



Department for
Business, Energy
& Industrial Strategy

Energy Company Obligation (ECO) Evaluation

Wave 1 technical report

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1. Introduction

1.1 Overview

This technical report accompanies the Main Survey report for the wave 1 Energy Company Obligation Household Evaluation.¹ Kantar were commissioned to deliver this research by the Department of Business, Energy and Industrial Strategy in 2019 to capture robust evidence on the impact of ECO, including an understanding of the characteristics of existing ECO recipients and whether the policy has delivered against the objectives. The evaluation sought to address a number of specific research questions:

Who has been reached by the ECO2t and ECO3 phases of the scheme?

- What is the demographic make-up of households reached by ECO?
- To what extent are households low-income, fuel poor or vulnerable?
- How does the demographic make-up of households differ across the different subgroups of interest?

To what extent have the ECO outcomes been achieved?

- Have households in receipt of ECO measures experienced: o warmer homes, improved health outcomes, reduced bills, changes to their energy consumption?
- Has there been behavioural and attitudinal changes for participating households? (e.g. Do they turn their heating on more regularly? Have their perceptions about affordability of a warm home changed? Are they more aware of their energy use or alternative energy saving measures?)
- What progress has been made towards achieving statutory fuel poverty commitments and affordable warmth targets?
- How have the outcomes of ECO differed across the different sub-groups of interest?

How effective and efficient has the delivery of the scheme been?

- What has been the experience of participating households and how did they come to be involved in ECO?
- Are the types of measures installed the most appropriate for the property and household type?
- Is take-up of measures influenced by public perception of benefit?
- What role did households have in the decision-making around which measure(s) to install?
- How well informed did households feel about their participation in the scheme?

¹ https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/1000756/eco-wave-1-summary-report.pdf

- To what extent are the most vulnerable households being reached?
- What were the costs incurred by participating households and did they feel they received value for money?
- How did the experience of households differ across different sub-groups of interest?

Are the outcomes achieved additional to what would otherwise have happened in the absence of ECO?

- What do households believe they would have done in the absence of ECO?
- How does what households would have done in the absence of ECO differ across the different sub-groups of interest

As part of the evaluation, BEIS commissioned a three wave household survey and follow-on qualitative interviews covering ECO2t and ECO3. The research was commissioned to provide insights on the type of households that have been reached by the scheme, households' experience of getting the measures installed and the perceived impact.

This report presents the technical summary from the first wave conducted in 2020. The first wave of survey fieldwork took place from March to May 2020, with qualitative interviews taking place in July and August.

Limitations and considerations

The research goes a long way to addressing the research questions described above. Some potential limitations of the evaluation, which readers should consider include:

- Fieldwork took place during the early phases of the COVID-19 pandemic. For the survey specifically, this meant that most households took part in March and April 2020, during the first lockdown, when most of the population were required to remain at home (including where possible to work). Survey fieldwork also coincided with an unseasonably warm and dry Spring. It is probable these factors impacted (positively) on the survey response rate and the profile of those who took part. It is also possible that being at home for long periods of time and the unseasonably warm weather may have had an impact on how participants responded to some questions. However, such risks were mitigated by asking participants to answer in relation to specific reference periods (e.g. "thinking about an average week during winter").
- As with all primary research, there is a reliance on the accuracy of responses received from participants. This is relevant in our research for measurement of perceived impacts on energy costs and measures which require recall of the decision making process when choosing to have energy saving measures installed.

Regardless of limitations, we are confident that findings from the survey and qualitative interviews are highly reliable.

2. Survey methodology

2.1 Overview of approach

The primary aim of the quantitative strand of the research was to collect statistically robust evidence from households that had received a measure under ECO2t and ECO3, to understand who they are, their experiences of ECO and the impacts of their participation.

The survey was carried out using a combination of postal questionnaires and an online survey. The target sample size for the study was 2,000 and the response rate was expected to be c.25%. As such, 8,000 properties were sampled for original issue. A reserve sample of an additional 4,000 cases was also selected.

In total, postal questionnaires were sent out to all 12,000 households (see section 2.1.2). Kantar received 2,857 completed responses, which equates to a response rate of 24%. Of these, 2,382 respondents completed a postal questionnaire and 475 respondents completed the online survey. Kantar carried out verification of all responses received to ensure they were eligible as completed responses

2.1.1 Survey approach

The survey was carried out using a self-completion approach, with a 16-page paper questionnaire posted to all selected addresses. All households also had the option to complete the survey online.

This hybrid postal and online approach was chosen because the postal address was the only sample information available. The alternative was to conduct a face-to-face survey, which would have delivered a lower degree of sample quality for a much higher cost.

Most questions were categorical in style, requiring respondents to pick one or more responses from pre-coded list. The questionnaire was structured around six broad sections:

- The property – capturing age, tenure, number of floors, size, age and gender of household
- Details of heating in the home – capturing main way of heating home, use of additional heaters, method of paying for heating and perceived temperature of the house
- How respondent found out about the energy saving measures
- Details on the energy saving installation – capturing the cost, and information on the process of installation
- Results of having the measure installed – capturing impacts, changes in behaviour and attitudes
- Household demographics – including income, health or disabilities, receipt of benefits

The full questionnaire can be found in Appendix A. Questionnaires were accompanied by a covering letter, which explained the purpose of the research and provided the option for households to take part online. The research was branded as the ‘Energy Saving Survey’ to offer as broad an appeal as possible to households. To maximise response and reduce non-response bias, participants were offered a £10 gift card incentive as a thank you for taking part.

Fieldwork at wave 1 took place between 9th March and 6th May 2020.

2.1.2 Reminders and issuing the reserve sample

The planned approach was to issue the original 8,000 households that would receive two reminder packs in week 2 and 4 after the initial invite. However, in mid-March restrictions related to Covid-19 came into force. This raised concerns about whether households would be willing or able to leave their home to return the postal questionnaire, and whether the postal service would be disrupted during fieldwork, meaning that reminders would not be able to be dispatched. Further, the restrictions meant that returned questionnaires could only be booked in and counted at Kantar operations centre weekly rather than daily.

In order to mitigate the risk that the target number of interviews would not be achieved because of the Covid-19 restrictions, it was decided that the second reminder would be replaced by issuing 4,000 reserve cases. Post-fieldwork, sensitivity analysis was conducted to see whether the inclusion of the reserve sample unduly affected survey estimates (which could be indicative of bias). This is discussed in section 5.2.

A summary of communication is shown in Table 2.1.

Table 2.1: Timetable of communications

Communication type	Date
Invitation: cover letter and questionnaire sent to original sample of 8,000	9 March 2020
Reminder: reminder letter and questionnaire sent to non-completions from the original 8,000 sample	27 March 2020
Invitation: cover letter and questionnaire sent to reserve sample of 4,000	31 March 2020

The final response rate was 24%². A summary of the response rate is provided in section 4.3.

² Throughout this technical report, response rates are calculated as the number of usable returns divided by the total number of cases issued (returned questionnaires that were not completed as far as Q57 with 40% or more missing answers were counted as incomplete). This corresponds to Response Rate 1 according to the AAPOR standard definitions of response rates:

http://www.aapor.org/AAPOR_Main/media/publications/Standard-Definitions20169theditionfinal.pdf

3. Questionnaire development and testing

3.1 Initial development of the questionnaire

BEIS provided an outline of key question areas to be covered at the outset of the project. Kantar used this as the basis of questionnaire design, and drew on existing questions as far as possible during the initial questionnaire design. The research team conducted a desk review of relevant questions from previous research within this area. These included:

- Energy Company Obligation (ECO) Customer Journey
- Heat Networks Customer Survey
- Green Deal Customer Journey Survey
- English Housing Survey

BRE were also consulted throughout the questionnaire development phase, providing an additional, external perspective³.

BEIS and Kantar held a questionnaire workshop on 1 November 2019 to finalise the questionnaire for cognitive testing.

3.2 Cognitive testing

As part of the questionnaire development, Kantar undertook 18 cognitive interviews with people who had measures installed under ECO2t and ECO3. The main aim of the cognitive testing was to test whether questions were suitably worded, correctly and consistently understood, and easily answered by people who had received a measure under the scheme.

Interviews took place in respondents' home and were conducted by researchers from Kantar. Interviews were carried out in two geographical areas: North London, and Hertfordshire/Bedfordshire. Interviews lasted around an hour. Interviewing took place between 20th January and 30th January 2020.

Most of the whole questionnaire was tested, with specific probes for questions which were new, adapted from previous measures or which were felt may be difficult to answer in a paper questionnaire. The questionnaire referred to 'energy saving measures' throughout to refer to installations. Respondents were asked to think about the specific measure that they had installed as on the ECO database.

³ BRE is an independent research-based advisory, testing and training organisation, offering expertise in every aspect of the built environment and associated industries. BRE is part of the BRE Trust, which aims to support research and education in the built environment.

3.2.1 Sample for cognitive testing

A total of 18 cognitive interviews were carried out. These were spread over a range of different installation types, tenure, age, gender and region. Recruitment for the cognitive interviewing was carried out by Kantar's team of specialist recruiters.

The profile of interviews are shown in Table 3.1.

Table 3.1: Profile of respondents who took part in cognitive interviewing

Tenure	Number of interviews
Owner occupier	15
Private renter	1
Social housing	2
Installation	
A new boiler	3
Loft insulation	5
Cavity wall insulation	8
Heating controls	2
Obligation	
ECO2t	13
ECO3	5
Had multiple measures	
As part of ECO	3
Outside of ECO	5

3.2.2 Key findings of cognitive testing

The survey was generally seen to be easy to complete, of reasonable length overall, with clear instructions. The key findings are summarised below:

- **Dealing with multiple installations:** Some respondents that were interviewed had received more than one measure from ECO. Other respondents had other measures installed outside of the ECO scheme at around the same time, or shortly after the ECO measure. Respondents were unable to separate out the impact from different measures. For example, one respondent was being interviewed about loft insulation received under ECO, but had also had new radiators and mentioned throughout the

survey that they wasn't certain which measure had caused the impact. It was decided to ask households specifically about the measures they had installed in ECO, which were listed on the front of the questionnaire. In the main survey, households were asked to think about the overall impact, rather than the impact of individual measures.

- Repetition and overlap: Respondents felt that some of the questions were asking very similar things.. Questions were subsequently streamlined, including removing or merging questions to reduce repetition in order to improve the respondent experience and reduce burden.
- Interview length: Some questions, particularly those with long answer code lists took respondents quite a long time to read through and select the answer that was applicable to them. Question answer codes lists were reviewed and reduced were applicable.
- Use of the word measure: Throughout the questionnaire the terminology wasn't consistent. For example, we used measure, energy saving measure, energy saving installation etc. Most respondents had no issue with the word 'measure', which appeared throughout the questions in reference to their specific installation(s), as they knew this was referring to the specific installation (such as the cavity wall insulation, boiler etc.). The questionnaire was updated to use consistent terminology.

A second questionnaire workshop between BEIS and Kantar was held following the cognitive testing on 6 February 2020. This was to discuss the findings and finalise the questionnaire. The final questionnaire used in the research can be found in Appendix A.

4. Sampling

Sample for the study was drawn from the ECO2t and ECO3 databases held by BEIS. The sample design was disproportionate to allow for standalone analysis of key sub-groups, including different obligations and categories, and by nation.

The sample was designed to be a representative sample of households that had received measures under ECO2t and ECO3 and aimed to deliver confidence intervals of no more than +/- 5 percentage points for overall analysis and the analysis of priority sub-groups. Whilst the ECO2t obligation had ended by the time of the wave one survey, ECO3 was ongoing and therefore ECO3 sample could be built on over future waves.

Full details on sampling for wave 1 of the survey has been provided below.

4.1 Processing the ECO database

BEIS provided Kantar with an anonymised database of ECO installations. This included 532,675 ECO2t and ECO3 installations made at 407,912 properties between the 1st April 2017 and the 30th November 2019.

The ECO database is at the installation-level. However, the key analytical unit for the survey is properties and the ECO database was restructured to be at this level.

It was decided that properties with five or more installations should be excluded from the survey. Manual review of these records indicated data quality issues. For example, some of these records had an incomplete address, or the address (as recorded in the database) actually consisted of multiple buildings or flats rather than a single property. The inclusion of these properties in the study would have been problematic, for instance:

- The survey invitation would be very unlikely to be delivered to the right property.
- The information we would have for these properties would be inaccurate – complicating analysis and potentially confusing respondents. For example, the mail merge in the questionnaire would list a high number of installations that did not all apply to the property.

This issue only affected a very small number of properties. After this exclusion there were 528,642 installations (99.3% of the original total) at 407,726 properties (99.95% of the original total).

4.2 Drawing the sample

In designing the sample there were two key considerations; to ensure overall results would be robust and to allow for analysis by key sub-groups:

- Obligation / Category / LA flex: ECO2t CERO, ECO2t AW Standard, ECO2t AW Flexible, ECO3 AW Standard and ECO3 AW Flexible.

- Nation: England, Wales & Scotland.

A disproportionate sample design was required to meet these objectives. An explicit stratification variable with 18 cells was derived for the sampling (see Table 4.1).

Prior to a systematic sample being selected from each explicit stratum, the sample frame was sorted by several characteristics. This ensured that the drawn sample was representative of the population in terms of these variables. This helped to minimise sampling error to the extent that the population estimates are correlated with these factors. The variables used in the implicit stratification were as follows:

- Measure⁴ (Boiler / Cavity wall insulation / Loft insulation / Solid wall insulation / Other heating / Other Insulation)
- Region (11 former government office regions)
- Urban / Rural classification (3 categories⁵)
- Tenure⁶ (Owner occupied / Private rental / Social / Other)
- Property type⁷ (Flat or maisonette / Bungalow / Detached / Terraced / Semi-detached / Other)
- IMD decile (England IMD 2019, Wales IMD 2014 & Scotland IMD 2016 - 1 (most deprived decile) - 10 (least deprived decile))
- Year of installation⁸ - (Apr17-Mar18 / Apr18-Mar19 / Apr19-Nov19)

The target sample size for the study was 2,000 and the response rate was expected to be c.25%. As such, 8,000 properties were sampled for original issue. A reserve sample of an additional 4,000 cases was also selected, as discussed in section 2.

Table 4.1: Strata for the wave 1 sample

	Population N	Population %	Total sampled (n=12k)	Original issue (n=8k)
England ECO2t CERO	128,315	31.5%	2,678	1,785
England ECO2t AW Standard	73,305	18.0%	931	621
England ECO2t AW Flexible	7,770	1.9%	742	495

⁴ Note that this is multi-code – as properties can have multiple measures installed

⁵ 1= Conurbation (E/W) & Large Urban (S), 2= City and town (E/W) & Other Urban (S), & 3 = Rural (E/W) & Small town or rural (S)

⁶ In a small number of cases the “Tenure” listed for a property varied from measure to measure. Where this was the case, the tenure from the last installation installed has been used.

⁷ In a small number of cases the “Property type” listed for a property varied from measure to measure. Where this was the case, one value has been selected at random.

⁸ Note that this is multi-code – as properties can have multiple measures installed

	Population N	Population %	Total sampled (n=12k)	Original issue (n=8k)
England ECO3 AW Standard	83,958	20.6%	1,830	1,220
England ECO3 AW Flexible	18,152	4.5%	1,608	1,072
England Multiple strata	4,342	1.1%	209	139
Scotland ECO2t CERO	35,051	8.6%	819	546
Scotland ECO2t AW Standard	12,272	3.0%	175	116
Scotland ECO2t AW Flexible	1,093	0.3%	117	78
Scotland ECO3 AW Standard	13,249	3.2%	323	216
Scotland ECO3 AW Flexible	5,853	1.4%	581	387
Scotland Multiple strata	1,253	0.3%	67	45
Wales ECO2t CERO	4,769	1.2%	223	149
Wales ECO2t AW Standard	7,239	1.8%	206	137
Wales ECO2t AW Flexible	3,193	0.8%	683	456
Wales ECO3 AW Standard	4,775	1.2%	233	155
Wales ECO3 AW Flexible	2,599	0.6%	516	344
Wales Multiple strata	538	0.1%	59	39
Total	407,726	100%	12,000	8,000

4.3 Response rates

The overall response rate was 24%. The response rate was 27% among the original sample of 8,000 that received one reminder and 18% among the reserve sample that did not receive a reminder (table 4.2). Response also varied by the obligation type.

Among obligation types the response rate was lowest among ECO2t AW Standard (15%) and ECO2t CERO (19%). These were the obligation types that had the longest time gap between the installation and the survey and so were expected to be lower. Response was higher for ECO3 (27%); these households had received a measure more recently.

Response rates were lower among some groups, for example homes in London (8%), or homes that were flats or maisonettes (12%).

Table 4.2: Survey response rates

	Number issued	Number of responses achieved	Response rate
Original sample	8,000	2,154	27%
Reserve sample	4,000	703	18%
Total	12,000	2,857	24%
ECO2t CERO	3,858	719	19%
ECO 2t AW Standard	1,530	235	15%
ECO 2t AW Flexible	1,587	525	33%
ECO3 AW Standard	2,604	523	20%
ECO3 AW Flexible	2,759	928	34%
Total	12,000	2,857	24%

5. Weighting and analysis

This section outlines the processes used to produce the final data outputs, covering weighting the data, sensitivity analysis to decide whether to include the reserve sample in the final data, cleaning the data and the coding of verbatim responses to open-ended questions.

5.1 Weighting

Weighting was applied to ensure that the sample was representative of the population. The process used to weight the data is outlined below.

5.1.1 Calculating the design weight

As outlined in section 4.2, a disproportionate sample design was used. The sampling fraction varied by stratum and design weighting was applied to compensate for this. The design weight was calculated by inverting the sampling probability for each case.

5.1.2 Calculating non-response weights

Additional weighting was also required to compensate for systematic differences in response probabilities. The sample frame included information about each address⁹. The following variables were used in a logistic regression to estimate the response probability of each respondent:

- Region (11 former Government Office Regions)
- Urban / Rural¹⁰ (Conurbation / City and Town / Rural)
- Housing tenure (Owner occupied / Social Housing / Private Rental)
- Property type (Bungalow / Detached / Flat or Maisonette / Semi-Detached / Terraced / Other)
- Index of Multiple Deprivation (Deciles)
- Scheme (Eco2t /Eco3)
- Obligation (CERO / Standard / Flexible)
- Type of measure installed¹¹ (Boiler / Cavity Wall Insulation / Loft Insulation / Microgeneration / Solid Wall Insulation / Windows and Doors / Other Heating)

⁹ These variables are either from the ECO database, or are geo-demographic variables that have been merged into the database.

¹⁰ In Scotland, the urban rural classification is a little different. The three categories used are as follows: Large Urban / Other Urban / Small Town or Rural

¹¹ Note that addresses can have had multiple types of installations at different points in time.

- Date of installation (Apr-Jun 2017 / Jul-Sep 2017 / Oct-Dec 2017 / Jan-Mar 2018 / Apr-Jun 2018 / Jul-Sep 2018 / Oct-Dec 2018 / Jan-Mar 2019 Apr-Jun 2019 / Jul-Sep 2019 / Oct-Nov 2019)

Non-response weights were calculated as the inverse of the predicted probability (as estimated by the regression model) of any given sampled household taking part in the survey.

5.1.3 Calculating the overall weight

The overall weight was calculated by multiplying the non-response weight by the design weight. Different thresholds were trialled for trimming the weights. Based on this analysis, the final weight was then trimmed so that there were no weights greater than 8 times the median weight¹². This offered the best balance between minimising bias (ensuring the weighted sample profile closely matching the population benchmarks) and minimising the design effect. The overall design effect due to the weighting¹³ is estimated as 2.07 (compared with 2.52 for the untrimmed weight). As shown in Appendix C, the profile of the weighted sample remained a good match to the population profile, even after larger weights were trimmed.

5.2 Sensitivity analysis

5.2.1 Background

As outlined in section 2.1, reserve sample was issued towards the end of the fieldwork period.

The original issue sample was sent two mailings (an initial invitation and a reminder). The purpose of the reminder was twofold – to increase the overall response rate to the study and it was also hoped that this would improve the sample balance by encouraging response from under-represented groups. Nevertheless, it is important to note that the reminder was not targeted – it was sent to all non-respondents. There is no guarantee that the reminder did in fact encourage different types of people to respond.

The reserve sample were only sent the initial invitation mailing. Given that no reminder was sent to this group, it was possible that this sample could be less representative of the population. Therefore, there was a concern that including this group in the final sample could potentially add bias.

It was decided that sensitivity analysis should be conducted to see whether the inclusion of the “reserve” unduly affected survey estimates (which could be indicative of bias). The sensitivity analysis covered a range of key variables and key sub-groups (see Appendix D).

¹² This affected 117 cases.

¹³ Design effect calculated as $1 + \text{cov}(W)^2$ – where $\text{cov}(W)$ is the coefficient of variation of the weights

5.2 2 Results

For this analysis, we compared the two following datasets:

- Original issue only = 2,154 cases
- All sample (original + reserve) = 2,857 cases

For both sets of data, we produced weighted point estimates and calculated 95% Confidence Intervals (accounting for the complex survey design – the weighting and the pre-stratification) for the agreed list of key variables. We then conducted significance testing (allowing for the fact the samples overlap¹⁴) to identify any significant differences (p-value of <0.05). Prior to conducting the analysis, it was decided that:

- If more than 5% of the differences were statistically significant (p-value of <0.05) we would report using the original data only.
- If 5% or less of the differences were statistically significant (p-value of <0.05) we would report using all data (original issue and reserve).

When comparing the overall results (original only vs all sample (original + reserve)), we conducted 81 significance tests and only one of these (1.2% of the tests) had a statistically significant difference (p value of <0.05). We also compared results for key sub-groups. Across all of the sub-groups included in the analysis, only 0.7% of differences were significant (10 out of 1,315 tests had a p value of <0.05).

This analysis indicated that the inclusion of the reserve sample was not having much of an effect on the point estimates. It was therefore decided that all data (2,857 cases) should be used for the reporting.

5.3 Data processing and coding

5.3.1 Comparing data quality between online and postal

Where self-completion, and particularly, postal questionnaires are used there is a risk that respondents do not complete all questions. This is commonly referred to item non-response. The degree of missing data (or item non-response) for those questionnaires that were return by post was examined. Overall, the levels were generally low (for most questions less than five percent of responses). We can therefore be confident that the quality of the postal data is good and comparable to the online data.

5.3.2 Cleaning and editing of data

Returned paper questionnaires were booked in and scanned at a Kantar operations centre in High Wycombe, which is housed in a security-protected location with restricted access. Data from the questionnaires were captured by electronic scanning using Kantar's in-house scanning facilities.

¹⁴ The "all sample" data includes the whole of the "original only" data. Standard significance tests assume the two samples are independent. Standard significance testing would overestimate how large a difference needs to be for it to be statistically significant (leading to false negative findings).

Editing instructions were provided to the scanning team. Most edits were to ensure that, for each question, people who should have answered are included in the data (even if as 'Question not answered') and that any who answered in error are excluded. The completed postal questionnaires were checked for internal consistency, completeness and accuracy. The data was also cleaned to ensure that the data was consistent. This involved:

- Adding a new code for 'Question not answered' where respondents should have been filtered to a question but left the postal questionnaire blank.
- If 'Don't know' was selected in conjunction with a valid answer code, answers were removed from 'Don't know'
- If multiple responses were given at a single code question, answers were edited to 'Don't know'

Some additional cleaning and editing also took place, including:

- Q5 number of people living in household – if this question had been left blank, but Q6 and Q7 (age and gender of people within the household) Q5 was re-coded to show the number of people given at Q6/Q7.
- Q39/Q40 – these questions were filtered, however the data showed that some respondents answered them who should not have. However, it was decided that this could be caused by unclear instructions on the paper questionnaire and therefore this data was not edited out.

Data cleaning was not required for the online survey. Measures implemented throughout the script ensured that all questions had a valid and clean response.

5.3.3 Coding

The survey contained open-ended questions, allowing respondents to provide verbatim responses. These responses were coded by Kantar's in-house coding team. All coded data were incorporated into the final SPSS datafiles.

The coding undertaken was on partial open-ended questions. These allow respondents to enter an answer which cannot be categorised into a pre-existing response option. For each partial open-ended question, the coding team checked whether any of the verbatim responses given in the 'other specify' category could be coded as an existing response option (this exercise is commonly known as back-coding). On questions where the 'other' answer category exceeded 10% of the total number of responses, answers were reviewed, and new codes were created if necessary.

Coding was reviewed by the research team to check the quality of coders' work in terms of what had been back-coded to each answer category and what new codes had been added to the code frame.

5.3.4 SPSS and table outputs

The SPSS datasets were checked and cleaned¹⁵, and underwent basic editing. This included: the addition of sample variables needed for analysis; the addition of weighting

¹⁵ As part of this process, redundant variables were deleted, variables were renamed or re-ordered to match the questionnaires, and values were standardised.

variables; and the derivation of new variables required for analysis. Key nets and derived variables were agreed with BEIS as part of the data specification to ensure outputs meet both analysis and publication requirements. The SPSS datasets and tables were fully quality assured by the research team.

5.4 Subgroup analysis

The analysis was carried out based on agreed key subgroups that were included on the cross-tabulations detailed in Table 5.2.

Table 5.2: Key subgroup analysis

Subgroup	Categories
Measure installed	Boiler, solid wall insulation, cavity wall insulation, loft insulation, underfloor insulation, other insulation, microgeneration, windows and doors, other heating, net: any insulation
Number of measures	Single measure, multiple measures
Obligation - broad	ECO2t, ECO3
Obligation - detailed	ECO2t: CERO, ECO2t: AW standard, ECO2t: AW flexible, ECO3: AW standard, ECO3: AW flexible
Region	England, Scotland, Wales
Region (England)	North East, North West, Yorkshire and the Humber, East Midlands, West Midlands, East of England, London, South East, South West
Tenure	Owner occupied, private rental, social housing
Household income	Less than £16,000 a year, more than £16,000 a year
Age of residents	Working age adults only, working age adults with under 5s, over 65s only, mixed households
Whether paid towards the cost of installation	Yes, No
Likelihood of considering other energy saving installations in the future	More likely, no difference, less likely

Subgroup	Categories
Whether benefitted from having measures installed	A great deal, a fair amount, not very much, not at all
Whether have any long standing illness/disability	Yes, No
Whether receiving any benefits	Yes receiving benefits, no not receiving any benefits
Age of property	Pre-1919, 1919-1944, 1945-1964, 1965-1980, 1981-1990, 1911-2002, post 2002

5.4.1 Statistical significance

Results from all surveys are attempts to estimate “true values” in a wider population; all figures come with an associated margin of error. As such, all differences quoted in the reports have been tested for statistical significance; that is, the difference is significant once the margins of error have been accounted for.

Unless otherwise specified, all commentary in the main report focuses on differences that are statistically significant at a 95 per cent confidence level. In basic terms, this means that if the survey was conducted 100 times, a finding of the same nature would be found in at least 95 cases. On occasion, survey findings which were not significant have been presented, where their inclusion was important for context or was consistent with a wider trend. Such differences are sometimes described as being indicative, as opposed to statistically significant, or substantive. Applying weights to data as described earlier in this section, while tending to make the quoted figures more representative of the population of interest, has the effect of reducing the effective sample size of the data. As such, the effective base size, which is used in any statistical testing, is smaller than the unweighted base size. This effect has been taken into account in determining whether or not differences described throughout the report are statistically significant. Therefore, while the base sizes reported throughout this report are the actual base sizes, the statistical analysis is based on the effective base.

6. Qualitative fieldwork

Follow-up qualitative research was conducted to provide detailed insights on household experiences of the ECO scheme. Specifically, the qualitative strand focused on understanding the decision-making and installation journey, the process of installation and the impact and benefits of ECO measures installed. The qualitative element was conducted among households that had completed the quantitative survey and had agreed to be contacted for further research.

6.1 Developing the focus of the qualitative research

Interim analysis of the quantitative survey data was used to inform the focus and sampling strategy for the qualitative research. The key research questions for the qualitative research developed included:

- What was the decision making journey that participants went on to have the measure installed? (What was the trigger that made them think about the measure; what were the motivations; what were their sources of information)
- What was the process like for getting the measure installed? (Was it easy/difficult and why; how different measures compare in terms of disruptiveness)
- What have been the impacts on the individual of having the measures installed? (On what scale are the impacts on their day to day life; extent to which positive or negative; are they mainly financial/environmental/health/comfort levels; what are the most important impacts to the individual and how do they manifest)
- What is driving varied levels of impact or lack of benefits for those that did not report differences compared to before the measure was installed? (Is it harder to see the benefits for insulation compared to heating; what sort of benefits might they have been expecting; how does this impact on their likelihood to have future measures installed)

The discussion guide was designed around the research questions with input from BEIS. Alongside these questions, it sought to explore participants' priorities with contextual and attitudinal discussions around environmental, financial and their home and how these factors may play a part in how they received and felt about the ECO scheme. The discussion guide then followed the structure of the scheme journey, from the initial point of finding out about the ECO scheme to the impact it currently has on their home. Journey mapping was used to aid the memory of participants and ensure as much detail as possible was collected from participants, particularly for those who had the measures installed more than one year previously. The final discussion guide can be found in Appendix E.

6.2 Method

6.2.1 In-depth telephone interviews

In-depth interviews of up to 60 minutes in length were conducted with 40 participants via telephone between July and August 2020. A small team of trained researchers conducted the interview, with a researcher briefing before interviews took place to ensure consistency and reduce interview bias.

Participants received £40 incentive as a PayPal transfer or gift card of their choice as a thank you for their participation. All interviews were audio recorded with the consent of the participants. Recruitment was carried out by Kantar's specialist in-house recruitment team.. Participants were recruited because they completed the quantitative survey and agreed to be contacted for further research. Using the list of survey participants, recruiters identified potential qualitative participants to take part, pre-screening them using the available survey data. From this they were contacted via telephone for a screening call to ensure they met all recruitment quotas, before scheduling in the research interview with a qualitative researcher at a time convenient to them.

As this method was socially distanced, complying with Covid-19 guidelines, it remained as originally designed.

6.2.2 Post-interview photo task

Originally, Kantar proposed five in-home ethnographic interviews to establish rich, detailed case studies alongside the telephone interviews. However, the impact of Covid-19 meant that it was not possible to carry out in-home interviews, so an alternative approach was developed.

In order to capture as much information as possible from the CERO group, which will not be included in future waves, Kantar and BEIS decided to replace the five in home interviews with a photo task. This was conducted as a post-interview task as a way to reflect on and illustrate the impacts and outcomes of the energy saving measures that the households had installed. All households that took part in the in-depth telephone interviews were invited to take part in the photo task and an additional incentive of £10 was provided if completed.

Respondents were asked to provide at least four photos of the following:

- Photo of the measure(s)
- Before photo of the measure(s)
- Any information they received about the measure, leaflets etc.
- Any sources of information e.g. websites they looked at
- Any impacts they can show evidence of e.g. warmer home
- A photo of their overall feelings about the measure
- Any negative impacts of the measure they have experienced

Overall, 16 participants completed the post-interview photo task.

6.3 Sampling

A purposive sampling strategy was developed after the quantitative phase to ensure the qualitative sample broadly reflected the characteristics reflected in the survey and key characteristics underpinning differences in responses were reflected. Forty participants were recruited from the survey sample of 992 who had opted in to take part in the qualitative stage.

The final achieved sample is shown in table 6.1.

Table 6.1: Final achieved qualitative sample

Total	
Obligation	CERO: 15 AW standard: 15 AW flexible: 10
Number of measures	Single measure: 20 Multiple measures: 20
Measure	Insulation: 23 Heating: 4 Mix: 13
Level of disruption	Highly disruptive: 7 Quite disruptive: 10 Not very disruptive: 13 Not at all disruptive: 10
Level of impact	High impact: 11 Medium impact: 16 Low impact: 13
Benefit	Positive: 29

Total	
	Negative: 6 Neutral / no impact: 5
Gender	Male: 14 Female: 26
Age	Under 18: 0 18-24: 1 25-34: 8 35-44: 6 45-54: 10 55-64: 7 65+: 8
Region	Greater London: 0 South East: 3 South West: 7 West Midlands: 6 North West: 5 North East: 2 Yorkshire and the Humber: 3 East Midlands: 3 East of England: 1 Scotland: 4 Wales: 6
Tenure	Own home: 26

Total	
	Rent privately: 8 Social housing: 6
Property type	House: 35 Flat: 2 Other: 3

6.4 Qualitative analysis

The qualitative analysis approach included the following elements:

A process-driven element using a matrix mapping framework technique, as part of which data is coded and systematically summarised into an analytical framework organised by issue and theme. The framework was developed to reflect the research objectives and according to the themes emerging from the initial debrief session. The completed Excel framework allowed the research team to review and sort the data by theme, by case and across groups of participants ensuring a thorough review of the data. Analysis of photos received was also analysed in this way and was used to support the depth of the qualitative findings. Photos chosen for the final report were considered to be illustrative of the points made in the report while also ensuring anonymity.

An interpretative element focused on identifying features and patterns within the data, mapping the range and nature of data, finding associations, defining concepts, undertaking sub-group analysis. This process created descriptive accounts and explanatory data, which came from aggregating patterns as well as from weighing up the salience and dynamics of issues, and searching for structures within the data that have explanatory power. Researcher analysis sessions were used to support interpretation of the data, during which the team comes together to discuss and test emerging themes and insights. A researcher from BEIS attended one of these sessions to hear initial findings from the research as well as provide input and guidance into areas of interest for reporting.

Case studies were developed for key sections of the report to provide a more holistic view of a participant's context, attitudes, motivations and the impact of the measure on their home. These were chosen to reflect a variety of perspectives, both positive and negative experiences. Names were changed for the case studies to provide anonymity to participants.

Appendix A: Questionnaire

KANTAR



Department for
Business, Energy
& Industrial Strategy

Energy Saving Survey

This survey is about the [MEASURE FROM DATABASE] that you had installed in [MM/YY].

This survey is about the below measures which you have had installed:

- [MEASURE FROM DATABASE] that you had installed in [MM/YY]
- [MEASURE FROM DATABASE] that you had installed in [MM/YY]
- [MEASURE FROM DATABASE] that you had installed in [MM/YY]
- [MEASURE FROM DATABASE] that you had installed in [MM/YY]

Thank you for taking the time to answer these questions. The questionnaire should take no longer than 25 minutes to complete and we will keep your answers completely confidential.

As a thank you for taking part we will send you a £10 voucher.

Who should complete the questionnaire?

Any adult aged 16 or older can complete the questionnaire as long as they have joint or sole responsibility for energy bills and were living in this property when the energy saving measures were installed.

How do I fill out the questionnaire?

Please answer the questions as fully as you are able by crossing the boxes or writing in the spaces provided. Please return the completed questionnaire in the pre-paid envelope.

Most questions on the following pages can be answered by putting a cross in the box next to the answer that applies to you, like this:

Occasionally a question will ask you to “choose all that apply.” Please cross as many boxes as apply to you when you see this instruction.

Please try to answer every question. If you cannot remember, do not know, or the question does not apply to you then please cross the relevant box where shown or leave the question blank.

If you mark the wrong box, fill in the box and put a cross in the right one like this:

Please use black or blue ink to complete the questionnaire.

If it is difficult for you to complete the questionnaire, you can ask a friend, family member or

carer to help you or fill it in on your behalf.

Where can I get more information?

✉ energysavingsurvey@kantar.com

☎ Survey helpline: 0800 051 0884

If you have any queries about the survey or need help completing the questionnaire, please contact Kantar.

Thank you for taking the time to complete this questionnaire

ASK ALL

Q1. Firstly, can we check that energy saving improvements described on the front page were installed at this property, and you or someone else still living there lived there at the time?

1. Yes
2. No
3. Don't know

If yes, please complete the survey. If no or don't know, there is no need to take part.

To begin, we have a few questions about the property that you currently live in

ASK ALL

Q2. How many floors does your home have?

Please only include the total number of floors in your home, including the ground floor.

Please choose one answer only

1. One floor
2. Two floors or more

ASK ALL

Q3. Do you (or your household) own or rent the home that you live in?

Please choose one answer only

1. Own home outright (no mortgage to pay off)
2. Own home but with a mortgage to pay off
3. Part own and part rent (shared ownership)
4. Rent privately
5. Rent from council or local authority
6. Rent from housing association, housing co-operative, charitable trust or registered social landlord
7. Live here rent-free
8. Something else (please specify)

ASK ALL

Q4. Roughly when was your home built?

If you are not sure, please select 'Don't know'

Please choose one answer only

1. Before 1919
2. 1919 – 1930
3. 1931 – 1944
4. 1945 - 1964
5. 1965 - 1980
6. 1981 - 1990
7. 1991- 1995
8. 1996 – 2001
9. After 2002
10. Don't know

ASK ALL

Q5. How many people are there in your household altogether, including any children and yourself? *Please write in the box provided*

ENTER NUMBER

ASK ALL

Q6. And what is the gender of each person in your household? Please include yourself and any children. Please tick one answer per person only

MALE/FEMALE/OTHER for up to 10 people

ASK ALL

Q7. And how old is each person in your household? Again, please include yourself and any children. Please tick one answer per person only

AGE CATEGORIES for up to 10 people:

1. Under 5
2. 6-13
3. 14-17
4. 18-64
5. 65+

Details of heating in home

ASK ALL

Q8. Thinking about an average week during winter, on how many week days (Mon-Fri) is someone at home during the day (9am-5pm)?

Please write in the box provided

ENTER NUMBER

ASK ALL

Q9. Which of these is the main way you heat your home?

Please choose all that apply

1. Central heating – mains gas
2. Central heating – other (e.g. oil or liquid petroleum gas)
3. Electric radiators or storage heaters
4. Open fire or wood burning stove
5. Something else (please specify)
6. Don't know

ASK ALL

Q10. Before the installation of the measure(s), which of these other type(s) of heater did you use in your home?

Please choose all that apply

1. Gas fire (mains gas)
2. Gas fire (bottled gas)
3. Electric plug-in room heaters (including fan/radiant heaters)
4. Other electric heaters (including towel rails or underfloor heating)
5. Open fire burning coal/wood/smokeless fuel
6. Enclosed fire or stove burning coal / wood / smokeless fuel
7. Aga or Rayburn stove (any fuel)
8. Something else (please specify)
9. None of these

ASK IF USE OTHER TYPES OF HEATING (Q10=1-8)

Q11. Thinking about these other types of heater, overall, do you use them more or less often since installing the measure(s)?

Please choose one answer only

1. Use a lot less now
2. Use a little less now
3. No difference

4. Use a little more now
5. Use a lot more now

ASK ALL

Q12. Which methods do you use to pay for your fuel?

Please choose all that apply

1. Direct debit (including online direct debit)
2. Pay after receiving bill (by post, telephone, online or at bank/post office)
3. Pre-payment meter
4. Included in rent
5. Other (specify)
6. Don't know

ASK ALL

Q13. What help, if any, does your household receive to help with fuel bills?

Please choose all that apply

1. Winter fuel payment
2. Warm home discount scheme
3. Cold weather payment
4. National Concessionary Fuel Scheme
5. None of these
6. Don't know

ASK ALL

Q14. As a result of the measure(s) being installed, would you say your energy bills are more or less affordable now?

Please choose one answer only

1. More affordable now

2. No difference
3. Less affordable now
4. Don't know

ASK ALL

Q15. Before the measure(s) were installed, how easy or difficult was it to heat your home to a comfortable temperature?

Please choose one answer only

1. Very easy
2. Easy
3. Difficult
4. Very difficult
5. Don't know

ASK ALL

Q16. Before the measure(s) were installed, was your home...

Please choose one answer only

1. Much colder than you would have liked
2. A bit colder than you would have liked
3. About right
4. A bit warmer than you would have liked
5. A lot warmer than you would have liked
6. Both too warm and too cold

ASK ALL

Q17. After the measure(s) were installed, how easy or difficult was it to heat your home to a comfortable temperature?

Please choose one answer only

1. Very easy

2. Easy
3. Difficult
4. Very difficult
5. Don't know

ASK ALL

Q18. After the measure(s) were installed, was your home...

Please choose one answer only

1. Much colder than you would have liked
2. A bit colder than you would have liked
3. About right
4. A bit warmer than you would have liked
5. A lot warmer than you would have liked
6. Both too warm and too cold

How you found out about the energy saving measures

ASK ALL

Q19. How did you find out that you might be able to have measure(s) installed?

Please choose one answer only

1. Approached by salesperson (knocking on your door or calling you)
2. Leaflet or letter
3. Advert, on the news or online
4. Through a friend or relative/word of mouth
5. Some other way (please specify)
6. Don't know/can't remember

ASK IF Q19 = 1,2

Q20. And was this from...

Please choose one answer only

1. An energy company or a company installing the measure
2. My landlord/local authority/housing association
3. A charity/community group/other advice service
4. Someone else (please specify)
5. Don't know / can't remember

ASK IF Q19 = 1,2

Q21. You said you were approached about having measure(s) installed. How many organisations in total approached you, including the one you decided to move forward with?

If you were approached by an organisation working on behalf of another (e.g. a company working on behalf of the council), please only count that as one organisation.

Please choose one answer only

1. One
2. Two or three
3. More than three
4. Don't know

ASK ALL

Q22. Did you feel pressured at any point into having the measure(s) installed?

Please choose one answer only

1. Yes
2. No
3. Don't know

ASK ALL

Q23. At the time when you found out about the measure(s), were you receiving any of the following advice or support?

Please choose all that apply

1. Debt advice
2. Advice to keep my home warm
3. Help to switch to a cheaper energy deal
4. Advice to manage my health
5. Any other advice or support
6. None of the above

ASK IF Q23 = 1,2,3,4,5

Q24. Did the advice and support you were receiving recommend that you could get the measure(s) installed?

Please choose one answer only

1. Yes
2. No
3. Don't know

ASK ALL

Q25. Were you ever told that you were eligible to have the measure(s) installed for any of the following reasons?

Please choose all that apply

1. I live in council/local authority/housing association property
2. Someone in the household receives certain benefits/tax credits
3. Someone aged 60+ lives in the household
4. A disabled person lives in the household
5. Someone in the household has a health condition
6. Dependent children live in the household
7. The type of property I live in (e.g. with solid walls or hard to treat cavity walls)
8. The area I live in
9. I was not told why I was eligible
10. Don't know/can't remember

ASK ALL

Q26. What were your reasons for having the measure(s) installed?

Please choose all that apply

1. To save money on energy bills
2. To make my home warmer or more comfortable
3. To bring my home up to modern standards
4. The boiler/heating was broken or nearing the end of its life
5. To increase my home's value
6. To reduce energy use for environmental reasons
7. I was doing other work to my home
8. The measures were offered for free/at a reduced price
9. I was offered insulation to get new heating
10. I had no choice – landlord/building owner said that the work had to be done
11. Another reason (please specify)
12. Don't know/can't remember

ASK ALL

Q27. If you had more than one measure installed at the same time, why did you choose to have both of these installed at the same time?

Please choose all that apply

1. I was only allowed one if I also had another measure
2. I was advised that having both would be best for me
3. I asked if I could have both
4. The measures were offered for free/at a reduced price
5. Another reason [please specify]
6. Not applicable – I only had one measure
7. Don't know

ASK ALL

Q28. Were you made aware of the range of different energy saving measures you could have had installed in your home?

Please choose one answer only

1. Yes
2. No
3. Don't know/Don't remember

ASK ALL

Q29. Did you receive enough advice in advance about the measures you had installed?

Please choose one answer only

1. Yes
2. No
3. Don't know/Don't remember

ASK ALL

Q30. Did anyone involved in the installation discuss with you if the measure(s) might influence ventilation, condensation and/or mould growth in your home?

Please choose one answer only

1. Yes
2. No
3. Don't know/can't remember

ASK ALL

Q31. Who made the decision to have measure(s) installed?

Please choose one answer only

1. I made the decision solely by myself
2. I made the decision jointly with someone else who lived in the household
3. I made the decision jointly with someone else who did not live in the household

4. Somebody else made the decision (e.g. landlord, family member) (please specify)
5. Don't know / can't remember

ASK ALL

Q32. Were you given a guarantee with instructions about what to do if there were problems with the measure(s)?

Please choose one answer only

1. Yes
2. No
3. Don't know/Don't remember

The energy saving installation.

ASK ALL

Q33. Were the measure(s) installed for free, or did you pay towards the cost of installation?

Please choose one answer only

1. It was free
2. I paid towards the cost of installation
3. Don't know

ASK IF Q33 = 2

Q34. How much in total did you pay towards the cost of having the measure(s) installed?
Please provide your best estimate

Please write in the boxes provided

ENTER NUMBER

ASK IF Q33 = 2

Q35. Did you do any of the following to pay for the measure(s)?

Please choose all that apply

1. Get a loan

2. Extend my mortgage
3. Use a credit card
4. Borrow from family or friends
5. Use money from savings
6. None of these

ASK ALL

Q36. How likely would you have been to have the measure(s) installed, if there had been no help with funding?

Please choose one answer only

1. Very likely
2. Fairly likely
3. Fairly unlikely
4. Very unlikely
5. Don't know

ASK ALL

Q37. Had you considered installing the measure(s) before you found out you could get help paying for them?

Please choose one answer only

1. Yes
2. No
3. It was not my decision to make because I'm renting the property

ASK IF Q37=1

Q38. Which of the following best applied to you?

Please choose one answer only

1. I had looked into installing the measure(s) but decided against it
2. I had looked into installing the measure(s) but not taken it any further

3. I had firm plans to install the measure(s) soon
4. I was in the process of installing the measure(s)

ASK IF Q37=2

Q39. Which of the following best applied to you?

Please choose one answer only

1. I had never heard of the measure(s)
2. I had heard of the measure(s) but was not aware that it/they could be installed in my home
3. I had heard of the measure(s) but had not thought about installing it/them in my home

ASK IF Q38 = 1

Q40. Why had you decided not to have the measure(s) installed?

Please choose all that apply

1. It would have been too expensive
2. It would have been too disruptive
3. I didn't think there would be any benefit
4. I didn't know where to go for more information
5. Lack of time
6. Been put off by negative stories about energy efficiency measures.
7. Another reason (please specify)

ASK ALL

Q41. Overall, how satisfied or dissatisfied were you with the process of having the measure(s) installed?

Please choose one answer only

1. Very satisfied
2. Fairly satisfied
3. Neither satisfied nor dissatisfied

4. Fairly dissatisfied
5. Very dissatisfied
6. Don't know

ASK ALL

Q42. Thinking about the time it took to have the measure(s) installed, how did this compare with your expectations?

Please choose one answer only

1. It took longer to install than expected
2. It took less time to install than expected
3. It took the amount of time that I expected
4. I had no expectations
5. Don't know

Before you had the energy saving measures installed

ASK ALL

Q43. Before you had the measure(s) installed, which, if any, of the following stopped you from making changes to your home to reduce heating costs?

Please choose all that apply.

1. Cost of improvements being too high
2. No guarantee that it would save me money
3. Didn't trust installers/suppliers
4. Confused/received conflicting information
5. Didn't know what to do
6. Hassle/disruption of making improvements
7. Other priorities (e.g. new baby, other home improvements)
8. Landlord/freeholder wouldn't allow/hadn't been discussed
9. Had never thought about trying to reduce heating costs
10. Had already done everything I could

11. Something else (please specify)

12. None of these

ASK ALL

Q44. And before you had your measure(s) installed did you have any of these problems with your home?

Please choose all that apply.

1. Difficulty heating my home to a comfortable temperature even with the heating on

2. It was too expensive to heat my home to a comfortable temperature

3. Damp walls, floors, foundations etc

4. Rot in windows frames or floors

5. Mould/mildew

6. Condensation/steamed up windows

7. Draughts

8. Something else (please specify)

9. None of these

10. Don't know

ASK ALL

Q45. Which of the following energy saving measures have you had installed in the last 5 years?

Were any of these installed at the same time, or within 6 months of (before or after) the measure(s) we have been asking you about?

Please do not include any measures that were already in the property when you moved in.

	Installed after the measure(s) we have been asking you about	Installed at same time / within 6 months of the measure(s)	Installed up to 5 years before the measure(s) we have been asking you about
Double glazing			
Loft insulation			
Cavity wall insulation			
Solid wall insulation			
New boiler or heating system			
Heating controls (e.g. thermostat)			
Draught proofing			
Low Energy Lighting			
Don't know			

ASK ALL

Q46. As a result of having energy saving measures installed, would you say you are more or less likely to consider other energy saving installations in the future?

Please choose one answer only

1. A lot more likely
2. A little more likely
3. No difference
4. A little less likely
5. A lot less likely
6. Don't know

ASK ALL

Q47. How likely are you to recommend similar energy saving measures under this scheme to people you know?

Please choose one answer only

1. I have already recommended similar measures
2. Very likely
3. Quite likely
4. Neither likely nor unlikely
5. Quite unlikely
6. Very unlikely
7. Don't know

Result of having the measure installed

The following questions are about the impact of the energy saving measures you had installed. If you had more than one thing installed around the same time, you may find it easier to think about the impact of all these things together.

ASK ALL

Q48. How much have you benefitted from having the measure(s) installed in your home?

Please choose one answer only

1. A great deal
2. A fair amount
3. Not very much
4. Not at all
5. Don't know
6. Too early to tell

ASK ALL

Q49. And which, if any, of these things have you noticed as a result of having the measure(s) installed?

Please choose all that apply

1. My home is warmer and more comfortable
2. My home is less draughty
3. I have less condensation
4. I have less mould or mildew
5. I have lower levels of damp
6. Lower levels of illness (e.g. colds, asthma)
7. None of these
8. Too early to tell

ASK ALL

Q50. And which of these things have happened as a result of the measure(s) you have had?

Please choose all that apply

1. I spend less on my energy bills
2. My heating is switched on for less time
3. My heating is switched on for longer
4. I use electric room heaters or other additional sources of heating less often
5. I use more rooms than you did before
6. None of these
7. Don't know

ASK ALL

Q51. Has your home generally felt warmer or cooler since the measure(s) were installed?

Please choose one answer only

1. A great deal warmer
2. A little warmer
3. About the same
4. A little cooler

5. A great deal cooler
6. Don't know

ASK ALL

Q52. Since the measure(s) were installed, which of the following best describes how the temperature drops when the heating is switched off?

Please choose one answer only

1. Drops a lot more quickly
2. Drops a little more quickly
3. Drops at about the same speed
4. Drops a little more slowly
5. Drops a lot more slowly
6. Don't know

ASK ALL

Q53. Have you had any of the following problems since your measure(s) were installed?

Please choose all that apply

1. Faults with the measures requiring repair
2. Damp walls, floors, foundations etc
3. Rot in windows frames or floors
4. Mould/mildew
5. Condensation/steamed up windows
6. Draughts
7. Something else (please specify)
8. None of these problems
9. Don't know

ASK ALL

Q54. Would you say your energy bills are now...

Please choose one answer only

1. A lot higher compared with before the energy saving measures were installed
2. A little higher compared with before the energy saving measures were installed
3. No different
4. A little lower compared with before the energy saving measures were installed
5. A lot lower compared with before the energy saving measures were installed
6. Don't know

ASK ALL

Q55. Would you say the measure(s) have had an impact on the health of you and/or other people in your household?

Please choose one answer only

1. Yes – impact on physical health
2. Yes – impact on mental health
3. Yes – impact on both physical and mental health
4. No - it has made no difference

ASK IF HAD AN IMPACT ON HEALTH (Q55 = 1-3)

Q56. What type of impact have the measure(s) had on the health of you and/or other people in your household?

Please choose one answer only

1. A strong positive impact
2. Some positive impact
3. Some negative impact
4. A strong negative impact
5. Don't know

Some questions about your household

We now have some questions about your household. Understanding more about who has energy saving measures installed in their home allows the Department for Business, Energy and Industrial Strategy (BEIS) to better develop policies in the future. This research is carried out in line with the Market Research Society Code of Conduct and your answers will be completely confidential.

ASK ALL

Q57. Which of these options best describes the working status of the chief income earner in your household?

Please choose one answer only

1. Full-time paid work (30+ hours per week)
2. Part-time paid work (8 – 29 hours per week)
3. Part-time paid work (Under 8 hours per week)
4. Retired
5. Still at school
6. In full time higher education
7. Unemployed (seeking work)
8. Not in paid employment (not seeking work)

ASK ALL

Q58. Thinking back to when you had the measure(s) installed, which of these options best describes your household's total income, before taxes and any other deductions at that time?

This includes the combined earnings of the household from employment or self-employment, income from benefits and pensions, and income from other sources such as interest from savings.

If you are an individual living in a shared house, please answer with your own income

Please choose the row which most closely applies. Please choose one answer only.

Annual	Monthly	Weekly
Under £5,000	Under £400	Under £100
£5,000 – £9,999	£400 – £829	£100 – £199
£10,000 – £15,999	£830 – £1329	£200 – £309
£16,000 – £19,999	£1,330 – £1,649	£310 – £389
£20,000 – £24,999	£1,650 – £2,099	£390 – £489
£25,000 – £29,999	£2,100 – £2,499	£490 – £579
£30,000 – £34,999	£2,500 – £2,899	£580 – £679
£35,000 – £39,999	£2,900 – £3,349	£680 – £769
£40,000 – £44,999	£3,350 – £3,749	£770 – £869
£45,000 – £49,999	£3,750 – £4,149	£870 – £969
£50,000 - £74,999	£4,150 - £6,249	£970 - £1,449
£75,000 or more	£6,250 or more	£1,450 or more

ASK IF Q58 = BLANK

IF YOU DID NOT ANSWER Q58 ABOUT YOUR HOUSEHOLD'S TOTAL INCOME, PLEASE ANSWER Q59

Q59. Is your household's total income, before taxes and any other deductions, £16,000 or more a year?

Please choose one answer only

1. Yes - £16,000 or more per year
2. No - less than £16,000 a year
3. Don't know
4. Prefer not to say

ASK ALL WHO RENT OR PAY A MORTGAGE

Q60. How frequently do you pay rent, or make a payment towards your mortgage?

Please choose one answer only

1. Weekly
2. Every two weeks
3. Every four weeks
4. Monthly
5. Quarterly (every three months)
6. Annually
7. Not applicable

ASK ALL WHO RENT

Q61. In this time period, how much rent does the landlord/council/housing association charge for your accommodation, excluding water rates?

ENTER NUMBER

Don't know

ASK ALL WHO OWN

Q62. In this time period, what is the total of your payments on (all) your mortgage(s) or loan(s) - please INCLUDE any payments for endowment policies but EXCLUDE any other items

ENTER NUMBER

Don't know

ASK ALL

Q63. Is anyone in your household, including yourself, currently receiving any of these benefits?

Please choose all that apply

1. None of these
2. Universal credit
3. Job seekers allowance
4. Income support
5. Employment support allowance
6. Working tax credit
7. Child benefit
8. Child tax credit
9. Pension credit
10. Housing benefit

11. Council Tax benefit
12. Disability Living Allowance/ others
13. Other state benefits
14. Don't know
15. Prefer not to answer

ASK ALL

Q64. Does anyone in your household have any long-standing illness, disability or infirmity that limits their normal day to day activities? *By 'long-standing' we mean anything that has troubled you over a period of time or that is likely to affect you over a period of time.*

Normal day to day activities include everyday things like eating, washing, walking and going shopping

Please choose one answer only

1. Yes
2. No
3. Prefer not to say

ASK IF HAS LONGSTANDING HEALTH CONDITION (Q64 =1)

Q65. To what extent does this long-standing illness, disability or infirmity limit the day to day activities of this person? *Normal day to day activities include everyday things like eating, washing, walking and going shopping*

Please choose one answer only

1. It limits their activities all of the time
2. It limits their activities some of the time

ASK IF HAS LONGSTANDING HEALTH CONDITION (Q64=1)

Q66. Do any of these conditions or illnesses affect this person in any of the following areas?

Please choose all that apply

1. Vision for example blindness or partial sight
2. Hearing for example deafness or partial hearing
3. Mobility for example walking short distances or climbing stairs
4. Dexterity for example lifting or carrying objects, using a keyboard
5. Learning or understanding or concentration
6. Memory
7. Mental health
8. Stamina or breathing or fatigue
9. Socially or behaviourally for example associated with autism, attention deficit order or Asperger's syndrome
10. Something else (please specify)

Final questions

ASK ALL

Q67. Kantar may conduct further research on this topic in the future. Would you be happy for someone from Kantar to re-contact you and invite you to participate in this research in the next 12 months?

Please choose one answer only

1. Yes
2. No

ASK ALL

Q68. The Department for Business, Energy and Industrial Strategy (BEIS) may conduct further research on this topic in the future. Would you be happy for someone from BEIS to re-contact you and invite you to participate in this research in the next 12 months?

Please choose one answer only

1. Yes
2. No

ASK ALL WHO AGREE TO EITHER RECONTACT

Q69. Please provide a telephone number that you would be happy to be contacted on.

ENTER NUMBER

ASK ALL WHO AGREE TO EITHER RECONTACT

Q70. Please provide your name in the box below.

ENTER NAME

ASK ALL WHO AGREE TO EITHER RECONTACT

Q71. Please provide your email address in the box below.

ENTER EMAIL

ASK ALL

We would like your permission to link the information you provided in this survey with other datasets held by the Government to help us understand people's experiences of using and paying for energy. These records include but are not limited to:

Department for Business, Energy and Industrial Strategy (BEIS) includes information on energy usage in your property

Department for Work and Pensions (DWP) includes information about benefit receipt

Department of Health and Social Care (DHSC) includes high-level information about your use of NHS services (e.g. number of appointments attended, or broad category of illness being treated)

You can change or withdraw your permissions at any time by contacting the research team at energysavingsurvey@kantar.com or by calling 0800 051 0884. If you withdraw your permission, data that has already been linked will be retained but no future linking will take place.

Q72. Do you give permission for the information you have provided in this survey and home address to be passed to the Department for Business, Energy and Industrial Strategy, so your records can be identified and linked to your survey responses?

Please choose one answer only

1. Yes
2. No

ASK ALL

This is the end of the survey. Thank you for taking part in the Energy Saving Survey.

Please return the questionnaire to us in the pre-paid envelope. Where can you get more information about the survey? Telephone 0800 051 0884

Email: energysavingsurvey@kantar.com

You can contact Kantar if you have accessibility requirements, or difficulties completing the questionnaire. If it is difficult for you to complete the questionnaire, you can ask a friend, family member or carer to help you or fill it in on your behalf.

Appendix B: Survey materials

- Survey invite
- Reminder letter

KANTAR



Department for
Business, Energy
& Industrial Strategy

The Resident(s)

<ADDRESS_LINE_1>

<ADDRESS_LINE_2>

<ADDRESS_LINE_3>

<ADDRESS_LINE_4>

<POSTCODE>

Department for Business

Energy and Industrial Strategy

1 Victoria Street

London

SW1H 0ET

Date: **XX** March 2020

Our ref.: <SERIAL>

Dear Sir/Madam,

This is an invitation for your household to take part in the Energy Saving Survey, which is an official government study. This survey is about the following measures that you have had installed recently:

- [MEASURE FROM DATABASE] that you had installed in [MM/YY].
- [MEASURE FROM DATABASE] that you had installed in [MM/YY].
- [MEASURE FROM DATABASE] that you had installed in [MM/YY].
- [MEASURE FROM DATABASE] that you had installed in [MM/YY].

The research is being conducted on behalf of the Department for Business, Energy and Industrial Strategy (BEIS). We are contacting you because the measure(s) were installed as part of a government supported scheme. Kantar have been contracted to deliver this survey to help review how well the scheme is working and inform future planning and policy design. We really value your opinions and very much hope you will take part.

As a thank you for taking part you will be sent a **£10 voucher**.

To take part, please **fill in the enclosed questionnaire** and post it back to us in the pre-paid envelope provided by **Tuesday 31st March**. Alternatively, you can complete the survey online using the details below:



Go to this website: www.energysavingsurvey.co.uk

Enter your username: **123456**

Enter your passcode: **abcdef**

Anyone aged 16 or older can complete the questionnaire, as long as they have joint or sole responsibility for energy bills and were living in this property when the energy saving measures were installed. It should take up to 25 minutes to complete depending on your answers.

Participation in the research is entirely voluntary, your answers will be kept confidential and used by the Kantar and BEIS researchers, for research purposes only. An independent research agency, Kantar, is carrying out this research on behalf of BEIS. All research is carried out in line with the Market Research Society Code of Conduct. To view the Kantar Privacy Policy, please visit uk.kantar.com/surveys. Please get in touch using the contact details below if you have any difficulties accessing this.

If you have any questions, accessibility requirements, or difficulties completing the survey please contact Kantar using the details below. You can ask a friend, family member or carer to help you.

Thank you in advance for your participation in this important research.

Yours sincerely,



Andrej Miller

Head of ECO and Warm Home Discount,

Energy Efficiency & Local Directorate,

BEIS

To talk to someone about the study or ask not to be contacted further, please contact Kantar between 9am and 5pm, Monday to Friday on:

✉ Email: energysavingsurvey@kantar.com ☎ Tel: 0800 051 0884

To confirm the authenticity of this research you can contact BEIS on
beisecoteam@beis.gov.uk

The Resident(s)

<ADDRESS_LINE_1>

<ADDRESS_LINE_2>

<ADDRESS_LINE_3>

<ADDRESS_LINE_4>

<POSTCODE>

Department for Business,

Energy and Industrial Strategy

1 Victoria Street

London

SW1H 0ET

Date: XX March 2020

Our ref.: <SERIAL>

Dear Sir/Madam,

We recently invited your household to take part in the **Energy Saving Survey**, an official government study about the following measures that you have had installed recently:

- [MEASURE FROM DATABASE] that you had installed in [MM/YY].
- [MEASURE FROM DATABASE] that you had installed in [MM/YY].
- [MEASURE FROM DATABASE] that you had installed in [MM/YY].
- [MEASURE FROM DATABASE] that you had installed in [MM/YY].

If you haven't yet completed the survey, we would be grateful if you could respond by **Friday 10 April**.

The research is being conducted on behalf of the Department for Business, Energy and Industrial Strategy (BEIS). We are contacting you because the measure(s) were installed as part of a government supported scheme. We really value your opinions and very much hope you will take part.

Why take part in this survey?

- Your views will help review how well the scheme is working and help future planning and policy design
- It's quick – it should only take around 25 minutes to complete
- As a thank you for taking part you will be sent a **£10 voucher**.

Please **fill in the enclosed questionnaire** and post it back to us in the pre-paid envelope provided. Alternatively, you can complete the survey online using the details below:



Go to this website: www.energysavingsurvey.co.uk

Enter your username: 123456

Enter your passcode: abcdef

Anyone aged 16 or older can complete the questionnaire, as long as they have joint or sole responsibility for energy bills and were living in this property when the energy saving measures were installed.

Participation in the research is entirely voluntary, your answers will be kept confidential and used by the Kantar and BEIS researchers, for research purposes only. An independent research agency, Kantar, is carrying out this research on behalf of BEIS. All research is carried out in line with the Market Research Society Code of Conduct. To view the Kantar Privacy Policy, please visit uk.kantar.com/surveys. Please get in touch using the contact details below if you have any difficulties accessing this.

If you have any questions, accessibility requirements, or difficulties completing the survey please contact Kantar using the details below. You can ask a friend, family member or carer to help you.

Thank you in advance for your participation in this important research.

Yours sincerely,



Andrej Miller

Head of ECO and Warm Home Discount,

Energy Efficiency & Local Directorate, BEIS

To talk to someone about the study or ask not to be contacted further, please contact Kantar between 9am and 5pm, Monday to Friday on:

✉ Email: energysavingsurvey@kantar.com ☎ Tel: 0800 051 0884

To confirm the authenticity of this research you can contact BEIS on beisecoteam@beis.gov.uk

Appendix C: Weighted sample profile

	Population	Weighted survey sample
Region		
E12000001 North East	4.5%	4.2%
E12000002 North West	14.9%	13.2%
E12000003 Yorkshire and The Humber	11.9%	11.6%
E12000004 East Midlands	6.8%	7.9%
E12000005 West Midlands	8.9%	9.2%
E12000006 East of England	6.8%	7.0%
E12000007 London	6.6%	4.8%
E12000008 South East	8.3%	8.7%
E12000009 South West	8.7%	9.3%
S99999999 Scotland	16.9%	17.8%
W999999999 Wales	5.7%	6.4%
Urban / Rural		
Conurbation (E/W) / Large Urban (S)	38.4%	34.9%
City and town (E/W) / Other urban (S)	37.5%	39.8%
Rural (E/W) / Small town or Rural (S)	24.1%	25.3%
Housing tenure		
Owner occupied	61.9%	63.5%
Private rental	13.8%	12.8%
Social housing	24.3%	23.7%
Property type		
Flat/maisonette	23.4%	20.9%
Bungalow	13.8%	14.7%

	Population	Weighted survey sample
Detached	19.0%	20.4%
Terraced	23.7%	22.5%
Semi-detached	20.1%	21.4%
Other (mobile homes)	0.1%	0.1%
Index of Multiple Deprivation Decile		
1	18.5%	16.3%
2	13.0%	11.8%
3	10.8%	11.2%
4	10.4%	10.7%
5	10.0%	11.3%
6	9.0%	9.2%
7	8.3%	9.3%
8	7.7%	7.2%
9	6.5%	6.7%
10	5.9%	6.5%
Obligation and Category		
ECO2t CERO	41.8%	42.7%
ECO2t AW Standard	23.8%	21.0%
ECO2t AW Flexible	3.1%	3.4%
ECO3 AW Standard	26.0%	27.4%
ECO3 AW Flexible	6.7%	7.2%
Type of installation		
Boiler	28.4%	28.8%
Cavity Wall Insulation	40.8%	41.1%
Loft Insulation	21.8%	21.4%

	Population	Weighted survey sample
Microgeneration	0.1%	0.02%
Solid Wall Insulation	10.1%	10.9%
Windows and Doors	0.2%	0.1%
Other heating	21.1%	19.7%
Other insulation	6.5%	6.4%
Date of installation		
Apr-Jun 2017	6.9%	6.8%
Jul-Sep 2017	10.1%	9.4%
Oct - Dec 2017	10.9%	10.7%
Jan-Mar 2018	12.4%	11.6%
Apr-Jun 2018	14.1%	14.3%
Jul-Sep 2018	15.4%	15.7%
Oct-Dec 2018	3.1%	3.6%
Jan-Mar 2019	7.1%	6.6%
Apr-Jun 2019	7.6%	8.1%
Jul-Sep 2019	8.9%	10.2%
Oct-Nov 2019	7.0%	7.0%
Number of measures installed		
1	75.2%	75.4%
2	20.3%	20.4%
3	4.1%	3.8%
4	0.4%	0.3%

Appendix D: Variables used in sensitivity analysis

The key variables included in the sensitivity analysis:

- Q57: Working status
- Q58: Income
- Q63: Benefits
- Q64: Illness / disability
- Q6/Q7: Age of household (number of people in the household and presence of children)
- Q17: After the measures(s) were installed, how easy or difficult was it to heat your home to a comfortable temperature?
- Q41: Overall, how satisfied or dissatisfied were you with the process of having the measure(s) installed?
- Q47: How likely are you to recommend similar energy saving measures under this scheme to people you know?
- Q48: How much have you benefitted from having the measure(s) installed in your home?
- Q54: Would you say your energy bills are now...(a lot higher, a little higher, no different, a little lower, a lot lower)
- Q3: Tenure
- Date of installation

The following sub-groups were included in the sensitivity analysis:

- Measure installed
- Boiler
- Solid wall insulation
- Cavity wall insulation
- Loft insulation
- Underfloor insulation
- Other insulation
- Microgeneration
- Windows and doors

- Other heating
- NET: Any insulation
- Obligation
- ECO2t: CERO
- ECO2t: AW Standard
- ECO2t: AW Flexible
- ECO3: AW Standard
- ECO3: AW Flexible
- Region
- England
- Scotland
- Wales

Appendix E: Qualitative topic guide

1. Introduction - 2 minutes

Section aim: Introduce research, reassure about confidentiality and set tone of discussion

- **Thanks & Introduction:** Introduce yourself and Kantar Public Division – independent research agency.
- **About the client:** Research on behalf of BEIS – department responsible for energy saving policy.
- **Purpose of discussion:** Explain that they have been selected to participate because of their interest at the end of a recent survey about energy saving. The purpose is to discuss in more depth their experiences of the ECO scheme and any energy saving measures installed and to understand further the impact. Emphasis will be on the ECO scheme.
- **[If applicable] Photo task:** If they have consented, explain that this will be discussed further at the end of the interview for useful photos for them to share. Photos will be shared with BEIS. Explain that if they would not like photos to be identifiable, we can work with them to accommodate this.

Researcher note: throughout the interview, listen out for opportunities for photographs. There is a list of examples in Section 7, however please consider anything which will illustrate the decision making process or impact of ECO measures.

- **How their information will be used:** Information will be used for this research only and we will delete all identifiable information a year after the end of the research, in line with GDPR. Their views and experiences will be looked at together with views of others taking part in interviews across the country. These views will be analysed by theme then a report written based on those themes. This report will include anonymised verbatim quotes and be published on the gov.uk website.
- **Ethical considerations:** Confidential research, voluntary participation. BEIS will not know that they have taken part and their participation in the research will in no way impact any future contact they may have with BEIS.
- **Duration:** 45 - 60 minutes.
- **Incentive:** £40 as a thank you for taking part in the research plus £10 for taking part in the photo task.
- **Reassurances:** No right or wrong answers - we are simply asking for people's views.
- **Reminder about audio recording:** the discussion will be recorded so that we can accurately capture their views, and so researchers can listen back when analysing the data. The recorder is encrypted and only the research team will have access to the recordings. The audio from a small number of interviews will be shared with BEIS,

where they will be listened to internally only. They will be stored for up to a year, and will be deleted afterwards in line with GDPR.

- **Any questions/concerns?**
- **Start recording:** acknowledge consent for being recorded.

2. Background and context - 10 minutes

Section aim: to warm participants up to the discussion and gain background information on the participant, their home and attitudes towards household finances and energy saving.

- Introduction and thoughts about their home
 - Please can you tell me a little bit about your home [spontaneous]
 - Who you live with; the property; how long they have lived there
 - How do you feel about your home
 - What you looked for in a property to buy/rent
 - What aspects of your home are most important to you e.g. looking nice, location, being fit for purpose, affordability
 - How they use home, both pre and post COVID-19 i.e. time spent at home, type of activities
- Measures and heating their home
 - What measure(s) have you had installed, and when

Researcher note: refer to information on profile sheet

- How do you currently heat your home
 - Compare with before the measure
- How often do you have the heating on – reasons
 - Probe for seasonal changes
 - Are you conscious of how much you have the heating on or it is not something you think about so much
- **What do you need from your home in terms of heating? Spontaneous, then ask to prioritise:**
 - Managing or reducing cost of bills
 - Environmental motivations
 - Keeping the home comfortable

- Usage information i.e. understanding how you use energy in home

- Attitudes towards household finances
 - How do you approach household finances e.g. is there a method or is it not something they think about as much
 - How important or otherwise is saving money on bills for you?
 - Explore ways they do this, e.g. monitoring bills, spreadsheets, limiting heating use
 - **Are household bills and finances something that worry or concern you – reasons**

- Attitudes towards energy and the environment
 - What comes to mind when you think about environmental issues?
 - What about in the home? E.g. recycling, reusing things, thinking about measures, growing vegetables etc.
 - Views on energy saving and energy efficiency generally and in the home
 - Are they important or less important to you when thinking about your home?

3. Knowledge of ECO scheme - 5 minutes

Section aim: to understand participant's awareness of the ECO scheme and attitude towards government schemes of this kind

- Spontaneous awareness of ECO scheme
 - How would you describe it?
 - Understanding of who operates ECO scheme? i.e. a government scheme
 - Had you heard of ECO before the survey/today?

Researcher note: Read out description of ECO scheme... "The Energy Company Obligation (ECO) is a government energy efficiency scheme in Great Britain to help reduce carbon emissions and ensuring every household is able to keep their home warm by obliging large energy suppliers to promote energy saving measures. The scheme began in April 2013, and over time it has been amended. Ofgem administers the scheme on behalf of the Department for Business, Energy & Industrial Strategy.

- Understanding measures installed were part of this scheme
 - Where did understanding come from?
 - Were they aware of their eligibility for the scheme?

- Attitudes towards scheme
 - Sentiment e.g. positive, negative
 - Factors influencing sentiment. Refer back to attitudes discussed in Section 2 e.g. cost saving, environmental impact
- Views on government involvement
 - Spontaneous views towards Ofgem and BEIS
 - **Whether government involvement influences trustworthiness**

4. Energy saving measure journey - 20 minutes

Section aim: to understand decision making at each step of the journey to having measure(s) installed and immediate impacts

Researcher note: Please annotate a journey map throughout the interview, to use and refer back to throughout the interview. Throughout the rest of the guide: discuss the participant's experiences of having measures installed. Establish rough timings for each stage and record this on the map. Fully explore all participant can remember throughout the process, including key points of contact, what worked well / less well, how they felt at each point of contact – and record on the map.

4a. Triggers for thinking about the measure(s)

- *Researcher note: probe for each measure if applicable or understand process if multiple measures installed all at the same time, Distinguish between ECO and other measures where applicable. How did they hear about the measure(s)*
 - **Who did it come from**
 - What was this experience like
 - **How did they feel about the interaction**
 - [Especially for renters] Describe level of control over the situation
- What first made you consider getting the measure(s)
 - E.g. friends/family, information from an energy provider, information from local council/BEIS
 - If local council: were they referred and if so why

- Were they thinking of getting the measure before hearing about the scheme
- **Why they were interested**
- Any research undertaken? Where did you look for information about the measure(s) e.g. online, installation company, friends and family
 - **How useful were these sources of information**
 - Which were most trustworthy
- What were your initial impressions of the idea of getting measure(s). Probe using responses from Section 2 e.g. cost saving, environment, etc.
 - Overall positive/negative – reasons
 - What they expected the benefits to be
 - Any concerns they had
- [If multiple measures] Explore any differences in experience for each measure

4b. Deciding to have the measure(s)

Researcher note: probe for each measure

- Who made the decision to get the measure
 - Who was involved in the decision/did anyone help in the decision making process
 - If not involved, how did they feel about the decision
- **Were they offered a range of options for the ECO measure**
 - How did they find this out, e.g. from someone else/company or own research
 - If many, how did they decide on which option to go for
 - What were the main considerations – [spontaneous listen] cost, comfort, health, environment
 - If few options, would they have wanted more information or more choice
- **What was the most important reason you decided to have the measure installed [spontaneous]**
 - **Did they pay towards it? Would they have been able/willing to contribute if free. If they did pay, would they have been willing to pay more and if so how much?**
 - Were there any other factors or reasons?
 - Probe: environment (did you know the measure was better for the environment)
 - Probe: cost (did you think it would save money on bills)

- Probe: comfort (did you hope it would make your house more comfortable)
- Probe: health (did you think that it would benefit your health)
- Sources of information accessed e.g. online, installation company, friends and family
 - Have you kept any materials?
- How easy or difficult was the decision
 - How long did it take to decide
- Did you feel confident in the decision
- [If multiple measures] Explore any differences in experience for each measure

4c. Measure(s) installation experience

Researcher note: probe for each measure

- What was your experience of having the measure(s) installed [spontaneous]
 - What were your expectations of what it would be like
 - How long did it take
- Who installed the measure
 - Did you trust them to do a good job. What made them trustworthy?
- Did anything work well as part of this step in the process
- Did you have any concerns or difficulties
- Is there anything you would improve about the process
- **While the measure was being installed, what impact did this have on your day to day life**
 - Did it change anything about your day to day life
 - How disruptive or otherwise was it
- **Did you receive any information about what to do in case of any issues with your measure?**
 - **What information do you have?**
 - Were you given information about this – did it feel clear
 - Who gave you this information – form the information came in (e.g. writing)
 - Did you receive contact details in case of any issues
 - Did you ask for it or was it given without prompting
- [If multiple measures] Explore any differences in experience for each measure

4d. Experiences of having the measure(s)

Researcher note: probe for each measure

- What are your perceptions of the measure(s) now?
 - Has it been a good thing or a bad thing for your household? – reasons
 - Is it working as it was meant to/described to you?
 - How has it compared to your expectations?
 - [If multiple measures] are your perceptions more or less positive for some compared to others?

5. Reflections on impact of the measure(s) - 10 minutes

Section aim: to understand overall reflections on having the measures installed and exploring high level impacts

- Since having the measure installed, what impact has it had on your home?
 - **Do you heat your home differently?**
 - The measure will make your house more energy efficient, is this important to you
 - **Have you noticed any changes in the comfort of your home (e.g. warmer house)**
 - **Have you noticed any changes to your bills**
 - **Have you noticed any differences in your wellbeing/wellbeing of those in your household**
 - **Have you noticed any changes to your health, either mental or physical/ health of those in your household**
 - **Have you noticed any negative impacts**
 - E.g. measure not working properly, mould etc.
 - **[If low impact] Why is that?**
 - What could have made it have a bigger impact
 - How different is this your expectations

- Impact of measure on participant's behaviour and attitudes
 - Has it changed the way you think about energy saving measures – either positively or negatively
 - Has it changed the way you monitor bills or household finances - feelings
 - Have you sought to understand the impact of the measure on your property's value
 - Have there been any unexpected impacts?

- Reflections between short term and longer term impacts
 - Explore any expectations or 'metrics for success' in future e.g. earning back installation costs, increasing value of property, etc.
 - Explore who will benefit e.g. them, future tenants, owner, etc.

- Overall reflections on the impact of measures
 - What has been the biggest impact of the measure(s)
 - How worthwhile do you feel the measure(s) have been
 - **[If CERO/contributing] Was it/they worth the money – why**

6. Future behaviour - 10 minutes

Section aim: to understand the extent to which having the measure installed has changed behaviour or impacted on thoughts about future behaviour, e.g. advocacy, willingness to have more measures.

- **Whether likely or not to install future energy efficiency measures**
 - **Probe: with or without subsidy? How much would they be willing/able to contribute?**
 - Factors influencing e.g. positive/negative impact from previous experience, cost of future measures, knowledge/understanding of energy saving measures
 - Explore any perceived trade off between disruption, impact, and cost of installation [if applicable]

- Level of research /planning done into energy efficiency measures post installation

- Drivers of research e.g. desire to reduce costs further, advice from installation company, information from council/landlord
- [For tenants] Would you ask landlord for installation of further measures?
 - In this property
 - In future properties
 - What would prompt this e.g. comparison to current experience of living in property with measure(s)
- How would you describe a scheme to your neighbour
 - Factors to weigh up in decision, experience of installation, impact (short and longer term)
- **Would you recommend friends and family install ECO measure(s)? Why? Why not?**

7. Close and photo task - 3 minutes

Section aim: to capture any final thoughts and wrap up the discussion

- Final thoughts / comments around BEIS ECO scheme. Advice to BEIS on future energy efficiency policy
- Explain photo task [below]
- Explain incentive process (£40 for interview, £10 for photo task)
- Reminder around audio recording, confirm consent to share with BEIS or not
- Thank and close

Photo task

Researcher note: Use the below information to explain the photo task to participants who have opted-in. Please guide participants on which photos would be most appropriate, and send an email follow-up from energysavingsurvey@kantar.com with the below instructions

Dear [participant name]

You mentioned that you would be happy to provide photos to Kantar to show some of the impacts or decision making. By providing photos you will be helping our analysis and understanding of everything you've told us today. We'd like to see at least four photos [RESEARCHER TO SELECT] of:

- Photo of the measure(s)
- Before photo of the measure(s)
- Any information they received about the measure, leaflets etc.
- Any sources of information e.g. websites they looked at
- Any impacts they can show evidence of e.g. warmer home
- A photo of their overall feelings about the measure
- Any negative impacts of the measure they have experienced

If you are worried about personal information being identifiable, we're happy for you to blur or cover any personal information or Kantar can help you do this if you would like.

The photos may be used for the following purposes, if you are not happy with these uses please let us know.

- Internal BEIS reports
- Internal presentations with BEIS or other Government departments
- Photos which are not personally identifiable may be used in public reports

Please take photos and send them with a caption describing the photo to energysavingsurvey@kantar.com within three days [by XX/XX/2020].

As a thank you for sharing the photos, you will receive an additional incentive of £10 on top of your £40 interview incentive.

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If you need a version of this document in a more accessible format, please email enquiries@beis.gov.uk. Please tell us what format you need. It will help us if you say what assistive technology you use.