vs. 51%).

Levels of engagement with IHD



Note that some smart meter customers have access to and may be using complementary feedback tools such as mobile applications and online accounts (including PPM customers in particular). The role of these alongside IHDs in looking at energy use or credit balances has not been assessed in this phase of the research.

- Respondents who recalled being told in advance about the offer of an IHD were more likely to have used it to look at energy use or their credit balance (85% vs. 78%) and looked at it at least once a week (71% vs 62%).
- Key Drivers Analysis showed that the strongest driver of using the IHD in an applied way (such as to set a baseline), was receiving a demonstration of how to do this from the installer. According to this analysis, receiving follow-up contact to give energy saving guidance was another key driver of applied IHD use.

Using the IHD to understand energy use

More than half of respondents with an IHD have used the device to look at their current electricity use, their electricity use over the last week or month and the traffic lights which show whether they are using a high, medium or low amount of electricity at that point in time. Similar percentages of dual fuel respondents have used it to check their gas usage. Far fewer report using their IHD to see how much carbon they have emitted, or for applied uses such as setting a household baseline, or a budget. Most PPM customers with an IHD report that they have used it to check their balance.

Information viewed on IHD	All (1,763)	PPM (391)	Non-PPM (1,372)
Electricity use at that point in time	63%	58%	64%
Electricity used over the last week or month	57%	60%	57%
Traffic lights	55%	48%	56%
Carbon you have emitted	15%	17%	15%
Remaining credit balance	N/A	57%	N/A
Low credit alerts	N/A	36%	N/A
Debt balance	N/A	26%	N/A

Applied uses of IHD	All (1,763)	PPM (391)	Non-PPM (1,372)
Set a baseline	23%	30%	22%
Set a budget	10%	15%	9%
Check nothing is left on when you go out or go to sleep	23%	25%	22%
Encourage others in household to reduce their energy use	40%	42%	39%

- Younger respondents, aged 18-34, were more likely to report that they were looking at any type of information on their IHD and to be using the device for an applied purpose. For example, 44% of these respondents had set a baseline (compared to 23% overall), and 21% had set a budget (compared to 10% overall).
- PPM respondents were less likely to report having looked at their current electricity use, but were more likely to have looked at how much electricity they had used over the last week or month. They were also less likely to have looked at the traffic lights, but were were more likely to report they had used the IHD to set a baseline or budget.

Technical notes:

Approach to sampling and survey design

Approach to data weighting and analysis

Department for Business, Energy & Industrial Strategy

Approach to sampling & survey design

Key stages in survey sampling approach:

- The survey sample was drawn from customer databases provided by the two participating suppliers. Each provided an anonymised file, containing all smart meter installations carried out between 3 January and 4 February 2017 (supplier 1) and between 9 January and 6 February 2017 (supplier 2).
- Given the importance of understanding the experiences of pre-payment meter (PPM) customers, all PPM customers in each of the supplier databases were drawn in the survey sample to maximise the number of interviews with this group.
- The remaining customer leads within the databases were stratified by payment type, fuel type (dual or single fuel) and postal area. Supplier 2 was additionally stratified by consumption level (this information was not available in the supplier 1 sample).
- A random sample of customers (to add to the census of PPM customers) was drawn from the stratified databases, generating sufficient leads for the target of 1,000 completed interviews per supplier.
- The selected anonymised sample leads were sent to each supplier to append contact details for interviewing, thus minimising the sharing of personal data.

Fieldwork details:

- 2,015 interviews were conducted in total, all with adults aged 16+ who were at home during the smart meter installation.
- Interviews were carried out between 3 March and 15 April 2017 using Computer Assisted Telephone Interviewing (CATI).
- The average interview length was 23 minutes.

Achieved sample profile (2,015 total)

Age	Frequency	Percent
18-34	273	14%
35–44	235	12%
45–59	521	26%
60–64	243	12%
65-74	459	23%
75 and over	240	12%
Refused	44	2%

Working status	Frequency	Percent
Working full time (30+ hours per week)	593	29%
Working part time (less than 30 hours a week)	296	15%
Retired/Not working with private pensions/means	449	22%
Unemployed	179	9%
Retired with state benefit/ pension only	332	16%
Not working with state benefit only	80	4%
Student	20	1%
Refused	66	3%

Payment type	Frequency	Percent
PPM	469	23%
Not PPM	1546	77%

Fuel type	Frequency	Percent
Electric	208	10%
Dual	1807	90%

Total household income	Frequency	Percent
Less than £16,000 per year	621	31%
£16,000 - £30,000 a year	439	22%
£31,000 - £50,000 a year	301	15%
Above £50,000 a year	246	12%
Don't know	137	7%
Refused	271	13%

Gender	Frequency	Percent
Male	938	47%
Female	1072	53%
Unsure/Refused	5	*

Based on unweighted data

Approach to data weighting and analysis

Weighting

- The data have been weighted to be representative of the total number and range of installations conducted by each supplier within the defined time period (in January and early February). The completed survey data have been weighted by the original known profile for each supplier with respect to: payment type, fuel type and postal area. Supplier 2 data was also weighted by the known profile of electricity consumption.
- Weighting has also been applied to ensure that the overall achieved sample reflects the balance in the respective number of installations conducted by each supplier in the defined time period.

Key Drivers Analysis (KDA)

- KDA was carried out to test the relative importance of aspects of the smart meter customer journey in explaining various behavioural and attitudinal outcomes.
- A Logistic regression was used to analyse the association between **dependent variables** and the **selected drivers.**
- The dependent variables are binary outcome variables of interest (e.g. use of IHD versus not using it).
- The standardised regression coefficients were then used to obtain the relative importance of each driver (such as receiving energy efficiency guidance, or being shown through the IHD screens) in predicting the likelihood of the event of an outcome measuring occurring (i.e. using the IHD).
- The drivers chosen were not strongly correlated among themselves (i.e. there was a relatively low level of multi-collinearity in the data)
- To gauge the strength of the fit of the model, a ratio of concordant vs. discordant pairs of observations was utilised. This metric demonstrated the models to be a good fit for the data (with approximately 2:1 concordant vs. discordant pairs).

Any enquiries regarding this publication should be sent to us at smartmetering@beis.gov.uk.

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Department for Business, Energy & Industrial Strategy
1 Victoria Street, London, SW1H 0ET
www.gov.uk/beis

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