seai SUSTAINABLE ENERGY AUTHORITY OF IRELAND

Behavioural Energy and Travel Tracker

Results report 2 – Summer 2023

SEAI Behavioural Economics Unit

Behavioural insights for policy: primary research

Rialtas na hÉireann
Government of Ireland

Behavioural Energy and Travel Tracker

Results report 2 – Summer 2023

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Sustainable Energy Authority of Ireland
SEAI is Ireland's national energy authority investing in, and delivering, appropriate, effective and sustainable solutions to help Ireland's transition to a clean energy future. We work with the public, businesses, communities and the Government to achieve this, through expertise, funding, educational programmes, policy advice, research and the development of new technologies.

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Executive summary

Background

Changing individual behaviour alone will not solve the energy and climate crises, but the choices individuals make every day do contribute a significant proportion of Ireland's energy use and associated emissions, while also impacting on their own financial wellbeing.

Since December 2022, SEAI's Behavioural Economics Unit has supported the Irish government's efforts to educate and encourage citizens and businesses to use less energy by running the Behavioural Energy and Travel Tracker (BETT). BETT is an online survey that tracks residential and travel-related energy consumption behaviours of people in Ireland. The motivating idea behind BETT is that to understand energy consumption and how we can change it, we must first accurately measure behaviours and uncover the factors (structural, sociodemographic, psychological) that underlie them.

The first BETT report covered the first five waves that ran from December 2022 to April 2023, roughly corresponding to the winter or heating season. **This report details results from the following five waves of BETT that ran from May 2023 to September 2023**. BETT ran monthly throughout 2023 and continues to run on a quarterly basis in 2024. Future outputs will focus on deep dives into specific topics of interest.

Main findings

Most of the findings from the first BETT report continue to hold. New findings are highlighted below.

The prevalence of inefficient energy behaviour remained broadly unchanged in summer 2023 compared with the preceding winter.

Some expected seasonal differences were seen in heating behaviour but there was no meaningful change in mode of transport choice in the summer months, despite the warmer weather.

- Seven in ten journeys continued to be taken by car and one in five participants travelled by car for a short journey in any given day.
- Use of heating was much less prevalent, as expected, but one in ten participants continued to use some form of heating in any given day across the summer months; one in five in July and August.
- Tumble dryer use was lower than in the winter months, but still prevalent, with over a quarter of participants who did a wash on a given day using their tumble dryer.

New objective comprehension tasks revealed some misconceptions and knowledge gaps among participants, but there was no strong relationship found between self-reported and objective measures of understanding.

- People have poor understanding of the relative carbon intensity of different energy consuming activities, with many underestimating the intensity of home heating and tumble dryer use.
- Over three in five participants incorrectly believed electricity was cheaper at off-peak times for everyone with a smart meter, and about three in ten incorrectly believed that setting the thermostat to a higher temperature would make a room heat up faster.
- Participants tended to underestimate the share of energy used by sectors relevant to individual behaviour, particularly transport.

Energy poverty remained worryingly prevalent in the summer months

Over a third of participants reported spending 10% of their income on energy and having difficulty paying their bills.

Conclusion

BETT continues to offer a comprehensive picture of everyday energy use in Ireland and the factors influencing it. The analysis presented in this report builds on that presented in the first BETT report and makes comparisons between behaviour in the summer months compared with the winter. While most people feel they are making an effort to use energy sustainably, there are still a number of domains in which people are using energy where they might not need to.

Five recommendations for policy and communications based on findings in this report are highlighted in the box below.

Recommendations

1. Provide further support to people struggling to pay their bills and cutting back on essentials to do so, ensuring that those eligible for support are aware of this. Be aware that measures of energy poverty may fluctuate depending on what time of year they are taken.
2. Use communications campaigns to correct misconceptions and educate people on the relative energy intensity of different activities, targeting especially those on lower incomes.
3. Create the necessary policies and infrastructure to foster positive habits around sustainable travel and reduce car dependence.
4. Continue to emphasise the high energy intensity of space heating and discourage heating during the summer months when it is unlikely to be necessary.
5. Put more emphasis on avoiding the use of tumble dryers as this should be feasible for most, particularly during the summer months.

1. Introduction

1.1. Background

The importance of changing the way we consume energy has been heightened by the recent energy crisis, layered with a cost-of-living crisis and the ongoing climate crisis. Changing individual behaviour alone will not solve the energy and climate crises. But the choices individuals make every day contribute a significant proportion of Ireland's energy use, with the residential sector responsible for a quarter of all energy-related emissions in 2022.[1] Energy efficient behaviour also benefits householders by reducing their energy bills.

Over the last two years, SEAI's Behavioural Economics Unit has supported the Irish government's efforts to educate and encourage citizens and businesses to use less energy. An element of this support has come from the Behavioural Energy and Travel Tracker (BETT) - a survey that tracks residential and travel-related energy consumption behaviours of people in Ireland. The motivating idea behind BETT is that to understand energy consumption and how we can change it, we must first measure behaviours accurately and in detail, and uncover the underlying structural, sociodemographic and psychological factors that underlie them. BETT is unique in its use of a behavioural science technique known as the "Day Reconstruction Method" to capture granular data on the behaviours behind energy consumption over time, as well as the factors influencing these behaviours.

BETT was run monthly from December 2022 to December 2023, and continues to run on a quarterly basis in 2024. The first BETT results report summarised findings from the 2022/2023 heating season, from December 2022 to April 2023.[2] This report follows a similar format to the first, summarising findings related to summer 2023, from May 2023 to September 2023.

1.2. Summary of previous findings

Throughout the 2022/2023 heating season, people generally reported a high understanding of how to save energy and said they were making a substantial effort to use energy efficiently, but analysis of BETT data revealed inefficient behaviours were common and people tend to overestimate the effort they make compared with others.

The types of people most likely to use energy inefficiently were not consistently the same across different types of behaviours and activities, but on the whole, sociodemographic factors were more influential on behaviour than the psychological factors measured. That said, psychological factors did also play a role. People who reported having a higher understanding of how to save energy engaged in fewer inefficient behaviours. In addition, higher worry about climate change was associated with lower likelihood of using appliances inefficiently. Higher worry about cost of living, on the other hand, was not associated with more efficient behaviours, despite people saying saving money was their main motivation for using energy efficiently. Many people were found to be at risk of energy poverty during the winter months, according to both objective and subjective measures.

In-depth results can be found in the first BETT report, as can further detail on the motivations behind the survey design.

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[1] SEAI National Energy Balance. https://www.seai.ie/data-and-insights/seai-statistics/key-publications/national-energy-balance/
[2] SEAI (2023) Behavioural Energy and Travel Tracker: Results report 1 – heating season 2022/2023. https://www.seai.ie/data-and-insights/behavioural-insights/publications/behavioural-energy-and-tr/

1.3. Factors influencing energy behaviour

As well as providing detailed information about energy behaviour, BETT tracks a number of other factors that might be related to energy behaviour such as;

- sociodemographic characteristics,
- psychological measures,
- energy poverty indicators, and
- recall of the Irish government's "Reduce Your Use" energy saving campaign.

A full description of the evidence and motivation behind the measures included in BETT can be found in the first results report. Most of the factors remained unchanged for the current report, however there were some additions which are discussed below.

1.3.1. Additional measures tracked in summer 2023

Awareness and understanding

Given that self-reported understanding was the psychological factor most strongly associated with behaviour in the first study period, we expanded our comprehension measures in subsequent waves of BETT. There may be a gap between how much people feel they know or understand about energy conservation, and how much they actually know,[3] so adding objective measures of comprehension complements our subjective (self-assessed) measure. We added a task asking participants to rank the relative inefficiency of different energy activities. Previous research has shown that while Irish people are able to identify climate-friendly actions, their awareness of the relative impact of different actions is poor.[4] The purpose of this new task was to measure participants' comprehension of the relative intensity of inefficient energy behaviours and see whether having a higher level of comprehension is associated with performing different or fewer inefficient behaviours.

Findings from the first BETT report also pointed to the possibility of misconceptions about energy-related topics, particularly the relationship between smart meters and time-of-use tariffs. Most participants said their main motivation to shift their electricity use away from peak times was to save money, despite only a small proportion of these being on tariffs that would allow them to do so. To investigate this further, we gave participants five statements relating to energy and asked them to identify which were true or false.

Social influence and perceived efficacy

The survey waves covered in the first BETT report included questions to gauge participants' self-evaluated effort to use energy sustainably, as well as the level of effort they perceive others to be making and their confidence in government.

We added a task whereby participants were asked to attribute responsibility for lowering Ireland's energy consumption between three groups: individuals, the government, and private business and industry. Another task was then added where participants were asked to estimate what share of Ireland's energy use is used by different sectors. With these questions we can gauge where people think responsibility lies for Ireland's total energy use, and whether this affects their behaviour.

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[3] Ellen, P.S. (1994). Do we know what we need to know? Objective and subjective knowledge effects on pro-ecological behaviors. Journal of Business Research, 30(1), 43-52. doi: 10.1016/0148-2963(94)90067-1.

[4] Timmons, S. & Lunn, P. (2022) Public understanding of climate change and support for mitigation. ESRI Research Series 135. doi: 10.26504/rs135

1.4. Scope of this report

This report details the results from May 2023 to September 2023, following directly on from the first BETT report's study period (the December 2022 to April 2023). We invite the reader to refer to this first report for detail regarding the study motivation, design and methodology.

Below we give a brief outline of the methodology followed by an overview of energy behaviour during this period and the factors influencing it, and a discussion of implications for policy and communications. At the time of publication BETT is still an ongoing study, running on a quarterly basis in 2024. BETT generates a very rich dataset that could be used to answer a wide variety of research questions. The analysis presented in this report is not exhaustive, and further reports will examine certain topics or behaviour in greater detail.

2. Methodology

2.1. Sampling and data collection

Each wave of BETT is run with a sample of 1,000 people, representative of the Irish population in terms of age, gender, social grade, and geographical region. The sample is drawn from an online market research panel. Data collection for each wave is spread out over at least seven days to capture behaviour from every day of the week. The dates for each wave detailed in this report were:

1. 2nd – 8th May
2. 2nd – 8th June (including a bank holiday Monday)
3. 4th – 11th July (over the school holidays)
4. 2nd – 8th August (over the school holidays and including a bank holiday Monday)
5. 4th – 10th September

2.2. Survey design

The full survey design is described in detail in the first BETT report. Here we give only a brief outline and detail the new additions to the survey.

2.2.1 Survey outline

The structure of the survey is summarised in Figure 1 below. Following screening, the survey begins with general questions about participants' travel and home energy behaviour over the previous week. The Day Reconstruction Method[5] is then used to gather detailed information on the participant's energy related behaviour on a given day. We ask participants to think back over the previous day in "episodes" (morning, afternoon, and evening) and make a note of their travel and energy related behaviours. These notes are not analysed, instead serving purely as a recall aid. Next, we ask a number of specific, detailed questions about participants' travel and home energy behaviours (heating, hot water use, cooking and appliance use) on the reference day. Where a given behaviour was engaged in more than once, we typically record detail about one randomly chosen instance of that behaviour. This allows us to capture a representative picture while keeping the survey to a manageable length.

Figure 1: Schematic overview of BETT's structure

[5] Kahneman, D. et al (2004). A survey method for characterizing daily life experience: The day reconstruction method. Science, 306(5702), 1776-1780. doi: 10.1126/science.1103572

2.2.2 Additional psychological measures

As mentioned in Section 1.3.1, some questions were added to gain more nuanced measures of participants' understanding and of where they think responsibility lies for Ireland's energy use.

In June, we added a task designed to detect potential misconceptions or knowledge gaps about energy use. Participants had to rate the following five statements as true or false. The first three of which are false and the last two true.

- Electricity costs less at off-peak times for everyone who has a smart meter.
- Setting the thermostat to a higher temperature will make the room heat up quicker.
- Driving a given distance will use the same amount of fuel regardless of the speed you drive at.
- Washing clothes at 30 degrees instead of 40 degrees uses approximately 30% less energy on average.
- Using an oven for 35 minutes uses about the same amount of energy as using an air fryer for 1 hour.

In July, we added another comprehension task. Participants were asked to rank a list of activities in order of the amount of excess CO2 they produce, from most to least. Initially ten activities were included in this task. This was later shortened to six, to reduce the complexity of the task. The final activities included were (in their correct order):

- Heating an average-sized home for 30 minutes using an oil or gas boiler
- Using a tumble dryer for 1 hour
- Using an electric shower for 10 minutes
- Driving 2 km in a petrol/diesel car
- Cooking with an electric hob for 30 minutes
- Using the washing machine for a standard cycle at 40 degrees instead of 30 degrees

In July, we added a task where participants used sliders to attribute responsibility (as a percentage) for lowering Ireland's energy consumption between

- government,
- private businesses and industry, and
- individuals.

In August, this was complemented by a similar task where participants estimated what share of Ireland's energy use is used by different sectors:

- residential,
- business and industry,
- transport, and
- agriculture and fisheries.

2.3 Data analysis

2.3.1 Defining inefficient energy behaviours

As in the first study period, our analysis approach involves constructing several variables to identify a set of inefficient ways of performing different behaviours. These are times where someone used energy when they likely did not need to. These are:

1. Using a car for a journey under 2 km
2. Using a car for a journey under 5 km where public transport was available
3. Heating their home
4. Taking multiple showers or baths, or taking a long shower or full bath
5. Using energy intensive appliances to cook a small number of portions
6. Using a washing machine inefficiently
7. Using a tumble dryer
8. Using a dishwasher inefficiently

This list is unchanged from the first study period other than heating behaviour. In the first BETT report, we focused on both heating unoccupied space and using high thermostat settings as inefficient behaviours, for the summer months we define heating the home at all as an inefficient behaviour.

2.3.2 Identifying factors influencing inefficient behaviour

As before, we use a logistic regression modelling approach to identify the factors that influence inefficient behaviour. We control for the survey wave, whether the reference day was a weekday or weekend/bank holiday, and weather.

For psychological variables measured on 7-point scales, participants are categorised as being "high" if they respond 5 or above or "low" if they respond 4 or below. There is an exception for worry about cost of living, which was particularly skewed towards higher scores – participants are classified as "high" if they respond 6 or above.

For our misconceptions task, each participant is grouped as measuring either "high" or "low", where "high" represents attaining a median or above correct number of answers. For the ranking task, participants are grouped as having "high" or "low" comprehension, depending on the absolute cumulative distance from the correct ranking (again, using the median value to delineate). We also looked at whether participants' ranking of specific inefficient activities related to participant behaviour. For example, if those who underestimated the energy intensity of inefficient heating were more likely to heat inefficiently.

For the responsibility task, participants are grouped as assigning "high" if they scored at or above the median score and "low" otherwise. For the energy use by sector question, participants' responses were grouped by whether they over or underestimated the proportion of energy used for each sector.

Regression model results are found in Appendix E and referenced in the main text. Further detail on weather for the period and how it was linked to BETT data is contained in Appendix A. Distributions for the psychological variables can be found in Appendix B.

3. Results

We begin this section with a summary of characteristics of the sample. We then give an overview of energy behaviour from May 2023 to September 2023, with a particular focus on instances of potentially inefficient energy use and the effect of sociodemographic variables on these. Next, we describe the responses to psychological measures before assessing their associations with energy behaviour. We end the results section with a short description of energy deprivation in the sample.

Throughout, we comment on any differences or similarities with results of this study (May 2023 to September 2023) compared to the first study period (December 2022 to April 2023).

3.1 Sample characteristics

A full description of the sample, as well as household and dwelling characteristics is included in Appendix C. As in the first study period, the sample was broadly nationally representative, with a slight under-sampling of;

- men (46% of the sample were men compared with the target 49%),
- younger people (23% of the sample were aged 18-34 compared with a target of 28%), and
- lower social grades (49% fell into the C2DEF category compared with a target of 56%).

Household and dwelling characteristics remained unchanged from the first study period, with the exception of smart meter ownership. 52% of the sample reported owning a smart meter in September compared with 41% the previous December. This increase is roughly in line with ESB Network's own figures about smart meter roll out during the same period. Our figures lag slightly behind, likely because some participants do not know they have a smart meter.

There was also an increase in the proportion of people reporting being on a smart/time-of-use (TOU) tariff. 18% of smart meter owners or 10% of the full sample in September compared with 14% of smart meter owners or 7% of the full sample in December. However, as commented on in the first report, these proportions are likely an overstatement. The supplier reported figures from the Commission for the Regulation of Utilities (CRU) indicate that about 9% of smart meter owners were on smart tariffs in September 2023.[6] It is worth noting that 16% of the sample did not know what type of tariff they were on.

3.2 Energy behaviour

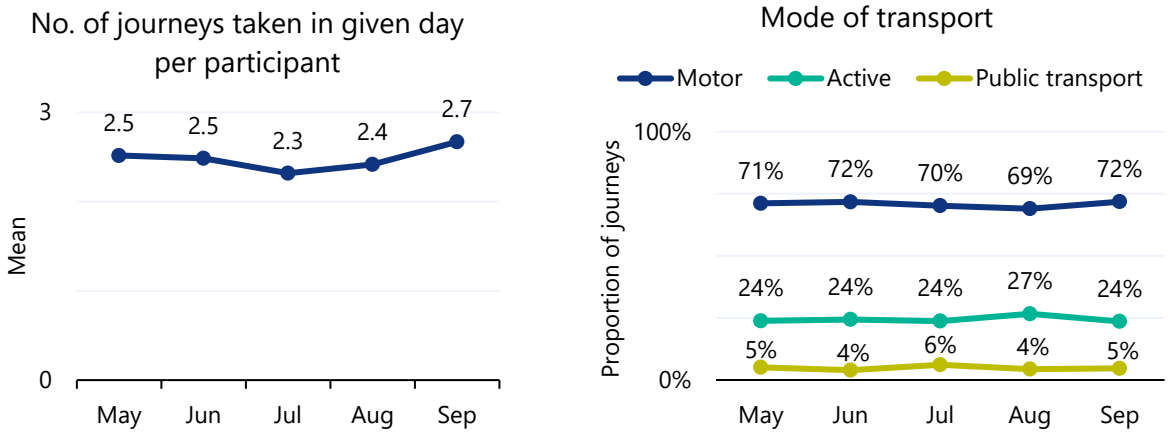
In this section we report descriptive statistics about behaviours of interest. For most of these we define a way of doing the behaviour that is considered inefficient. We then model these inefficient behaviours to find associations between acting inefficiently and some of the other variables that we record.

[6] Email correspondence with CRU.

3.2.1 Travel behaviour

Travel behaviour was broadly unchanged compared with the first study period. Participants made an average of 2.5 journeys in a given day compared with 2.4 during the winter months. Despite this study period having warmer weather, the share of transport types used was unchanged. About seven in ten journeys were taken using motorised transport, with about a quarter being walked or cycled, and just 1 in 20 using public transport (Figure 2). The distance profiles are slightly different between the two periods, with the proportion of 10 km–50 km journeys rising in the summer (25% in winter compared to 29% in the summer months), and a small decrease in the proportion of journeys under 5 km (47% in winter and 45% in the summer months).

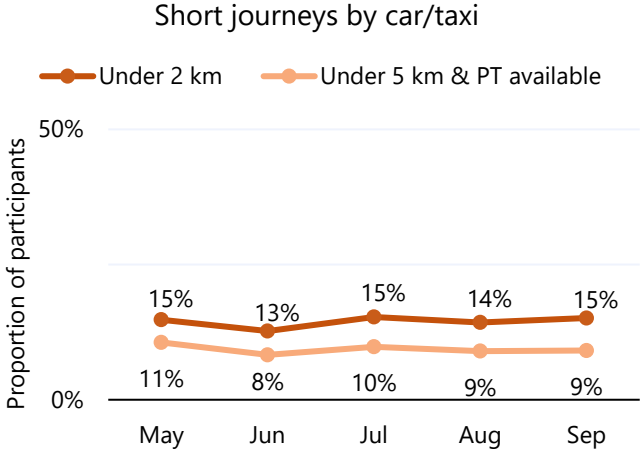
Figure 2: Left, the average number of journeys taken by participants on the previous day. Right, the proportion of journeys taken by different modes of transport.



Inefficient energy behaviour: short car journeys

To gauge the extent of driving that might be unnecessary or inefficient, we track whether participants travelled by car or taxi for journeys under 2 km, or under 5 km where public transport was available. A fifth of the sample used a car for at least one such journey in any given day, just 2% less than during the winter months, with about 14% using a car for journeys under 2 km and 9% for journeys under 5 km where public transport was available (Figure 3).

Figure 3: Proportion of participants who travelled by car or taxi for short journeys.



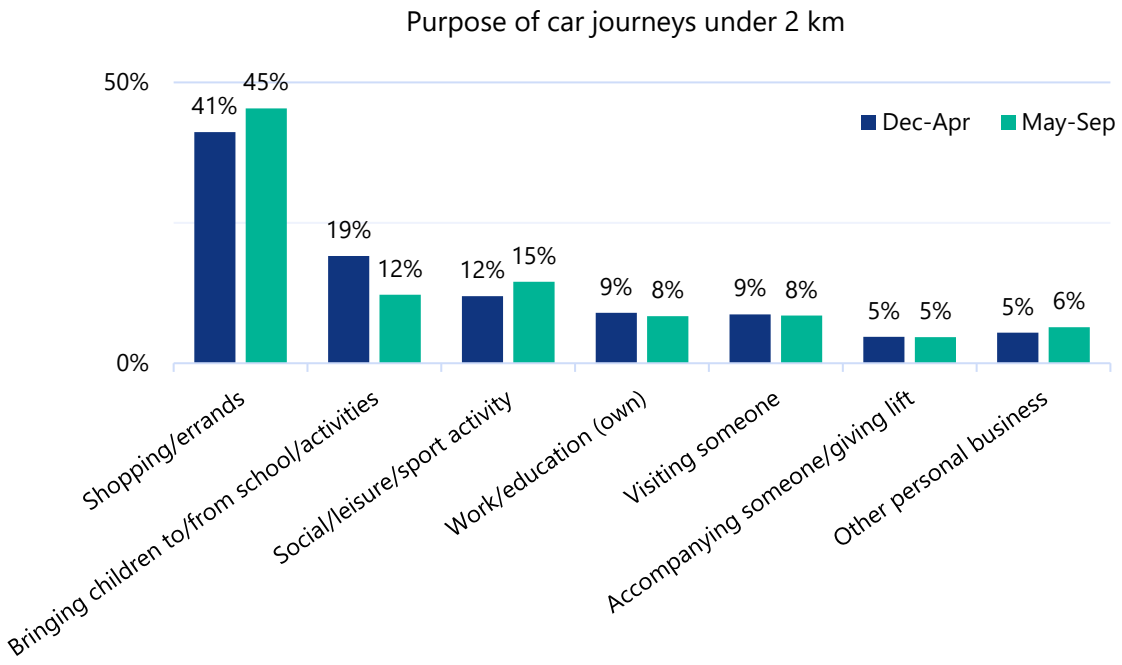
Results of regression models examining how various factors influence the likelihood of using a car if making a journey under 2 km and 5 km with public transport available can be found in Appendix E. As with the first study period, weather did not affect how likely people were to travel by car for short journeys – the proportions of participants who drove short journeys when it was dry and when it was raining were not significantly different.

As before, the factors most associated with travelling by car for journeys under 2 km were higher income, being female, aged over 35, living in rural areas, and living as a family. There were subtle differences, for example during the winter months the middle age group (35 – 54) were more likely than the 55+ group to drive for these journeys, however, the reverse was true in the summer months, and the effect of income was less pronounced, with a statistically significant effect only seen for the highest income categories. In the first study period car ownership accounted for the effects of income, being in the oldest age group (55+) and part of the effect of living in a rural area or as a family, but in this period car ownership accounted for all sociodemographic effects except gender.

In the first BETT report, the only sociodemographic factors that were related to travelling by car for journeys under 5 km where public transport is available were living in an urban area or belonging to ABC1 social grades. These effects remained during the summer months, as well as an additional effect of income. Those belonging to the highest income bracket were more likely to use a car. When car ownership is accounted for the income and social grade effects diminish, but we also see an education effect, with degree-holders being less likely to use their car for this type of journey.

Shopping or errands was the most common purpose of short car journeys under 2 km in both study periods. It accounted for 41% and 45% of car journeys under 2 km in the first and second study periods respectively, when "returning home" journeys are excluded (Figure 4). Over the summer months, social/leisure/sport activity was the second most common purpose, accounting for 15% of these types of journeys. This is a change from the preceding winter, where the second most common purpose of these shorter journeys was bringing children to school or other activities.

Figure 4: Stated purpose of car journeys (excluding "returning home") under 2 km.

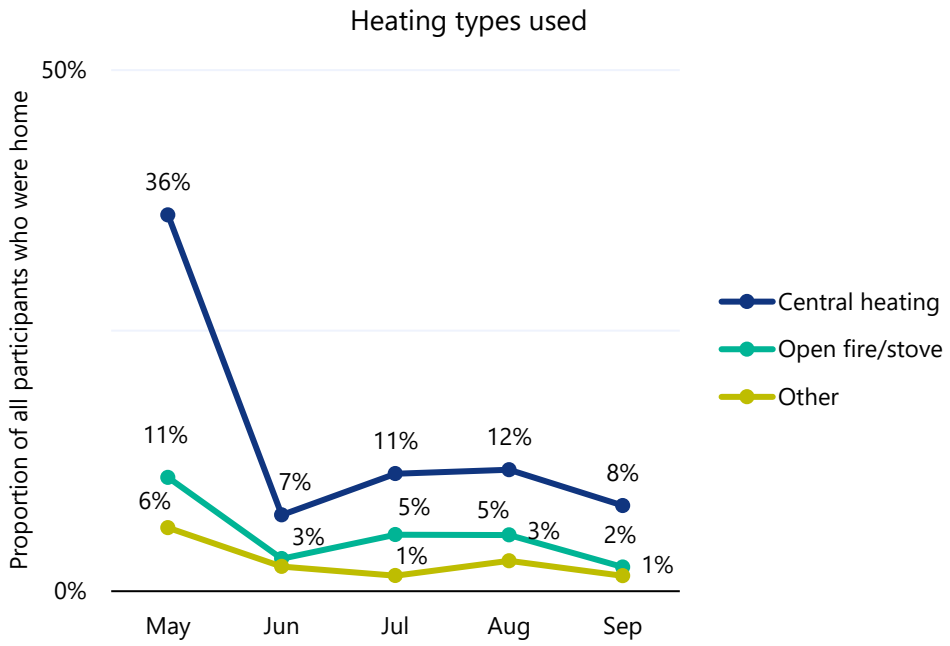


3.2.2 Home energy behaviour

Heating

Most people did not heat their homes throughout the study period of May to September. A little over half of participants did not use any heating in a given day in May, increasing to over 4 in 5 from June to September. Of those who did heat their home, central heating remained the most common option. On average, 15% of people who were at home used the central heating on a given day (Figure 5). Open fires and stoves were the second most popular option, with 1 in 20 participants indicating they were used, on average.

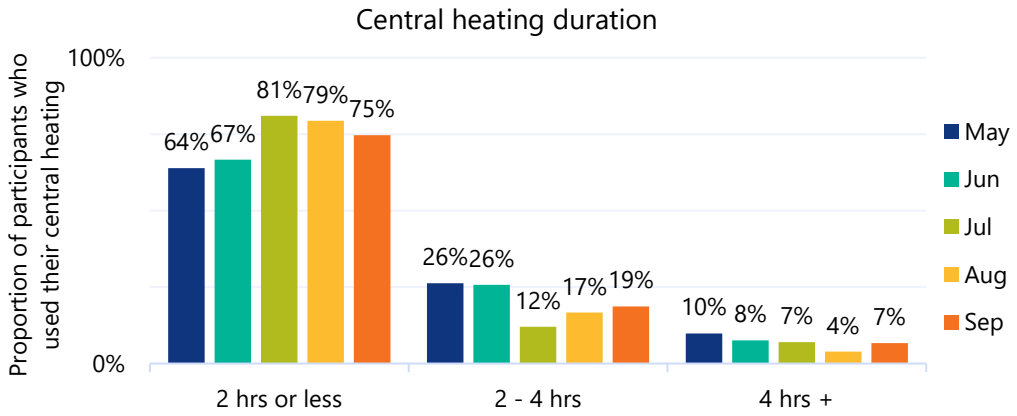
Figure 5: Space heating used by participants who were at home on the reference day.



There was a change in the relative popularity of fuels used for fires compared with the winter months. Whereas in the first study period wood and coal were the most used fuels, 34% and 20% of cases, respectively, and turf being used by 17% of those who lit fires. The pattern was reversed in the summer months, with turf being used in 33% of cases, compared to 26% for wood and 14% for smokeless coal.

The duration for which the central heating was switched on (for those who had it switched on at all) is shown in (Figure 6). Compared with the preceding winter months, participants who used their heating used it for less time, with just 7% (or 1% of the overall sample) having it switched on for 4 hours or more compared with 30% (or 22% of the overall sample) in the first study period. Thermostat settings for thermostat owners who heated their homes remained the same – just over a quarter of these had theirs set to 21°C or higher.

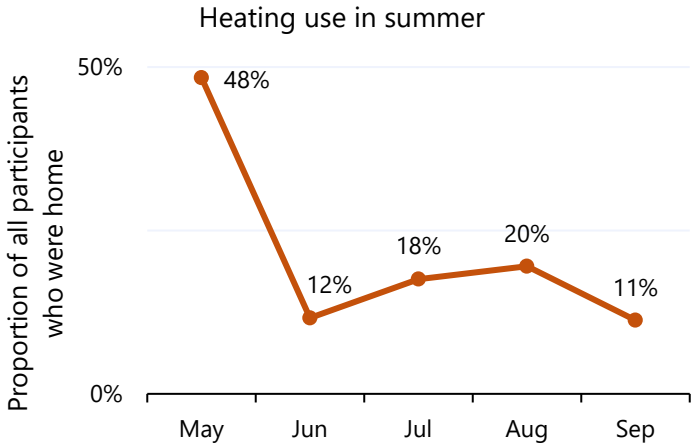
Figure 6: Duration for which the central heating was switched on (if used at all) on the reference day.



Inefficient energy behaviour: heating use during summer months

In the first study period, which took place in the colder months, we defined inefficient heating behaviours as heating unoccupied rooms and homes, or having the thermostat set to 21°C or higher. Given that space heating is much less common (and likely unnecessary) in the summer months, for this report we define heating the home at all as an inefficient behaviour. Almost half of participants heated their homes on a given day in May, with this decreasing to between 1 in 10 and 1 in 5 between June and September (Figure 7).

Figure 7: Proportion of participants who heated their home on the reference day.



Results of regression models examining how various factors influence the likelihood of using space heating (of any kind) during the summer months can be found in Appendix E. As might be expected, higher outside temperatures were associated with a lower likelihood of using heating. Lower rainfall also decreased this likelihood. People were less likely to heat their homes over the weekend.

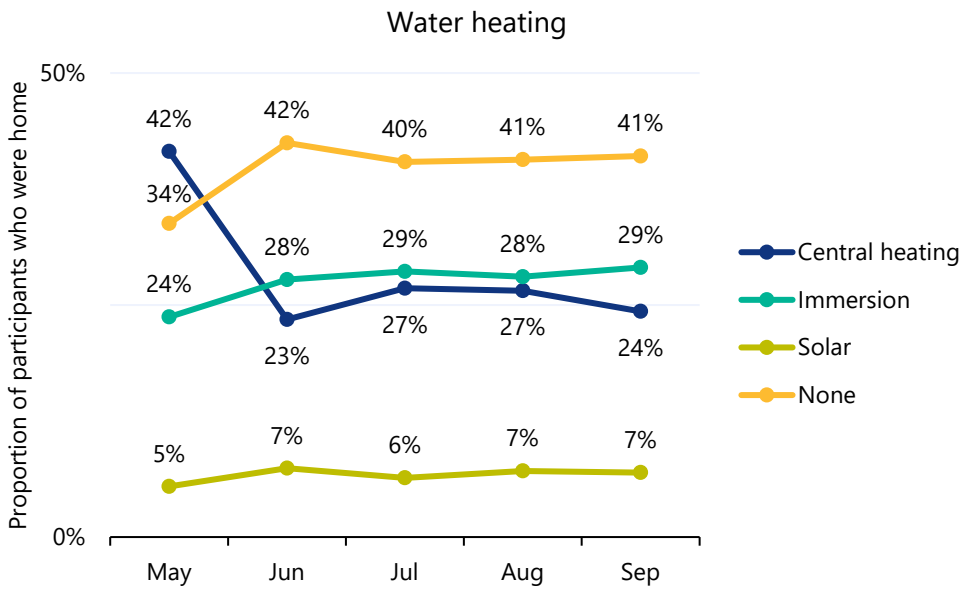
Participants who lived alone and apartment dwellers were less likely to heat their homes in the summer, while younger people (under 35) were more likely to, as were those living in rural areas and, interestingly, those on the lowest incomes. These income and rural effects are explained by these groups being more likely to light open fires during the summer months – there is no effect on central heating use.

Hot water use

Fewer people heated water during the summer months compared with the preceding winter. Two in five did not heat water in a given day compared with one in five during the first study period.

The decrease was specific to use of central heating systems to heat water. From December to April, an average of 63% of people used central heating to heat their water on a given day, falling to 29% from May to September (Figure 8). In contrast, the proportion of participants using the immersion to heat their water rose from 19% in the first study period to 27% in this one. The proportion using solar panels also increased slightly from 5% to 7%.

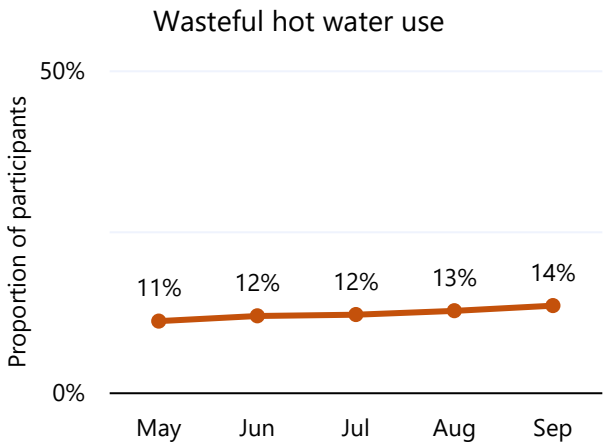
Figure 8: Water heating methods used by participants who were at home on the reference day.



Inefficient energy behaviour: hot water use

As for the first BETT report, we define taking multiple showers or baths, taking a long shower (over 10 mins) or a full bath as inefficient hot water use. Remaining consistent with the winter months, an average of 12% of participants engaged in at least one of these behaviours in a given day over the study period (Figure 9).

Figure 9: Proportion of participants who had multiple showers or baths on the reference day or took a long shower or a full bath.

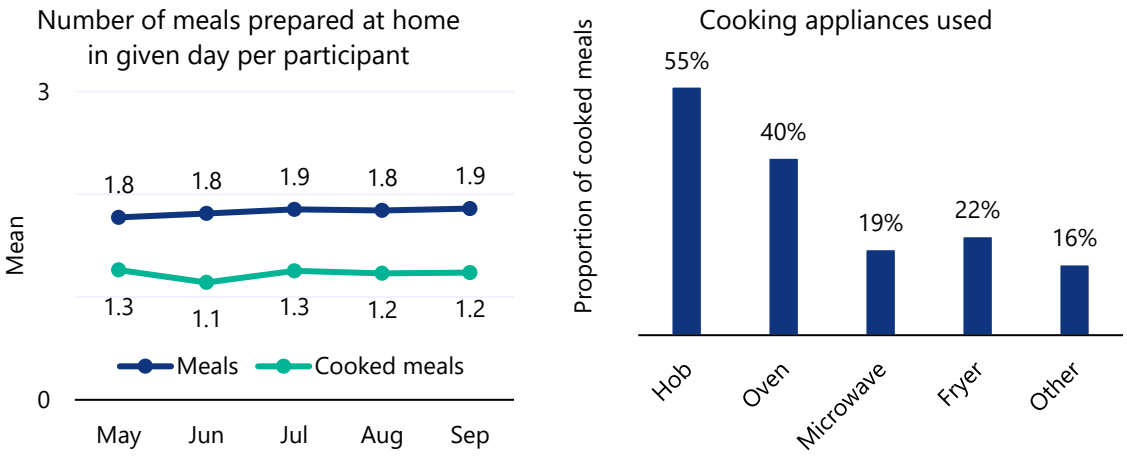


As before, we find women and under 35s are more likely to use hot water inefficiently (see Appendix E). Whereas in the first study period we found people were more likely to use water inefficiently on weekends, no significant association was found this time. There was, however, a slight effect of income, with those in the middle income bracket less likely to use water inefficiently than those in the lowest income bracket.

Cooking

People were slightly less likely to cook during the summer months compared with the preceding winter. 67% of meals prepared at home involved cooking (an average of 1.2 meals a day) compared with 72% previously (Figure 10, left). The most used cooking appliances remained the hob and the oven (Figure 10, right), although their use decreased compared with the first study period (60% vs. 55% of cooked meals used a hob and 42% vs. 40% used an oven). Microwave use also declined slightly (from 22% to 19%), but the popularity of fryers (particularly air fryers) has increased steadily since BETT began, from 17% of cooked meals in December 2022 to 24% in September 2023.

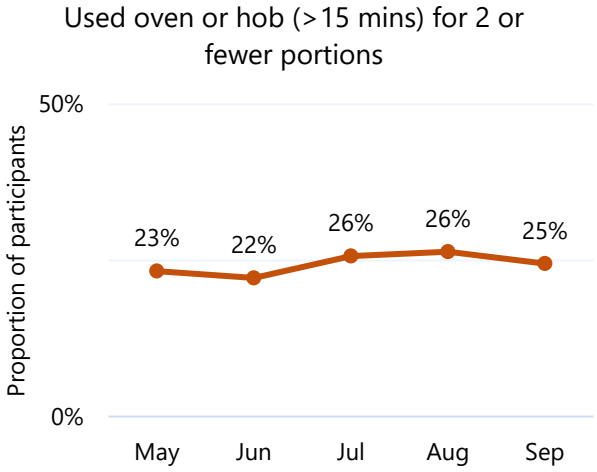
Figure 10: Left, average number of meals prepared and cooked at home in a given day. Right, appliances used for cooked meals, averaged over all five waves.



Inefficient energy behaviour: cooking

We define cooking inefficiently as using energy intensive appliances (the oven, or the hob for longer than 15 mins) to cook only a small number of portions (two or fewer). On average, 24% of participants cooked inefficiently on a given day (Figure 11), compared to 26% in the first study period.

Figure 11: Proportion of participants who cooked inefficiently on a given day.



The characteristics of those more likely to cook inefficiently are similar across both study periods. Among participants who had cooked at all, men and those on lower incomes were more likely to cook inefficiently, while those in the middle age category (35 – 54) or living as a family or with unrelated people were less likely to do so (compared to those who live alone). The income effect was more pronounced in the current study period.

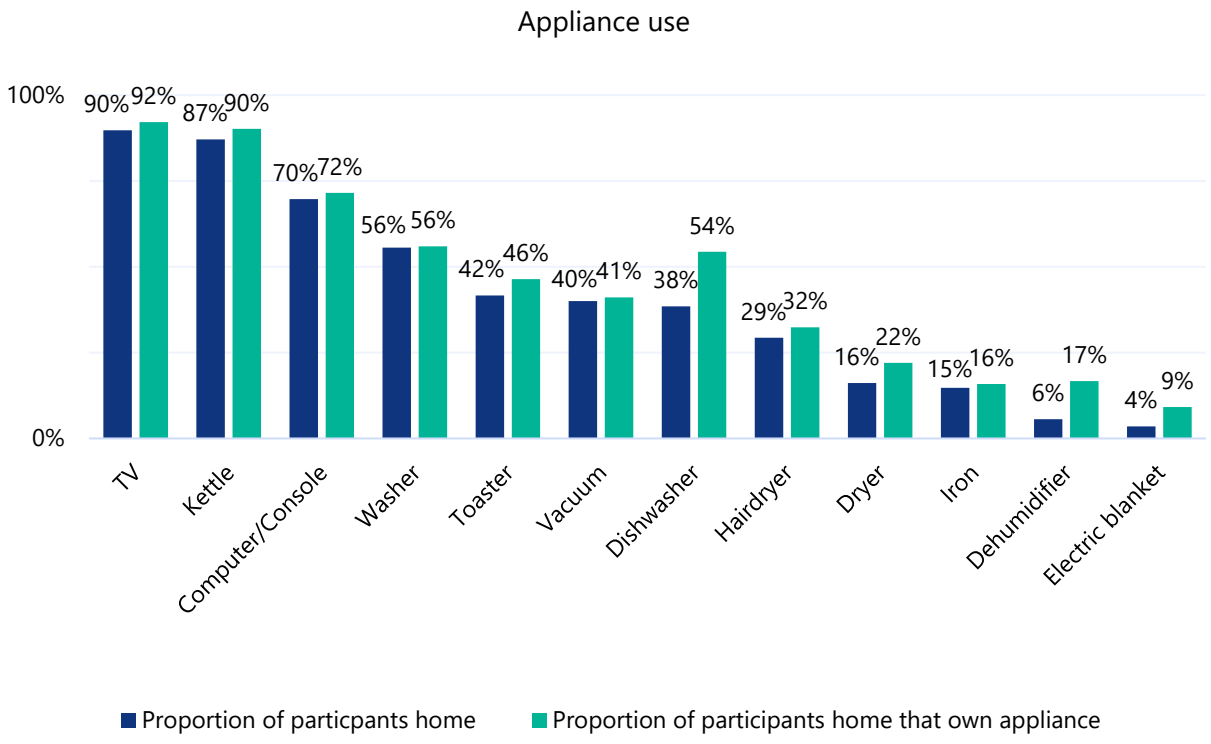
Appliances

The proportions of participants that used a range of electrical appliances in a given day are shown in Figure 12. Compared with the preceding winter, there were small (under 5%) but statistically significant decreases in the use of TVs, kettles, computers, toasters among those who owned these appliances. Larger decreases were seen for

- tumble dryers (22% of participants who were home and owned a dryer vs. 29%),
- dehumidifiers (17% vs. 29%) and
- electric blankets (9% vs. 43%).

The only appliance for which use increased in this study period was the iron (16% vs. 14%). There were no changes in use of washing machines, vacuum cleaners, dishwashers or hair appliances.

Figure 12: Proportion of participants using a range of appliances in a given day, averaged across all five waves and ordered by most used.

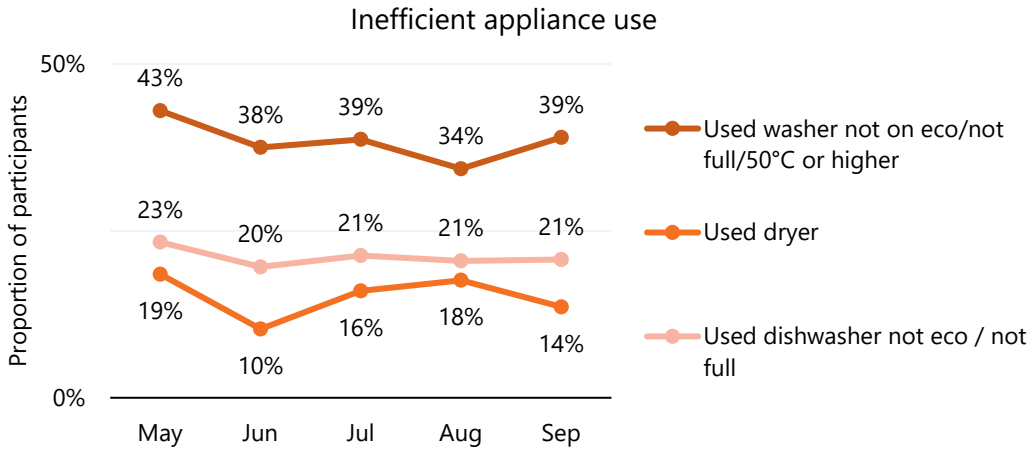


Inefficient energy use: appliance use

To investigate factors influencing the inefficient use of electrical appliances, we focus particularly on the use of larger, more energy intensive appliances such as the washing machine, tumble dryer and dishwasher. For washing machines and dishwashers, inefficient use was defined as not using eco settings, not filling the machine or, for washing machines, setting the temperature to 50°C or higher. Using the tumble dryer was designated as an inefficient behaviour in and of itself.

Between 34% and 43% of people used their washing machine inefficiently in a given day, with no significant change since the first study period (Figure 13). A smaller but still substantial proportion, between 10% and 19%, used their tumble dryer or used their dishwasher inefficiently in a given day. Of the participants who used their washing machine on the reference day, 27% used a tumble dryer, marking a decrease from an average of 37% during the first study period.

Figure 13: Proportion of participants who used the washing machine, tumble dryer or dishwasher in an inefficient way on a given day.



Results of regression models examining how various factors influence the likelihood of using appliances inefficiently during the summer months can be found in Appendix E. Results were similar to those in the first study period. As in the first study period, men were less likely to use the washing machine inefficiently (specifically, more likely to choose an eco cycle), but more likely to have used a tumble dryer. People aged over 55 continued to be less likely to use the tumble dryer. This study period, we found that participants were more likely to have used the dryer on days with rain. A new association was also seen where men were less likely to use the dishwasher inefficiently.

Overall inefficient home energy use

As will be apparent from the preceding sections as well as the first BETT report, different sociodemographic groups are engaged to different extents in different inefficient behaviours. To gain a higher-level view of which individuals are more likely to use energy inefficiently in general, we constructed a further variable that summed all inefficient household behaviours for a given participant.

As we define inefficient heating differently for the summer months, there are fewer behaviours being considered, making it harder to compare this directly with the first study period.[7] Most people (60%) engaged in fewer than two of the five inefficient behaviours defined on the reference day, with almost one in three not performing any. About 16% of participants had done three or more.

As in the first study period, women had a higher count of inefficient behaviours than men, over 55s had a lower count of inefficient behaviours than under 35s, as did people who lived alone compared with those living with others. In this study period, employed people and those living in rural areas also tended to have a higher count of inefficient behaviours. When travel variables are included in the count outcome, these relationships remain, except for the effect of living in a rural area.

In general, sociodemographic characteristics had a stronger relationship with inefficient behaviour than psychological factors. We report the influence of psychological variables on behaviour in the next section.

3.3 Psychological variables

In this section we describe the psychological variables measured in BETT and examine how these are related to the inefficient behaviours we track. In this study period we took additional measures of participants' understanding of the relative intensity of different inefficient behaviours and potential misconceptions held, as well as perceptions of responsibility and energy use by sector.

3.3.1 Awareness and understanding

Self-reported understanding

Participants' self-reported understanding of how to save energy in their day-to-day lives remained unchanged compared with the first study period. People gave an average rating of 5.3 over the five waves (measured on a 7-point scale). As before, men rated themselves as having a higher understanding of how to save energy than women, as did older age groups compared to younger people.

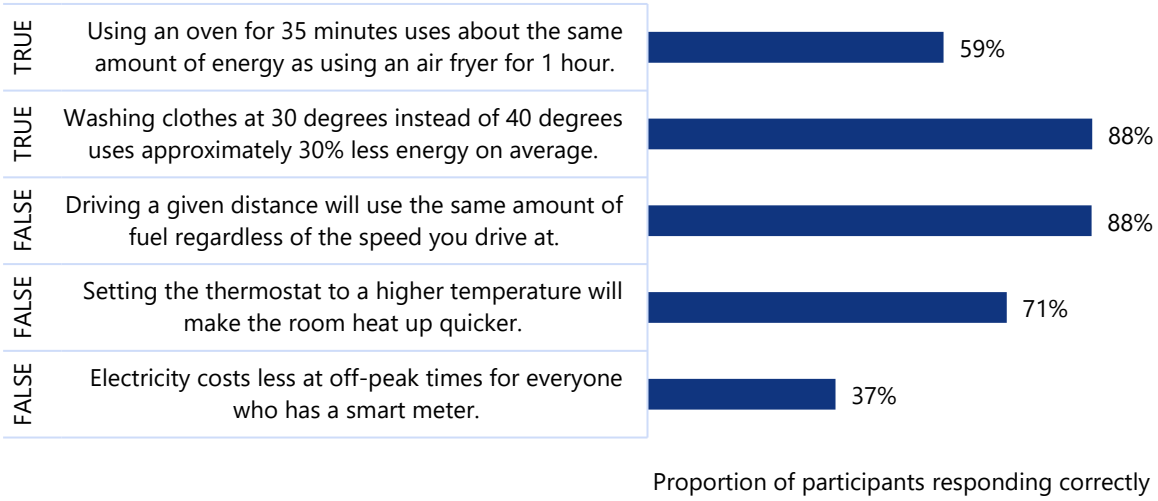
The relationships between self-reported understanding and likelihood to engage in different inefficient behaviours were slightly different compared with the first study period (see Appendix E). As before, participants who self-reported higher understanding (rated 5 and above) of how to save energy were less likely to use hot water inefficiently than those who reported lower understanding (17% vs. 25% of those who took a shower or bath). In addition to this, in the summer months we found those with higher understanding were less likely to use the washing machine inefficiently (72% vs. 80% of those who used the washing machine) and use the dryer (26% vs. 31% of those who used the washing machine). Unlike the winter months, there was no significant association between self-reported understanding of how to save energy and travelling by car for short journeys or (newly defined) heating behaviour. However, consistent with the first BETT report, self-reported understanding continued to be the psychological measure most strongly related to the number of inefficient home energy behaviours participants engaged with overall.

[7] As we track different "inefficient" heating behaviours in this study period, our overall inefficient home energy variable only contains one heating-related behaviour, rather than three that were considered in the first study. This means heating behaviour is given less weight in this version of the variable.

Comprehension and misconceptions

For this study period, we sought to complement measures of self-reported understanding with more objective comprehension measures. In June we included a task whereby participants were asked to read a series of statements about energy efficiency and choose if they were true or false. Figure 14 shows the proportion of participants correctly identifying the statements as true or false.

Figure 14: Proportion of participants correctly responding true/false to statements about energy.



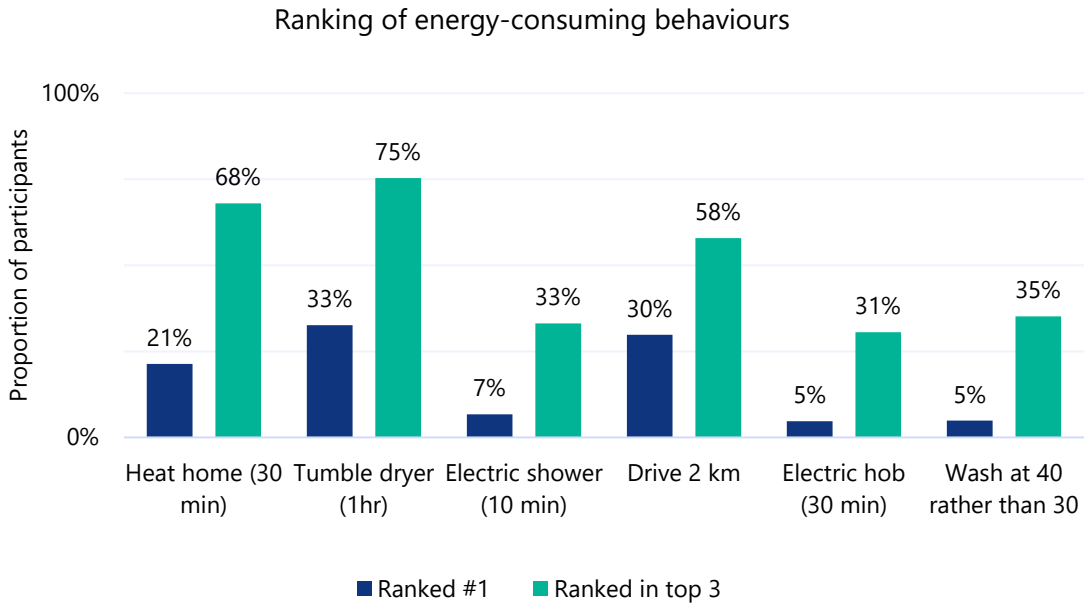
Participants did best at identifying that driving speed affects fuel consumption and that washing clothes at lower temperatures saves energy (only 12% responded incorrectly). They were less successful at identifying that higher thermostat settings do not heat the room up quicker (29% answering incorrectly) and that using an oven for 35 minutes uses the same amount of energy as an airfryer for 1 hour (41% answering incorrectly). The biggest misconception was around smart meters – 63% of participants thought that the cost of electricity at off peak-times is cheaper for everyone who has a smart meter.

We ran a logistic regression to look at which sociodemographic groups performed better at this task (Appendix E). The middle age group (35-54) performed significantly better than those in the youngest age group, as did those in the highest income bracket or ABC1 social grade compared with those in the lowest income bracket or C2DEF social grades.

Looking at the statements individually, we found men and under 35s (compared to the middle age group) were less likely to respond correctly to the statements about off-peak electricity costs, and the energy saved by washing at lower temperatures. Those in the middle income bracket and over 55s were also more likely to know washing at lower temperatures saves energy compared to those in the lowest income and youngest age brackets. Over 55s, people belonging to ABC1 social grade, and people living in rural areas were more likely to know that driving speed affects fuel consumption. The only statement for which there was a relationship found with either behaviour or self-reported understanding was the one about washing at lower temperatures. Participants who responded correctly to this statement were in fact less likely to wash at higher temperatures, and those who reported having a high level of understanding of how to save energy were more likely to answer this question correctly.

From August onwards we introduced a comprehension ranking task to measure how well participants understood the relative carbon intensity of different behaviours (Figure 15). In general, people underestimated the relative intensity of heating-related behaviours, and overestimated the impact of appliance use – only one in five participants ranked heating a home for 30 mins number 1 despite this being the highest emitting activity, but over a third ranked the lowest emitting activity (washing clothes at 40 rather than 30) in the top three.

Figure 15: Proportion of participants in August and September ranking each energy-consuming behaviour number one or in top three. The behaviours are ordered left to right from most to least energy intense.

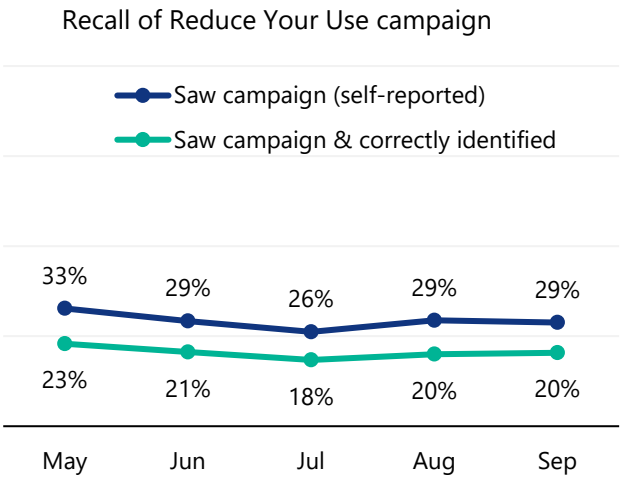


To create an overall measure of comprehension from responses to this task, for each participant we averaged the distance between their ranking of each behaviour and the correct ranking. The only sociodemographic factors that had an influence on comprehension were income and social grade. Those in higher income brackets and social grades performed better than those in lower income brackets and social grades. As with our other comprehension task, there was no association with self-reported understanding. There was some indication that perceptions of relative energy intensity were related to actual behaviour for the most energy intense activities. Those who ranked using the tumble dryer as one of the top two highest energy consuming behaviours were less likely to use their tumble dryer. And those who ranked heating as one of the top three energy consuming behaviours were less likely to have heated their home.

Recall of "Reduce Your Use"

Recall of the "Reduce Your Use" campaign was lower throughout the reference period compared to the preceding winter. An average of 20% of participants recalled seeing the campaign (said they saw a campaign and correctly identified it from three possible options) compared with 29% previously (Figure 16).[8]

Figure 16: Recall of the Reduce Your Use campaign.



Consistent with results from the first study period, those who recalled seeing the Reduce Your Use campaign were significantly more likely to report high understanding of how to save energy.[9] There was also a positive association with performance in our comprehension task where participants were asked to rank behaviours from most to least energy intensive.

Recall of the Reduce Your Use campaign was associated with lower likelihood to use hot water inefficiently. In the first study period, we had found ad recall to be associated with lower likelihood of engaging in inefficient heating behaviours. However, here we find that those who recalled seeing the campaign were in fact slightly more likely to heat their home in the summer (when controlling for sociodemographic factors). The small association might be explained by a higher propensity for summer heat users to notice the ad when they see that heating is energy intensive.

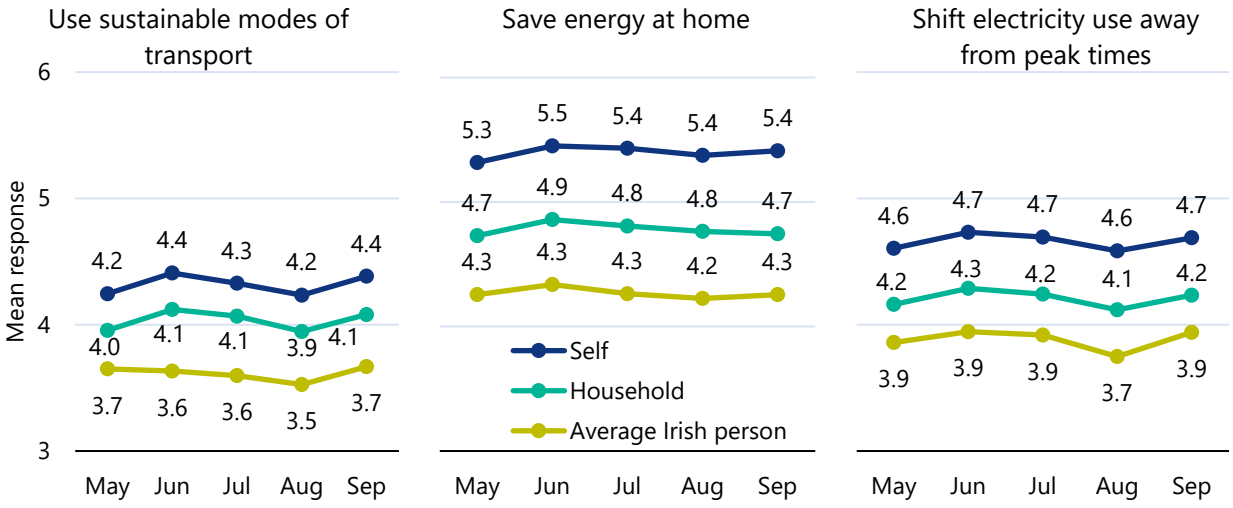
[8] The Reduce Your Use campaign was wound down between April and September 2023, with fewer ads in fewer outlets.
[9] Note it is not possible to know to what extent the campaign increased understanding and to what extent those with higher understanding to begin with were more likely to notice and remember the campaign.

3.3.2 Social influence & perceived efficacy

Effort of self and others

Figure 17 shows participants' responses to questions about the level of effort they thought they themselves, others in their household, and the average Irish person were making to use sustainable modes of transport, save energy at home and shift electricity use away from peak times (4pm – 7pm). As in the first study period, participants consistently rated their own efforts more highly than the efforts of others in their household, which in turn were rated higher than those for the average Irish person. Ratings fluctuated slightly from month to month but remained largely unchanged since the first study period.

Figure 17: Average perceived effort made by oneself and others to use energy efficiently in three domains, as measured on a scale from 1 (Not making an effort) to 7 (Doing everything possible).



The sociodemographic characteristics associated with self-reported effort remained broadly consistent between both study periods. The strongest effects were of income and age. Those in higher income brackets reported making less effort to travel sustainably and shift away from using energy at peak times, and over 35s reported making more effort to reduce home energy use and shift away from using energy at peak times. The sociodemographic characteristics associated with believing the average Irish person is making an effort were also mostly unchanged, with men in particular giving lower ratings across all three domains.

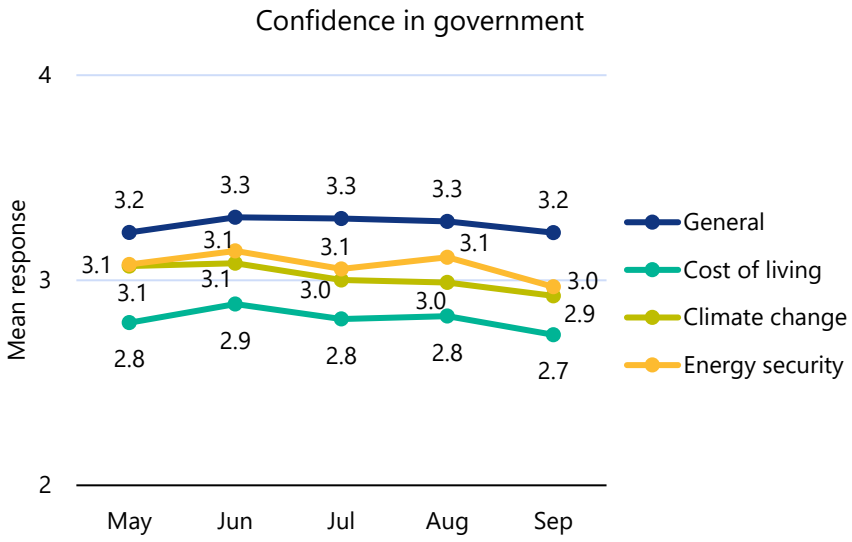
Whereas in the first study period we found participants who thought others were making a substantial effort to save energy at home were less likely to use their tumble dryer, in this study period we did not see any effects of people's perceptions of the efforts of others on their own behaviour.

Confidence in government

Participants' confidence in the current Irish government remained low (below the midpoint score of 4) and relatively stable from May to September (Figure 18). Ratings of confidence in the government's response to cost of living, climate change and energy security issues were again lower than that for overall confidence. Overall confidence in government was more highly correlated with confidence related to cost of living and energy security (both r=0.78) than confidence in the government's response to climate change (r=0.66).

As in the first study period, men, over 55s, those on higher incomes, and those educated to degree level or higher all reported higher confidence in government. Individual level of confidence in government did not show any association with inefficient energy behaviour in our models. But, as before, confidence in government was positively correlated with self-reported effort to use energy sustainably. Additionally, we found confidence in government was positively correlated with recalling the Reduce Your Use campaign.

Figure 18: Average confidence in the current Irish government and in their response to various issues, measured on a scale from 1 (Not at all confident) to 7 (Very confident).



Allocation of responsibility and perceived energy use

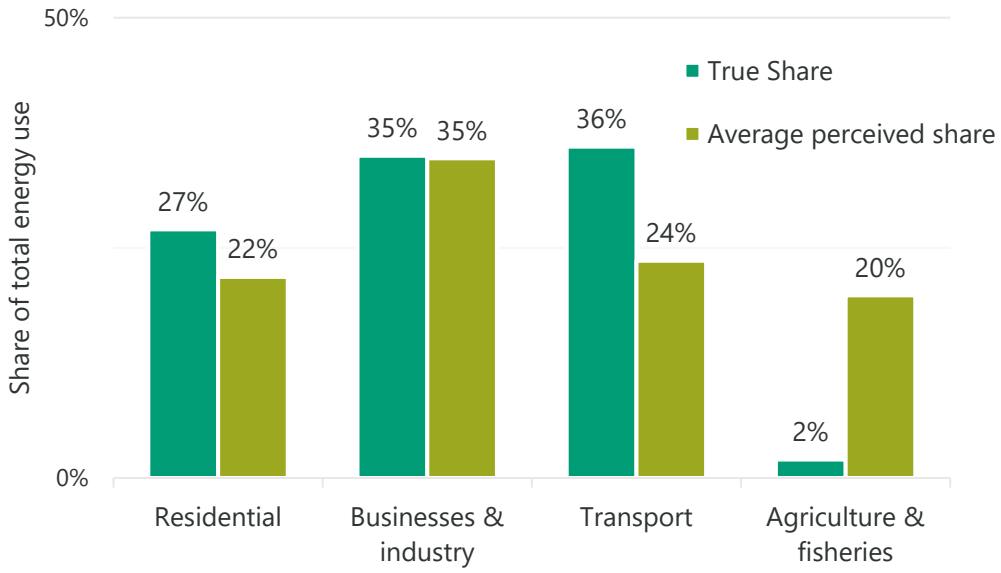
In June, we added a question asking participants to indicate where they thought responsibility for lowering Ireland's energy consumption should lie, by dividing it between different actors (individuals, private business and industry, and the government) as a percentage (Figure 19). People allocated the largest share of responsibility to the government (40%), followed closely by private business and industry (37%), with a smaller but not insubstantial share being allocated to individuals (23%).

Figure 19: Allocation of responsibility for lowering Ireland's energy consumption (July 2023 only)

People who live alone, who are aged over 35, and who report a high level of worry about climate were more likely to assign a higher amount of responsibility for reducing Ireland's energy consumption to individuals. Interestingly, the only association we found with behaviour was related to heating. Participants who assigned a high amount of responsibility to individuals were more likely to have heated their homes in the summer.

In August we replaced the allocation of responsibility task with a question that looked at participants' understanding of what share of Ireland's energy use is shared by different sectors (Figure 20). Participants were able to assign the correct share of energy use to the business and industry sectors, but underestimated the share of residential energy use by 5%, transport by 12%, and overestimated the amount of energy used by the agriculture and fishery sector by 18%.

Figure 20: Average perceived share and true share of energy use by sector (August and September only).



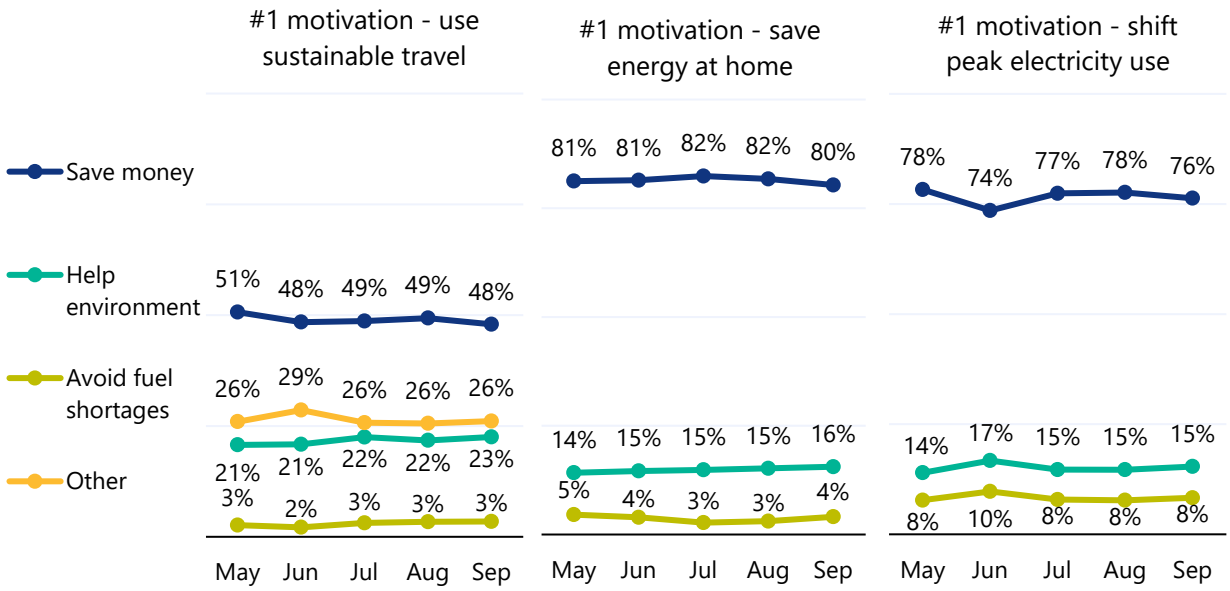
It is likely that some participants indicated what they thought was the share of overall greenhouse gas emissions produced by each sector rather than energy use, leading to a large overestimation of the energy use of agriculture and fisheries. If we exclude agriculture and fisheries, participants assign the correct share of energy use to the residential sector, but underestimate energy use in the transport sector (29%), and overestimate the share used by businesses and industry (43%).

3.3.3 Worry and motivation

Stated motivations

Participants were asked about their efforts to use sustainable modes of transport, save energy at home or shift electricity use away from peak times. If they stated they were making some effort to use energy sustainably in these categories, they were asked to rank their motivations for doing so. The proportion of participants ranking each type of motivation highest for each type of effort can be seen in Figure 21.

Figure 21: Highest-ranked motivations for using energy sustainably.



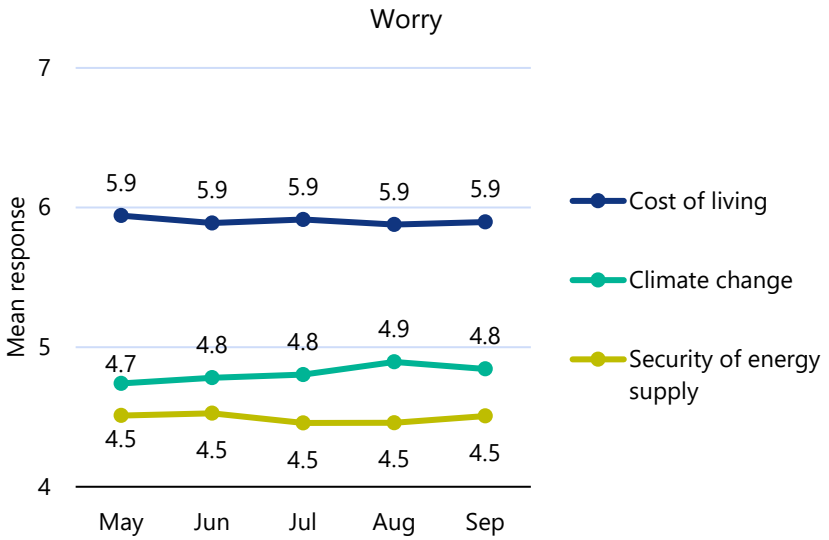
Saving money continued to be the most highly ranked motivation in all cases, with a smaller but not insubstantial proportion of participants ranking helping the environment as their top motivation. The proportion of participants giving an environmental motivation the top ranking increased slightly for saving energy at home (15% vs. 13% the preceding winter) and shifting electricity use away from peak times (15% vs. 12%), whereas the proportion ranking avoiding fuel shortages highest decreased (4% vs. 6% for saving energy at home and 8% vs. 12% for shifting electricity use).

The youngest age group (18 – 34) were significantly more likely to report environmental reasons as their top motivation to save energy at home than the middle age group (35 – 54), as were those educated to degree level and those belonging to ABC1 social grades.

Worry

Worry about cost of living remained high in the summer months, rated 5.9 on average on a 7-point scale. There were lower but still high levels of worry about climate change and energy/fuel shortages, rated on average 4.8 and 4.5 respectively (Figure 22). The level of worry about climate change and cost of living remained relatively constant over the two study periods, but the level of worry about security of supply declined from 5.1 in December 2022 to 4.5 in September 2023.

Figure 22: Average self-reported level of worry about cost of living, climate change, and security of energy supply as rated on a scale from 1 (Not at all worried) to 7 (Very worried).



Many of the sociodemographic associations with worry found previously remain. Men reported significantly lower levels of all three types of worry. Over 55s reported lower levels of worry about cost of living than younger people but were more likely to report high worry about climate change and security of supply compared to the youngest group. Those in C2DEF social grades were more worried about cost of living, and less worried about climate change, while having a degree and being in the highest income bracket was associated with lower worry about cost of living and energy security. In this study period, we also found those educated to a degree level were more likely to report higher worry about climate, and those living as a couple or a family were more likely to report higher worry about cost compared to those who live alone.

Some of the associations between level of climate worry and inefficient behaviours found previously persisted through the summer months. Participants with higher levels of climate worry were less likely to use hot water inefficiently or use the washing machine or dishwasher inefficiently than those with lower levels of worry. Higher worry was also associated with a lower likelihood of using heating during the summer – 20% of those with higher worry about climate and spent some time at home used some form of heating on a given day compared with 24% of those with lower worry.

In this study period, participants who reported a high level of worry about security of energy supply were less likely to take the car for journeys under 5 km (where public transport was available) or use the washing machine inefficiently, but more likely to use the dryer.

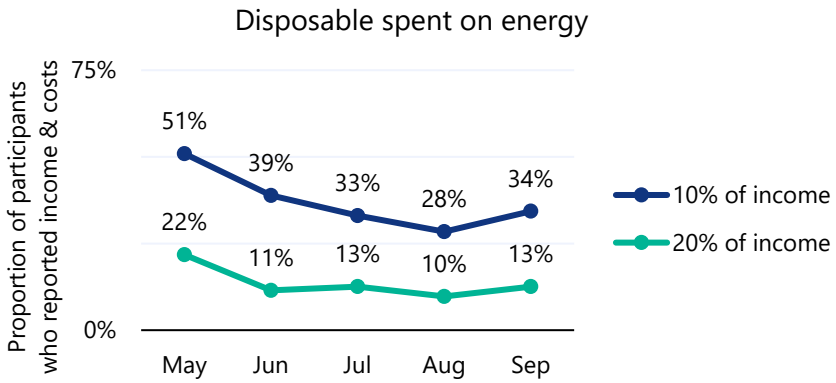
Interestingly, the only association found with worry about cost of living was a slightly higher likelihood to use hot water inefficiently.

3.4 Energy Poverty

BETT participants are asked to optionally report monthly disposable income and home energy spend, which included heating and electricity. Based off those responses we calculate the percentage of income spent on home energy costs for those participants who provide all this information, which was 74% of the total sample.

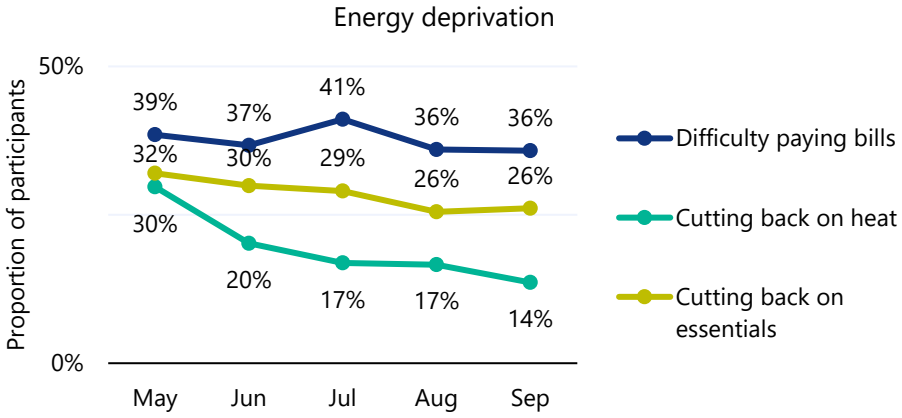
Figure 23 shows the proportion of participants who spent 10% or more of their income on energy, a longstanding measure of energy poverty. By this definition, energy poverty was at its lowest in August (just under 3 in 10 people), and at its highest in March (almost 3 in 5). Overall, energy poverty was lower during the summer months compared with the preceding winter, during which consistently over half of participants were spending 10% of their income on energy costs. The burden of energy bills remained high however, with on average 14% of participants spending over 20% of their income on energy.

Figure 23: Proportion of participants spending at least 10% or 20% of their monthly disposable income on home energy costs.



Subjective measures of energy poverty are shown in Figure 24. Just under two in five participants reported having had difficulty paying their last bill during the summer months, with 8% saying they were unable to pay it on time or at all. This represents a slight increase compared with the preceding winter (38% vs. 36%). More people also reported cutting back on other essentials to pay their energy bills (29% vs. 27%) but fewer reported cutting back on heat (19% vs. 24%).

Figure 24: Subjective self-reported measures of energy deprivation.



The characteristics of those at greater risk of energy poverty were largely unchanged from the previous study period (Appendix E). The most at-risk groups included those on lower incomes, younger people and those living as a family.

As before, people at risk of energy poverty were highly worried about the cost of living and security of energy supply. They also performed worse in our comprehension ranking task, reported lower confidence in government and a lower level of understanding about how to save energy in the home. During this study period we also found that those in energy poverty were slightly less likely to report high levels of worry about climate change.

4. Discussion

The significance of many findings from BETT has been discussed previously in the first report. Here we highlight where there are divergences with results from the preceding winter and discuss any new findings.

4.1. Inefficient energy use and differences between summer and winter

The prevalence of inefficient energy behaviours remained broadly unchanged from May-September 2023 compared with preceding winter. One notable exception is inefficient heating practices; heating use is naturally much lower in the summer months. Nevertheless, **a surprisingly large proportion of people used some form of heating in a given day during the summer months, with almost one in five heating their homes in July and August**. Fewer people heated hot water during the summer months, although immersion use increased (in line with CSO data[10]), and there was no change in inefficient hot water use as indicated by taking long or multiple showers in a day.

We found smaller differences in cooking behaviour and tumble dryer use. Tumble dryer use was slightly less prevalent on average, but remained common, with over a quarter of participants who did a wash on the reference day using their tumble dryer. The proportion of people cooking inefficiently was similar to the winter months, but air fryer use has steadily increased over time.

Perhaps the most surprising finding is the **persistence of inefficient travel behaviour during the summer months**. Seven in ten journeys continued to be taken by car during this study period, despite the warmer weather. The prevalence of short car journeys was practically unchanged, with a fifth of the sample used a car for a journey under 2 km or under 5 km where public transport was available in any given day, just 2% less than during the winter months. In our first report we noted the prevalence of short car journeys for the school run and saw these types of journeys decline in the summer months, but other types of short car journeys increased.

This lack of seasonality in travel behaviour may seem counterintuitive and evidence from other countries suggests travel behaviour can be responsive to weather.[11,12] July and August 2023 did see relatively high rainfall, but we find no effect of rainfall on propensity to use the car for short journeys. Culture around travel behaviour likely varies between different contexts, and our results suggest car use in Ireland is driven more by habit and structural factors than by weather conditions.

As found previously, different groups of people are more likely to engage in different inefficient energy behaviours. Additionally, the groups of people that engage in each inefficient behaviour remained broadly unchanged across the two study periods. Sociodemographic factors were again more influential on behaviour than the psychological variables we measured.

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[10] https://www.cso.ie/en/releasesandpublications/er/q-env/qnhsenvironmentmoduleq22014/

[11] Ahmad Termida, N., Susilo, Y. O., Franklin, J. P., & Liu, C. (2018). Understanding seasonal variation in individual's activity participation and trip generation by using four consecutive two-week travel diary. Travel Behaviour and Society, 12, 52–63. doi: 10.1016/j.tbs.2017.12.006.

[12] Liu, C., Susilo, Y. O., & Karlström, A. (2015). The influence of weather characteristics variability on individual's travel mode choice in different seasons and regions in Sweden. Transport Policy, 41, 147–158. doi: 10.1016/j.tranpol.2015.01.001.

4.2. Psychological factors

Self-reported understanding remains the most influential psychological factor across our models of energy behaviours, particularly with regards to hot water use and efficient appliance use. People report good understanding, on average, but ratings have not increased at all since BETT began, despite the additional attention placed on the topic in the wake of the energy crisis.

In this study period, we supplemented this subjective measure of understanding with more objective tasks. In doing so we uncover a **lack of understanding of the relative carbon intensity of different energy consuming activities and some misconceptions**. Most participants incorrectly believed electricity was cheaper at off-peak times for everyone with a smart meter, and about three in ten incorrectly believed that setting the thermostat to a higher temperature would make a room heat up faster. These misconceptions could be addressed in information campaigns. There is also some indication that participants who underestimated the carbon intensity of heating and tumble dryer use were more likely to engage in these behaviours.

Interestingly, there was no strong relationship found between self-reported and objective measures of understanding. It may be that the self-reported measure is capturing something closer to perceived self-efficacy in saving energy rather than comprehension alone. On the whole, however, our results point to a need for further education, particularly amongst people on lower incomes**,** who performed more poorly in comprehension tasks.

Participants continued to rate their own efforts to use energy sustainably more highly than that of others. It is worth noting that self-reported effort to save energy remained high during the summer months despite falling energy prices, indicating that participants weren't making an effort solely in response to the energy crisis.

Participants tended to underestimate the share of energy used by sectors relevant to individual behaviour, namely transport. Highlighting the opportunity for making an impact through individual behaviour change and the efforts of others may help motivate those who underestimate the impact they can have.

In keeping with the first report, saving money was the most reported top motivation for using energy efficiently, and participants were highly worried about cost of living, but higher worry about cost was not associated with more efficient behaviour, while worry about climate change was.

4.3. Energy poverty

One of the unique strengths of BETT is that it allows us to measure changes in energy poverty across the year**.** Our results indicate that **energy poverty is worryingly prevalent in Ireland in all seasons.** There was a downward trend in the proportion of participants spending at least 10% of their disposable income on energy costs in summer compared with winter. Even still, at its lowest point in August, more than a quarter of participants were in energy poverty by this definition. The seasonal trend in expenditure measures of energy poverty was not mirrored in the subjective measures. In fact, the average proportion of participants reporting they had difficulty paying bills or were cutting back on essentials increased slightly during the summer months.

Given only about one in ten people have their heating on in the current study period compared to nine in ten in the first, we might have expected to see bigger reductions in energy poverty measures. Some potential explanations for this sustained prevalence of energy poverty include increases in other non-energy costs or recall issues, such as participants considering more than just the last month when

responding to our questions. In any case, the level of energy deprivation is extremely concerning and requires action.

4.4. Conclusion

BETT continues to offer a comprehensive picture of everyday energy use in Ireland and the factors influencing it. The analysis presented in this report builds on that presented in the first BETT report and makes comparisons between behaviour in the summer months compared with the winter. As expected, there was less energy use in some domains during summer 2023 compared with the preceding winter (namely heating), but inefficient energy behaviours remained prevalent and additional analyses revealed potential misconceptions and knowledge gaps regarding the relative energy intensity of different activities and sectors. Thus, while most people feel they are already making an effort to use energy sustainably, there is room for improvement and potential for education to have an impact.

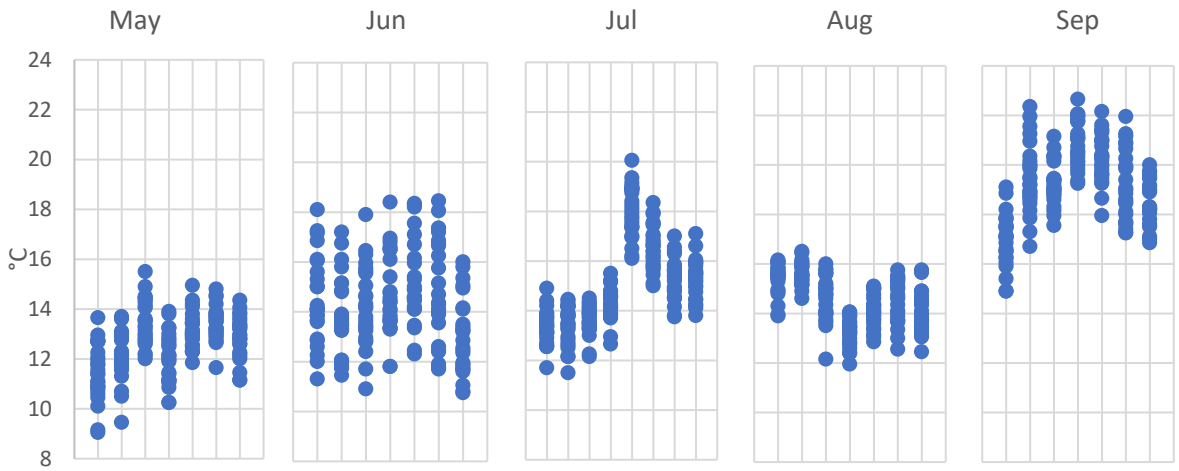
5. Appendices

Appendix A - Weather

We incorporate average daily temperature and rainfall into our regression models by matching a participant's county to the closest of 25 synoptic weather stations for which Met Éireann provide recent data.

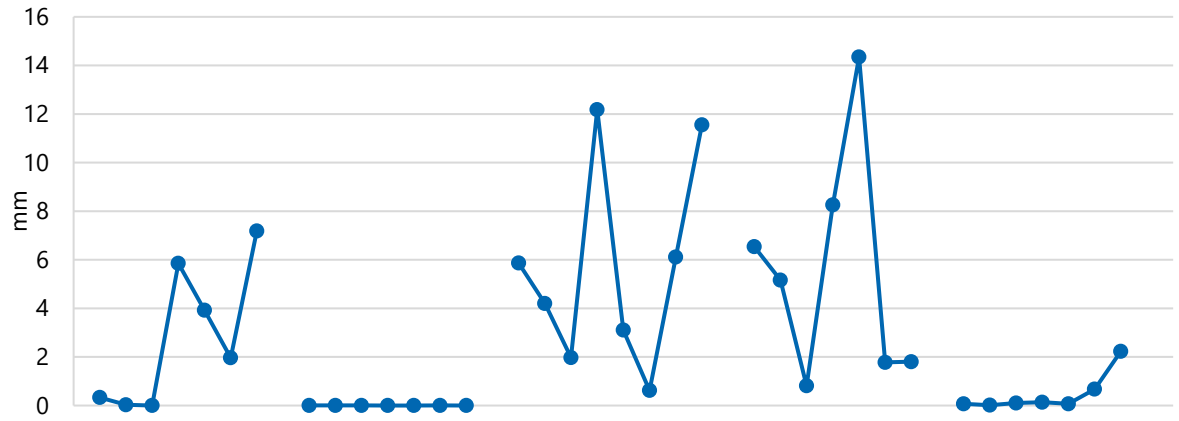
Figure 24 charts the average daily temperatures on each of the days about which participants responded.[13] Each dot on the chart represents the mid temperature at one of the 25 stations.

Figure 24: Mid daily temperatures for each study reference day at each of the 25 synoptic weather stations.



We categorise rainfall into "no rain" (0mm), "wet day" (1-9mm), and "very wet day" (10mm+).[14] Figure 25 charts the rainfall averaged across the weather stations for each of the reference days in the study.

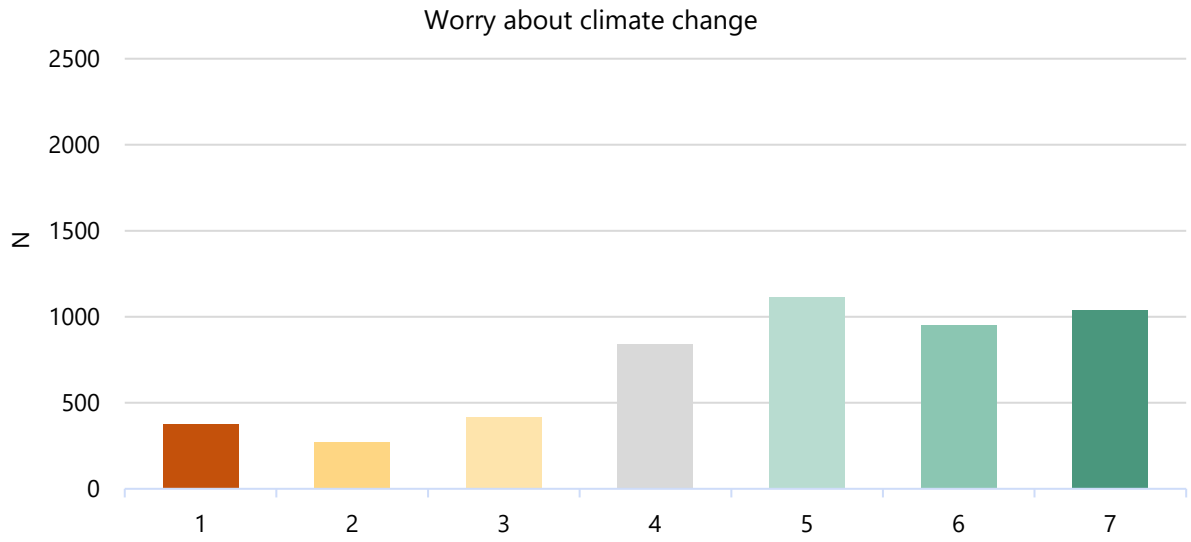
Figure 25: Average daily rainfall during study periods.

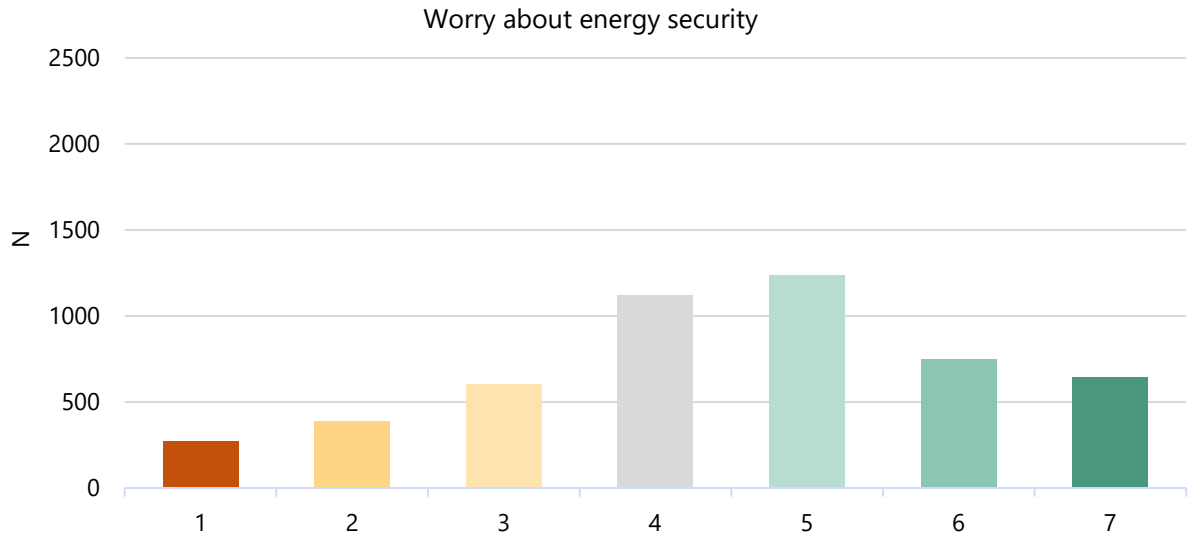


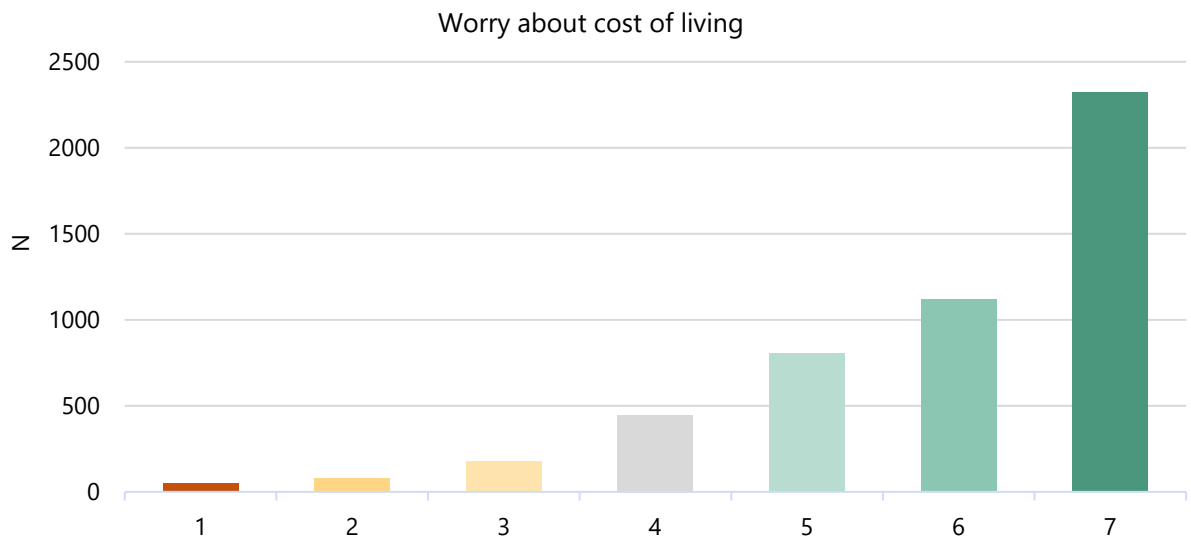
[13] There were 8 data collection days in the July wave.

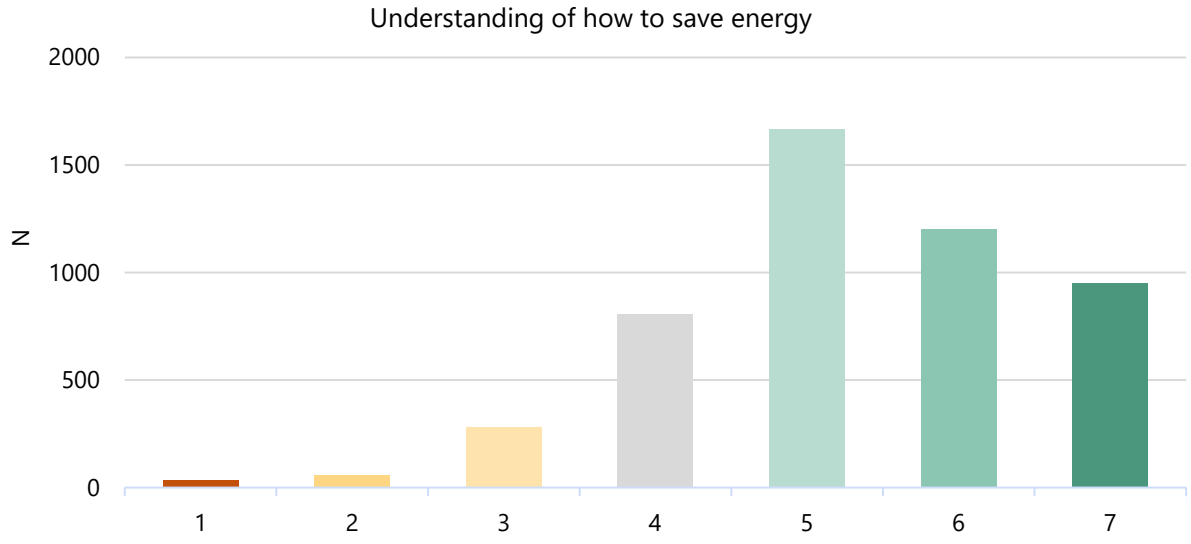
[14] https://www.epa.ie/publications/monitoring--assessment/freshwater--marine/hydrology-bulletin/hydrology-bulletin/EPA-Hydrology-Bulletin-September-2021v2.pdf

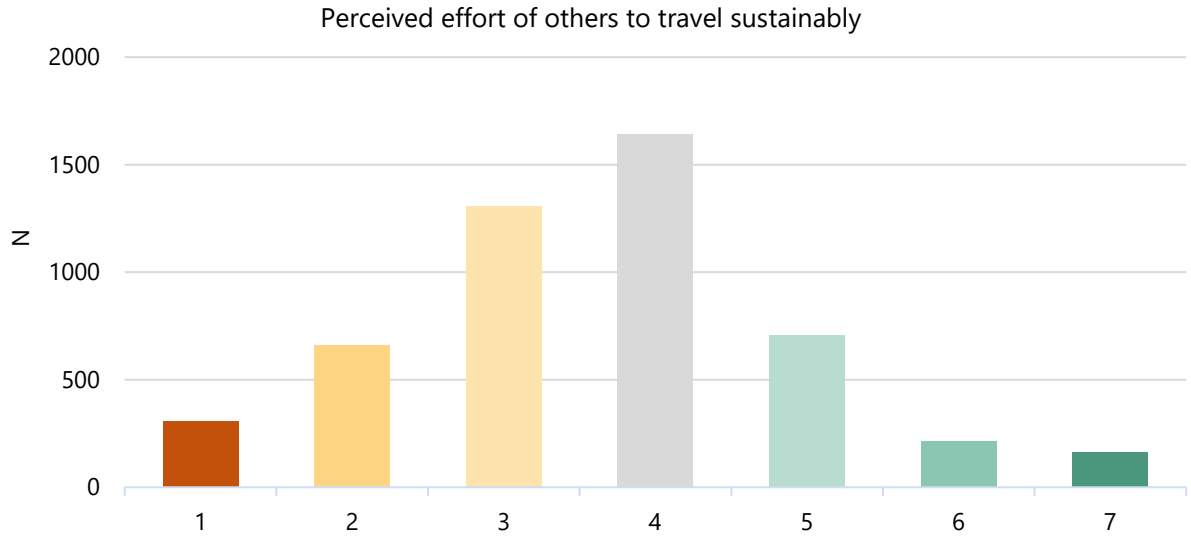
Appendix B – Distributions of psychological variables

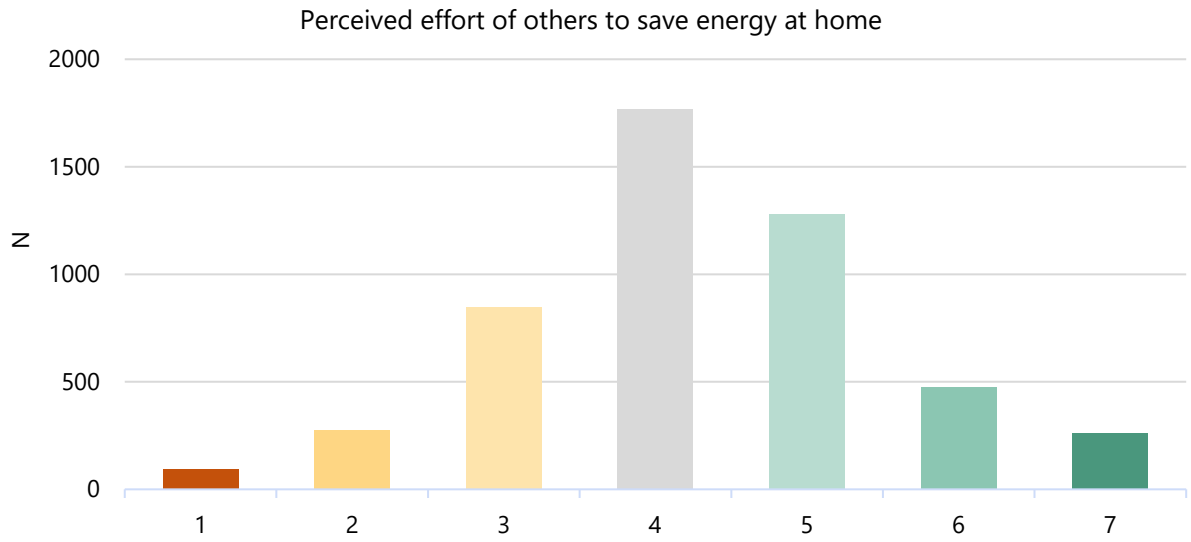


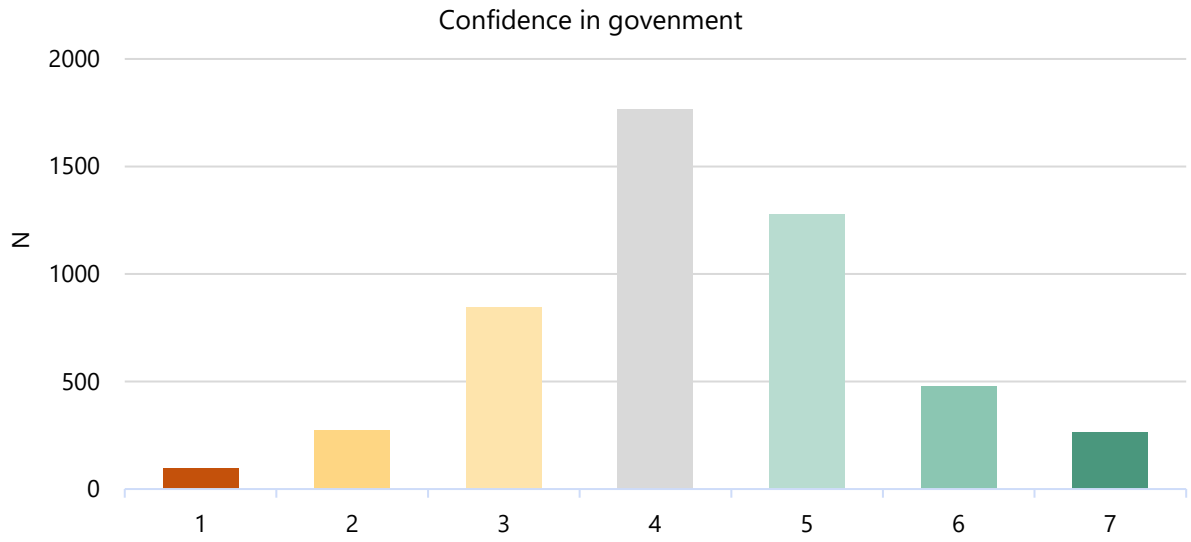



Worry about cost of living
2500
2000
1500
1000
500
0
N
1
2
3
4
5
6
7


Understanding of how to save energy
2000
1500
1000
500
0
N
1
2
3
4
5
6
7


Perceived effort of others to travel sustainably
2000
1500
1000
500
0
N
1
2
3
4
5
6
7


Perceived effort of others to save energy at home
2000
1500
1000
500
0
N
1
2
3
4
5
6
7


Confidence in govenment
2000
1500
1000
500
0
N
1
2
3
4
5
6
7

Appendix C – Sample characteristics

Individual

Table 1: Sociodemographic characteristics of the sample

		Proportion
Gender	Male	45.6%
	Female	54.1%
	Other	0.3%
Age	18 – 34	23.2%
	35 – 54	43.9%
	55+	32.9%
Region	Leinster	54.4%
	Munster	27.8%
	Connacht/Ulster	17.8%
Social grade	ABC1	50.6%
	C2DEF	49.4%
Education	Degree or above	38.1%
	Below degree	61.9%
Employment	Employed - full time	44.2%
	Employed - part time	16.0%
	Homemaker/carer	10.7%
	Student	2.3%
	Unable to work	4.3%
	Retired	14.8%
	Self-employed	3.8%
	Unemployed	3.9%
Net monthly income	Under €2k	29.2%
	€2k- €4k	37.5%
	€4k+	22.0%
	Unknown	11.3%

Household

Table 2: Household characteristics for the sample.

		Proportion
Living situation	Living alone	14%
	Couple	26%
	Family	55%
	Unrelated/Mix	5%
Under 18s in home	Yes	36%
	No	64%
Over 65s in home	Yes	24%
	No	76%
Person with chronic illness or disability in home	Yes	29%
	No	71%
Dwelling type	Detached house	40%
	Semi-detached/end of terrace house	36%
	Terraced house	14%
	Apartment/flat/bedsit	10%
	Mobile home/caravan/temporary building	0%
Dwelling tenure	Own home outright	32%
	Own home with loan/mortgage	31%
	Renting (private landlord)	19%
	Renting (local authority or housing association)	9%
	Living rent-free (e.g. with parents or friends)	8%
Car ownership	Yes – petrol/diesel	75%
	Yes – electric/hybrid	9%
	No	16%

Dwelling

Table 3: Dwelling energy characteristics for the sample.

		Proportion
BER rating	A/B/C	32%
	D/E/F/G/Exempt	12%
	Don't know	57%
Electricity meter type	Standard (24 hour) meter	28%
	Pay as you go	8%
	Day & night (Nightsaver) meter	9%
	Smart meter	49%
	Don't know	6%
Tariff type	Standard	56%
	Pay as you go	8%
	Nightsaver	12%
	Time-of-use	9%
	Don't know	16%
Central heating system	Oil boiler	40%
	Gas boiler	34%
	Electric boiler	5%
	Solid fuel boiler	6%
	Storage heaters	4%
	Heat pump/Geothermal	4%
	Don't know	3%
	No central heating	4%
Thermostat	Smart thermostat	13%
	Other thermostat	31%
	None	51%
	Don't know	5%
Solar	Solar thermal only	4%
	Solar PV only	5%
	Both	1%
	None	90%

Appendix D - Energy intensity of different behaviours

	Standard excess (g)CO2 per instance
Heating an average sized home for 30 minutes using an oil/gas boiler	1,200
Using a clothes dryer for 1 hour	993
Using an electric shower for 10 minutes	522
Driving 2 km in a petrol/diesel car	258
Cooking with an electric hob for 30 minutes	182
Using the washing machine for a standard cycle at 40 degrees instead of 30 degrees	33

Appendix E – Regression model results

For all models. beta coefficients (B) and associated standard errors (SE), odds ratios (OR) and confidence intervals (CI) are reported. Statistical significance is denoted by "." where p<.1; a "*" where p < .05; ** where p < .01; and ***p < .001.

E.1. Short car journeys

Table 1: Models of using a car for journeys of 2 km or less. Models 1-3 include all participants who travelled 2 km or less; model 4 excludes people who did not own a car.

	Model 1				Model 2				Model 3				Model 4			
	B (SE)	OR	CI (low)	CI (high)	B (SE)	OR	CI (low)	CI (high)	B (SE)	OR	CI (low)	CI (high)	B (SE)	OR	CI (low)	CI (hi)
Wave [ref= Sep]																
May	0.04 (0.18)	1.04	0.73	1.49	0.05 (0.18)	1.05	0.73	1.50	0.05 (0.18)	1.05	0.73	1.50	0.19 (0.21)	1.21	0.80	1.81
Jun	-0.24 (0.18)	0.79	0.56	1.11	-0.24 (0.18)	0.79	0.56	1.11	-0.23 (0.18)	0.80	0.56	1.13	-0.17 (0.2)	0.85	0.57	1.25
Jul	0.01 (0.2)	1.01	0.68	1.50	0.01 (0.2)	1.01	0.68	1.50	0.02 (0.2)	1.02	0.68	1.51	0.12 (0.23)	1.13	0.72	1.76
Aug	-0.12 (0.2)	0.88	0.60	1.31	-0.13 (0.2)	0.88	0.60	1.31	-0.12 (0.2)	0.89	0.60	1.31	-0.04 (0.23)	0.96	0.61	1.49
Weekend	0.09 (0.12)	1.10	0.87	1.38	0.09 (0.12)	1.09	0.87	1.37	0.09 (0.12)	1.09	0.87	1.38	0 (0.13)	1.00	0.77	1.30
Rain [ref= 0mm]																
1-9mm	0.05 (0.16)	1.05	0.77	1.42	0.05 (0.16)	1.05	0.77	1.43	0.05 (0.16)	1.05	0.77	1.43	0.02 (0.18)	1.02	0.72	1.45
10mm +	0.05 (0.25)	1.05	0.65	1.71	0.05 (0.25)	1.06	0.65	1.71	0.04 (0.25)	1.05	0.64	1.70	-0.06 (0.28)	0.94	0.55	1.62
Male	-0.42*** (0.11)	0.66	0.52	0.82	-0.42*** (0.11)	0.65	0.52	0.82	-0.42*** (0.12)	0.66	0.52	0.82	-0.48*** (0.13)	0.62	0.48	0.80
Age [ref= 18 – 34]																
35 – 54	0.35* (0.14)	1.42	1.07	1.88	0.36* (0.14)	1.43	1.08	1.90	0.36* (0.14)	1.44	1.08	1.91	0.25 (0.17)	1.28	0.92	1.80
55+	0.49** (0.17)	1.63	1.17	2.27	0.49** (0.17)	1.64	1.18	2.28	0.52** (0.17)	1.68	1.20	2.36	0.3 (0.2)	1.35	0.91	2.01
Urban [ref= rural]	-0.42*** (0.13)	0.66	0.51	0.84	-0.42** (0.13)	0.66	0.51	0.84	-0.42** (0.13)	0.66	0.51	0.84	-0.17 (0.14)	0.84	0.64	1.11

C2DEF [ref= ABC1]	-0.04 (0.12)	0.96	0.76	1.23	-0.03 (0.12)	0.97	0.76	1.23	-0.03 (0.12)	0.97	0.76	1.24	0.06 (0.14)	1.06	0.80	1.41
Degree	-0.15 (0.12)	0.86	0.67	1.10	-0.14 (0.12)	0.87	0.68	1.11	-0.15 (0.12)	0.86	0.67	1.10	-0.1 (0.14)	0.91	0.68	1.20
Not employed	-0.11 (0.13)	0.89	0.70	1.15	-0.11 (0.13)	0.90	0.70	1.15	-0.1 (0.13)	0.90	0.70	1.16	-0.09 (0.15)	0.92	0.68	1.23
Income [ref= <2k]																
2k – 4k	0.23 (0.14)	1.26	0.95	1.68	0.24. (0.14)	1.28	0.96	1.69	0.25. (0.15)	1.28	0.96	1.70	-0.06 (0.17)	0.94	0.67	1.31
4k +	0.41* (0.18)	1.50	1.06	2.13	0.42* (0.18)	1.52	1.07	2.15	0.4* (0.18)	1.50	1.05	2.14	0.12 (0.21)	1.12	0.75	1.68
Living situation [ref = alone]																
Couple	0.24 (0.19)	1.27	0.87	1.85	0.23 (0.19)	1.26	0.87	1.85	0.25 (0.19)	1.29	0.88	1.88	-0.18 (0.23)	0.83	0.53	1.30
Family	0.62*** (0.18)	1.87	1.32	2.66	0.62*** (0.18)	1.85	1.31	2.64	0.63*** (0.18)	1.88	1.33	2.68	0.19 (0.22)	1.21	0.79	1.85
Unrelated/mix	-0.26 (0.27)	0.77	0.45	1.31	-0.26 (0.27)	0.77	0.45	1.31	-0.26 (0.27)	0.77	0.45	1.31	-0.69* (0.33)	0.50	0.26	0.96
Recall RYU campaign					-0.18 (0.13)	0.84	0.65	1.09								
Climate worry (hi)									0.03 (0.12)	1.03	0.81	1.31	-0.04 (0.14)	0.96	0.73	1.27
Energy security worry (hi)									0.05 (0.12)	1.05	0.82	1.33	0.07 (0.14)	1.08	0.82	1.42
Cost of living worry (hi)									-0.14 (0.13)	0.87	0.67	1.12	-0.16 (0.15)	0.85	0.64	1.14
Understanding (hi)									-0.1 (0.13)	0.90	0.70	1.17	-0.11 (0.15)	0.90	0.67	1.21
Government confidence (hi)									-0.14 (0.13)	0.87	0.67	1.12	-0.18 (0.14)	0.84	0.63	1.11
Others' effort (hi)									0 (0.15)	1.00	0.76	1.33	-0.09 (0.17)	0.91	0.66	1.26
Observations	1455				1455				1455				1148			

Table 2: Models of using a car for journeys of 5 km or less where public transport was available. Models 1-3 include all participants who travelled 5 km or less; model 4 excludes people who do not own a car.

	Model 1				Model 2				Model 3				Model 4			
	B (SE)	OR	CI (low)	CI (high)	B (SE)	OR	CI (low)	CI (high)	B (SE)	OR	CI (low)	CI (high)	B (SE)	OR	CI (low)	CI (hi)
Wave [ref= Sep]																
May	0.27 (0.17)	1.31	0.94	1.83	0.27 (0.17)	1.31	0.94	1.83	0.26 (0.17)	1.29	0.92	1.81	0.33. (0.19)	1.39	0.97	2.01
Jun	-0.15 (0.17)	0.86	0.61	1.21	-0.15 (0.17)	0.86	0.61	1.21	-0.16 (0.17)	0.86	0.61	1.20	-0.1 (0.19)	0.91	0.63	1.31
Jul	0.29 (0.2)	1.34	0.91	1.96	0.29 (0.2)	1.34	0.91	1.96	0.28 (0.2)	1.32	0.90	1.94	0.42* (0.21)	1.52	1.01	2.29
Aug	0.17 (0.2)	1.18	0.80	1.74	0.17 (0.2)	1.18	0.80	1.74	0.18 (0.2)	1.19	0.81	1.76	0.28 (0.21)	1.33	0.87	2.01
Weekend	-0.22. (0.12)	0.80	0.64	1.00	-0.22. (0.12)	0.80	0.64	1.00	-0.23. (0.12)	0.80	0.63	1.00	-0.27* (0.13)	0.76	0.59	0.97
Rain [ref= 0mm]																
1-9mm	-0.27. (0.15)	0.77	0.57	1.02	-0.27. (0.15)	0.77	0.57	1.02	-0.27. (0.15)	0.76	0.57	1.02	-0.28. (0.16)	0.75	0.55	1.03
10mm +	-0.43. (0.26)	0.65	0.39	1.07	-0.43. (0.26)	0.65	0.39	1.07	-0.44. (0.26)	0.64	0.38	1.06	-0.46 (0.28)	0.63	0.36	1.08
Male	-0.18 (0.11)	0.84	0.67	1.04	-0.18 (0.11)	0.84	0.67	1.04	-0.23* (0.11)	0.79	0.63	0.99	-0.2 (0.12)	0.82	0.64	1.04
Age [ref= 18 – 34]																
35 – 54	-0.01 (0.14)	0.99	0.75	1.31	-0.01 (0.14)	0.99	0.75	1.31	-0.03 (0.14)	0.97	0.74	1.29	-0.05 (0.16)	0.95	0.69	1.30
55+	0.13 (0.16)	1.14	0.83	1.56	0.13 (0.16)	1.14	0.83	1.56	0.11 (0.16)	1.12	0.81	1.54	0.02 (0.18)	1.02	0.71	1.46
Urban [ref= rural]	1.37*** (0.16)	3.94	2.91	5.47	1.37*** (0.16)	3.94	2.91	5.47	1.37*** (0.16)	3.95	2.91	5.48	1.58*** (0.17)	4.84	3.49	6.88
C2DEF [ref= ABC1]	-0.24* (0.12)	0.78	0.62	0.99	-0.24* (0.12)	0.78	0.62	0.99	-0.24* (0.12)	0.79	0.62	1.00	-0.22. (0.13)	0.80	0.62	1.04
Degree	-0.22. (0.12)	0.80	0.63	1.01	-0.22. (0.12)	0.80	0.63	1.01	-0.26* (0.12)	0.77	0.61	0.98	-0.28* (0.13)	0.76	0.58	0.98
Not employed	0.06 (0.13)	1.07	0.83	1.36	0.06 (0.13)	1.07	0.83	1.36	0.06 (0.13)	1.06	0.83	1.36	-0.03 (0.14)	0.97	0.74	1.28
Income [ref= <2k]																
2k – 4k	0.06 (0.15)	1.06	0.80	1.42	0.06 (0.15)	1.06	0.80	1.42	0.03 (0.15)	1.03	0.77	1.37	-0.11 (0.16)	0.90	0.65	1.23
4k +	0.46** (0.17)	1.59	1.15	2.20	0.46** (0.17)	1.59	1.15	2.20	0.39* (0.17)	1.48	1.06	2.07	0.27 (0.18)	1.31	0.92	1.89

Living situation [ref = alone]																
Couple	-0.03 (0.19)	0.97	0.67	1.42	-0.03 (0.19)	0.97	0.67	1.42	-0.01 (0.19)	0.99	0.68	1.45	-0.18 (0.21)	0.84	0.56	1.27
Family	0.18 (0.18)	1.19	0.85	1.70	0.18 (0.18)	1.19	0.85	1.70	0.21 (0.18)	1.23	0.87	1.76	-0.07 (0.2)	0.93	0.63	1.38
Unrelated/mix	0.3 (0.26)	1.35	0.81	2.23	0.3 (0.26)	1.35	0.81	2.23	0.33 (0.26)	1.39	0.83	2.31	0.22 (0.3)	1.24	0.68	2.24
Recall RYU campaign					0 (0.13)	1.00	0.78	1.28								
Climate worry (hi)									-0.09 (0.12)	0.91	0.73	1.15	-0.15 (0.13)	0.86	0.67	1.10
Energy security worry (hi)									-0.29* (0.12)	0.74	0.59	0.94	-0.26* (0.13)	0.77	0.60	0.99
Cost of living worry (hi)									-0.13 (0.12)	0.88	0.69	1.12	-0.12 (0.13)	0.89	0.69	1.15
Understanding (hi)									0.03 (0.13)	1.03	0.80	1.32	0 (0.14)	1.00	0.76	1.31
Government confidence (hi)									0.08 (0.12)	1.08	0.85	1.37	0.04 (0.13)	1.04	0.80	1.34
Others' effort (hi)									-0.02 (0.14)	0.98	0.74	1.29	-0.06 (0.16)	0.94	0.69	1.27
Observations	2658				2658				2658				2187			

E.2 Inefficient heating behaviour

Table 3: Heating home (given the individual used some form of heating on the reference day).

	Model 1				Model 2				Model 3			
	B (SE)	OR	CI (low)	CI (high)	B (SE)	OR	CI (low)	CI (high)	B (SE)	OR	CI (low)	CI (high)
Weekend	-0.26** (0.08)	0.77	0.66	0.90	-0.27*** (0.08)	0.76	0.65	0.89	-0.27*** (0.08)	0.76	0.65	0.89
Temperature	-0.2*** (0.02)	0.82	0.79	0.84	-0.21*** (0.02)	0.81	0.79	0.84	-0.2*** (0.02)	0.81	0.79	0.84
Rain [ref= 0mm]												
1-9mm	0.32*** (0.08)	1.38	1.18	1.60	0.32*** (0.08)	1.38	1.19	1.61	0.32*** (0.08)	1.38	1.19	1.61
10mm +	0.5*** (0.14)	1.66	1.25	2.18	0.51*** (0.14)	1.66	1.25	2.19	0.52*** (0.14)	1.68	1.27	2.21
Male	0.03 (0.08)	1.03	0.89	1.20	0.02 (0.08)	1.02	0.88	1.19	0 (0.08)	1.00	0.86	1.17
Age [ref= 18 – 34]												
35 – 54	-0.32*** (0.09)	0.73	0.60	0.87	-0.33*** (0.1)	0.72	0.60	0.88	-0.34*** (0.1)	0.71	0.59	0.86
55+	-0.27* (0.11)	0.76	0.62	0.94	-0.3* (0.12)	0.74	0.58	0.93	-0.32** (0.12)	0.73	0.58	0.92
Urban [ref= rural]	-0.42*** (0.08)	0.66	0.57	0.76	-0.39*** (0.08)	0.68	0.58	0.79	-0.39*** (0.08)	0.68	0.58	0.79
C2DEF [ref= ABC1]	0.08 (0.08)	1.08	0.92	1.27	0.08 (0.08)	1.08	0.92	1.28	0.06 (0.08)	1.06	0.90	1.25
Degree	0.06 (0.08)	1.06	0.90	1.25	0.05 (0.08)	1.05	0.89	1.24	0.07 (0.08)	1.07	0.91	1.27
Not employed	-0.1 (0.09)	0.90	0.76	1.07	-0.1 (0.09)	0.90	0.76	1.07	-0.1 (0.09)	0.90	0.76	1.07
Income [ref= <2k]												
2k – 4k	-0.23* (0.09)	0.80	0.66	0.96	-0.24* (0.1)	0.79	0.65	0.95	-0.22* (0.1)	0.80	0.66	0.97
4k +	-0.28* (0.12)	0.76	0.60	0.95	-0.3* (0.12)	0.74	0.59	0.94	-0.29* (0.12)	0.75	0.59	0.94
Living situation [ref = alone]												
Couple	0.3* (0.13)	1.36	1.05	1.76	0.28* (0.13)	1.32	1.02	1.72	0.27* (0.13)	1.31	1.01	1.71

Family	0.34** (0.12)	1.41	1.11	1.80	0.28* (0.13)	1.32	1.03	1.70	0.27* (0.13)	1.31	1.02	1.69
Unrelated/mix	0.49* (0.19)	1.63	1.12	2.35	0.44* (0.19)	1.56	1.07	2.27	0.45* (0.19)	1.57	1.07	2.29
Own home					-0.01 (0.09)	0.99	0.83	1.18	0 (0.09)	1.00	0.84	1.19
Apartment dweller					-0.4** (0.14)	0.67	0.50	0.88	-0.4** (0.14)	0.67	0.50	0.89
Recall RYU campaign					0.21* (0.09)	1.23	1.03	1.47				
Climate worry (hi)									-0.21** (0.08)	0.81	0.69	0.95
Energy security worry (hi)									0.04 (0.08)	1.04	0.88	1.22
Cost of living worry (hi)									-0.08 (0.09)	0.92	0.78	1.10
Understanding (hi)									-0.01 (0.09)	0.99	0.83	1.18
Government confidence (hi)									0.02 (0.09)	1.02	0.87	1.21
Others' effort (hi)									0.09 (0.08)	1.10	0.94	1.28
Observations	4700				4700				4700			

E.3 Inefficient hot water use

Table 4: Taking multiple baths/showers, a long shower or full bath (given a participant took a shower or bath on the reference day).

	Model 1				Model 2				Model 3			
	B (SE)	OR	CI (low)	CI (high)	B (SE)	OR	CI (low)	CI (high)	B (SE)	OR	CI (low)	CI (high)
Weekend	0.16. (0.1)	1.18	0.97	1.42	0.16. (0.1)	1.18	0.97	1.42	0.16. (0.1)	1.18	0.97	1.42
Temperature	0 (0.02)	1.00	0.97	1.04	0 (0.02)	1.00	0.97	1.04	0.01 (0.02)	1.01	0.97	1.04
Rain [ref= 0mm]												
1-9mm	0.05 (0.1)	1.05	0.87	1.27	0.05 (0.1)	1.05	0.87	1.27	0.05 (0.1)	1.05	0.87	1.26
10mm +	-0.15 (0.21)	0.86	0.57	1.28	-0.14 (0.21)	0.87	0.57	1.29	-0.13 (0.21)	0.88	0.58	1.30
Male	-0.4*** (0.1)	0.67	0.55	0.81	-0.39*** (0.1)	0.67	0.56	0.82	-0.42*** (0.1)	0.65	0.54	0.79
Age [ref= 18 – 34]												
35 – 54	-0.54*** (0.11)	0.59	0.47	0.72	-0.53*** (0.11)	0.59	0.47	0.73	-0.53*** (0.11)	0.59	0.48	0.73
55+	-1.3*** (0.15)	0.27	0.20	0.36	-1.3*** (0.15)	0.27	0.20	0.36	-1.24*** (0.15)	0.29	0.22	0.38
Urban [ref= rural]	0.01 (0.1)	1.01	0.83	1.22	0.02 (0.1)	1.02	0.84	1.24	0 (0.1)	1.00	0.83	1.21
C2DEF [ref= ABC1]	-0.14 (0.11)	0.87	0.71	1.07	-0.15 (0.11)	0.86	0.70	1.06	-0.16 (0.11)	0.85	0.69	1.05
Degree	-0.22* (0.11)	0.80	0.65	0.99	-0.2. (0.11)	0.82	0.67	1.01	-0.19. (0.11)	0.83	0.67	1.02
Not employed	0.1 (0.11)	1.10	0.89	1.36	0.09 (0.11)	1.10	0.89	1.36	0.1 (0.11)	1.10	0.89	1.37
Income [ref= <2k]												
2k – 4k	-0.32** (0.12)	0.72	0.57	0.92	-0.31* (0.12)	0.74	0.58	0.93	-0.32** (0.12)	0.73	0.57	0.93
4k +	-0.18 (0.14)	0.84	0.64	1.11	-0.17 (0.14)	0.85	0.64	1.12	-0.16 (0.14)	0.86	0.65	1.13
Living situation [ref = alone]												
Couple	-0.12 (0.17)	0.89	0.64	1.25	-0.14 (0.17)	0.87	0.62	1.23	-0.13 (0.17)	0.88	0.63	1.23

Family	-0.03 (0.15)	0.97	0.72	1.32	-0.06 (0.15)	0.95	0.70	1.29	-0.08 (0.16)	0.93	0.69	1.26
Unrelated/mix	0.1 (0.23)	1.10	0.70	1.73	0.08 (0.23)	1.09	0.69	1.71	0.07 (0.23)	1.08	0.68	1.70
Recall RYU campaign					-0.33** (0.12)	0.72	0.57	0.91				
Climate worry (hi)									-0.34*** (0.1)	0.71	0.58	0.87
Energy security worry (hi)									-0.01 (0.1)	0.99	0.81	1.21
Cost of living worry (hi)									0.23* (0.11)	1.26	1.01	1.57
Understanding (hi)									-0.28** (0.11)	0.76	0.61	0.93
Government confidence (hi)									0.07 (0.11)	1.08	0.86	1.33
Others' effort (hi)									-0.11 (0.1)	0.89	0.74	1.09
Observations	3275				3275				3275			

E.4 Inefficient cooking behaviour

Table 5: Cooking with an oven or a hob for more than 15 minutes (given a participant cooked on a given day).

	Model 1				Model 2				Model 3			
	B (SE)	OR	CI (low)	CI (high)	B (SE)	OR	CI (low)	CI (high)	B (SE)	OR	CI (low)	CI (high)
Wave [ref= Sep]												
May	-0.07 (0.12)	0.93	0.74	1.18	-0.07 (0.12)	0.93	0.73	1.18	-0.07 (0.12)	0.93	0.73	1.18
Jun	-0.06 (0.12)	0.94	0.74	1.19	-0.06 (0.12)	0.94	0.74	1.19	-0.06 (0.12)	0.94	0.74	1.19
Jul	0.04 (0.14)	1.04	0.79	1.35	0.04 (0.14)	1.04	0.79	1.35	0.03 (0.14)	1.03	0.79	1.35
Aug	0.12 (0.13)	1.13	0.87	1.46	0.12 (0.13)	1.13	0.87	1.46	0.12 (0.13)	1.13	0.87	1.47
Weekend	-0.2* (0.08)	0.82	0.70	0.96	-0.2* (0.08)	0.82	0.70	0.96	-0.2* (0.08)	0.82	0.70	0.96
Rain [ref= 0mm]												
1-9mm	-0.01 (0.11)	0.99	0.80	1.22	-0.01 (0.11)	0.99	0.80	1.22	-0.01 (0.11)	0.99	0.80	1.22
10mm +	0.17 (0.17)	1.19	0.84	1.67	0.17 (0.17)	1.19	0.84	1.67	0.17 (0.18)	1.18	0.84	1.67
Male	0.36*** (0.08)	1.44	1.24	1.67	0.36*** (0.08)	1.44	1.24	1.67	0.34*** (0.08)	1.41	1.21	1.64
Age [ref= 18 – 34]												
35 – 54	-0.53*** (0.1)	0.59	0.48	0.71	-0.53*** (0.1)	0.59	0.48	0.71	-0.54*** (0.1)	0.58	0.48	0.71
55+	-0.14 (0.11)	0.87	0.71	1.08	-0.14 (0.11)	0.87	0.71	1.08	-0.13 (0.11)	0.87	0.71	1.08
Urban [ref= rural]	0.14. (0.08)	1.14	0.98	1.33	0.13. (0.08)	1.14	0.98	1.33	0.14. (0.08)	1.15	0.98	1.33
C2DEF [ref= ABC1]	0.04 (0.08)	1.04	0.89	1.23	0.04 (0.08)	1.04	0.89	1.23	0.04 (0.08)	1.05	0.89	1.23
Degree	0.11 (0.08)	1.11	0.94	1.31	0.1 (0.08)	1.11	0.94	1.31	0.1 (0.08)	1.11	0.94	1.30
Not employed	-0.15. (0.09)	0.86	0.72	1.02	-0.15. (0.09)	0.86	0.72	1.02	-0.15. (0.09)	0.86	0.72	1.02
Income [ref= <2k]												
2k – 4k	-0.29** (0.1)	0.75	0.62	0.91	-0.29** (0.1)	0.75	0.62	0.91	-0.29** (0.1)	0.75	0.62	0.90

4k +	-0.34** (0.12)	0.71	0.56	0.90	-0.34** (0.12)	0.71	0.56	0.90	-0.35** (0.12)	0.70	0.55	0.89
Living situation [ref = alone]												
Couple	0.11 (0.12)	1.11	0.89	1.40	0.11 (0.12)	1.11	0.89	1.40	0.1 (0.12)	1.11	0.88	1.39
Family	-1.14*** (0.11)	0.32	0.26	0.40	-1.14*** (0.11)	0.32	0.26	0.40	-1.14*** (0.11)	0.32	0.25	0.40
Unrelated/mix	-0.37* (0.18)	0.69	0.49	0.98	-0.37* (0.18)	0.69	0.49	0.98	-0.38* (0.18)	0.69	0.48	0.97
Recall RYU campaign					0.02 (0.09)	1.02	0.85	1.21				
Climate worry (hi)									-0.06 (0.08)	0.95	0.80	1.11
Energy security worry (hi)									-0.07 (0.08)	0.93	0.79	1.09
Cost of living worry (hi)									0.02 (0.09)	1.02	0.86	1.21
Understanding (hi)									-0.1 (0.09)	0.90	0.76	1.08
Government confidence (hi)									0.1 (0.08)	1.10	0.94	1.30
Others' effort (hi)									-0.11 (0.08)	0.89	0.77	1.04
Observations	3884				3884				3884			

E.5 Inefficient appliance use

Table 6: Using the washing machine inefficiently (not on eco setting, over 50°C, or not a full load).

	Model 1				Model 2				Model 3			
	B (SE)	OR	CI (low)	CI (high)	B (SE)	OR	CI (low)	CI (high)	B (SE)	OR	CI (low)	CI (high)
Wave [ref= Sep]												
May	0.2 (0.15)	1.22	0.91	1.63	0.2 (0.15)	1.22	0.91	1.64	0.19 (0.15)	1.20	0.90	1.62
Jun	-0.07 (0.15)	0.94	0.70	1.25	-0.07 (0.15)	0.94	0.70	1.25	-0.08 (0.15)	0.92	0.69	1.24
Jul	-0.09 (0.16)	0.91	0.66	1.26	-0.1 (0.16)	0.90	0.65	1.24	-0.11 (0.17)	0.90	0.65	1.24
Aug	-0.23 (0.16)	0.80	0.58	1.10	-0.23 (0.16)	0.79	0.57	1.10	-0.23 (0.17)	0.79	0.57	1.10
Weekend	0.21* (0.1)	1.23	1.02	1.49	0.21* (0.1)	1.24	1.02	1.50	0.21* (0.1)	1.24	1.02	1.50
Rain [ref= 0mm]												
1-9mm	0.04 (0.13)	1.04	0.80	1.34	0.04 (0.13)	1.04	0.81	1.34	0.03 (0.13)	1.03	0.80	1.33
10mm +	0.07 (0.23)	1.08	0.70	1.69	0.08 (0.23)	1.08	0.70	1.69	0.09 (0.23)	1.09	0.70	1.72
Male	-0.36*** (0.09)	0.70	0.58	0.84	-0.36*** (0.09)	0.70	0.58	0.84	-0.4*** (0.1)	0.67	0.55	0.81
Age [ref= 18 – 34]												
35 – 54	-0.12 (0.12)	0.89	0.70	1.12	-0.12 (0.12)	0.89	0.70	1.12	-0.12 (0.12)	0.88	0.69	1.12
55+	-0.24. (0.14)	0.79	0.60	1.04	-0.23. (0.14)	0.79	0.60	1.04	-0.17 (0.14)	0.85	0.64	1.12
Urban [ref= rural]	0.14 (0.09)	1.16	0.96	1.39	0.15 (0.09)	1.16	0.97	1.39	0.14 (0.09)	1.15	0.96	1.38
C2DEF [ref= ABC1]	0.15 (0.1)	1.16	0.95	1.42	0.14 (0.1)	1.15	0.95	1.41	0.13 (0.1)	1.14	0.93	1.39
Degree	-0.12 (0.1)	0.89	0.72	1.09	-0.11 (0.1)	0.89	0.73	1.10	-0.11 (0.11)	0.89	0.73	1.10
Not employed	0.18. (0.11)	1.20	0.97	1.48	0.18. (0.11)	1.19	0.97	1.47	0.19. (0.11)	1.21	0.98	1.49
Income [ref= <2k]												
2k – 4k	-0.06 (0.12)	0.94	0.74	1.19	-0.05 (0.12)	0.95	0.75	1.21	-0.06 (0.12)	0.94	0.74	1.19

4k +	0.09 (0.14)	1.09	0.83	1.45	0.1 (0.14)	1.11	0.83	1.47	0.09 (0.15)	1.09	0.82	1.46
Living situation [ref = alone]												
Couple	-0.34. (0.2)	0.71	0.48	1.04	-0.35. (0.2)	0.71	0.48	1.04	-0.31 (0.2)	0.73	0.49	1.07
Family	-0.22 (0.19)	0.80	0.55	1.15	-0.23 (0.19)	0.80	0.55	1.14	-0.2 (0.19)	0.82	0.56	1.17
Unrelated/mix	0.13 (0.3)	1.14	0.64	2.07	0.13 (0.3)	1.14	0.64	2.08	0.17 (0.3)	1.18	0.66	2.15
Recall RYU campaign					-0.2 (0.11)	0.82	0.67	1.02				
Climate worry (hi)									-0.3** (0.1)	0.74	0.60	0.91
Energy security worry (hi)									-0.27** (0.1)	0.77	0.63	0.94
Cost of living worry (hi)									0.17 (0.11)	1.18	0.95	1.47
Understanding (hi)									-0.37** (0.12)	0.69	0.55	0.86
Government confidence (hi)									0.14 (0.11)	1.15	0.93	1.42
Others' effort (hi)									0.07 (0.1)	1.07	0.89	1.30
Observations	2614				2614				2614			

Table 7: Using the tumble dryer (given a participant used the washing machine on the reference day).

	Model 1				Model 2				Model 3			
	B (SE)	OR	CI (low)	CI (high)	B (SE)	OR	CI (low)	CI (high)	B (SE)	OR	CI (low)	CI (high)
Weekend	0.07 (0.09)	1.07	0.89	1.29	0.07 (0.09)	1.07	0.89	1.29	0.08 (0.09)	1.08	0.90	1.30
Mid temperature	-0.02 (0.02)	0.98	0.95	1.01	-0.02 (0.02)	0.98	0.95	1.01	-0.02 (0.02)	0.98	0.95	1.01
Rain [ref= 0mm]												
1-9mm	0.42*** (0.09)	1.52	1.26	1.83	0.42*** (0.09)	1.52	1.26	1.83	0.42*** (0.09)	1.52	1.27	1.83
10mm +	0.52** (0.19)	1.68	1.15	2.42	0.52** (0.19)	1.68	1.15	2.42	0.55** (0.19)	1.73	1.19	2.51
Male	0.28** (0.1)	1.32	1.10	1.59	0.28** (0.1)	1.32	1.10	1.59	0.3** (0.1)	1.35	1.12	1.63
Age [ref= 18 – 34]												
35 – 54	0.08 (0.11)	1.08	0.87	1.36	0.08 (0.11)	1.08	0.86	1.36	0.11 (0.12)	1.11	0.89	1.40
55+	-0.49*** (0.14)	0.61	0.46	0.81	-0.49*** (0.14)	0.61	0.46	0.81	-0.47** (0.15)	0.62	0.47	0.83
Urban [ref= rural]	-0.1 (0.09)	0.91	0.75	1.10	-0.09 (0.09)	0.91	0.76	1.10	-0.1 (0.1)	0.90	0.75	1.09
C2DEF [ref= ABC1]	-0.14 (0.1)	0.87	0.71	1.06	-0.14 (0.1)	0.87	0.71	1.06	-0.15 (0.1)	0.86	0.70	1.05
Degree	-0.08 (0.11)	0.93	0.75	1.14	-0.07 (0.11)	0.93	0.75	1.14	-0.06 (0.11)	0.94	0.77	1.16
Not employed	0.17 (0.11)	1.19	0.97	1.46	0.17 (0.11)	1.19	0.96	1.46	0.2. (0.11)	1.22	0.99	1.50
Income [ref= <2k]												
2k – 4k	0.04 (0.12)	1.04	0.82	1.32	0.04 (0.12)	1.05	0.83	1.32	0.06 (0.12)	1.07	0.84	1.35
4k +	0.19 (0.14)	1.21	0.92	1.60	0.2 (0.14)	1.22	0.92	1.60	0.24. (0.14)	1.27	0.96	1.68
Living situation [ref = alone]												
Couple	-0.39. (0.2)	0.68	0.46	1.02	-0.39. (0.2)	0.68	0.46	1.02	-0.39. (0.21)	0.68	0.46	1.02
Family	0.19 (0.19)	1.21	0.85	1.76	0.19 (0.19)	1.21	0.85	1.76	0.19 (0.19)	1.21	0.85	1.76
Unrelated/mix	0.26 (0.27)	1.30	0.76	2.21	0.26 (0.27)	1.30	0.76	2.21	0.26 (0.27)	1.30	0.76	2.22

Apartment dweller	0 (0.17)	1.00	0.71	1.40	0 (0.17)	1.00	0.71	1.39	0.02 (0.17)	1.02	0.72	1.42
Recall RYU campaign					-0.03 (0.11)	0.97	0.78	1.21				
Climate worry (hi)									-0.04 (0.1)	0.97	0.79	1.18
Energy security worry (hi)									0.27** (0.1)	1.32	1.08	1.61
Cost of living worry (hi)									-0.14 (0.11)	0.87	0.70	1.08
Understanding (hi)									-0.26* (0.11)	0.77	0.62	0.95
Government confidence (hi)									-0.06 (0.11)	0.94	0.76	1.17
Others' effort (hi)									0.11 (0.1)	1.12	0.93	1.35
Observations	2614				2614				2614			

Table 8: Using the dishwasher inefficiently (not on eco setting or not a full load).

	Model 1				Model 2				Model 3			
	B (SE)	OR	CI (low)	CI (high)	B (SE)	OR	CI (low)	CI (high)	B (SE)	OR	CI (low)	CI (high)
Wave [ref= Sep]												
May	0.31. (0.16)	1.36	1.00	1.87	0.31. (0.16)	1.36	1.00	1.87	0.3. (0.16)	1.34	0.98	1.85
Jun	0.08 (0.16)	1.09	0.80	1.48	0.08 (0.16)	1.08	0.80	1.48	0.08 (0.16)	1.08	0.80	1.48
Jul	0.17 (0.18)	1.18	0.83	1.69	0.16 (0.18)	1.18	0.82	1.68	0.14 (0.18)	1.15	0.80	1.64
Aug	0.13 (0.18)	1.14	0.79	1.63	0.12 (0.18)	1.13	0.79	1.62	0.14 (0.19)	1.15	0.80	1.65
Weekend	0.08 (0.1)	1.09	0.89	1.33	0.08 (0.1)	1.09	0.89	1.33	0.08 (0.1)	1.08	0.89	1.33
Rain [ref= 0mm]												
1-9mm	-0.06 (0.14)	0.95	0.71	1.25	-0.05 (0.14)	0.95	0.72	1.26	-0.05 (0.14)	0.96	0.72	1.27
10mm +	0.22 (0.24)	1.24	0.78	1.99	0.22 (0.24)	1.25	0.79	2.00	0.24 (0.24)	1.27	0.80	2.05
Male	-0.23* (0.1)	0.80	0.65	0.97	-0.22* (0.1)	0.80	0.65	0.98	-0.27* (0.11)	0.76	0.62	0.94
Age [ref= 18 – 34]												
35 – 54	0.03 (0.13)	1.03	0.80	1.32	0.03 (0.13)	1.03	0.80	1.32	0.01 (0.13)	1.01	0.78	1.30
55+	0.24 (0.15)	1.27	0.95	1.71	0.24 (0.15)	1.27	0.95	1.71	0.3. (0.15)	1.34	1.00	1.82
Urban [ref= rural]	-0.05 (0.1)	0.95	0.78	1.16	-0.05 (0.1)	0.95	0.78	1.16	-0.07 (0.1)	0.93	0.77	1.14
C2DEF [ref= ABC1]	0.17 (0.11)	1.19	0.96	1.47	0.17 (0.11)	1.18	0.95	1.47	0.13 (0.11)	1.14	0.91	1.41
Degree	0.03 (0.11)	1.03	0.83	1.28	0.03 (0.11)	1.03	0.83	1.28	0.05 (0.11)	1.05	0.85	1.31
Not employed	0.19. (0.11)	1.21	0.97	1.51	0.19. (0.11)	1.21	0.97	1.52	0.21. (0.12)	1.24	0.99	1.55
Income [ref= <2k]												
2k – 4k	-0.06 (0.14)	0.94	0.72	1.24	-0.05 (0.14)	0.95	0.72	1.25	-0.02 (0.14)	0.98	0.74	1.29
4k +	-0.16 (0.16)	0.85	0.62	1.16	-0.16 (0.16)	0.85	0.63	1.16	-0.13 (0.16)	0.88	0.64	1.20

Living situation [ref = alone]												
Couple	-0.12 (0.25)	0.89	0.54	1.44	-0.12 (0.25)	0.89	0.54	1.43	-0.14 (0.25)	0.87	0.53	1.41
Family	-0.04 (0.24)	0.96	0.60	1.51	-0.05 (0.24)	0.95	0.59	1.51	-0.06 (0.24)	0.94	0.58	1.49
Unrelated/mix	-0.08 (0.35)	0.92	0.46	1.84	-0.08 (0.35)	0.92	0.46	1.84	-0.1 (0.35)	0.91	0.45	1.82
Recall RYU campaign					-0.07 (0.12)	0.93	0.74	1.17				
Climate worry (hi)									-0.4*** (0.11)	0.67	0.54	0.84
Energy security worry (hi)									-0.08 (0.11)	0.92	0.75	1.14
Cost of living worry (hi)									0.07 (0.12)	1.07	0.85	1.34
Understanding (hi)									-0.15 (0.12)	0.86	0.68	1.09
Government confidence (hi)									-0.02 (0.11)	0.98	0.79	1.23
Others' effort (hi)									-0.06 (0.1)	0.95	0.77	1.16
Observations	1809				1809				1809			

E.6 Number of inefficient home energy behaviours

Table 9: Number of inefficient home energy behaviours engaged in in a given day, out of a possible five.

	Model 1				Model 2				Model 3			
	B (SE)	OR	CI (low)	CI (high)	B (SE)	OR	CI (low)	CI (high)	B (SE)	OR	CI (low)	CI (high)
Wave [ref= Sep]												
May	0.3*** (0.04)	1.36	1.25	1.46	0.3*** (0.04)	1.35	1.25	1.46	0.3*** (0.04)	1.35	1.25	1.46
Jun	-0.08. (0.04)	0.92	0.85	1.00	-0.08. (0.04)	0.92	0.85	1.00	-0.08. (0.04)	0.92	0.85	1.00
Jul	0.06 (0.05)	1.06	0.97	1.16	0.06 (0.05)	1.06	0.97	1.16	0.06 (0.05)	1.06	0.97	1.16
Aug	0.06 (0.05)	1.06	0.97	1.16	0.06 (0.05)	1.06	0.97	1.17	0.06 (0.05)	1.06	0.97	1.16
Weekend	0.03 (0.03)	1.03	0.98	1.08	0.03 (0.03)	1.03	0.98	1.08	0.03 (0.03)	1.03	0.98	1.09
Rain [ref= 0mm]												
1-9mm	0 (0.03)	1.00	0.94	1.07	0 (0.03)	1.00	0.94	1.07	0 (0.03)	1.00	0.94	1.07
10mm +	0.05 (0.06)	1.05	0.94	1.18	0.05 (0.06)	1.05	0.94	1.18	0.05 (0.06)	1.06	0.94	1.18
Male	-0.1*** (0.03)	0.91	0.86	0.96	-0.1*** (0.03)	0.91	0.86	0.96	-0.09*** (0.03)	0.91	0.87	0.96
Age [ref= 18 – 34]												
35 – 54	-0.03 (0.03)	0.97	0.91	1.04	-0.03 (0.03)	0.97	0.91	1.04	-0.02 (0.03)	0.98	0.91	1.04
55+	-0.16*** (0.04)	0.85	0.78	0.92	-0.16*** (0.04)	0.85	0.78	0.92	-0.15*** (0.04)	0.86	0.80	0.94
Urban [ref= rural]	-0.08** (0.03)	0.93	0.88	0.98	-0.08** (0.03)	0.93	0.88	0.97	-0.07** (0.03)	0.93	0.88	0.98
C2DEF [ref= ABC1]	-0.04 (0.03)	0.96	0.91	1.02	-0.04 (0.03)	0.97	0.91	1.02	-0.04 (0.03)	0.96	0.91	1.01
Degree	-0.06* (0.03)	0.94	0.89	1.00	-0.06* (0.03)	0.94	0.89	0.99	-0.05. (0.03)	0.95	0.90	1.01
Not employed	0.08** (0.03)	1.08	1.02	1.14	0.08** (0.03)	1.08	1.02	1.15	0.08** (0.03)	1.09	1.03	1.15
Income [ref= <2k]												
2k – 4k	-0.07* (0.03)	0.94	0.88	1.00	-0.07* (0.03)	0.93	0.88	1.00	-0.06. (0.03)	0.94	0.88	1.00

4k +	0.03 (0.04)	1.03	0.96	1.12	0.03 (0.04)	1.03	0.96	1.11	0.04 (0.04)	1.04	0.97	1.13
Living situation [ref = alone]												
Couple	0.22*** (0.05)	1.24	1.14	1.36	0.22*** (0.05)	1.25	1.14	1.37	0.21*** (0.05)	1.23	1.13	1.35
Family	0.26*** (0.04)	1.30	1.19	1.42	0.26*** (0.04)	1.30	1.20	1.42	0.25*** (0.04)	1.28	1.18	1.40
Unrelated/mix	0.21** (0.07)	1.23	1.07	1.40	0.21** (0.07)	1.23	1.07	1.40	0.2** (0.07)	1.22	1.07	1.40
Own home	0.02 (0.03)	1.02	0.97	1.09	0.02 (0.03)	1.02	0.96	1.08	0.04 (0.03)	1.04	0.98	1.10
Apartment dweller	0 (0.05)	1.00	0.91	1.09	0 (0.05)	1.00	0.91	1.09	0 (0.05)	1.00	0.92	1.10
Recall RYU campaign					0.03 (0.03)	1.03	0.97	1.10				
Climate worry (hi)									-0.06* (0.03)	0.95	0.90	1.00
Energy security worry (hi)									0.01 (0.03)	1.01	0.96	1.06
Cost of living worry (hi)									0.08** (0.03)	1.08	1.02	1.15
Understanding (hi)									-0.11*** (0.03)	0.90	0.85	0.95
Government confidence (hi)									0 (0.03)	1.00	0.94	1.06
Others' effort (hi)									-0.02 (0.03)	0.98	0.93	1.03
Observations	5000				5000				5000			

E.6 Psychological variables

Table 10: Higher comprehension (above median score), as measured by correctly identifying energy-related statements as true or false.

	Model 1				Model 2			
	B (SE)	OR	CI (low)	CI (high)	B (SE)	OR	CI (low)	CI (high)
Male	-0.21. (0.12)	0.81	0.64	1.03	-0.21. (0.12)	0.81	0.64	1.03
Age [ref= 18 – 34]								
35 – 54	0.41** (0.16)	1.51	1.11	2.07	0.4* (0.16)	1.49	1.09	2.05
55+	0.25 (0.18)	1.28	0.90	1.81	0.22 (0.18)	1.25	0.88	1.77
Urban [ref= rural]	-0.01 (0.12)	0.99	0.78	1.26	-0.03 (0.12)	0.97	0.76	1.23
C2DEF [ref= ABC1]	-0.36** (0.13)	0.70	0.54	0.89	-0.36** (0.13)	0.70	0.54	0.90
Degree	0.15 (0.13)	1.16	0.90	1.50	0.15 (0.13)	1.16	0.90	1.49
Not employed	0.08 (0.13)	1.08	0.83	1.41	0.09 (0.13)	1.10	0.84	1.43
Income [ref= <2k]								
2k – 4k	0.26. (0.15)	1.30	0.97	1.75	0.25. (0.15)	1.29	0.96	1.74
4k +	0.46* (0.19)	1.58	1.10	2.27	0.46* (0.19)	1.59	1.11	2.29
Living situation [ref = alone]								
Couple	0.2 (0.19)	1.22	0.83	1.77	0.2 (0.19)	1.22	0.84	1.79
Family	0.08 (0.18)	1.08	0.76	1.54	0.09 (0.18)	1.09	0.76	1.56
Unrelated/mix	0.25 (0.34)	1.29	0.66	2.52	0.26 (0.34)	1.30	0.66	2.54
Recall RYU campaign					0.28. (0.15)	1.32	0.99	1.76
Understanding (hi)					0.08 (0.14)	1.08	0.82	1.42
Observations	1000				1000			

Table 11: Ranking behaviours in order of their energy intensity (ranking comprehension task, binary outcome, logistic regression).

	B (SE)	OR	CI (low)	CI (high)
Male	-0.08 (0.1)	0.92	0.76	1.12
Age [ref= 18 – 34]				
35 – 54	0.13 (0.13)	1.14	0.89	1.46
55+	0.26. (0.14)	1.30	0.98	1.73
Urban [ref= rural]	-0.05 (0.1)	0.95	0.78	1.15
C2DEF [ref= ABC1]	-0.21. (0.11)	0.81	0.66	1.00
Degree	0.12 (0.11)	1.13	0.91	1.40
Not employed	-0.07 (0.11)	0.94	0.75	1.16
Income [ref= <2k]				
2k – 4k	0.27* (0.12)	1.31	1.03	1.67
4k +	0.64*** (0.16)	1.90	1.40	2.58
Living situation [ref = alone]				
Couple	-0.35* (0.16)	0.70	0.51	0.96
Family	-0.07 (0.15)	0.93	0.69	1.25
Unrelated/mix	-0.34 (0.25)	0.71	0.43	1.17
Recall RYU campaign	0.27* (0.12)	1.31	1.03	1.68
Understanding (hi)	-0.01 (0.11)	0.99	0.80	1.23
Observations		2000		

E.7 Energy deprivation

Table 12: Model of reporting having difficulty paying energy bills (binary outcome, logistic regression).

	B (SE)	OR	CI (low)	CI (high)
Wave [ref= Sep]				
May	0.13 (0.11)	1.14	0.92	1.40
Jun	0.05 (0.11)	1.05	0.85	1.29
Jul	0.27** (0.11)	1.32	1.07	1.62
Aug	0.01 (0.11)	1.01	0.82	1.25
Weekend				
Male	-0.03 (0.07)	0.97	0.85	1.12
Age [ref= 18 – 34]				
35 – 54	-0.22* (0.09)	0.80	0.67	0.96
55+	-0.7*** (0.11)	0.49	0.40	0.61
Urban [ref= rural]	-0.16* (0.07)	0.86	0.75	0.98
C2DEF [ref= ABC1]	0.31*** (0.07)	1.36	1.17	1.57
Degree	-0.32*** (0.08)	0.73	0.62	0.85
Not employed	-0.08 (0.08)	0.92	0.78	1.08
Income [ref= <2k]				
2k – 4k	-0.5*** (0.09)	0.61	0.51	0.72
4k +	-1.19*** (0.11)	0.31	0.25	0.38
Living situation [ref = alone]				
Couple	0.05 (0.12)	1.05	0.84	1.32
Family	0.68*** (0.11)	1.97	1.60	2.43
Unrelated/mix	0.32. (0.17)	1.38	0.99	1.93
Disability in the home	0.23** (0.08)	1.25	1.08	1.46
Climate worry (hi)	-0.16* (0.08)	0.85	0.73	0.99
Energy security worry (hi)	0.37*** (0.07)	1.44	1.25	1.67
Cost of living worry (hi)	1.2*** (0.09)	3.31	2.80	3.93
Understanding (hi)	-0.3*** (0.09)	0.74	0.62	0.88
Government confidence (hi)	-0.4*** (0.08)	0.67	0.58	0.78
Own effort (hi)	0.01 (0.09)	1.02	0.85	1.22
Observations	4607			

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