**Survey technical report**

**Perceptions of electricity use at home and in the workplace**

University of Nottingham

Alexa Spence, Caroline Leygue, Eamonn Ferguson

**Procedure overview**

Participants were first randomly assigned to one of six scenarios about a situation where they shared an office with other people and they had to reduce their energy use at work. In half of the scenarios, the office has an energy display that shows average usage, and in half of the scenarios, an energy display that shows individual usage with names. In a third of the scenarios, there is no Free rider (i.e., person who uses more than the others), in another third, there is a Free rider, and in the last third of the scenarios, the free-rider is legitimate (they have a legitimate explanation for using more).

Then participants were asked to fill in questions about how they would react in such a scenario.

The rest of the questionnaire asks about motivations to save energy at home and at work, behaviour intentions, concern about climate change, and experience of blackouts.

**Sample**

We conducted this national survey of the United Kingdom using data obtained from an online panel hosted by a social research company (Final N = 1729) between 12 August and 20 August 2016.

We gained a quota sample approximately representative of the UK in terms of age, gender, social grade, and location. Quotas for sampling were set according to data obtained from the Office of National Statistics.

The online panel was an actively managed panel recruited through sources including newsletter campaigns, banner placements and affiliate networks; the panel uses a double opt-in email verification to ensure that participants are interested in panel membership and are contactable. Quotas achieved were monitored daily while the survey was active and further emails were sent to specific panellist groups to achieve a broadly representative quota.

The survey was conducted using the Qualtrics software.

Participants were provided with points for their participation in the survey, which could be used to gain shopping vouchers. Recruitment emails provided participants with a broad description of the study as a “research study to look at people’s attitudes and beliefs about the use of energy in the workplace”; details of estimated completion time (15-20 minutes) and incentives points offered were also provided.

The median time for completion of the survey was 12 minutes (slightly faster than estimated). The original sample size was 2570, but data from participants who took less than 5 minutes (N = 841) to complete the survey were deleted as it was considered that these participants were likely to have responded simply to gain points and could not have read questions completely.

We further deleted from the final sample participants who had only completed the demographics questions.

Final sample size is hence N = 1585.

**Weight**

The weighting variable was based on the following demographics: age, gender, location, and social grade.

Office of National Statistics (2011). *Labour Force Survey*. (HM Gov, UK).

**Variable Description**

Below is a table with the variable names in the data file, a bried description, and where (page number) they are located in the questionnaire.

Exact wording can be found in the questionnaire and in the SPSS data file.

|  |  |  |
| --- | --- | --- |
| Variable Name | Description | page |
| participant\_number | Participant’s number |  |
| weight | Weighting variable |  |
| StartDate | When the participant started |  |
| EndDate | When the participant finished |  |
| consent1 | Answer to question 1 of the consent form | 2 |
| consent2 | Answer to question 2 of the consent form | 2 |
| consent3 | Answer to question 3 of the consent form | 2 |
| consent4 | Answer to question 4 of the consent form | 2 |
| concent5 | Answer to question 5 of the consent form | 2 |
| age | Age of the participant | 3 |
| gender | Gender of the participant | 3 |
| gender\_TEXT | Gender of the participant when choice was “other” | 3 |
| location | Where the participant currently lives | 3-4 |
| qualification | Highest qualification of the participant | 4 |
| qualification\_TEXT | Highest qualification when answer was “other” | 4 |
| Social\_Grade | Social grade based on the occupation of the main income earner of the household | 4 |
| Work\_hours | Type of hours of the participant’s contract | 4 |
| Work\_Long | How long the participant has worked for their organisation (in years) | 5 |
| Management | If the participant has managerial responsibilities | 5 |
| Size\_Company | Size of the company where the participant is working | 5 |
| Sector\_Company | Sector of the company where the participant is working | 5 |
| Scenario\_noFR\_averagedisplay\* | Type of scenario participant was assigned to: Scenario with no Free Riding and an energy display with averaged information | 5-6 |
| Scenario\_classicFR\_averagedisplay\* | Type of scenario participant was assigned to: Scenario with a classic Free Riding and an energy display with averaged information | 6-7 |
| Scenario\_legitimateFR\_averagedisplay\* | Type of scenario participant was assigned to: Scenario with a legitimate Free Riding and an energy display with averaged information | 7-8 |
| Scenario\_noFR\_namedisplay\* | Type of scenario participant was assigned to: Scenario with no Free Riding and an energy display with named information | 8-9 |
| Scenario\_classicFR\_namedisplay\* | Type of scenario participant was assigned to: Scenario with a classic Free Riding and an energy display with named information | 9-10 |
| Scenario\_legitimateFR\_namedisplay\* | Type of scenario participant was assigned to: Scenario with a legitimate Free Riding and an energy display with named information | 10-11 |
| Manipulation\_check1 | Verification the participant read the scenario well: how many people work in the office? | 11 |
| Manipulation\_check2 | Verification the participant read the scenario well: average electricity usage | 11 |
| Manipulation\_check3 | Verification the participant read the scenario well: how much was used this month? | 11-12 |
| Angry\_Situation\*\* | How the participant would feel in the situation | 12 |
| Grateful\_Situation\*\* | How the participant would feel in the situation | 12 |
| Guilty\_Situation\*\* | How the participant would feel in the situation | 12 |
| Happy\_Situation\*\* | How the participant would feel in the situation | 12 |
| Irritated\_Situation\*\* | How the participant would feel in the situation | 12 |
| Ashamed\_Situation\*\* | How the participant would feel in the situation | 12 |
| Surprised\_Situation\*\* | How the participant would feel in the situation | 12 |
| Annoyed\_Situation\*\* | How the participant would feel in the situation | 12 |
| Disappointed\_Situation\*\* | How the participant would feel in the situation | 12 |
| Fearful\_Situation\*\* | How the participant would feel in the situation | 12 |
| Proud\_Situation\*\* | How the participant would feel in the situation | 12 |
| Hopeful\_Situation\*\* | How the participant would feel in the situation | 12 |
| Find\_Who\_Use\_More | Whether the participant would try to find out who is using more | 12 |
| Fair\_Ashley | Whether the participant think it is fair that Ashley uses a dehumidifier | 12 |
| Angry\_FR\*\* | How the participant would feel towards the Free Rider | 13 |
| Grateful\_FR\*\* | How the participant would feel towards the Free Rider | 13 |
| Guilty\_FR\*\* | How the participant would feel towards the Free Rider | 13 |
| Happy\_FR\*\* | How the participant would feel towards the Free Rider | 13 |
| Irritated\_FR\*\* | How the participant would feel towards the Free Rider | 13 |
| Ashamed\_FR\*\* | How the participant would feel towards the Free Rider | 13 |
| Surprised\_FR\*\* | How the participant would feel towards the Free Rider | 13 |
| Annoyed\_FR\*\* | How the participant would feel towards the Free Rider | 13 |
| Disappointed\_FR\*\* | How the participant would feel towards the Free Rider | 13 |
| Fearful\_FR\*\* | How the participant would feel towards the Free Rider | 13 |
| Proud\_FR\*\* | How the participant would feel towards the Free Rider | 13 |
| Hopeful\_FR\*\* | How the participant would feel towards the Free Rider | 13 |
| React\_open | How the participant would react: open ended | 13 |
| Talk\_Colleague\*\* | How likely would the participant be to talk to your other colleaguesabout the Free Rider | 13 |
| Tell\_manager\*\* | How likely would the participant be to tell the manager that this person is using more electricity | 14 |
| Tell\_Env\_Champion\*\* | How likely would the participant be to tell the environmental championthat this person is using more electricity | 14 |
| Talk\_directly\*\* | How likely would the participant be to talk to them directly and ask them to reduce their electricity use | 14 |
| Should\_Pay\_fine\*\* | How likely would the participant be to think the free Rider should pay a fine | 14 |
| Call\_meeting\*\* | How likely would the participant be to all a meeting with their colleagues to discuss the issue | 14 |
| Ask\_Colleagues\_switch\_off\*\* | How likely would the participant be to ask all of their colleagues to make sure they switch appliances off when they are not using them | 14 |
| Not\_react\*\* | How likely would the participant be to choose not to react | 14 |
| Investigate\*\* | How likely would the participant be to investigate how much energy thedifferent appliances in the office use | 14 |
| Change\_behaviour\*\* | How likely would the participant be to change their behaviour towardsThe Free rider (e.g., talk to them less, help them less)? | 14 |
| Expect\_Manager\*\* | How likely would the participant be to expect the manager to dosomething about it | 15 |
| Expect\_Env\_Champion\*\* | How likely would the participant be to expect the environmentalchampion to do something about it | 15 |
| Energy\_Use\_Intention\_Scale | To what extent would the participant increase or decrease their energy use the following month | 15 |
| Energy\_Use\_Intention\_Number | How much energy they would use the following month (in kW/h) | 15 |
| lightsScenario\*\* | To what extent would the participant intend to turn off the lightsbefore leaving forthe day | 15 |
| computerScenario\*\* | To what extent would the participant intend to Turn off their computerbefore leaving forthe day | 15 |
| monitorScenario\*\* | To what extent would the participant intend to Turn off their monitorbefore leaving forthe day | 16 |
| communalScenario\*\* | To what extent would the participant intend to Turn off communaloffice equipment before leaving for the day | 16 |
| campaignScenario\*\* | To what extent would the participant intend to take part in a campaign about energy issues | 16 |
| energy\_monitor | Whether the participant has ever lived in a house with an energy monitor | 16 |
| experience\_sharing\_office | Whether the participant has experience sharing an office | 16 |
| Ways\_Pay\_electricity | Way the participant is currently paying for their electricity  | 16 |
| MotivationW\_help\_organisation\_money\*\* | Motivation to save energy at work scale: to help their organisation save money | 17-18 |
| MotivationW\_help\_organisation\_image\*\* | Motivation to save energy at work scale: To help theirorganisation achievea “greener” image | 17-18 |
| MotivationW\_pride\_organisation\*\* | Motivation to save energy at work scale: Because they feel pride in the organisation | 17-18 |
| MotivationW\_commited\_company\*\* | Motivation to save energy at work scale: Because they are committed to the company | 17-18 |
| MotivationW\_concerned\_CC\*\* | Motivation to save energy at work scale: because they are concerned about climate change | 17-18 |
| MotivationW\_like\_want\_me\*\* | Motivation to save energy at work scale: Because people they like want them to | 17-18 |
| MotivationW\_feel\_good\_myself\*\* | Motivation to save energy at work scale: because they’d feel good about themselves | 17-18 |
| MotivationW\_feel\_proud\_myself\*\* | Motivation to save energy at work scale: Because they’d feel proud of themselves | 17-18 |
| MotivationW\_show\_people\_good\_person\*\* | Motivation to save energy at work scale: because it would let them show people that they are a good person | 17-18 |
| MotivationW\_colleagues\_friendly\*\* | Motivation to save energy at work scale: because their colleagues would be more friendly towards them | 17-18 |
| MotivationW\_children\_future\*\* | Motivation to save energy at work scale: Because it would help their children in the future | 17-18 |
| MotivationW\_company\_save\_money\*\* | Motivation to save energy at work scale: because it would make their company save money. | 17-18 |
| MotivationW\_someone\_has\_to\*\* | Motivation to save energy at work scale: Because someone has to do it | 17-18 |
| MotivationW\_feel\_have\_to\*\* | Motivation to save energy at work scale: if other people don’t save energy at work, they feel they have to | 17-18 |
| MotivationW\_cant\_trust\_others\*\* | Motivation to save energy at work scale: Because they can’t trust other people to save energy at work | 17-18 |
| MotivationW\_personally\_rewarding\*\* | Motivation to save energy at work scale: Because they would find it personally rewarding | 17-18 |
| MotivationW\_energy\_security\*\* | Motivation to save energy at work scale: Because they are concerned with energy security, | 17-18 |
| IntentionW\_lights\_day\*\* | Energy use intentions at work scale | 18-19 |
| IntentionW\_computer\_day\*\* | Energy use intentions at work scale | 18-19 |
| IntentionW\_monitor\_day\*\* | Energy use intentions at work scale | 18-19 |
| IntentionW\_printer\_day\*\* | Energy use intentions at work scale | 18-19 |
| IntentionW\_communal\_day\*\* | Energy use intentions at work scale | 18-19 |
| IntentionW\_communal\_use\*\* | Energy use intentions at work scale | 18-19 |
| IntentionW\_layers\_clothes\*\* | Energy use intentions at work scale | 18-19 |
| IntentionW\_speak\_keyppl\*\* | Energy use intentions at work scale | 18-19 |
| IntentionW\_campaign\*\* | Energy use intentions at work scale | 18-19 |
| IntentionW\_disapprove\*\* | Energy use intentions at work scale | 18-19 |
| IntentionW\_computer\_lunch\*\* | Energy use intentions at work scale | 18-19 |
| IntentionW\_procedural\*\* | Energy use intentions at work scale | 18-19 |
| IntentionW\_discuss\*\* | Energy use intentions at work scale | 18-19 |
| IntentionW\_purchase\*\* | Energy use intentions at work scale | 18-19 |
| IntentionW\_remind\*\* | Energy use intentions at work scale | 18-19 |
| sustainability\_relevant\_view | To what extent the participant thinks that sustainable behaviour is relevant to how people view them at work | 19 |
| company\_values\_sustainability | To what extent the participant thinks that their company values sustainable behaviour | 19 |
| concerned\_how\_people\_see\_you | To what extent the participant is concerned with how people see them at work | 19-20 |
| People\_see\_you\_focusW | To what extent the participant prefers that people see them focus on their work (rather than onenergy use)? | 20 |
| MotivationH\_ppl\_more\_friendly\*\* | Motivation to save energy at home scale: because people would be more friendly towards them | 20-21 |
| MotivationH\_show\_ppl\_good\_person\*\* | Motivation to save energy at home scale: because it would let them show people that they are a good person | 20-21 |
| MotivationH\_friends\_do\*\* | Motivation to save energy at home scale: because their friends do | 20-21 |
| MotivationH\_concerned\_CC\*\* | Motivation to save energy at home scale: because they are concerned about climate change | 20-21 |
| MotivationH\_energy\_security\*\* | Motivation to save energy at home scale: because they are concerned about energy security | 20-21 |
| MotivationH\_children\_future\*\* | Motivation to save energy at home scale: Because it would help their children in the future | 20-21 |
| MotivationH\_feel\_good\_myself\*\* | Motivation to save energy at home scale: because they’d feel good about themselves | 20-21 |
| MotivationH\_feel\_proud\_myself\*\* | Motivation to save energy at home scale: Because they’d feel proud of themselves | 20-21 |
| MotivationH\_personally\_rewarding\*\* | Motivation to save energy at home scale: Because they would find it personally rewarding | 20-21 |
| MotivationH\_family\_save\_money\*\* | Motivation to save energy at home scale: Because it would make their family save money | 20-21 |
| MotivationH\_energy\_costs\*\* | Motivation to save energy at home scale: to save money on energy costs | 20-21 |
| MotivationH\_feel\_have\_to\*\* | Motivation to save energy at home scale: if other people don’t save energy at home, they feel they have to | 20-21 |
| MotivationH\_cant\_trust\_others\*\* | Motivation to save energy at home scale: Because they can’t trust other people to save energy at home | 20-21 |
| MotivationH\_someone\_has\_to\*\* | Motivation to save energy at home scale: Because someone has to | 20-21 |
| IntentionH\_lights\_room\*\* | Energy use intentions at home scale | 21-22 |
| IntentionH\_computer\_notused\*\* | Energy use intentions at home scale | 21-22 |
| IntentionH\_monitor\_notused\*\* | Energy use intentions at home scale | 21-22 |
| IntentionH\_printer\_notused\*\* | Energy use intentions at home scale | 21-22 |
| IntentionH\_TV\_off\*\* | Energy use intentions at home scale | 21-22 |
| IntentionH\_layers\_clothes\*\* | Energy use intentions at home scale | 21-22 |
| IntentionH\_speak\_family\*\* | Energy use intentions at home scale | 21-22 |
| IntentionH\_capaign\*\* | Energy use intentions at home scale | 21-22 |
| IntentionH\_disapprove\*\* | Energy use intentions at home scale | 21-22 |
| IntentionH\_practical\_changes\*\* | Energy use intentions at home scale | 21-22 |
| IntentionH\_discuss\*\* | Energy use intentions at home scale | 21-22 |
| IntentionH\_purchase\*\* | Energy use intentions at home scale | 21-22 |
| IntentionH\_remind\_member\*\* | Energy use intentions at home scale | 21-22 |
| CC\_concern | How concerned the participant is about climate change | 22 |
| concern\_gas\_unaffordable\*\* | How concerned the participant is that in the next 10-20 years gas will become unaffordable for them | 22-23 |
| concern\_petrol\_unaffordable\*\* | How concerned the participant is that in the next 10-20 years electricity and petrol will become unaffordable for them | 22-23 |
| concern\_power\_cuts\*\* | How concerned the participant is that in the next 10-20 years there will befrequent power cuts | 22-23 |
| concern\_UK\_dependent\*\* | How concerned the participant is that in the next 10-20 years the UK will become too dependent on energy from other countries | 22-23 |
| concern\_petrol\_shortage\*\* | How concerned the participant is that in the next 10-20 years there will be a national petrol shortage | 22-23 |
| concern\_no\_alternative\*\* | How concerned the participant is that in the next 10-20 years the UK will have no alternatives in place if fossil fuels are no longer available | 22-23 |
| black\_out\_experience | Whether the participant has experienced a black out in their local area recently | 23 |
| comments | Whether the participant has any comment on the survey | 23 |
| CompletionTime | Questionnaire completion time in minutes |  |

\* participants were randomly assigned to one of the six scenarios

\*\* scale items were randomly presented