



**Self-reporting on domestic energy use:  
perceptions, behaviour and influencers**

**WholeSEM Survey Part I:**

**Descriptive Report**

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## A. Introduction

This survey was conducted as part of Whole Systems Energy Modelling Consortium (WholeSEM) project (EP/K039326/1). The survey was addressed to domestic end users of energy across the UK. The rationale for focusing on households was that energy use by households in the UK accounts for about 1/3 of energy demand (DECC, 2013).

Therefore, understanding household energy demand emerges as an imperative for climate change, noting at the same time that there are serious gaps in understanding the ways in which people use energy. Data is scarce and fragmented while concerns about the theoretical assumptions and methods used are often raised with regards to existing data. This large-scale survey was selected as a starting point.

The survey was run using Ipsos MORI's online panel of 300K+ respondents in the UK and the sample size was  $N=1,004$  participants. The aim in the sampling process was to mirror the characteristics of the UK adult population, filtered by tenure type (while controlling for other demographic variables).

### A.1 Why survey?

The survey design was inspired by existing research and issues. Firstly, it has been found that energy consumers often misperceive the amount of energy consumed in their daily practices. Therefore, (mis) perception has been the target of much domestic energy use research, as misperception of energy consumption or saving may be a barrier to 'meaningful' change. For example, Costanzo, Archer, Aronson, and Pettigrew (1986) found that many consumers thought that turning off lights would save as much energy as using less hot water. Therefore, the survey included a section on perceptions related to energy use.

Secondly, there is an ongoing debate as to how to deal with managing energy futures, the tension being between focusing on energy reduction or energy efficiency. This was also inspired by the issue of the rebound effect (Herring & Roy, 2007). Therefore, the survey included a section related to time-slot use and efficiency as well as monetary, energy reduction and energy efficiency criteria for making decisions related to energy use.

Finally, the survey took into account the discussion on the uptake of technological innovations and contingencies as user or manufacturer controlled interventions to manage carbon futures. In this line, it took into account existing surveys to interrogate whether demographic variables (age, education, employment, income, tenure, household type and composition) matter for market entry (purchase) and adoption intensity/consistency (numbers purchased and consistent use) of technological innovations. For

example, Mills and Schleich (2010) found that education and profession are not proxies for entering the market of Compact Fluorescent Lights (CFLs), while employment status and income seem to correlate with adoption intensity. The presence of children mattered for entry but not for adoption intensity of CFLs. Therefore, the survey sought to identify associations between demographic variables and uptake of innovations *inter alia*.

Overall, the survey questions asked about the following (see also Appendix 2):

- Type of home (detached, semi-detached, flat, etc.) and household (single person, couple, two or more non-family adults, etc.)
- Household composition (how many adults, children)
- Levels of responsibility vis a vis paying energy bills and making energy-related decisions
- Perceptions of energy use, including justifications for these perceptions
- Actual use (time-slot based) and intention to change
- Energy saving, including the meaning(s) of and reason(s) for energy saving
- The uptake (or not) of new technologies and energy saving tips, including justifications for this use and intention to change
- Their practices related to the lifecycle and replacement of domestic appliances, including justifications for these practices and intention to change
- What and who influences energy related decisions and purchases
- Who is responsible for energy saving

## B. Method

### B.1 Survey

The study was conducted using Ipsos MORI's (Appendix 1) online panel in the UK. The final sample size was be N=1,004 adults aged 18-65. The questionnaire was estimated at 35 minutes long and will be split into two distinct parts (the first part was a straight forward quantitative survey of 20 minutes, the second a Discrete Choice Model<sup>1</sup> module of 15 minutes). It was assumed that the respondents would need to have sole or joint decision making on energy supplier in their household but the filter demographic aimed for was a representative sample based on tenure type in the UK. It was assumed that 90% of respondents would qualify for the study. Quotas were set on age, gender and region across the UK. It was assumed that 100% of those completing the first part will be eligible for the second part. To get to N=750 completes on the second part of the study, we estimated that we would need N=1,000 on the first part (i.e. 25% fallout). This was based on the second part being conducted 1 month after the first part.

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<sup>1</sup> This report only covers part 1 of the survey.

Finally, all fieldwork was conducted online amongst GB adults aged 18-65. Ipsos MORI's online consumer panel was used for the study. Fieldwork for part 1 took place between 25th June 2015 and 6th July 2015. Fieldwork for part 2 took place between 4th August 2015 and 27th August 2015. There were 1004 completes at part 1. All those who completed part 1 were invited to complete part 2, which ultimately closed with 721 completes. The median completion timings were 19 minutes for part 1, and 10 minutes for part 2. At both stages non-response reminders were sent out during the fieldwork period. At part 1 broad quotas were applied on age, gender, region, working status and tenure in line with the profile of the target population. No quotas were applied at part 2. At part 1 raking was used to correct any imbalances in the profile achieved. The variables that were weighted on were age, gender, region, number of people in household, education, income, working status and tenure. For part 1 the panellists received 100 points, and for part 2 they received 75 points. The point's allocation is based on the estimated survey length and once enough points have been accumulated panellists can redeem these points for different incentives.

Standard quality control checks were run at both parts of the survey on completion time, straight lining on grid questions, IP address verification (there should only be one participant per household), and verifying panel information (e.g. making sure that the gender and age information that they provide is consistent with the information previously provided). The Survey design was handled by the University of Surrey and University College London, as was all reporting and analysis. The survey was entered in SPSS, which was also used to analyze part 1.

## **B.2 Demographics**

The starting point for recruiting participants was that they matched the tenure status of the UK population. This was represented below:

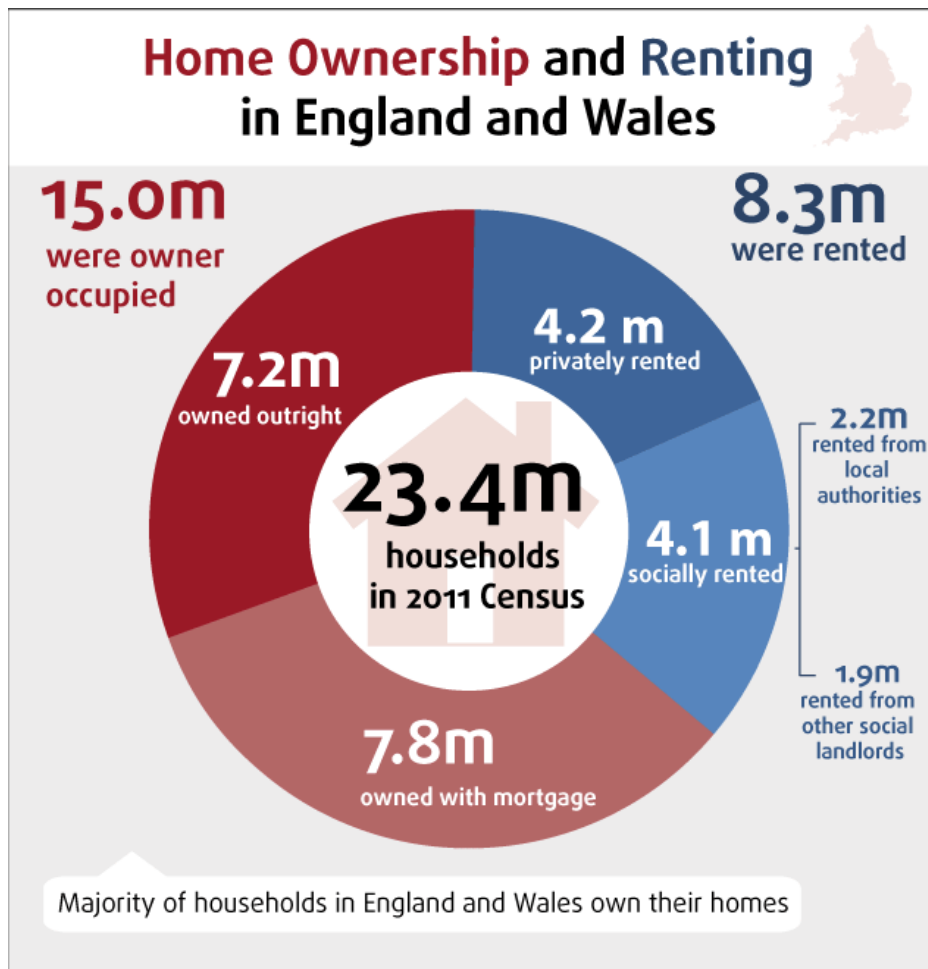


Figure 1. **Home ownership and renting in England and Wales – Detailed Characteristics**

[Part of 2011 Census, Detailed Characteristics on Housing for Local Authorities in England and Wales Release](#)

Released: **28 June 2013**

In the survey,

- 39% of respondents owned their house on a mortgage
- 21% owned their house outright
- 25% rented from a private landlord
- 31% of houses were semi-detached, 25% terraced, 21% flats
- 43% lived in accommodation with 3 bedrooms
- 22% of respondents were 30-49 years old
- Respondents lived in the house 11-24 years (31%) or 1-5 years (30%)
- Respondents were mainly couples (48%)
  - 70% no children under 16
  - 25% with dependent children

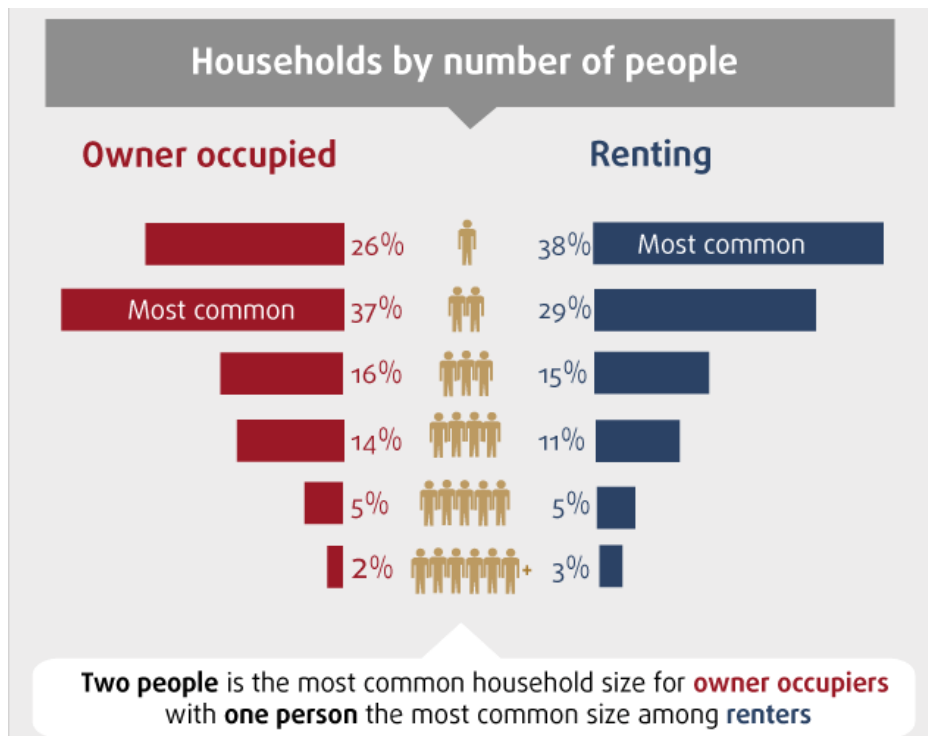


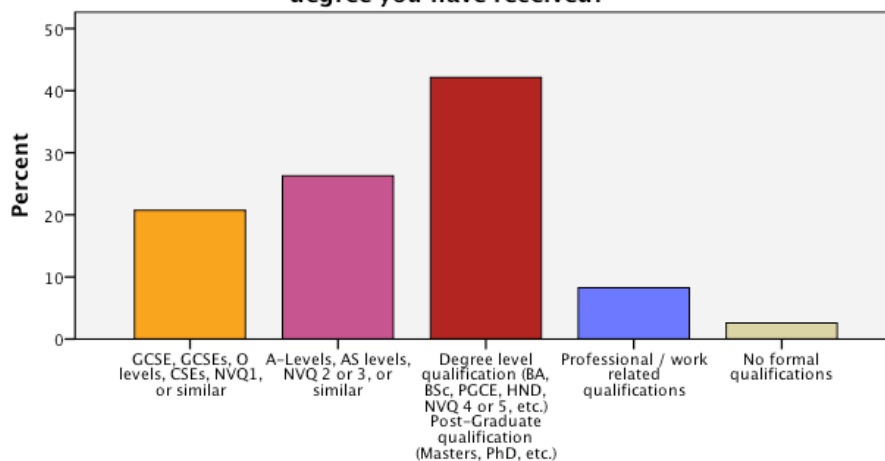
Figure 2. **Home ownership and renting in England and Wales – Detailed Characteristics**

[Part of 2011 Census, Detailed Characteristics on Housing for Local Authorities in England and Wales Release](#)

Released: **28 June 2013**

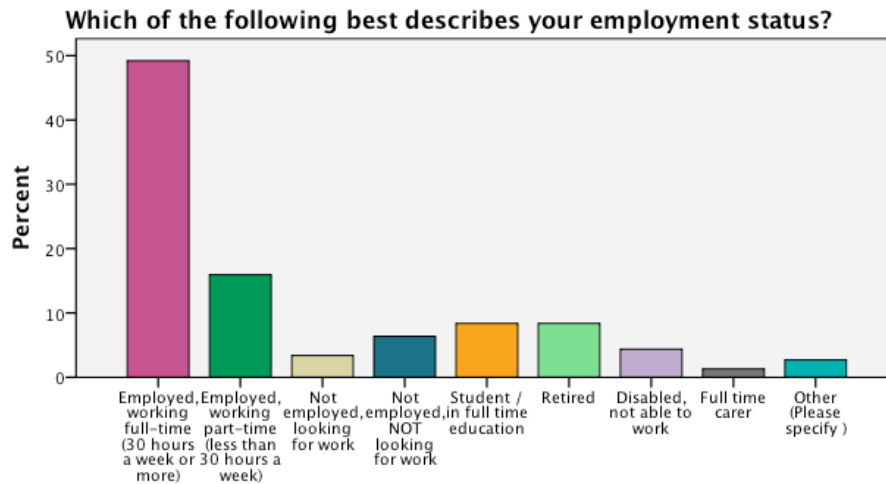
- National quotas were applied for: gender (men (49%) and women (51%), age and region.
- 42% of respondents were degree holders (national average 38%, ONS 2013)

**What is the highest level of school you have completed or the highest degree you have received?**



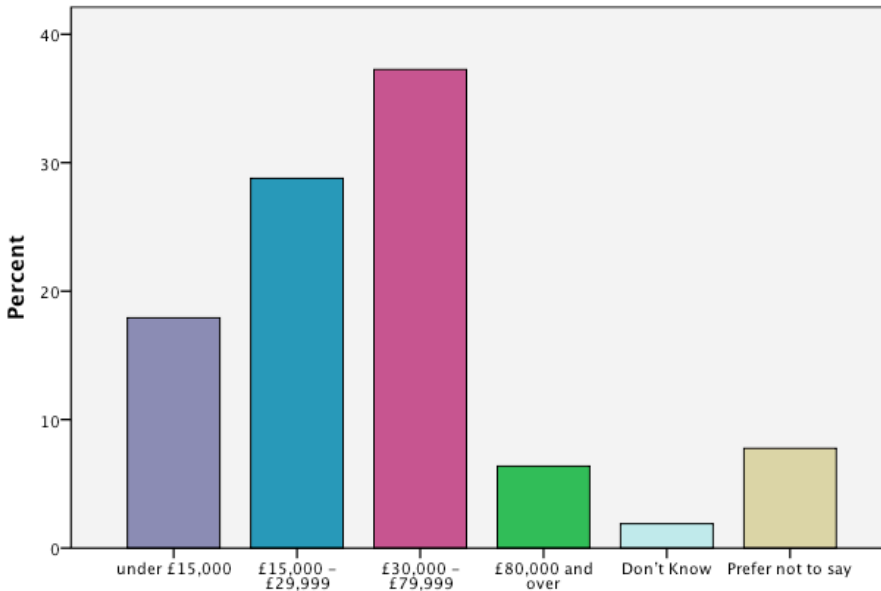
- 65% were in employment





- 37% £30,000 - £79,999 total combined income, while the majority of respondents earned £29,999 and under.

**How much total combined income did all members of your HOUSEHOLD earn in 2014?**

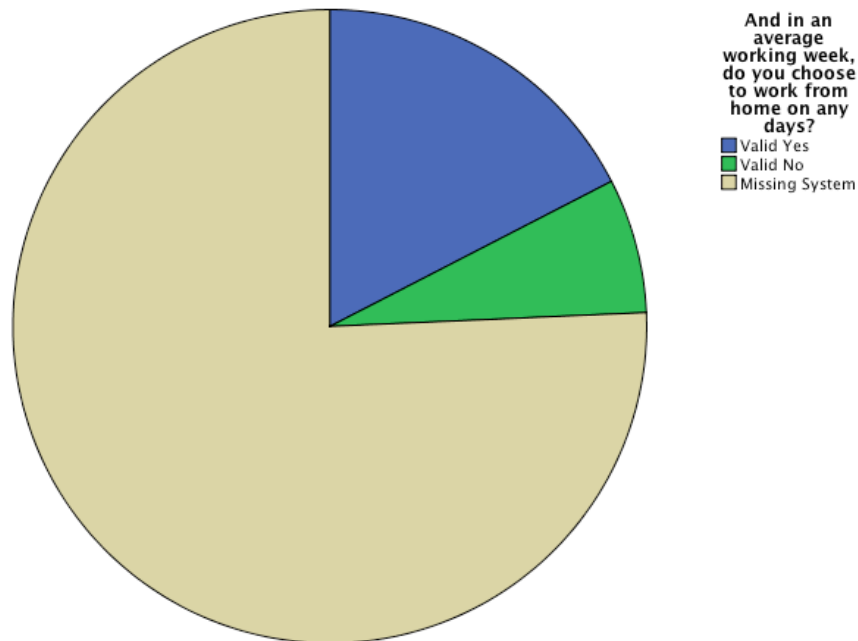


- 60% responsible for paying the bills
- 56% responsible for making decisions about suppliers

Another variable which was considered important for being a marginal category that could account for household energy use that goes unnoticed was identifying if respondents can and do work from home, which could potentially add to their domestic energy consumption. It was found in the sample that

- 37.3 % of those who are employed can work from home and 71.7% of these choose to do so (1-2 days per week, 5-8hrs per day)
  - Thus, 17.4% of all respondents work from home some times

And in an average working week, do you choose to work from home on any days?...



## C. Analysis

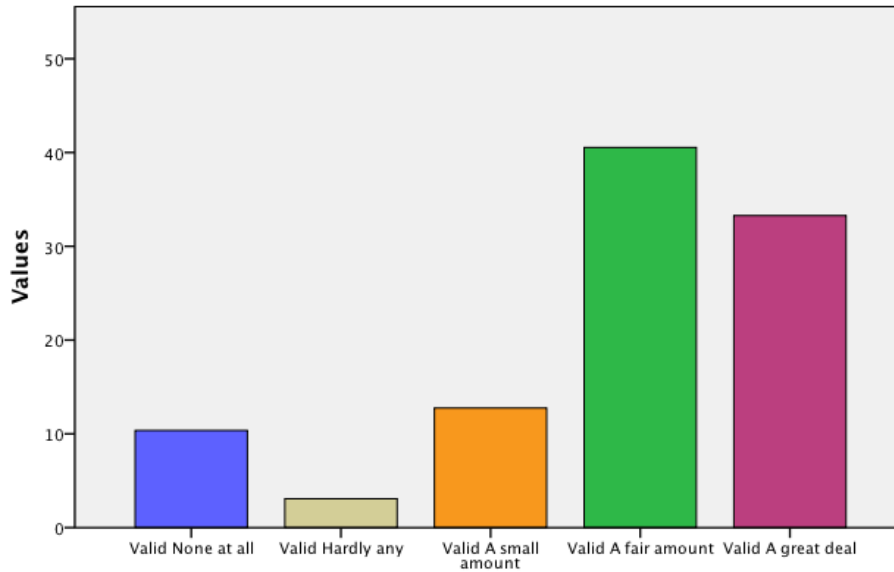
In this section a mapping of the data will be first attempted by presenting the percentage distribution of respondents by thematic section corresponding to the survey questionnaire. At a second stage associations between key variables will be presented.

### C.1 Frequencies

#### C.1.1 Perceptions of energy use and Justifications

Respondents were asked how much energy they thought a number of activities consumed in total in their home. Activities included: laundry, heating, cooking, personal hygiene, cleaning the dishes, food conservation, entertainment, charging devices, lighting and working from home. Heating was the most energy expensive activity, scoring the highest percentage in the 'A great deal' category (33%).

**Running the heating (either using central heating or a space heating appliance) :...**



It was followed by Laundry (53%), Cooking (49%) and Personal hygiene (46%), which featured high in the 'Fair amount' category of consumption. Respondents commonly attributed a 'Small amount' of consumption to Cleaning dishes, Food conservation, Entertainment, Charging devices and Lighting, and 'none at all' to Working from home (74%).

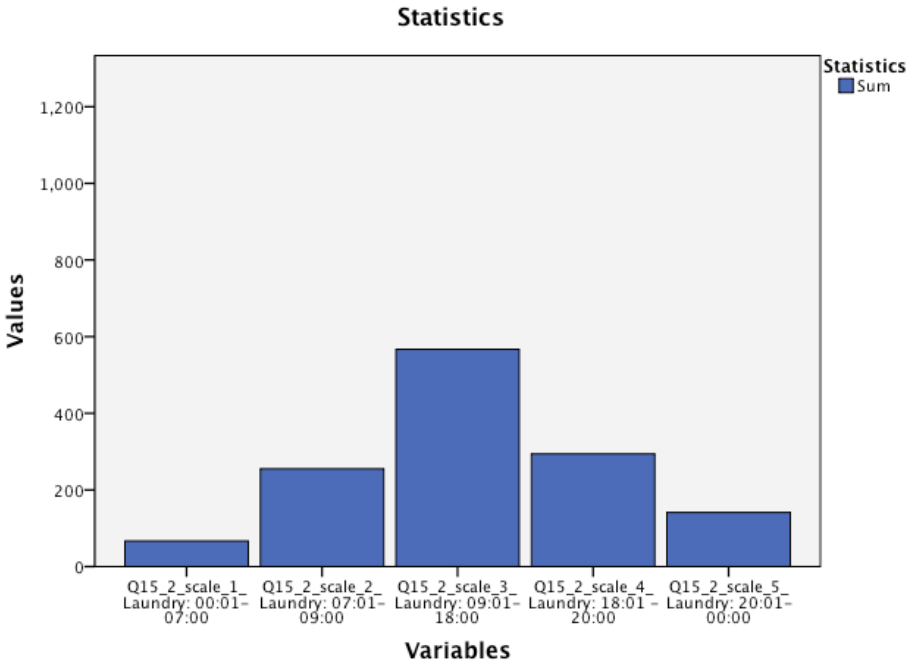
Respondents were then asked to choose from a list of options (including cost of energy source, their bills, duration and frequency of use, energy intensity, information and instinct) to account what they based the energy consumption attributions they made for the above activities. With the exception of heating which is mainly based on 'their bills', (42%), it is interesting to note that they based the above on instinct (32%) and to a lesser extent on duration (23%) and frequency (21%).

### **C.1.2 Time-slot use**

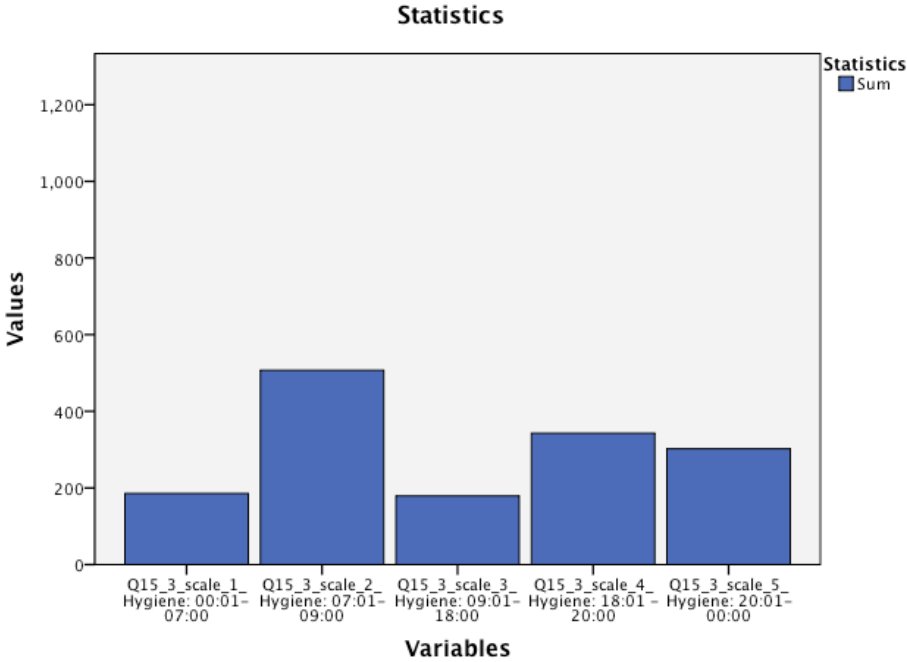
Respondents were asked a number of questions related to the time certain activities take place in their homes, whether they would opt for off-peak use or off-peak only use providing there incentives related to efficiency or cost reduction. At each stage only respondents for whom the questions were applicable based on their responses were moved on to the next question. For example only respondents stating that they do an activity at peak time were moved on to the question on whether to shift or not and only respondents stating that that they do an activity at both peak and off-peak times were moved on to the question to shift to off-peak time only or not. Respondents could select up to a maximum of 3 time periods for each activity.

Time periods were divided as follows, to match the time slots represented in UKTIMES: 00:01 – 07:00, 07:01 – 09:00, 09:01 – 18:00, 18:01 – 20:00, 20:01 – 00:00. Peak times were set from 07:01 to 20:00 and off-peak times were set from 20:01 – 07:00 in the morning. The following activities were primarily done at peak times:

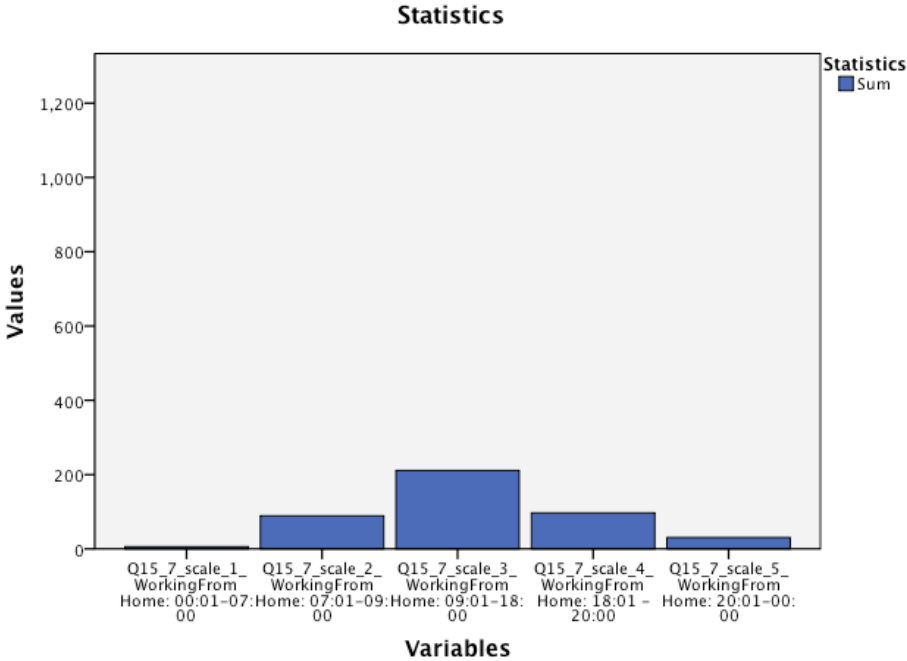
**Laundry**



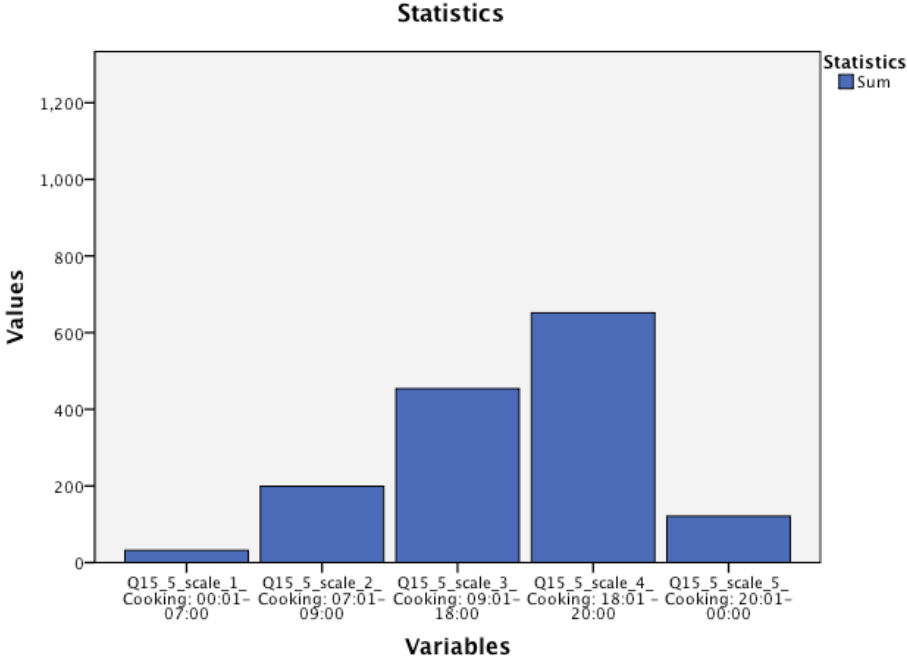
**Personal Hygiene**



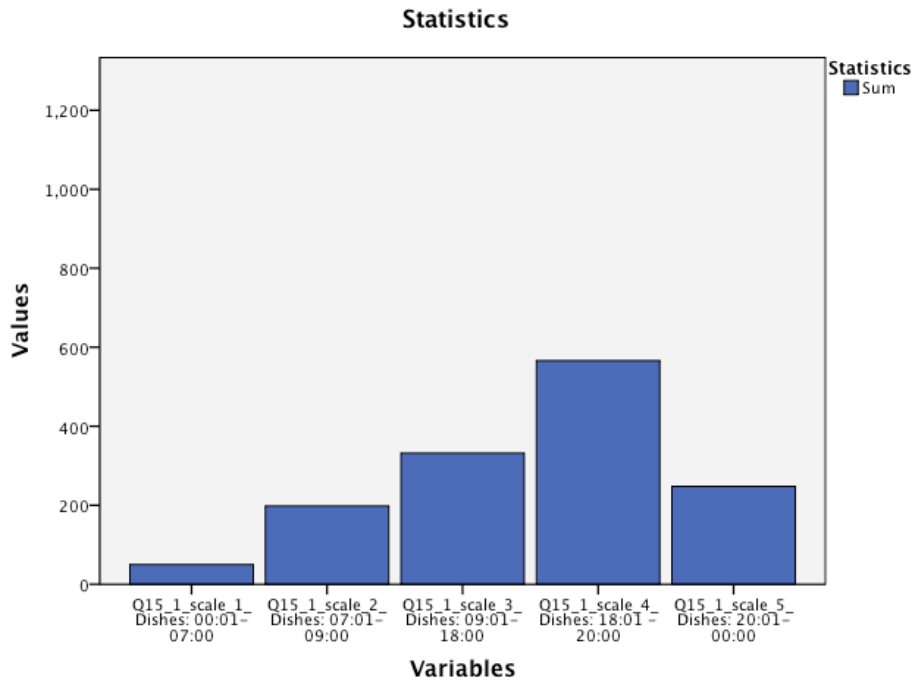
### Working from home



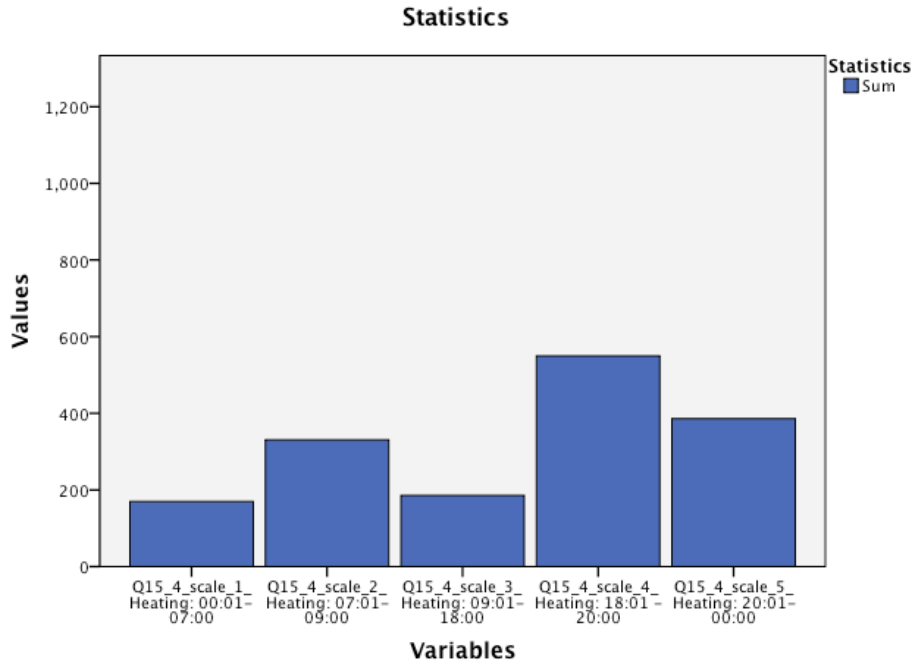
### Cooking

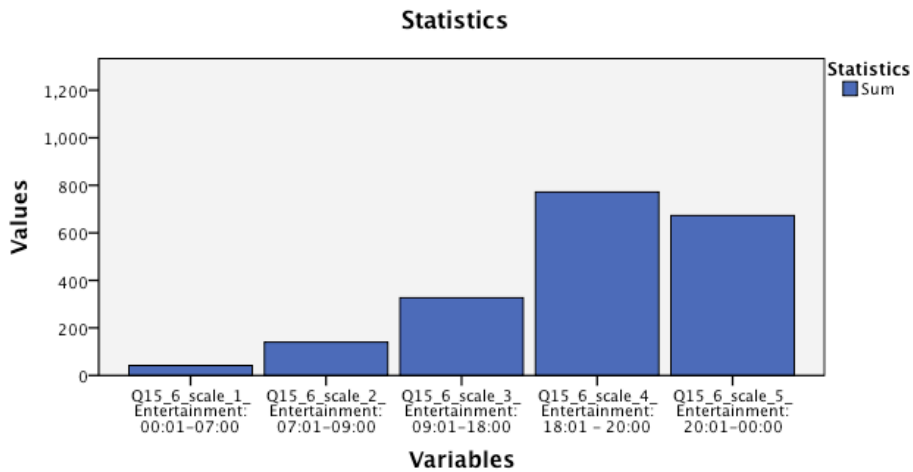


## Dishes



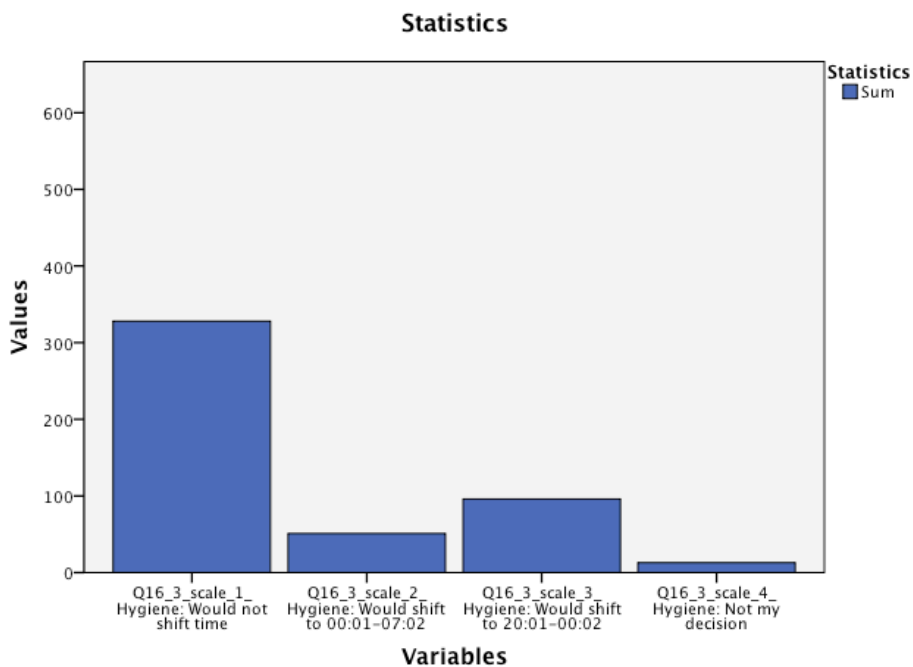
**Heating and Entertainment** were done at both peak and off-peak times:



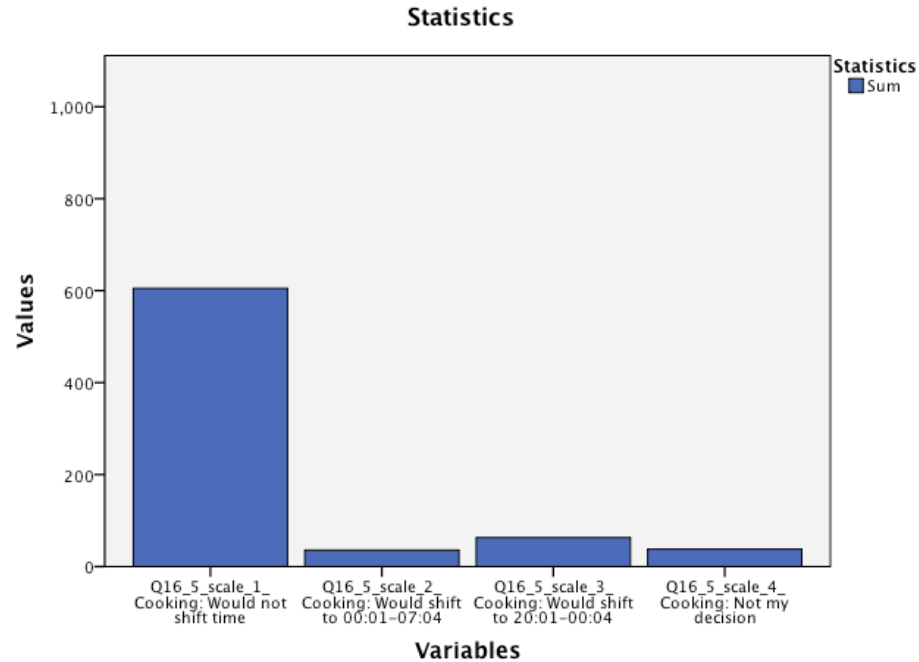


Respondents were then asked if they would shift if there was a time in the day/night when these activities could be done in a cheaper or more energy efficient way (e.g. flexible use option, ecological or economy programme or device, cheaper gas/electricity rate). Such a time would be from 8pm in evening to 7am in morning. Respondents would primarily not shift the times for:

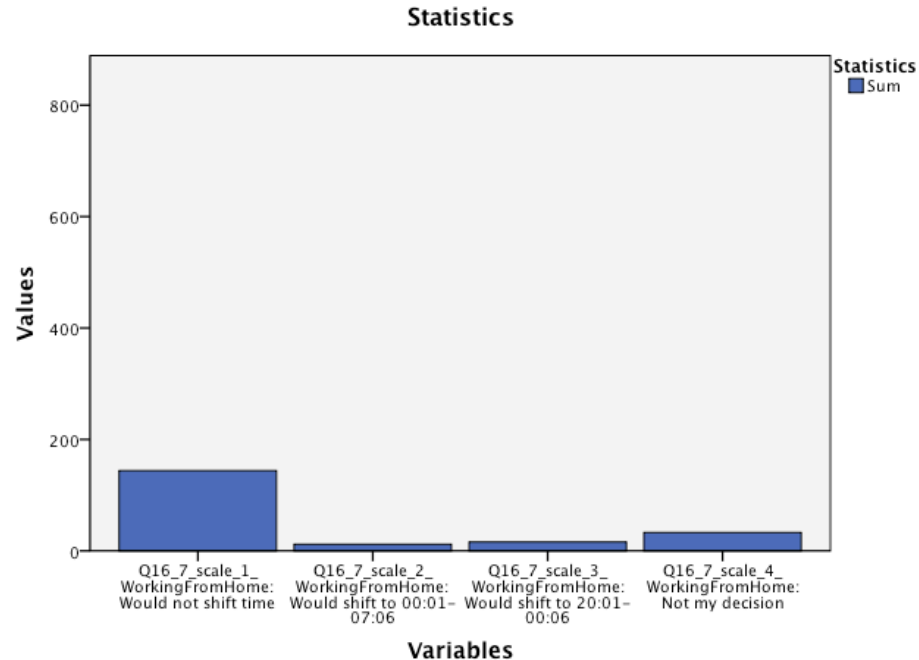
### Personal hygiene



### Cooking

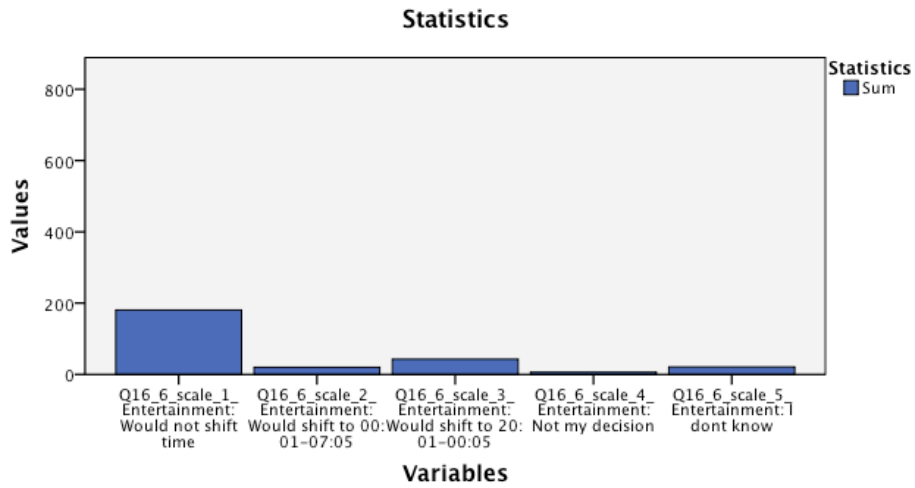


### Working from home

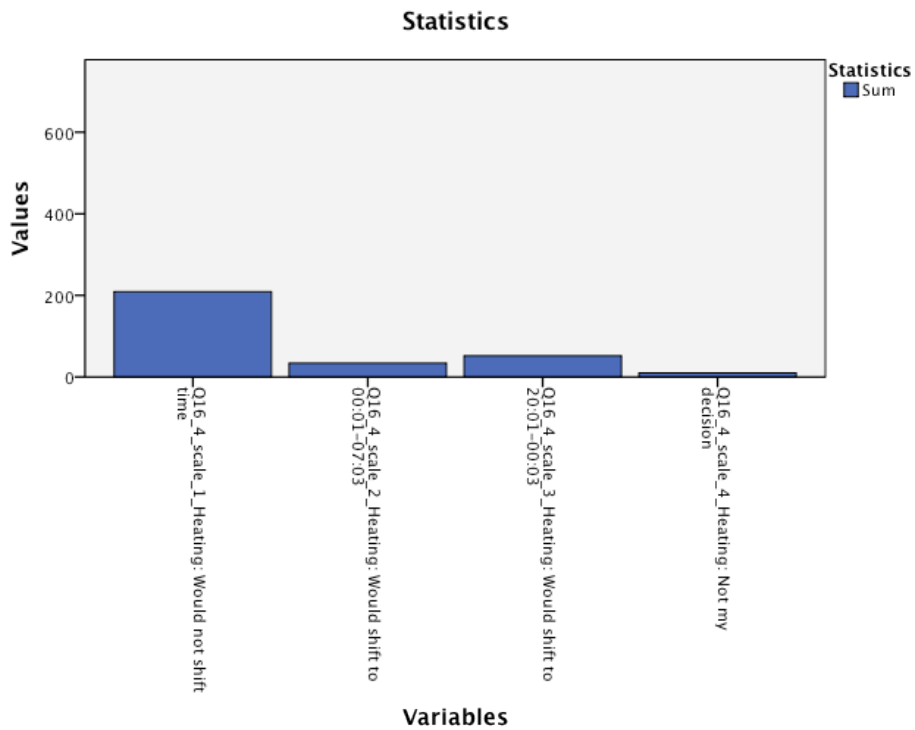




## Entertainment

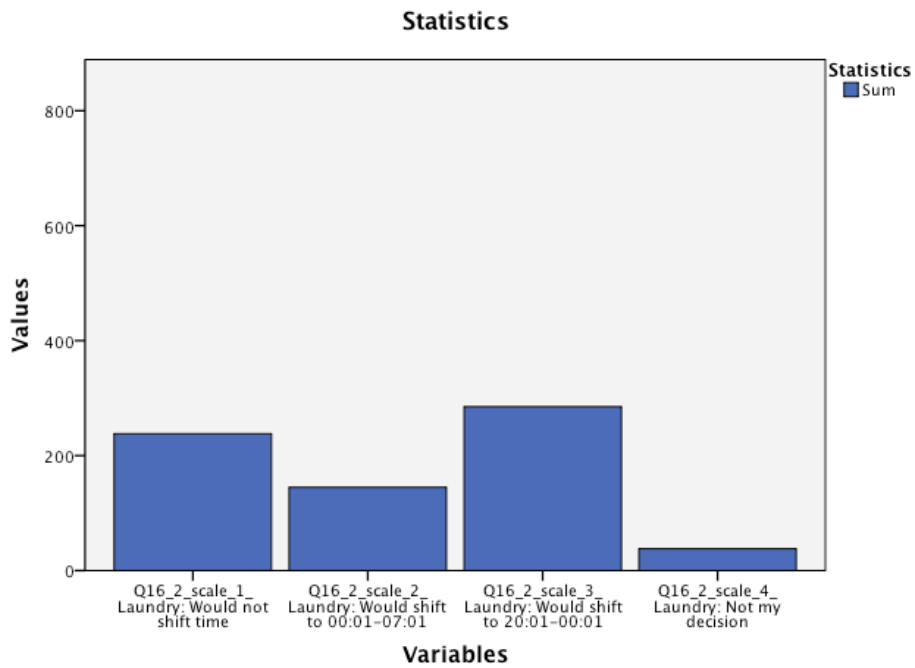


## And Heating

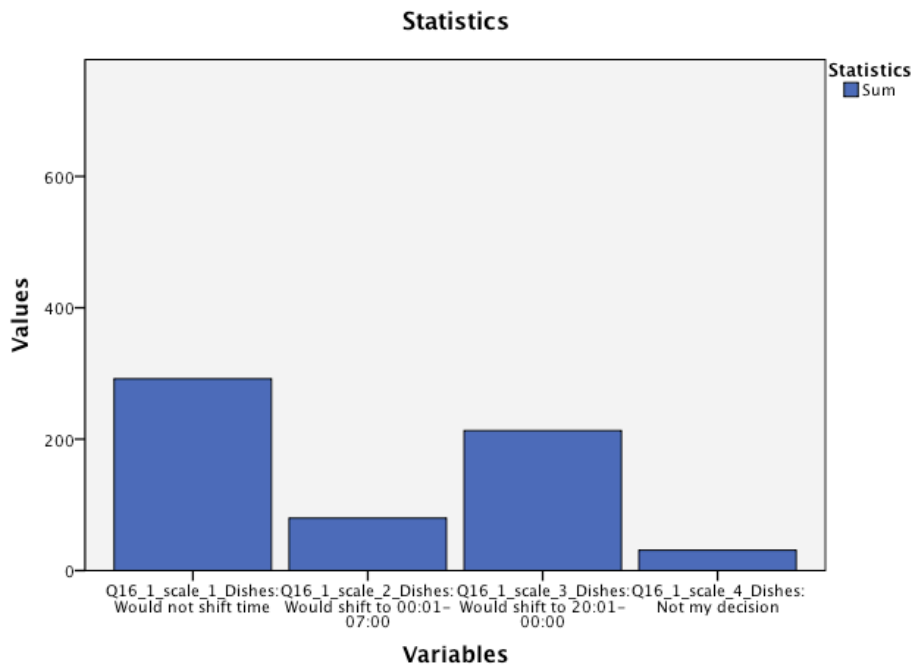


They would shift the times they did their laundry and somewhat their washing up.

## Laundry



## Dishes

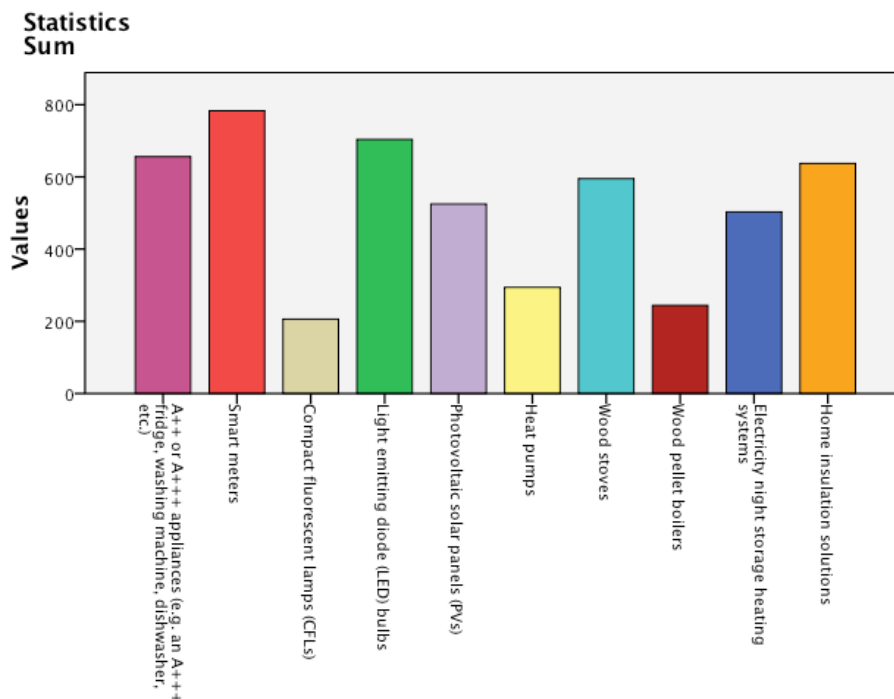


Respondents who stated that they did these activities at both peak and off-peak times would shift to only do the Dishes (52%) and Laundry (66%) at off-peak times only, and would not shift and continue to do them at both peak and off-peak times: Personal Hygiene (60%), Heating (68%), Cooking (73%), Entertainment (77%), and Working from Home (75%).

All in all, while activities may be done at peak and off-peak times, with the dishes, laundry, cooking, working from home and personal hygiene mainly done at peak times, it could be argued that respondents are primarily not inclined to change the way they do things already. It should be noted though that the question in Part 1 of the survey did not provide respondents with specific (monetary or other) incentives for doing so.

### C.1.3 Awareness and uptake of new technologies

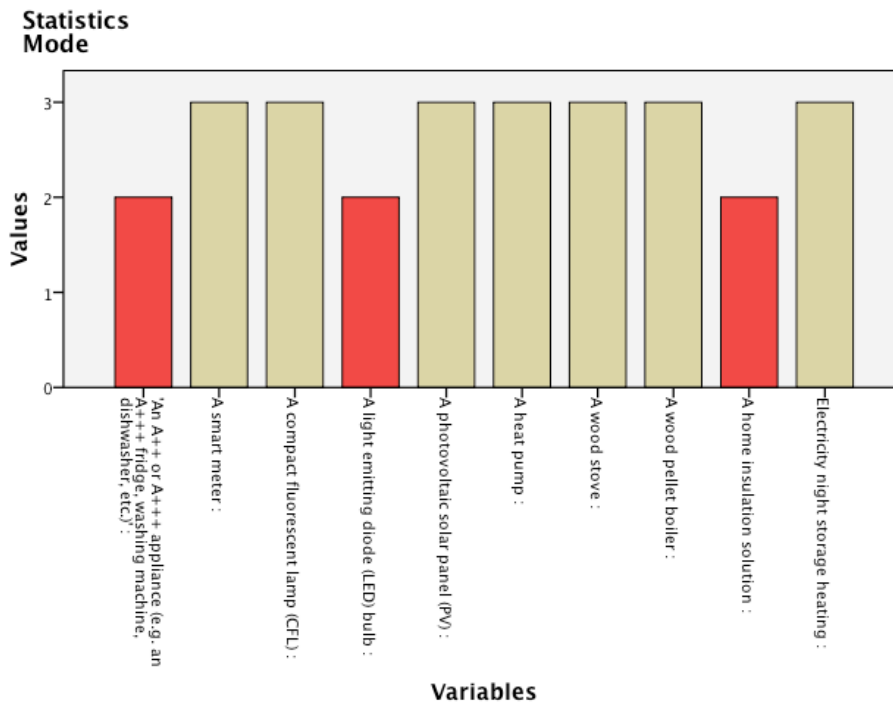
As the previous section hinted to energy saving already introduced through the option to do activities at off-peak times, in this section respondents were asked about technological innovations, which also addressed the issue of energy saving. Respondents were first asked if they had heard of certain appliances, devices, systems or items. It should be noted that the aim here was to record awareness by only providing the name of these appliances, devices, systems and items rather than providing information on them or descriptions (and visual prompts)<sup>2</sup>. Awareness was deemed to be important for the uptake of new technologies, hence it preceded such questions. Awareness of smart meters, A<sup>+</sup> devices, light emitting diode (LED) bulbs and home insulation solutions was high, followed by awareness of wood stoves photovoltaic solar panels (PVs) and electricity night storage. There was little awareness of heat pumps, compact fluorescent lamps (CFLs) and wood pellet boilers.



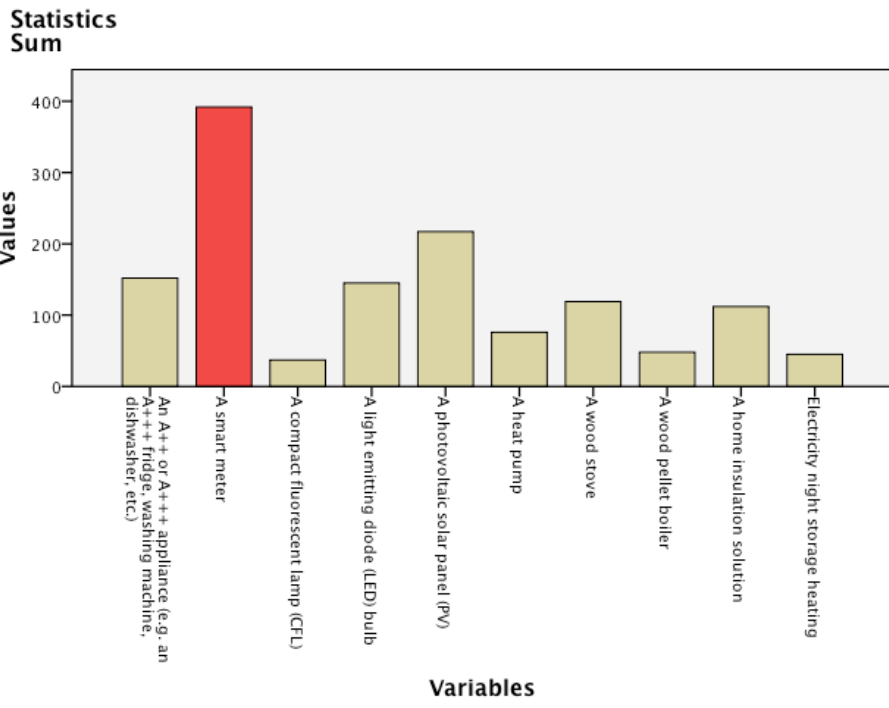
<sup>2</sup> Part 2 of the survey, which is based on an experimental design, provided extensive information prior to the choice experiment questions, yet this only concerned heating systems, which was the focus of that part of the survey.

Subsequently, respondents were asked if they had ever bought any of these appliances, devices, systems or items. Uptake was high for light emitting diode (LED) bulbs (44.5%), A++ or A+++ appliances (43.8%) and home insulation solutions (25.7%). While awareness of smart meters was very high, respondents recorded very low uptake (8,2%). Similar results were recorded for wood stoves (7.4%), electricity night storage heating (4.9%), and photovoltaic solar panels (PV) (2.9%). Interestingly CFLs recorded low awareness and uptake, which could be attributed to the question format, as by 2012 CFLs accounted for 28% of domestic electricity (DECC, 2013).

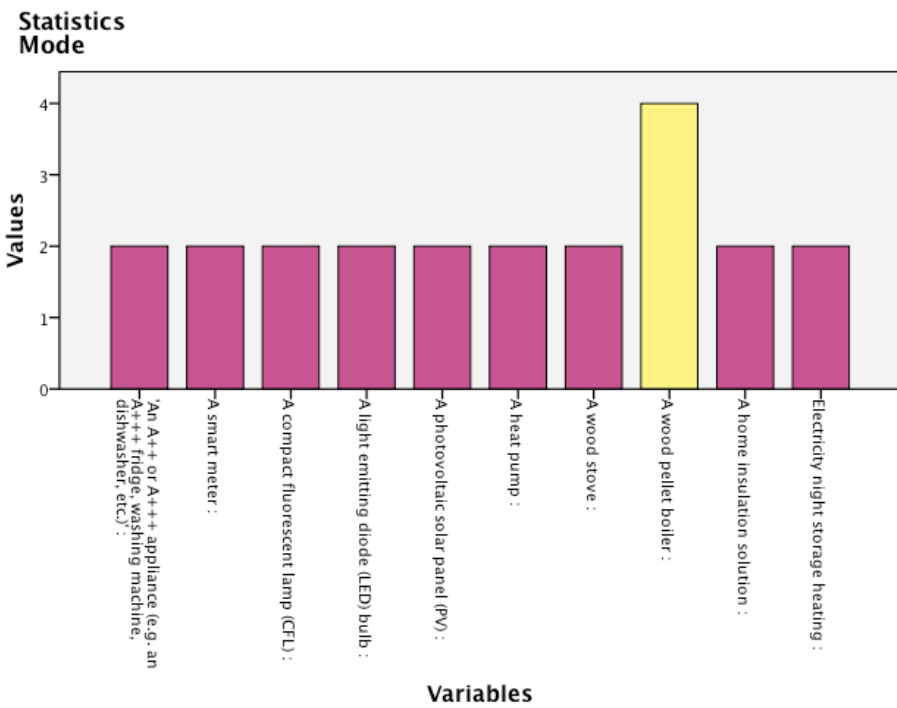
Respondents were then asked if they had ever used any of these appliances, devices, systems or items. This was inline with research on technological innovations and rebound, which focuses on consistency of use as a measure of efficiency. The most common response for A++ or A+++ appliances, LEDs and Home insulation solutions was 2: 'Yes, I use currently', while for the rest 3: 'No, I've never used'. It should be noted that respondents used Electricity night storage heating (25%) in the past but not anymore (1: 'Yes, I used in the past but not anymore').



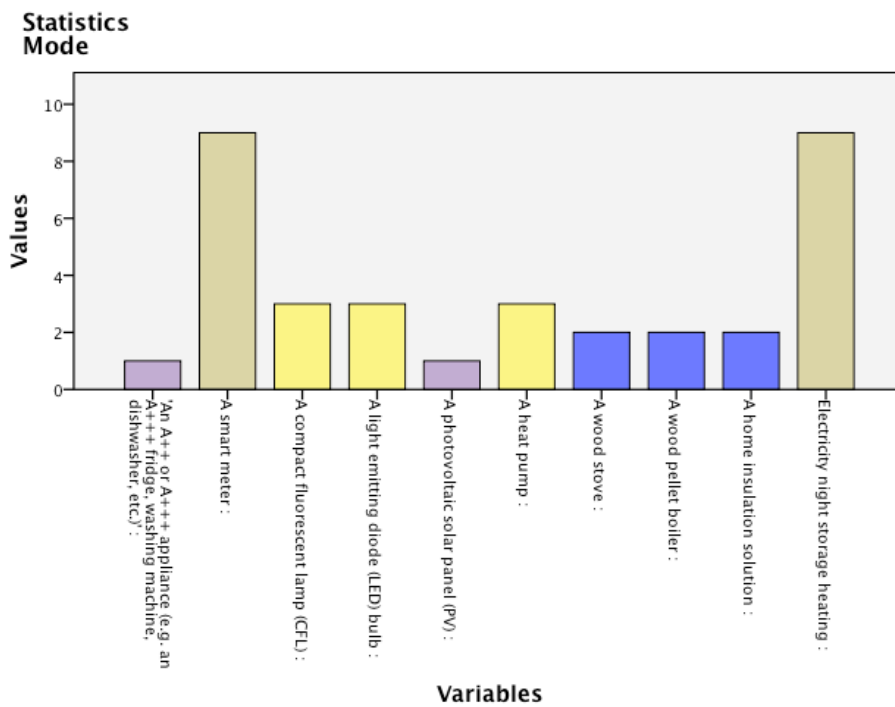
The next set of questions were addressed to respondents who were filtered through for not having bought or used these appliances, devices, systems or items. Only the relevant options were visible to respondents. The aim of this set of questions was to collect responses on the future intentions of respondents. Respondents would consider buying, installing or using smart meters (45%), PVs (24.9%), A++ or A+++ appliances (17.5%) and LEDs (16.6%) mainly.



Respondents who responded that they used or would consider using certain devices in the future were then asked why and could only select the one option that best applied out of a list of options. The main reason why respondents used or would consider using most of the devices they claimed they did or would was 2: 'It saves me money', yet for PVs this was closely followed by 4: 'It's environmentally friendly'; for the rest, with the exception of wood pellet boilers (see below), the second and third most popular options were 5: 'It is efficient' followed by 4: 'It's environmentally friendly'.

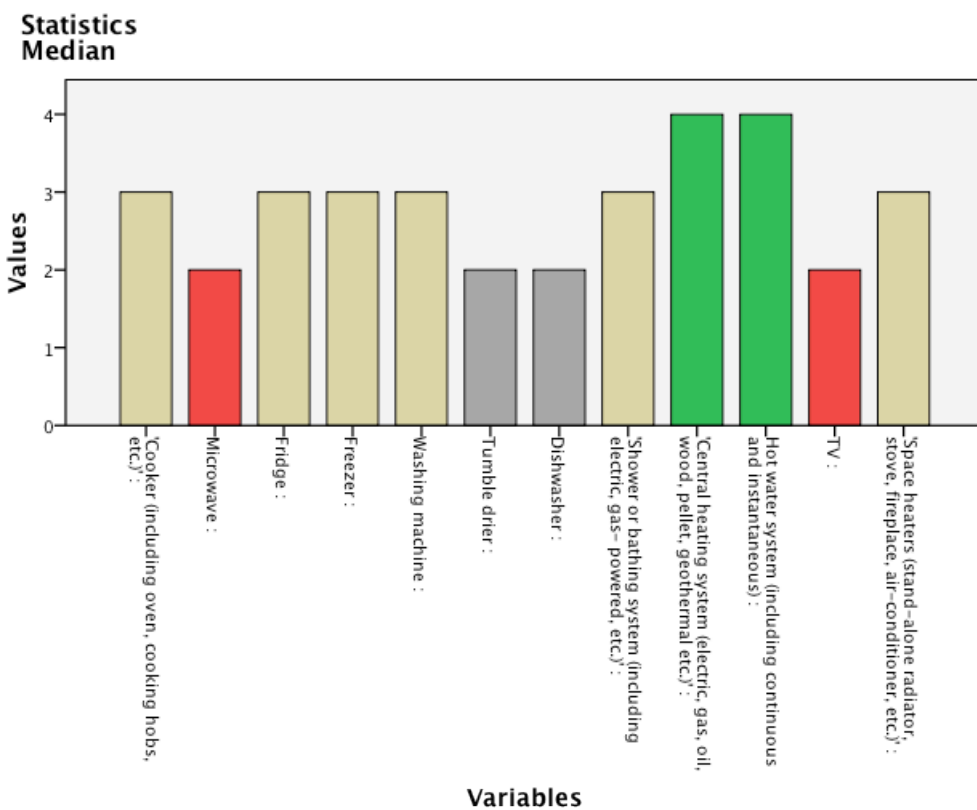


Respondents who responded that they do not use or would not consider using certain devices in the future were asked why not and could only select the one option that best applied out of a list of options. The main reason why respondents did not use or would not consider using A++ or A+++ appliances and PVs was 1: 'Expensive to buy'. For LEDs, CFLs and heat pumps the most common response was 3: 'I don't have enough information' and for the other heating systems that 2: 'I rent/ don't own my own home', which was included as a pragmatic option for respondents (notwithstanding the relevant demographic variable and the cross tabulation that could be applied). For smart meters and electricity night storage the most common response was 9: 'None of these' (followed by 2 and 3 above).



### C.1.4 Lifecycle and replacement of domestic appliances, justifications and intention to change

The next set of questions aimed to address the issues of adoption, use and rebound by specifically asking respondents how long they use and how often they replace domestic appliances. Respondents were first asked to select from a list of domestic appliances whether they had been replaced or not in their homes. The most replaced items were TVs (73%), washing machines (66%) and microwaves (60%). The least replaced items were heating and hot water systems. Respondents were then asked to choose one from a list of options to indicate how often they replaced the items they indicated they did. Microwaves and TVs were mainly replaced 2: every 3-7 years, and so were tumble driers and dishwashers, yet it should be noted that only 20.7% and 25.8% of the sample had stated that they owned these appliances. The rest of the appliances were mainly replaced 3: every 8-15 years, while central heating and hot water systems were replaced 4: more than every 15 years.



As this information was important both in terms of rebound, e.g. purchasing bigger fridge or higher definition TV owing to efficiency or to saving elsewhere, and in terms of the uptake on new technologies, e.g. purchasing A++ or A+++ appliances main reason for replacement was 'because it broke down' respondents were asked to state why they had and had not replaced the items they claimed they did. They could select all the reasons that applied to 'why' from a list of reasons but only the main reason that applied to 'why not'. The aim of this was to specify resistance. The main reason for

the former was that 'because it broke down' and for the latter that 'it works fine' across all appliances, which were included as pragmatic options. The second reason for replacing was 7: Previous one was too old, while in the reasons for changing TVs features, functionality and design followed. It should be noted that approximately 20% of respondents who replaced heating and hot water systems also opted for 5: 'To save energy'. Yet, this corresponded to a very small number of respondents, approximately 3% of the sample. Approximately 15% of respondents who replaced heating and hot water systems also opted for 4: 'I rent, therefore I wouldn't', which corresponds to about 9% of the sample.

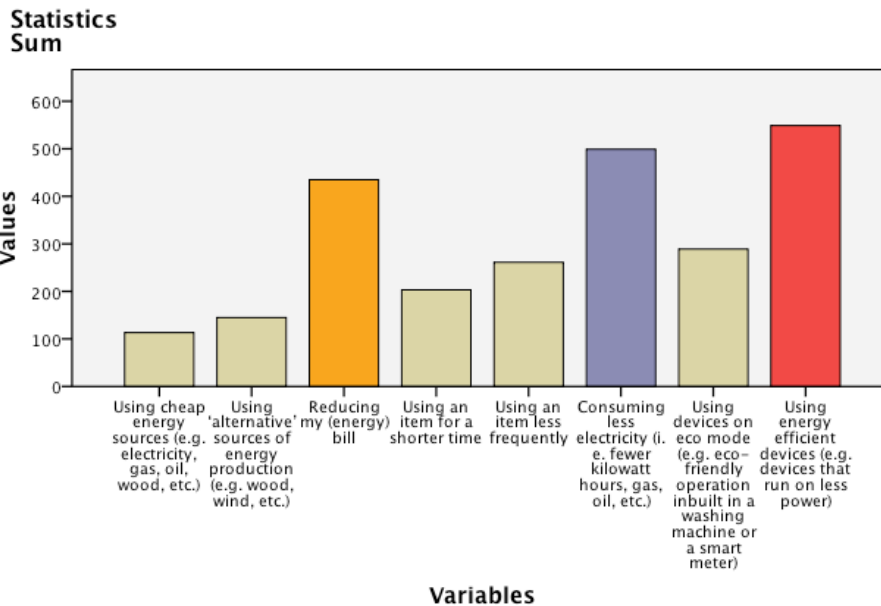
### **C.1.5 Sources of Information and Advice in making energy-related purchases**

The next set of questions followed on the previous two and aimed to collect responses on the sources of information and advice respondents used to make energy-related purchases. In this section appliances, devices and systems were grouped into: White goods, Wet appliances, Electronic devices, Heating systems and Lighting. Respondents could select all options that applied to the place or people they sought information and advice from including their relatives, neighbours, colleagues, friends, other household members, the owner (only visible to those in rental accommodation), sales advisors, newspapers and magazines, online sources as well as state that they make their own decisions or that it is beyond their control. The majority selected online sources for White goods (54%), Wet appliances (51.8%), Electronic devices (54.1%), Heating systems (44.9%) and Lighting (47.3%). For most options 'I make my own decisions' ranged between 13.1 and 17.4% (for lights), Sales advisors between 13.4 and 16% (for Heating systems), relatives between 14.2 and 17.7% (for white goods), and friends 13.2 and 16% (for e-devices).

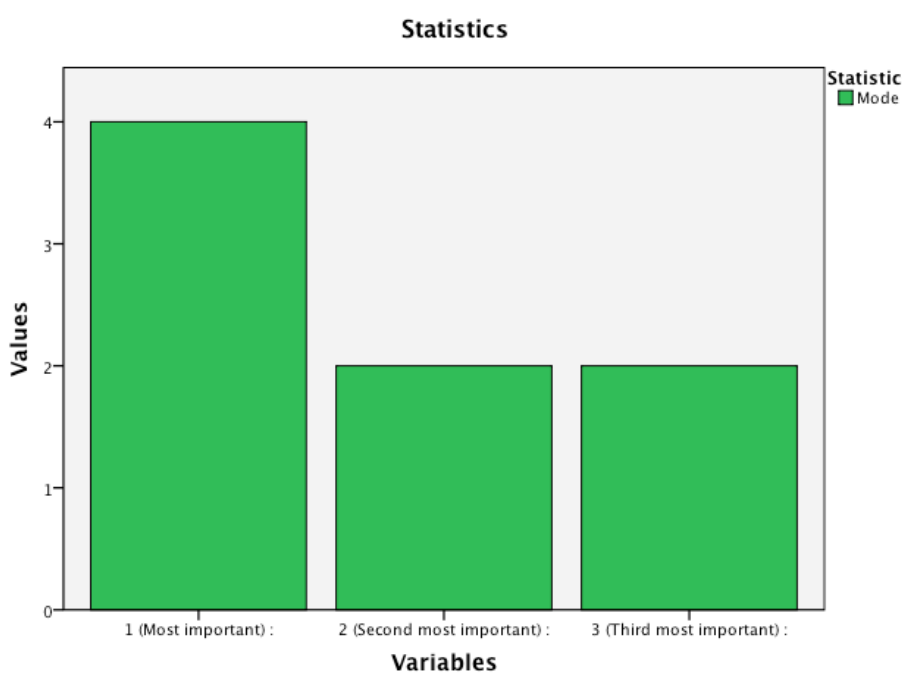
### **C.1.6 Meanings of and reasons for energy saving**

The questionnaire section on energy saving was introduced and closed with a question on the meaning(s) and a question on the reason(s) for energy saving. The meaning question read: 'Thinking of your own attitude towards energy saving, which of the following options best describes what energy saving means to you? Please select up to three options'. Respondents overwhelmingly selected the following three options: 'Using energy efficient devices (e.g. devices that run on less power)' (54.5%), 'Consuming less electricity (i.e. fewer kilowatt hours, gas, oil, etc.)' (49.7%) and 'Reducing my (energy) bill' (43.3%)



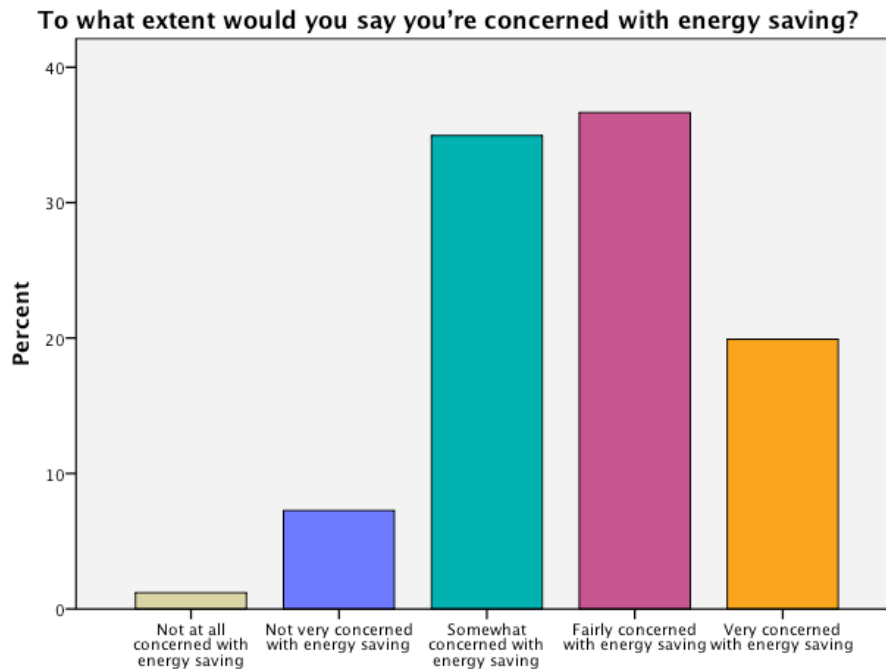


The reason question read 'Different types of energy saving are important to different people. From the statements below, please select the 3 that best describe your view of energy saving, ranking them in order of importance'. Respondents here were asked to rank in order of importance. The most common response in Rank 1 'most important' was 4: 'Ways to help me save on my energy bills'. The most common response in ranks 2 and 3 was 2: 'Using devices that consume less power'. The other options respondents could choose from were: 1: 'Using products that have been manufactured in an environmentally friendly way', 3: 'Using flexible, economy or eco modes', and 5 'hanging my practices to reduce energy consumption'. The least favourable were options 1 and 3.



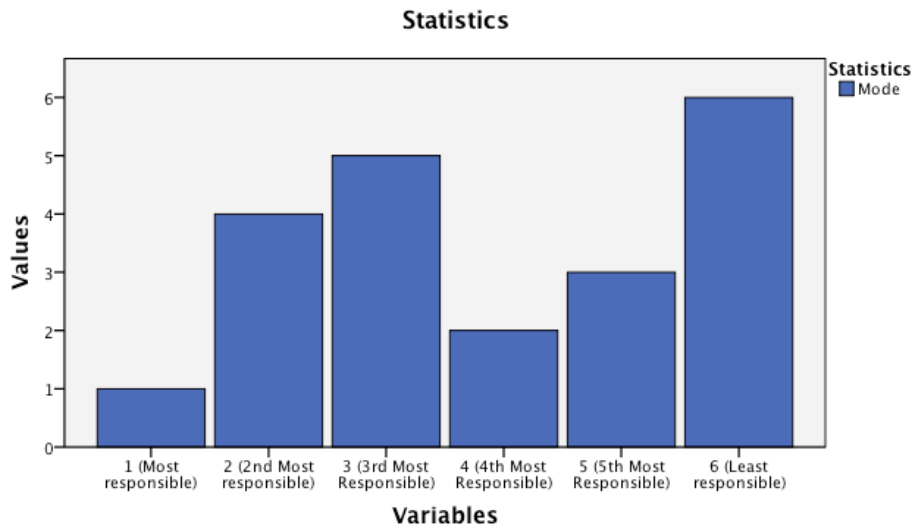
### C1.7 Concern and responsibility for energy saving

Finally, respondents were asked about how concerned they were with energy saving and why, as well as to allocate different agents in order(s) responsibility for energy saving. The median response was 'Fairly concerned' (36.7%) closely followed by 'Somewhat concerned' (35%).



For those indicating some level of concern, the question that read: 'You said that you are concerned about energy saving. Why is that? Please choose the main reason(s), selecting up to 2 options', followed. Respondents opted for 'Because it saves money' (81.8%), followed by 'To reduce environmental pollution' (43%), and 'To make sustainable use of natural resources' (20.4%).

Finally, they were asked to rank in order of responsibility for energy saving the following: 1 Individuals / Citizens, 2 Municipalities / Local Government, 3 Local communities, 4 Manufacturers / Industry, 5 The government, 6 Non-Governmental Organizations. The most common response for most responsible was individual citizens (48%), for second most responsible manufacturers (36%), third most responsible the government (25%) and least NGOs (51%).



### C.1.8 Summary points

In the survey, heating seems more clearly perceived as an energy consumption activity.

In terms of changing the time of actual use, people would mainly not shift the time they do energy related activities.

As regards the uptake of new technologies, there is some relationship between awareness and use of energy saving appliances. The main reason for purchasing any energy saving appliances is cutting costs while the main reasons for not purchasing energy saving appliances are: price, tenure conditions and lack of information. Similarly, whether people replace appliances or not mainly depends on whether these work (or not). They make decisions for energy related purchases by consulting online sources.

The main reason for energy saving is cutting costs and secondarily consuming less energy. However, the meaning of energy saving is first efficiency, followed by consuming less energy and then by cutting costs.

The majority of respondents are concerned with energy saving primarily because it saves them money. For respondents, responsibility for energy saving lies mainly with individual citizens, secondarily with manufacturers and, thirdly with the government

## Acknowledgements

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## References

Costanzo, M., Archer, D., Aronson, E., and Pettigrew, T. (1986) Energy conservation behavior: The difficult path from information to action. *American Psychologist*. Vol 41(5), pp. 521-528

DECC (2013a), *Estimated Impacts of Energy and Climate Change Policies on Energy Prices and Bills*, DECC, London

Herring, H. and Roy, R. (2007) Technological innovation, energy efficient design and the rebound effect. *Technovation*. 27, pp. 194–203

Mills, B. F. and Schleich, J. (2010) Why don't households see the light? Explaining the diffusion of compact fluorescent lamps. *Resource and Energy Economics*. 32, pp. 363–378

ONS (2013) Full Report - Graduates in the UK Labour Market 2013

## Appendices

### Appendix I

#### Online data quality – Ipsos MORI Declaration

The key factor in conducting successful online research is the quality of the panel. At Ipsos MORI, we employ stringent quality control and recruitment techniques to ensure our panel is of the highest quality. The below information covers the 4 key stages we employ to ensure panel quality

iPi stage 1 : Pre-panel

Before becoming Panel members, applicants are scrutinized by a sophisticated validation system: Duplicates and robots detection, geo-IP and contact information validation, and check against Ipsos black-list.

iPi stage 2 : Early panel

Shortly after joining the Panel, potential members are tested again, but this time on their survey-taking behavior. New panelists who are most likely to make intentional or unintentional errors on future surveys are deactivated at an early stage.

iPi stage 3 : Survey

During the survey, suspicious respondents are flagged and removed from the panel: duplicates detection, digital fingerprinting with Relevant ID, geo-IP validation, speeders and straight-liners detection, etc. Measuring also the respondents' experience helps us assess the quality of the questionnaire which plays an important role in the quality of data collected. And strict panel rules are applied.

iPi stage 4 : Ongoing panel

The panelists' behavior history is monitored and tracked across all surveys. Ipsos employs purging procedures based on these data to remove bad and inactive panelists from our eligible sampling pools.

### Appendix II

#### Questionnaire

1. Questions about you and your living situation

**[DON'T ASK. REGION CODED FROM SAMPLE]**

Q1. Where do you live? Please select one option.

**[SP]**

1. East Midlands
2. East of England
3. London
4. North East
5. North West
6. Scotland
7. South East
8. South West
9. Wales
10. West Midlands

11. Yorks and Humber

**ASK ALL**

Q2. Are you male or female? Please select one option.

[SP]

1. Male
2. Female

**ASK ALL**

Q3. Please indicate which of the following age bands you fit into? Please select one option.

[SP]

1. 17 or younger [CLOSE]
2. 18-24
3. 25-34
4. 35-44
5. 45-54
6. 55-65
7. 66 and over [CLOSE]

[IF Q3=1 or 7 THEN CLOSE]

**ASK ALL**

Q4. Which of the following applies to your home? Please select one option.

[SP]

1. It is owned outright
2. It is being bought on a mortgage
3. It is rented from the local authority
4. It is rented from a private landlord
5. It is rented from a Housing Association/Trust
6. Other (Please specify) [INSERT TEXT BOX]
7. Prefer not to say

**2. Questions about you and your household**

**ASK ALL**

Q5. What is the total number of people living in your household aged 16 or older, including yourself? Please select one option.

[SP]

1. 1 (just me)
2. 2
3. 3
4. 4
5. 5
6. 6 or more

**ASK ALL**

Q6. And how many children aged fifteen or under are living in your household, if any? Please select one option.

**[SP]**

1. None, no children under 16
2. 1
3. 2
4. 3
5. 4
6. 5 or more

**DO NOT ASK Q6X [COMPUTE FROM Q5 + Q6, TO DETERMINE TOTAL NUMBER OF PEOPLE IN HOUSEHOLD]**

**Q6X. TOTAL NUMBER OF PEOPLE IN HOUSEHOLD**

1. 1
2. 2
3. 3
4. 4
5. 5 or more

**ASK ALL**

Q7. Which of the following best describes your employment status? Please select one option.

**[SP]**

1. Employed, working full-time (30 hours a week or more)
2. Employed, working part-time (less than 30 hours a week)
3. Not employed, looking for work
4. Not employed, NOT looking for work
5. Student / in full time education
6. Retired
7. Disabled, not able to work
8. Other (Please specify ) **[INSERT TEXT BOX]**

**ASK ALL WORKING [Q7=1-2]**

Q7a. In an average working week do you have the option of working from home on at least some days, whether or not you choose to do so? This would not include occasions when you bring work home at the end of the working day.

**[SP]**

1. Yes - I have the option of working from home on some days
2. No - I do not have the option of working from home

**ASK ALL WITH OPTION TO WORK FROM HOME [Q7a =1]**

Q7b. And in an average working week, do you choose to work from home on any days?

**[SP]**

1. Yes
2. No

**Ask if more than one person in the household aged 16 or over [Q5 = 2-6]**

Q8a. Does anyone else in your household, aged 16 or over, work (either full or part time)?

[SP]

1. Yes
2. No

**ASK ALL WITH OTHER WORKING ADULTS IN H/H [Q8a=1]**

Q8b. You indicated that there are other adults in your household who work. Do any of them have the option to work from home on at least some days in an average working week, whether or not they choose to do so?

[SP]

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

**ASK ALL WHERE OTHER ADULTS IN H/H, HAVE THE OPTION TO WORK FROM HOME [Q8b =1]**

Q8C. And in an average working week, do any of the other adults in your household choose to work from home on any days?

[SP]

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

**Ask all where one or more adults in h/h works from home [Q7b = 1 or Q8C = 1]**

Q8d.

**IF RESPONDENT AND ANY OTHER ADULTS WORK FROM HOME [Q7b=1 and Q8c = 1] OR IF RESPONDENT DOESN'T WORK FROM HOME BUT OTHER ADULTS DO [Q8C=1 and (Q7=3-8 OR Q7a=2 OR Q7b=2)] THEN SHOW:** On average, how many days in the week is there someone in your household working from home?

**IF SINGLE ADULT WHO WORKS FROM HOME [Q5=1 and Q7b=1] OR IF MORE THAN 1 ADULT IN HOUSEHOLD, BUT ONLY THE RESPONDENT WORKS FROM HOME [Q7b=1 and (Q8a=2 or Q8b=2,3 or Q8c=2,3)] THEN SHOW:** On average, how many days in the week do you work from home?

[SP]

1. 1 day a week
2. 2 days a week
3. 3 days a week
4. 4 days a week
5. 5 days a week



6. 6 days a week
7. 7 days a week
8. Don't know / couldn't say

**Ask all where one or more adults in h/h works from home [Q7b = 1 or Q8C = 1]**

Q9.

**IF RESPONDENT AND ANY OTHER ADULTS WORK FROM HOME [Q7b=1 and Q8c = 1] OR IF RESPONDENT DOESN'T WORK FROM HOME BUT OTHER ADULTS DO [Q8C=1 and (Q7=3-8 OR Q7a=2 OR Q7b=2)] THEN SHOW:**

Thinking about a typical day when someone in your household is working from home, on average how many hours do they work? Please select one option.

**IF SINGLE ADULT WHO WORKS FROM HOME [Q5=1 and Q7b=1] OR IF MORE THAN 1 ADULT IN HOUSEHOLD, BUT ONLY THE RESPONDENT WORKS FROM HOME [Q7b=1 and (Q8a=2 or Q8b=2,3 or Q8c=2,3)] THEN SHOW:**

Thinking about a typical day when you are working from home, on average how many hours do you work? Please select one option.

[SP]

1. 1-4 hours
2. 5-8 hours
3. 9-12 hours
4. More than 12 hours
5. Don't know

**ASK ALL**

Q10. What type of home do you live in? Please select one option.

[SP]

1. Flat
2. Terraced house
3. Semi-detached house
4. Detached house
5. Studio
6. Other (Please specify) [INSERT TEXT BOX]

**ASK ALL EXCEPT THOSE WHO ANSWERED 'STUDIO' AT Q10 [ASK IF Q10 <> 5]**

Q11. How many bedrooms are in your home? Please select one option.

[SP]

1. 1
2. 2
3. 3
4. 4
5. more than 4

**ASK ALL**

Q12. How old is your home approximately? Please select one option.

**[SP]**

1. 100 years or older (Pre 1916)
2. 70-99 years old ( 1916-1945)
3. 50-69 years old (1946-1965)
4. 30-49 years old (1966-1985)
5. 10-29 years old (1986-2005)
6. 0-9 years old (2006-2015)
7. Don't know / not sure

### **8. Questions about energy use in your home**

This section includes questions about energy use in your home, about activities you do at home that consume energy, and about devices, appliances and items at home that use energy.

**ASK ALL**

**RANDOMISE CODES 1-20**

Q13a. Do you have any of the following in your home? Please select all that apply

**[MP=1-20, SP=21]**

1. Dishwasher
2. Tumble drier
3. Washing machine
4. Iron
5. Shower (including electric, gas-powered, etc.)
6. Cooker (including electric, gas-powered, etc.)
7. Microwave
8. Fridge
9. Freezer
10. Vacuum Cleaner
11. TV
12. Home Cinema Audio System
13. DVD Player
14. Games Console
15. Audio system (including Hi/Fi, digital, etc.)
16. Computer (including desktop, laptop, tablets, etc.)
17. Central heating system (electric, gas, oil, wood, pellet, geothermal etc.)
18. Space heaters (stand-alone radiator, stove, fireplace, air-conditioner, etc.)
19. Continuous hot water system (e.g. tank-type, heating-based, etc.)
20. Instantaneous hot water system (e.g. tank-less, switch-on/off systems, etc.)
21. None of these **[SP]**

**ASK ALL/WHERE INDICATED, SHOW STATEMENT BASED ON RESPONSE AT Q13a**

Q14a. How much energy do you think the following activities consume in total in your home? For each activity please indicate the amount of energy that you think this consumes using the scale below.

**[SP PER ROW]**

**Columns:**

1. None at all
2. Hardly any
3. A small amount
4. A fair amount
5. A great deal

**Rows:**

**RANDOMISE STATEMENTS 1-11**

1. Cleaning dishes (using a dishwasher or hand washing) **[ASK ALL]**
2. Laundry (washing, drying clothes and ironing) **[ASK ALL]**
3. Running the heating (either using central heating or a space heating appliance) **[Q13a=17 or Q13a=18, OTHERWISE AUTOCODE AS 1 IF NOT DISPLAYED]**
4. Personal hygiene (showering, bathing, etc.) **[ASK ALL]**
5. Cooking (preparing meals, drinks, snacks, etc.) **[ASK ALL]**
6. Food conservation (fridge/freezer) **[ONLY DISPLAY IF Q13a=8 or Q13a=9, OTHERWISE AUTOCODE AS 1 IF NOT DISPLAYED]**
7. Entertainment (watching TV, films, listening to music, video games, surfing the net, social media, etc.) **[ASK ALL]**
8. Charging devices (e.g. mobile phones, laptops, etc.) **[ASK ALL]**
9. Working from home (using a computer, etc.) **[Q7B OR Q8C = 1, OTHERWISE AUTOCODE AS 1 IF NOT DISPLAYED]**
10. Lights **[ASK ALL]**
11. Cleaning the house (e.g. vacuuming, etc.) **[ASK ALL]**

**ASK ALL [SHOW THE 2 ACTIVITIES WHICH THE RESPONDENT THINKS CONSUME THE MOST ENERGY AT Q14a – IF THERE'S NO CLEAR HIGHEST 2, THEN RANDOMLY SELECT THE 2 HIGHEST FROM ALL THOSE RANKED EQUALLY HIGH. ALSO SHOW 2 ACTIVITIES THAT THE RESPONDENT THINKS CONSUME LESS ENERGY AT Q14a – IF THERE'S NO CLEAR LOWEST 2, THEN RANDOMLY SELECT THE 2 LOWEST FROM ALL THOSE RANKED EQUALLY LOW. DO NOT SHOW ANY ACTIVITIES THAT THE RESPONDENT DID NOT SEE AT Q14a]**

Q14b. Thinking about the following activities and the amount of energy you thought they consumed, what did you base that on?

For each activity below please select all that apply.

**[MP PER ROW = 1-7, SP PER ROW = 8- 9]**

**Columns:**

**RANDOMISE STATEMENTS 1-7**

1. Cost of energy source (e.g. gas, electricity, wood, oil, etc.)
2. My bills
3. Duration of use (e.g. 'because of how long it is on or I spend on it')
4. Energy intensity (power, wattage or kilowatt rating of appliance)
5. Frequency of use (e.g. 'because I do this a lot')

6. Information (e.g. 'I have heard or read...')
7. Instinct
8. None of these **[SP]**
9. Don't know **[SP]**

**Rows:**

1. Cleaning dishes (using a dishwasher or hand washing)
2. Laundry (washing, drying clothes and ironing)
3. Running the heating (either using central heating or a space heating appliance)
4. Personal hygiene (showering, bathing, etc.)
5. Cooking (preparing meals, drinks, snacks, etc.)
6. Food conservation (fridge/freezer)
7. Entertainment (watching TV, films, listening to music, video games, surfing the net, social media, etc.)
8. Charging devices (e.g. mobile phones, laptops, etc.)
9. Working from home (using a computer, etc.)
10. Lights
11. Cleaning the house (e.g. vacuuming, etc.)

**ASK ALL**

Q15. At what times of day do the following activities mainly take place in your household? Please select up to a maximum of 3 time periods for each activity.

**[MP PER ROW CODES 1-5, MP A MAXIMUM OF 3 CODES; SP PER ROW CODES 6-7]**

**Columns:**

1. 00:01-07:00
2. 07:01-09:00
3. 09:01-18:00
4. 18:01 - 20:00
5. 20:01-00:00
6. Activity does not take place at all in my household **[SP]**
7. Don't know **[SP]**

**Rows:**

**RANDOMISE STATEMENTS 1-7**

1. Cleaning dishes (using a dishwasher or hand washing)
2. Laundry (washing, drying clothes and ironing)
3. Personal hygiene (showering, bathing, etc.)
4. Running the heating (either using central heating or a space heating appliance) **[Q13a=17 or Q13a=18, OTHERWISE AUTOCODE AS 6 IF NOT DISPLAYED]**
5. Cooking (preparing meals, drinks, snacks, etc.)
6. Entertainment (watching TV, films, listening to music, video games, surfing the net, social media, etc.)

7. Working from home (using a computer, etc.) [Q7b = 1 or Q8C = 1  
OTHERWISE AUTOCODE AS 6 IF NOT DISPLAYED]

**ASK ALL DOING ACTIVITIES EXCLUSIVELY BETWEEN 07:00-20:00 AND NOT BETWEEN 20:01-07:00 [Q15 =2-4 AND Q15<>1 OR 5] FOR ONE OR MORE ACTIVITY**

Q16. If there was a time in the day/night when the following activities could be done in a cheaper or more energy efficient way (e.g. flexible use option, ecological or economy programme or device, cheaper gas/electricity rate), would you shift the time in the day that the following activities are done in your home? Such a time would be from 8pm in evening to 7am in morning.

**[SP PER ROW CODES 1,4,5, MP PER ROW CODES 2-3]**

**Columns:**

1. Would not shift time [SP]
2. Would shift to 00:00-07:00 [MP]
3. Would shift to 20:00-00:00 [MP]
4. Not my decision [SP]
5. I don't know [SP]

**Rows:**

**KEEP SAME ORDER AS Q15**

1. Cleaning dishes (using a dishwasher or hand washing) [IF Q15\_1 = 2,3,4 AND NOT 1,5,6,7]
2. Laundry (washing, drying clothes and ironing) [IF Q15\_2 = 2,3,4 AND NOT 1,5,6,7]
3. Personal hygiene (showering, bathing, etc.) [IF Q15\_3 = 2,3,4 AND NOT 1,5,6,7]
4. Running the heating (either using central heating or a space heating appliance) [IF Q15\_4 = 2,3,4 AND NOT 1,5,6,7]
5. Cooking (preparing meals, drinks, snacks, etc.) [IF Q15\_5 = 2,3,4 AND NOT 1,5,6,7]
6. Entertainment (watching TV, films, listening to music, video games, surfing the net, social media, etc.) [IF Q15\_6 = 2,3,4 AND NOT 1,5,6,7]

**9. Questions about ways to save energy or reduce energy consumption in your home and household**

This section includes questions about energy saving and ways to reduce energy consumption in your household.

**ASK ALL**

Q17. Thinking of your own attitude towards energy saving, which of the following options best describes what energy saving means to you? Please select up to three options.

‘Energy saving for me means...’

**[MP=1-8 UP TO 3 OPTIONS, SP 9-10]**

**RANDOMISE CODES 1-8**

1. Using cheap energy sources (e.g. electricity, gas, oil, wood, etc.)
2. Using 'alternative' sources of energy production (e.g. wood, wind, etc.)
3. Reducing my (energy) bill
4. Using an item for a shorter time
5. Using an item less frequently
6. Consuming less electricity (i.e. fewer kilowatt hours, gas, oil, etc.)
7. Using devices on eco mode (e.g. eco-friendly operation inbuilt in a washing machine or a smart meter)
8. Using energy efficient devices (e.g. devices that run on less power)
9. None of these **[SP]**
10. Don't know / Couldn't say **[SP]**

**ASK ALL**

Q18a. Which of the following appliances, devices, systems or items have you heard of? Please tick as many as appropriate.

**[MP = 1-10, SP = 11]**

**RANDOMISE CODES 1-10**

1. A++ or A+++ appliances (e.g. an A+++ fridge, washing machine, dishwasher, etc.)
2. Smart meters
3. Compact fluorescent lamps (CFLs)
4. Light emitting diode (LED) bulbs
5. Photovoltaic solar panels (PVs)
6. Heat pumps
7. Wood stoves
8. Wood pellet boilers
9. Electricity night storage heating systems
10. Home insulation solutions
11. None of these **[SP]**

**ASK ALL AWARE OF ONE OR MORE DEVICE AT Q18a (Q18a <> 11). SHOW ANY DEVICE THE RESPONDENT IS AWARE OF AT Q18a**

Q19a. Have you ever bought any of the following? Please tick the option that best applies to you.

**[SP PER ROW]**

**Columns:**

1. Yes
2. No

**Rows:**

**KEEP SAME ORDER THAT RESPONDENT SAW AT Q18a**

1. An A++ or A+++ appliance (e.g. an A+++ fridge, washing machine, dishwasher, etc.) **[Q18a=1]**
2. A smart meter **[Q18a=2]**
3. A compact fluorescent lamp (CFL) **[Q18a=3]**

4. A light emitting diode (LED) bulb [Q18a=4]
5. A photovoltaic solar panel (PV) [Q18a=5]
6. A heat pump [Q18a=6]
7. A wood stove [Q18a=7]
8. A wood pellet boiler [Q18a=8]
9. A home insulation solution [Q18a=10]
10. Electricity night storage heating [Q18a=9]

**ASK ALL AWARE OF ONE OR MORE DEVICE AT Q18a. SHOW ANY DEVICE THE RESPONDENT IS AWARE OF AT Q18a**

Q19b. Have you ever used any of the following? Please tick the option that best applies to you.

**[SP PER ROW]**

**Columns:**

1. Yes, I used in the past but not anymore
2. Yes, I use currently
3. No, I've never used

**Rows:**

**KEEP SAME ORDER THAT RESPONDENT SAW AT Q18a**

1. An A++ or A+++ appliance (e.g. an A+++ fridge, washing machine, dishwasher, etc.) [Q18a=1]
2. A smart meter [Q18a=2]
3. A compact fluorescent lamp (CFL) [Q18a=3]
4. A light emitting diode (LED) bulb [Q18a=4]
5. A photovoltaic solar panel (PV) [Q18a=5]
6. A heat pump [Q18a=6]
7. A wood stove [Q18a=7]
8. A wood pellet boiler [Q18a=8]
9. A home insulation solution [Q18a=10]
10. Electricity night storage heating [Q18a=9]

**ASK THOSE WHO HAVE NEVER BOUGHT AND DO NOT CURRENTLY USE [Q19a=2 and Q19b =1, 3] APPLIANCES THEY ARE AWARE OF AT Q18a**

Q20a. Would you consider buying, installing or using any of the following in the future? Please select all that apply.

**[MP CODES 1-10, SP CODE 11]**

**KEEP SAME ORDER THAT RESPONDENT SAW AT Q18a**

1. An A++ or A+++ appliance (e.g. an A+++ fridge, washing machine, dishwasher, etc.)
2. A smart meter
3. A compact fluorescent lamp (CFL)
4. A light emitting diode (LED) bulb
5. A photovoltaic solar panel (PV)
6. A heat pump
7. A wood stove
8. A wood pellet boiler
9. A home insulation solution
10. Electricity night storage heating

11. None of these – I would not consider buying, installing or using any of these. [SP]

**ASK THOSE WHO ALREADY USE CURRENTLY OR WOULD CONSIDER USING APPLIANCES THAT THEY ARE AWARE OF AT 18a [Q19b=2 or Q20a=1-10].**

Q20b. You said that you currently use or would consider using the following devices. Why is this? Please tick the option that best applies for each item.

**[SP PER ROW]**

**Column:**

1. It's cheap to buy or install
2. It saves me money
3. I know how to use it
4. It's environmentally friendly
5. It is efficient
6. I've been required to by regulations
7. It is cool/in fashion
8. None of these
9. Don't know/ Couldn't say

**Rows:**

**KEEP SAME ORDER THAT RESPONDENT SAW AT Q18a**

1. An A++ or A+++ appliance (e.g. an A+++ fridge, washing machine, dishwasher, etc.) [Q19b\_1=2 or Q20a=1]
2. A smart meter [Q19b\_2=2 or Q20a=2]
3. A compact fluorescent lamp (CFL) [Q19b\_3=2 or Q20a=3]
4. A light emitting diode (LED) bulb [Q19b\_4=2 or Q20a=4]
5. A photovoltaic solar panel (PV) [Q19b\_5=2 or Q20a=5]
6. A heat pump [Q19b\_6=2 or Q20a=6]
7. A wood stove [Q19b\_7=2 or Q20a=7]
8. A wood pellet boiler [Q19b\_8=2 or Q20a=8]
9. A home insulation solution [Q19b\_9=2 or Q20a=9]
10. Electricity night storage heating [Q19b\_10=2 or Q20a=10]

**ASK THOSE WHO HAVE ANSWERED THAT THEY WOULD NOT CONSIDER buying, installing or using AT LEAST ONE DEVICE [SHOW ANY DEVICE NOT SELECTED AT Q20a. IF Q20a = 'NONE OF THESE' THEN SHOW ALL APPLIANCES THAT THEY SAW AT Q20a].**

Q21. You said that you do not currently use and would not consider using the following devices. Why is this? Please tick the option that best applies for each item.

**[SP PER ROW]**

**Columns:**

1. Expensive to buy
2. I rent/ don't own my own home
3. I don't have enough information
4. I don't have/wouldn't have enough space
5. High maintenance costs
6. Unsure about spare parts and service support



7. I don't like the style/design
8. It requires too much effort
9. None of these
10. Don't know

**Rows:**

**KEEP SAME ORDER THAT RESPONDENT SAW AT Q18a**

1. An A++ or A+++ appliance (e.g. an A+++ fridge, washing machine, dishwasher, etc.) [Q20A <>1]
2. A smart meter [Q20A <>2]
3. A compact fluorescent lamp (CFL) [Q20A <>3]
4. A light emitting diode (LED) bulb [Q20A <>4]
5. A photovoltaic solar panel (PV) [Q20A <>5]
6. A heat pump [Q20A <>6]
7. A wood stove [Q20A <>7]
8. A wood pellet boiler [Q20A <>8]
9. A home insulation solution [Q20A <>9]
10. Electricity night storage heating [Q20A <>10]

**10. Questions about ways to save energy or reduce energy consumption in your home and household**

The following questions are about how you use energy in your home. The aim of these questions is to understand more about your current energy use.

**ASK ALL**

Q22a.

**Lights**

Now thinking about how you typically use lights in your household, do you do any of the following? Please select the answer that best applies for each option.

**[SP PER ROW]**

**Columns:**

1. Yes I do
2. No I don't
3. I'm not responsible for this

**Rows:**

**RANDOMISE STATEMENTS 1-4**

1. Turn lights off when you leave a room
2. Choose to use a bulb no brighter than needed (i.e. try to match the output to your lighting requirements)
3. Buy long lasting light bulbs
4. Only turn the lights on if you have to

**ASK ONE RANDOM WHY 'YOU DO/DO NOT DO' OPEN ENDED QUESTION IF THEY ANSWER YES OR NO FOR AT LEAST ONE STATEMENT AT Q22a. [Q22a**

= 1 or 2]. IF THEY ANSWERED YES/NO FOR MORE THAN ONE STATEMENT THEN RANDOMLY SELECT ONE STATEMENT TO USE.

Q22b

You said you **do/don't**: [INSERT AS APPROPRIATE DEPENDING ON WHETHER THEY SAY 'YES' OR 'NO' AT Q22a; YES=DO, NO=DON'T] [INSERT CORRESPONDING STATEMENT FROM Q22a] - why is that?

[Open Text Box]

**ASK ALL**

Q23a.

**Heating**

Now thinking about how you typically use heating in your household, do you do any of the following? Please select the answer that best applies for each option.

**[SP PER ROW]**

**Columns:**

1. Yes I do
2. No I don't
3. I'm not responsible for this

**Rows:**

**RANDOMISE STATEMENTS 1-6**

1. Turn heating off when not at home or during some parts of the day (e.g. overnight, when on holidays, when at work, etc.)
2. Turn heating down when not at home or during some parts of the day (e.g. overnight, when on holidays, when at work, etc.)
3. Use curtains, sealing strips, etc., and other ways to prevent draughts
4. Have heating on only in the room(s) used the most (e.g. living room rather than bathroom or bedroom)
5. Set the thermostat 1°C lower
6. Operate heating at an average temperature (range varies depending on time in the day and year)

**ASK ONE RANDOM WHY YOU DO/DO NOT DO OPEN ENDED QUESTION IF THEY ANSWER YES OR NO FOR AT LEAST ONE STATEMENT AT Q23a. [Q23a = 1 or 2]. IF THEY ANSWERED YES/NO FOR MORE THAN ONE STATEMENT THEN RANDOMLY SELECT ONE STATEMENT TO USE.**

Q23b.

You said you **do/don't**: [INSERT AS APPROPRIATE DEPENDING ON WHETHER THEY SAY 'YES' OR 'NO' AT Q23a] [INSERT CORRESPONDING STATEMENT FROM Q23a] - why is that?

[Open Text Box]

**ASK ALL**

Q24a.

**Electronics**

Now thinking about how you typically use electronic devices in your household, do you do any of the following? Please select the answer that best applies for each option.

**[SP PER ROW]**

**Columns:**

1. Yes I do
2. No I don't
3. I'm not responsible for this

**Row:**

**RANDOMISE STATEMENTS 1-4**

1. Unplug all the devices that aren't being used regularly (e.g. chargers)
2. Adjust the brightness of screens (for TVs, computers etc.) or use energy-saving modes
3. Switch electronic devices (e.g. computers, TV, etc.) off after use
4. Put electronic devices (e.g. computers, TV, etc.) on sleep mode/standby after use

**ASK ONE RANDOM WHY/WHY NOT OPEN ENDED QUESTION IF THEY ANSWER YES OR NO FOR AT LEAST ONE STATEMENT AT Q24a [Q24a = 1 or 2]. IF THEY ANSWERED YES/NO FOR MORE THAN ONE STATEMENT THEN RANDOMLY SELECT ONE STATEMENT TO USE.**

Q24b.

You said you **do/don't**: [INSERT AS APPROPRIATE DEPENDING ON WHETHER THEY SAY 'YES' OR 'NO' AT Q24a] [INSERT CORRESPONDING STATEMENT FROM Q24a] - why is that?

**[Open Text Box]**

**ASK THOSE WHO HAVE A FRIDGE OR FREEZER THEIR HOME [IF Q13a= 8 or Q13a=9]**

Q25a.

**White Appliances: Fridge & Freezer**

Now thinking about how you typically use food storage devices in your household, do you do any of the following? Please select the answer that best applies for each option.

**[SP PER ROW]**

**Columns:**

1. Yes I do
2. No I don't
3. I'm not responsible for this.

**Row:**

**RANDOMISE STATEMENTS 1-5**

1. Keep the fridge at between 3 and 5°C [Q13a = 8]

2. Keep the freezer at approximately -18 °C [Q13a = 9]
3. Keep the fridge and freezer filled [Q13a = 8 and Q13a=9]
4. Avoid putting hot food in the fridge [Q13a = 8]
5. Place the fridge in a cool spot (away from the cooker and not positioned right against the wall) [Q13a = 8]

**ASK ONE RANDOM WHY/WHY NOT OPEN ENDED QUESTION IF THEY ANSWER YES OR NO FOR AT LEAST ONE STATEMENT AT Q25a. [Q25a = 1 or 2]**

Q25b.

You said you **do/ don't**: [INSERT AS APPROPRIATE DEPENDING ON WHETHER THEY SAY 'YES' OR 'NO' AT Q25a] [INSERT CORRESPONDING STATEMENT FROM Q25a] - why is that?

[Open Text Box]

**ASK ALL WHO HAVE A WASHING MACHINE OR DISHWASHER IN THEIR HOME [IF Q13a=3 or Q13a=1]**

Q26a.

**Wet appliances**

Now thinking about how you typically use wet appliances (washing machines or dishwashers) in your household, do you do any of the following? Please select the answer that best applies for each option.

**[SP PER ROW]**

**Columns:**

1. Yes I do
2. No I don't
3. I'm not responsible for this.

**Row:**

**RANDOMISE STATEMENTS 1-4**

1. Do full-loads when using a washing machine or dishwasher
2. Wash clothes or dishes on an economy or eco programme
3. Use the time delay programme or timer to wash clothes or dishes
4. Use a low temperature setting to wash clothes or dishes

**SUB-STATEMENTS 26A:**

1. **[IF 'YES' FOR STATEMENT 1 THEN SHOW]** full-loads when using a washing machine or dishwasher
2. **[IF 'NO' FOR STATEMENT 1 THEN SHOW]** do full-loads when using a washing machine or dishwasher

**ASK ONE RANDOM WHY/WHY NOT OPEN ENDED QUESTION IF THEY ANSWER YES OR NO FOR AT LEAST ONE OPTION AT Q26a. [Q26a = 1 or 2]**

Q26b.

You said you **do/ don't**: [INSERT AS APPROPRIATE DEPENDING ON WHETHER THEY SAY 'YES' OR 'NO' AT Q26a] [INSERT CORRESPONDING STATEMENT FROM Q26a. IF STATEMENT 1 THEN USE ONE OF THE ABOVE SUBSTATEMENTS DEPENDING ON WHETHER THEY SAY YES/NO] - why is that?

[Open Text Box]

#### **ASK ALL**

Q27. Energy saving potentially means different things to different people. From the statements below, please select the 3 that best describe your view of energy saving, ranking them in order of importance where 1= 'Most important, 2= 'Second most important', and 3 = 'Third most important'.

'Energy saving for me means....'

#### **Columns:**

[SINGLE PUNCH PER ROW Q27\_1 TO Q27\_5; MP PER ROW DON'T KNOW/COULDN'T SAY Q27\_6]

1. 1 (Most important)
2. 2 (Second most important)
3. 3 (Third most important)

#### **Rows:**

##### **RANDOMISE STATEMENTS 1-5**

1. Using products that have been manufactured in an environmentally friendly way
2. Using devices that consume less power
3. Using flexible, economy or eco modes
4. Ways to help me save on my energy bills
5. Changing my behaviour to reduce energy consumption (e.g. turning heating down, lights off, unplugging devices, etc.)
6. Don't know/ couldn't say

##### **11. Questions related to the lifecycle and replacement of domestic appliances, systems and devices**

This section includes questions related to the lifecycle and replacement of domestic appliances (e.g. fridge, freezer, washing machine, tumble drier, dishwasher, cooker, etc.) and other energy consuming systems and devices.

**ASK ALL. SHOW STATEMENTS BASED ON WHETHER THEY SAY THAT THEY HAVE THE DEVICE IN THEIR HOME AT Q13a (Q13a=1-20)/ASK ALL, WHERE INSTRUCTED.**

Q28a. Have any of the following ever been replaced in your home?

[SP PER ROW]

#### **Columns:**

1. Yes
2. No

3. I don't know/can't remember

**Rows:**

**RANDOMISE STATEMENTS 1-11**

1. Cooker (including oven, cooking hobs, etc.) [Q13a = 6]
2. Microwave [Q13a = 7]
3. Fridge [Q13a = 8]
4. Freezer [Q13a = 9]
5. Washing machine [Q13a = 3]
6. Tumble drier [Q13a = 2]
7. Dishwasher [Q13a = 1]
8. Shower or bathing system (including electric, gas- powered, etc.)  
[ASK ALL]
9. Heating system (including central and space heating) [Q13a = 17 OR  
Q13a = 18]
10. Hot water system (including continuous and instantaneous) [ASK  
ALL]
11. TV [Q13a=11]

**ASK THOSE WHO HAVE SAID THEY HAVE REPLACED ONE OR MORE  
HOUSEHOLD ITEMS AT Q28a. SHOW ANY HOUSEHOLD ITEM CODED 'YES'  
AT Q28a (Q28a=1)**

Q28b. How often would you say that you replace the following?

**[SP PER ROW]**

**Columns:**

1. every 2 years or less
2. every 3-7 years
3. every 8-15 years
4. more than every 15 years
5. I don't know/can't remember

**Rows:**

**KEEP SAME ORDER THAT RESPONDENT SAW AT Q28a**

1. Cooker (including oven, cooking hobs, etc.) [Q28a\_1=1]
2. Microwave [Q28a\_2=1]
3. Fridge [Q28a\_3=1]
4. Freezer [Q28a\_4=1]
5. Washing machine [Q28a\_5=1]
6. Tumble drier [Q28a\_6=1]
7. Dishwasher [Q28a\_7=1]
8. Shower or bathing system (including electric, gas- powered, etc.)  
[Q28a\_8=1]
9. Heating system (including central and space heating) [Q28a\_9=1]
10. Hot water system (including continuous and instantaneous)  
[Q28a\_10=1]
11. TV [Q28a\_11=1]

**ASK THOSE WHO HAVE SAID THEY HAVE REPLACED ONE OR MORE HOUSEHOLD ITEMS AT Q28a. SHOW 3 RANDOMLY SELECTED HOUSEHOLD ITEMS CODED 'YES' AT Q28a. IF LESS THAN 3 HOUSEHOLD ITEMS HAVE BEEN CODED 'YES' THEN SHOW ALL THAT HAVE BEEN CODED 'YES'**

Q29. Thinking about the last time you replaced each of these appliances, what were the reasons for doing so? For each appliance please select all reasons that apply.

**[MP PER ROW CODES 1-10, SP PER ROW 11-13]**

**Columns:**

**KEEP SAME ORDER THAT RESPONDENT SAW AT Q28a**

1. Cooker (including oven, cooking hobs, etc.) [Q28a\_1=1]
2. Microwave [Q28a\_2=1]
3. Fridge [Q28a\_3=1]
4. Freezer [Q28a\_4=1]
5. Washing machine [Q28a\_5=1]
6. Tumble drier [Q28a\_6=1]
7. Dishwasher [Q28a\_7=1]
8. Shower or bathing system (including electric, gas- powered, etc.) [Q28a\_8=1]
9. Heating system (including central and space heating) [Q28a\_9=1]
10. Hot water system (including continuous and instantaneous) [Q28a\_10=1]
11. TV [Q28a\_11=1]

**Rows:**

**RANDOMISE STATEMENTS 1-11**

1. To save money
2. I didn't think about it much
3. I wanted to scale down (smaller fridge, washing machine etc.)
4. I wanted a better design
5. To save energy
6. Previous one broke down
7. Previous one was too old
8. I wanted new features and capabilities
9. I wanted better functionality
10. I wanted to scale up (bigger fridge, washing machine etc.)
11. It wasn't my decision [SP]
12. None of these [SP]
13. Don't know/Can't remember [SP]

**ASK THOSE WHO HAVE SAID THEY DID NOT REPLACE ONE OR MORE HOUSEHOLD ITEM(S) AT Q28a. PLEASE DISPLAY ANY HOUSEHOLD ITEMS CODED 'NO' AT Q28a**

Q30. You said you haven't replaced the following appliance(s). Please indicate why that is? For each appliance please select the main reason that applies.

**[SP PER ROW]**

**Columns:**

**KEEP SAME ORDER THAT RESPONDENT SAW AT Q28a**

1. Cooker (including oven, cooking hobs, etc.) [Q28a\_1=2]
2. Microwave [Q28a\_2=2]
3. Fridge [Q28a\_3=2]
4. Freezer [Q28a\_4=2]
5. Washing machine [Q28a\_5=2]
6. Tumble drier [Q28a\_6=2]
7. Dishwasher [Q28a\_7=2]
8. Shower or bathing system (including electric, gas- powered, etc.) [Q28a\_8=2]
9. Heating system (including central and space heating) [Q28a\_9=2]
10. Hot water system (including continuous and instantaneous) [Q28a\_10=2]
11. TV [Q28a\_11=2]

**Rows:**

**RANDOMISE STATEMENTS 1-9**

1. Expensive to buy a new one
2. A new one would be more expensive to maintain
3. Existing one works fine
4. I rent, therefore I wouldn't
5. I don't have the time to go looking for one
6. Hassle to install
7. Prefer to stick with what I know
8. It's not my decision
9. I just haven't got round to it yet
10. None of these
11. Don't know

**12. Questions on decision-making, roles and responsibilities in energy consumption and energy saving**

This section includes questions about where you get information (the sources of information) and advice (sources of influence) when purchasing appliances, devices and energy systems at home. It also includes questions about roles and responsibilities with regards to energy saving.

**ASK ALL/ASK BASED ON ANSWERS AT Q13a WHERE STATED**

Q31. Where would you look for information and advice when purchasing any of the following: white goods (e.g. fridge, cooker), wet appliances (e.g. washing machine, dishwasher), electronic devices (e.g. TV, DVD player, audio devices and computers), lighting (e.g. lighting solutions/light bulbs), and heating and insulation systems? Please tick all options applicable.

**[MP PER ROW CODES 1-11. SP PER ROW CODES 12-14]**

**Columns:**

**RANDOMISE STATEMENTS 1-5**



1. 1. White goods [IF Q13a= 8 or Q13a=9]
2. 2. Wet appliances [IF Q13a=1 or Q13a=3]
3. 3. Electronic devices [ IF Q13a= 11-15]
4. 4. Heating and insulation systems [ASK ALL]
5. 5. Lighting [ASK ALL]

**Rows:**

**RANDOMISE STATEMENTS 1-11**

1. My relatives
2. My neighbours
3. My friends
4. My work colleagues
5. Other household members
6. Sales advisors / Professionals
7. The property owner / Bill payer
8. TV (advertisements, programmes, etc.)
9. Radio (advertisements, programmes, etc.)
10. Newspapers / magazines (advertisements, articles, etc.)
11. Online sources (websites, social media, chat forums, etc.)
12. None of these [SP]
13. No one - I make my own decisions [SP]
14. It's not my decision [SP]

**ASK ALL**

Q32. To what extent would you say you're concerned with energy saving?  
Please select one option.

[SP]

**Columns:**

1. Not at all concerned with energy saving
2. Not very concerned with energy saving
3. Somewhat concerned with energy saving
4. Fairly concerned with energy saving
5. Very concerned with energy saving

**ASK THOSE WHO HAVE SELECTED THAT THEY ARE CONCERNED ABOUT ENERGY SAVING [Q32= 2-5]**

Q33a. You said that you are concerned about energy saving [INSERT 'to some extent' IF Q32=2-3]. Why is that? Please choose the main reason(s), selecting up to 2 options.

**[MP- UP TO 2 OPTIONS]**

1. Because it saves money
2. To reduce environmental pollution
3. Because it is good for the community
4. To make sustainable use of natural resources
5. For future generations
6. Other (please specify) [INSERT TEXT BOX]

**ASK ALL**

Q34. Who do you think should take responsibility for energy saving? Please rank the options below where 1= 'Most responsibility', and 6= 'Least responsibility'.

**[SINGLE PUNCH PER ROW Q34\_1 TO Q34\_6; MP PER ROW DON'T KNOW/COULDN'T SAY Q34\_7]**

**Columns:**

1. 1 (Most responsible)
2. 2 (2<sup>nd</sup> Most responsible)
3. 3 (3<sup>rd</sup> Most Responsible)
4. 4 (4<sup>th</sup> Most Responsible)
5. 5 (5<sup>th</sup> Most Responsible)
6. 6 (Least responsible)

**Rows:**

**RANDOMISE STATEMENTS 1-6**

1. Individuals/Citizens
2. Municipalities/Local Government
3. Local communities
4. Manufacturers/Industry
5. The government
6. Non-Governmental Organizations (e.g. Earth Watch, Greenpeace, etc.)
7. Don't know/ couldn't say

**ASK ALL. ALLOW RESPONDENTS TO PROCEED IF THEY CLICK THE 'NO COMMENTS' BOX**

Q35. Please provide any feedback or comments on how you approached the previous question about who you think should take responsibility for energy saving?

**[Open Text Box]**

No comments/feedback

**12. And finally, just a few more questions about you and your household**

**ASK ALL**

Q36. What is the highest level of school you have completed or the highest degree you have received? Please select one option.

**[SP]**

1. GCSE, GCSEs, O levels, CSEs, NVQ1, or similar
2. A-Levels, AS levels, NVQ 2 or 3, or similar
3. Degree level qualification (BA, BSc, PGCE, HND, NVQ 4 or 5, etc.) Post-Graduate qualification (Masters, PhD, etc.)
4. Professional / work related qualifications
5. No formal qualifications

**ASK ALL**

Q37. How long have you lived in your home? Please select one option.

[SP]

1. Less than 1 year
2. 1-5 years
3. 6-10 years
4. 11-24 years
5. 25-40 years
6. Over 40 years

**ASK ALL**

Q38a. Are you responsible for choosing which energy supplier(s) you use for your home?

[SP]

1. Yes, fully responsible
2. Yes, partly responsible
3. No, no responsibility or involvement

**ASK ALL**

Q38b. Are you responsible for getting your household energy bills paid? Please select one option.

[SP]

1. Yes, fully responsible
2. Yes, partly responsible (e.g. for some bills)
3. Yes, I undertake this duty sometimes
4. No, not at all

**ASK THOSE WITH MORE THAN ONE PERSON IN H/H (Q6x = 2-5)**

Q39. Which of the following statements best describes your household? Please select one option.

[SP]

1. Single person household [**DO NOT DISPLAY, BUT AUTOCODE IF Q6x=1**]
2. Two or more non-family adults
3. Couple
4. Couple with dependent children
5. Couple with independent children
6. Lone parent with dependent children
7. Lone parent with independent children
8. Household containing two or more families

**ASK ALL**

Q40. How much total combined income did all members of your HOUSEHOLD earn in 2014? This includes money from jobs; net income from business, farm, or rent; pensions; dividends; interest; social security payments; and any other income received by members of your HOUSEHOLD that are SIXTEEN (16) years of age or older. Please report the gross income earned to the best of your knowledge (e.g. if in flat shares indicate the range you think fits best).

[SP]

1. under £15,000
2. £15,000 - £29,999
3. £30,000 - £79,999
4. £80,000 and over
5. Don't Know
6. Prefer not to say

### **13. Your feedback on the survey**

Thank you for taking the time to complete our survey.

Your feedback is very important so we would like to ask you one last question.

#### **ASK ALL**

Q41. 'I found this survey...' Please select the option that applies to you the most from the list below.

#### **[SP]**

1. Useful and educational. I will take away important messages and ways to change my energy use.
2. Thought-provoking. It made me think about the ways I use energy but changing my ways is another issue.
3. Boring and repetitive. I could not see the point and I have not discovered anything new.
4. None of these