

## Valuing the electricity demand of households in the north west of England: Block 1

Welcome to this survey about the value of continuous electricity supply in your home

The electricity supply in the United Kingdom is generally very reliable and available continuously. However, the power stations that generate electricity, and towers and pylons that deliver electricity to our homes, are often close to the coast or to rivers that may be affected by future sea level rise and subsequent flooding. This survey will ask about the use of electricity in your daily routine and the value that your household places on the availability of 24 hour electricity. The purpose of this survey is to help inform policymakers when to invest in anti-flooding measures for the electricity network.

This study, part of a major research project, is based within Department of Geography and Planning at the University of Liverpool.

All data collected as part of this survey will be stored in anonymised form.

If you have any queries or concerns, please feel free to contact our survey team at [arcoes@liverpool.ac.uk](mailto:arcoes@liverpool.ac.uk) and we will try to help. If you remain unhappy or have a complaint about which you feel you cannot come to us, then you should contact the Research Governance Officer at [ethics@liv.ac.uk](mailto:ethics@liv.ac.uk). When contacting the Research Governance Officer, please provide details of the name or description of the study (so that it can be identified) and the details of the complaint you wish to make.

Thank you for reading this.

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### Your electricity usage

**This survey has three parts. Part 1 asks about how you use electricity in your home. Part 2 asks you to make choices from a series of electricity supply scenarios that are presented to you. In Part 3, please tell us a little bit about you and your household.**

**Thank you for participating in our survey.**

#### **Part 1 asks about the use of electricity in your household**

- \* 1. Do you generate any of your own electricity? This includes solar (photovoltaic panels), wind and micro-hydro power

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2. If yes, approximately what proportion (%) of your total electricity needs are met by the electricity you generate?

\* 3. How do you heat your home? Please select the main heating source and any additional heating source used to heat your home.

|             | Mainly use           | Additional heating source |
|-------------|----------------------|---------------------------|
| Heat source | <input type="text"/> | <input type="text"/>      |

Other (please specify)

\* 4. Which type(s) of fuel do you use in the preparation of hot meals?

- ☐ Electricity only: electric oven and hob
- ☐ Gas only: gas oven and hob
- ☐ Both electricity and gas: for example, electric oven and gas hob
- ☐ Solid fuel: Aga or similar stove not dependent on electricity
- ☐ Other (please specify)

## Valuing the electricity demand of households in the north west of England: Block 1

### Experience of power cuts

**A power cut is a temporary interruption to the electricity supply. Power cuts range from local power cuts, affecting just a few properties on a street, to the failure of electric power for a much larger area. Please include any type of power cut in your answers.**

\* 5. How frequently, over the last ten years, you have experienced a power cut.

\* 6. Have you experienced a power cut in the last 12 months?

7. If yes, please estimate the number of power cuts in the last 12 months

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### Reliance on electricity during the summer

**Please think about the items in your home that use electricity.**

**Think about the activities that you and your household would find difficult to manage, or manage without, during a power cut in daytime or evening. Please take into account the length of the power cut and the season of the year.**

\* 8. If a power cut continued for 8 hours in summer (April to September), which of the following would you find difficult to manage? (Select all that apply)

- |                                                                     |                                                                                    |
|---------------------------------------------------------------------|------------------------------------------------------------------------------------|
| <input type="checkbox"/> It would not be difficult to manage        | <input type="checkbox"/> Loss of perishable food / freezer defrosting              |
| <input type="checkbox"/> Personal cleanliness                       | <input type="checkbox"/> No television / computer / internet                       |
| <input type="checkbox"/> Keeping warm / lack of heating in the home | <input type="checkbox"/> Looking after children or elderly people                  |
| <input type="checkbox"/> Lack of lighting in the home               | <input type="checkbox"/> Dealing with medical condition                            |
| <input type="checkbox"/> Not able to have hot meals                 | <input type="checkbox"/> Not able to recharge portable devices (mobile phone etc.) |

Other (please specify)

\* 9. How well do you think your household could manage without electricity for 24 hours in summer?

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### Reliance upon electricity during the winter

**Please think about the items in your home that use electricity and your household's requirements during winter daytime or evening.**

\* 10. If a power cut continued for 8 hours in winter (October to March), which of the following would you find difficult to manage? (Select all that apply)

- |                                                                     |                                                                                    |
|---------------------------------------------------------------------|------------------------------------------------------------------------------------|
| <input type="checkbox"/> It would not be difficult to manage        | <input type="checkbox"/> Loss of perishable food / freezer defrosting              |
| <input type="checkbox"/> Personal cleanliness                       | <input type="checkbox"/> No television / computer / internet                       |
| <input type="checkbox"/> Keeping warm / lack of heating in the home | <input type="checkbox"/> Looking after children or elderly people                  |
| <input type="checkbox"/> Lack of lighting in the home               | <input type="checkbox"/> Dealing with medical condition                            |
| <input type="checkbox"/> Not able to have hot meals                 | <input type="checkbox"/> Not able to recharge portable devices (mobile phone etc.) |

Other (please specify)

\* 11. How well do you think your household could manage without electricity for 24 hours in winter?

## Valuing the electricity demand of households in the north west of England: Block 1

### Electricity supply scenarios

This is Part 2 of the survey.

Imagine that there is a power cut affecting your whole neighbourhood.

For the next eight questions you will be presented with a choice between two alternative power cut situations and an associated one-off price to pay to avoid the power cut. Each alternative includes:

the duration of the cut, e.g. 1 hr

the time of day as either 'peak', e.g. early evening when most people are typically at home, or 'off-peak'

the time of week as either 'weekday' or 'weekend / Bank Holiday'

the season as either 'winter' or 'not winter'

the one-off amount you would pay to avoid the power cut

Imagine that by paying the one-off price shown, you could avoid the power cut and have an uninterrupted supply. These are hypothetical situations and, taking into account your household's electricity needs, please select the one you most want to avoid, based on the differences between them and the price you pay.

There is an example of a power cut scenario below.

Example of power cut scenario

|                         | option1    | option2                |
|-------------------------|------------|------------------------|
| Duration                | 20 minutes | 4 hours                |
| Time of day             | Peak       | Peak                   |
| Day of week             | Weekday    | Weekend / Bank Holiday |
| Season                  | Winter     | Not winter             |
| To avoid, amount to pay | £1         | £25                    |
|                         |            |                        |

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### Choice Experiment Scenario 1

Power cut scenario 1

|                 | Option 1 | Option 2 |
|-----------------|----------|----------|
| Season          | Summer   | Winter   |
| Duration        | 20 mins  | 8 hours  |
| Day of the Week | Weekend  | Weekday  |
| Time of Day     | Off-Peak | Peak     |
| Pay, once off   | £1       | £25      |

\* 12. If these were the only two options available to you, which power cut would you prefer to avoid? Please select either option 1 or option 2

☐ option 1

☐ option 2

## Valuing the electricity demand of households in the north west of England: Block 1

### Choice Experiment Scenario 2

Power cut scenario 2

|                 | Option 1 | Option 2 |
|-----------------|----------|----------|
| Season          | Summer   | Winter   |
| Duration        | 20 mins  | 8 hours  |
| Day of the Week | Weekend  | Weekday  |
| Time of Day     | Off-Peak | Peak     |
| Pay, once off   | £1       | £25      |

\* 13. If these were the only two options available to you, which power cut would you prefer to avoid? Please select either option 1 or option 2

☐ option 1

☐ option 2

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### Choice Experiment Scenario 3

Power cut scenario 3

|                 | Option 1 | Option 2 |
|-----------------|----------|----------|
| Season          | Winter   | Summer   |
| Duration        | 8 hours  | 20 mins  |
| Day of the Week | Weekend  | Weekday  |
| Time of Day     | Off-Peak | Peak     |
| Pay, once off   | £25      | £1       |

\* 14. If these were the only two options available to you, which power cut would you prefer to avoid? Please select either option 1 or option 2

☐ option 1

☐ option 2

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### Choice Experiment Scenario 4

Power cut scenario 4

|                   | Option 1 | Option 2 |
|-------------------|----------|----------|
| Season            | Summer   | Winter   |
| Duration          | 8 hours  | 20 mins  |
| Day of the Week   | Weekday  | Weekend  |
| Time of Day       | Off-Peak | Peak     |
| Payment, once off | £25      | £1       |

\* 15. If these were the only two options available to you, which power cut would you prefer to avoid? Please select either option 1 or option 2

☐ option 1

☐ option 2

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### Choice Experiment Scenario 5

Power cut scenario 5

|                   | Option 1 | Option 2 |
|-------------------|----------|----------|
| Season            | Winter   | Summer   |
| Duration          | 1 hour   | 4 hours  |
| Day of the Week   | Weekday  | Weekend  |
| Time of Day       | Off-Peak | Peak     |
| Payment, once off | £10      | £5       |

\* 16. If these were the only two options available to you, which power cut would you prefer to avoid? Please select either option 1 or option 2

☐ option 1

☐ option 2

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### Choice Experiment Scenario 6

Power cut scenario 6

|                   | Option 1 | Option 2 |
|-------------------|----------|----------|
| Season            | Winter   | Summer   |
| Duration          | 4 hours  | 1 hour   |
| Day of the Week   | Weekday  | Weekend  |
| Time of Day       | Peak     | Off-Peak |
| Payment, once off | 10       | 5        |

\* 17. If these were the only two options available to you, which power cut would you prefer to avoid? Please select either option 1 or option 2

☐ option 1

☐ option 2

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### Choice Experiment Scenario 7

Power cut scenario 7

|                   | Option 1 | Option 2 |
|-------------------|----------|----------|
| Season            | Winter   | Summer   |
| Duration          | 4 hours  | 1 hour   |
| Day of the Week   | Weekday  | Weekend  |
| Time of Day       | Peak     | Off-Peak |
| Payment, once off | £5       | £10      |

\* 18. If these were the only two options available to you, which power cut would you prefer to avoid? Please select either option 1 or option 2

☐ option 1

☐ option 2

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### Choice Experiment Scenario 8

Power cut scenario 8

|                   | Option 1 | Option 2 |
|-------------------|----------|----------|
| Season            | Summer   | Winter   |
| Duration          | 1 hour   | 4 hours  |
| Day of the Week   | Weekend  | Weekday  |
| Time of Day       | Peak     | Off-Peak |
| Payment, once off | £5       | £10      |

\* 19. If these were the only two options available to you, which power cut would you prefer to avoid? Please select either option 1 or option 2

☐ option 1

☐ option 2

## Valuing the electricity demand of households in the north west of England: Block 1

### The importance of different factors to your household

**There were five factors in each scenario:**

**Duration of power cut**

**Peak or Off-peak**

**Weekday or Weekend / Bank Holiday**

**Winter or Not winter**

**Amount to pay to avoid the power cut**

20. Did you consider all five factors in each option?

21. If you did not consider each factor, which factor was most important to you?

## Valuing the electricity demand of households in the north west of England: Block 1

### You and your household

#### This is Part 3 of our survey

\* 22. Please select the option that best describes your working status

\* 23. Please state head of household's occupation or, if retired, previous occupation

\* 24. Please select your age group

\* 25. Gender

\* 26. Annual household income

## Valuing the electricity demand of households in the north west of England: Block 1

### About your home and daily routine

\* 27. Number of people in your household

\* 28. Number of children **aged under 5** in household

\* 29. How many people, including children and babies, are usually at home in the daytime during a normal working week (Monday to Friday)?

- ☐ None
- ☐ 1 person
- ☐ 2 people
- ☐ 3 people
- ☐ 4 or more people

\* 30. Does anyone in the household need electricity for medical equipment / heating due to a disability / long term illness?

\* 31. Which of the following best describe where you live? Select one only

- ☐ City
- ☐ Suburbs
- ☐ Large town
- ☐ Small town
- ☐ Village
- ☐ Hamlet / small village or isolated dwelling in open countryside

\* 32. Have you ever lived in a hamlet / small village or in an isolated dwelling?

\* 33. Type of dwelling you currently live in

Thank you

**Thank you for completing our survey.**