

Understanding the challenges faced by fuel poor households

Technical Annex



LE
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1 Rapid Evidence Assessment

The Rapid Evidence Assessment (REA) collected and analysed, in a short timeframe, existing evidence on the challenges faced by the fuel poor. An REA provides a systematic and rigorous analysis process, but it is not a comprehensive literature review. The REA did not set out to review every paper on the topic of fuel poverty, but instead focused on those most pertinent to the questions from the Committee on Fuel Poverty. Below, we set out the methodology employed for the REA.

The first step involved a literature search. This search was conducted by searching for a pre-defined list of keywords on Google Scholar for academic articles, and Google Search for grey literature, news articles and other evidence. The evidence identified was then scanned for further references and evidence to ensure that important articles not captured by the initial search strategy were still included in our assessment. Table 1 below provides the search terms employed as well as the number of articles identified for each term. Note that in the literature search, the search terms were not only used in isolation but also occasionally combined to maximise the effectiveness of the search.

Table 1 Search terms used in the literature search

Search terms	Number of articles identified
fuel poverty england 2022	15
energy crisis winter 2022 england	6
fuel poverty vulnerable	9
Ofgem fuel poverty 2022	3
citizens advice fuel poverty	4
Energy crisis 2022	3
Energy crisis winter	3
Energy Crisis winter UK	8
National Energy Action Fuel Poverty	4
fuel poverty response	9
fuel poverty incentives England	3
alleviating fuel poverty uk	5
coping fuel poverty	8
Fuel Poverty Research Network	4
fuel poverty challenges	19
measuring fuel poverty	2
Fuel poverty impact	5
fuel poverty policy england	6

Following the search of literature on search engines, the identified evidence was analysed. The first step of the analysis involved an assessment of the relevance of the articles identified. The project team used the abstracts and executive summaries of the identified literature to assess whether the articles had any relation to fuel poverty in England. Any articles not passing the exclusion criteria were removed from the analysis. The main exclusion criteria were age and geographical scope. Articles deemed outdated or exclusively relating to non-UK-based studies were removed from the analysis at this stage. Articles deemed relevant were brought forward to the next stage of the analysis.

In this next stage, a more in-depth assessment of relevance and quality of the identified evidence was undertaken. Both were assessed using a Red-Amber-Green traffic light system and based on the article as a whole. Quality was (partially) assessed based on the source of the article. Literature from recognised organisations, including governmental departments, peer-reviewed journals and established experts in the field were deemed of high-quality. This was complemented by a cursory reading of the papers. In this reading, quality was assessed based on the depth and completeness of the content. The assessment of relevance was based on the following criteria:

- whether the article answered some or all of the research questions;
- whether the article focused on England¹; and,
- when the article was written (during or before the rise in energy costs).

Particularly excellent articles, either in quality or relevance, were identified as a separate category. Articles were identified as excellent based on the cursory reading of the articles. In particular, the analysis highlighted those articles that contained in-depth information closely linked to most, if not all, of the research questions. These high-quality articles form the backbone of the summary of findings provided in the main report.

Analysis

As part of the analysis, the identified literature deemed sufficiently relevant was classified based on whether articles fulfilled certain criteria. This classification was done on a simple yes/no classification. The criteria for each article were:

- whether the article provided answers to or inputs for the research questions posed by the Committee on Fuel Poverty;
- whether the article covered certain themes; these themes being:
 - health;
 - housing;
 - the energy market;
 - debt;
 - social security (benefits); and,
 - food;
- whether the article provided specific focus on nations of the UK and/or regions of England; and,
- whether the article covered certain household or personal characteristics; these characteristics being:
 - households including young children (below school age);
 - households including older people (over 65);
 - single parent households;
 - householder having medical conditions;
 - householder having low income;
 - householder being a renter or tenant;

¹ The remit of the Committee on Fuel Poverty is England. Note that literature relating to other nations of the UK was not dismissed, but deprioritised. Literature not relating to the UK was removed from the analysis in the previous step.

- householder belonging to an ethnic minority;
- householder being a student.

This classification exercise resulted in a literature database.

The summary of the study's findings was based on the articles considered excellent in terms of quality or relevance. In particular, an in-depth reading of these articles informed the overarching argument and structure of the summary. To ensure accuracy and validity of the findings, other articles in the literature database were then cross-referenced to confirm or contradict the overarching arguments. Additional information found in these articles was included in the summary if it added to the discussion.

Research questions used in the literature classification

The exact research questions used to classify the literature were as follows:

- What challenges are faced by fuel poor households around energy bill affordability?
 - What challenges are there?
 - What is the link between these challenges?
 - What is the cumulative impact of these challenges?
 - How are different groups, particularly protected and vulnerable groups, affected by these challenges?
 - How are these challenges being felt by fuel poor households this winter (2022/23)?
- How are fuel poor households using energy in winter 2022/23?
 - What are the strengths and limitations of government policies in place to support fuel poor households?
 - What other support is available for fuel poor households in facing the challenges identified in question 1?
 - What action are fuel poor households themselves taking to respond to these challenges?
 - What further actions, if any, would they like to take, and what are the barriers?
 - What further support do fuel poor households need relating to their energy bills and energy use?

Limitations

An REA is not a comprehensive literature review. As such, it does not set out to review all papers on a topic. This means that the assessment provided for this report may have missed some relevant information. However, the search strategy used provided a systematic and rigorous approach to collate and interpret the evidence base in a short period of time.

Another limitation of the literature is the application of the definition of fuel poverty. Although some papers, especially those in government, use the Low Income Low Energy Efficiency (LILEE) indicator to define fuel poverty, this is not the case for all papers. Some papers prefer the 10% rule: households spending 10% or more of their net income on fuel. Other papers do not strictly define fuel poverty, but instead focus more generally on those struggling to pay energy bills. This broader definition captures those households who following the strict definitions are not fuel poor, but cannot afford energy bills.

Therefore, different articles do not always capture identical groups of fuel poor households. However, the review did not identify systematic differences in papers using different definitions of fuel poverty. Therefore, the main report includes evidence from papers with different definition of fuel poverty.

Lastly, fuel poverty is difficult to disentangle from general poverty. Furthermore, the additional stresses due to rises in energy costs cannot be easily separated from the more general cost-of-living crisis. Articles identified do not necessarily attempt to disentangle these effects on struggling households. This means that some problems identified for fuel poor households may not always directly relate to, or be resolved solely through, energy policy.

2 Workshops

Six stakeholder workshops were conducted with experts and frontline energy advisors. The purpose of these workshops was to provide a sense-check of the findings from the REA, and to bridge the evidence gaps outstanding from the literature.

Five workshops were conducted with a mix of industry experts. These experts covered both the supply and demand sides of the energy market, and included – among others – charities, academics, energy suppliers and trade bodies. Including a mix of stakeholders from different organisations within each workshop was considered valuable for this research strand, to:

- 1) Reduce the likelihood of single focus, groupthink and/or false consensus, and instead have discussion borne from differing experiences.
- 2) Widen session availability, making logistics of planning the sessions easier (i.e. stakeholders of the same type do not all have to be available on the same day).

One workshop was dedicated completely to frontline advisors working directly with vulnerable and fuel poor households. This session was held separately because the experiences of the frontline advisors were expected to be too distinct from the industry experts to generate useful discussion. Frontline advisors directly assist struggling households, whereas industry experts are more likely to be involved in broader policy discussions.

Workshop sessions and participation

Workshops were carried out online via Zoom and each workshop lasted around two hours, to explore particular areas in depth, whilst minimising participant fatigue. Sessions were held on the following days:

- 8 March 2023
- 10 March 2023 (frontline advisors' session)
- 15 March 2023 (morning session)
- 15 March 2023 (afternoon session)
- 17 March 2023
- 20 March 2023

Each workshop contained between 5 and 9 participants² and across all workshops there were 39 participants. The frontline advisors were recruited via the network of the Centre for Sustainable Energy. The industry experts were recruited via outreach in the networks of the Committee on Fuel Poverty, the Department for Energy Security and Net Zero, and London Economics. Table 2 presents an overview of the workshop participants.

² To facilitate discussion, the aim was to include 6 to 8 participants per workshop.

Table 2 Workshop participants

Workshop session	# of participants	Participating organisations
8 March 2023	5	British Energy Efficiency Federation Centre for Sustainable Energy Dr Neil Simcock, Liverpool John Moores University Resolution Foundation One fuel poverty charity
10 March 2023 (frontline advisors)	9	Plymouth Energy Community The National Energy Foundation Act on Energy Community Energy Plus Centre for Sustainable Energy Bristol Energy Network Citizens Advice Manchester Exeter Community Energy Cumbria Action for Sustainability
15 March 2023 (morning)	6	Age UK Environmental Change Institute (University of Oxford) Exeter Community Energy Utilita (twice represented) Energy market trade association
15 March 2023 (afternoon)	5	AgilityEco Good Faith Partnership Local Government Association National Housing Federation National Residential Landlord Association
17 March 2023	6	Catapult Energy Systems Centre for Sustainable Energy Energy Savings Trust Local Government Association Ofgem Social Market Foundation
20 March 2023	8	Catapult Energy Systems Energy UK Chartered Institute for Housing Christians against Poverty Citizens Advice EDF Energy The Association of Local Energy Officers Trussell Trust

Note: Where an organisation is represented more than once, individual experts will provide different perspectives on fuel poverty. The table above only names those organisations who have given consent to be named. All others are identified by organisation type only.

An experienced facilitation team guided the workshop discussion. The facilitators were briefed by the project team prior to the workshops and remained in contact throughout the workshop fieldwork. One member of the London Economics project team sat in on each of the workshops as a link to the wider project. It was agreed to not involve members of the Committee on Fuel Poverty or the Department for Energy Security and Net Zero in the workshops. This decision was made to allow participants to speak freely on the topic.

Workshop guide

The workshop guide was developed with the findings of the REA in mind, aiming to sense-check its findings and to bridge any gaps in the current evidence base. In particular, links between the challenges had not yet fully been mapped out in the literature, and an assessment of where policies may be best targeted was lacking in evidence from the review.

The guide was structured in six parts as follows:

- 1) Introduction and welcome
- 2) Ice breaker
- 3) Sense-checking the findings from the literature
- 4) This winter
- 5) Government policy
- 6) Close and thank you

The complete workshop guide is provided below. Given their distinct perspectives on the topic, a slightly different version was prepared for the session with frontline advisors, focusing more of the session on the challenges faced by fuel poor households this winter. Furthermore, the guide was amended following, and based on, the first two workshop sessions with industry experts to ensure the best use of the time. We provide the final workshop guide below, as this guide was used in the majority of the workshops. The original guide and the frontline advisors guide are provided in the annex.

Final industry expert workshop guide

Text in *italic* is text/questions to be put forward to participants. Timings provided give an indication of the importance of each section; they do not need to be strictly adhered to. Similarly, depending on the discussion, questions may not need to be strictly adhered to.

Moderator note: steer away from “rabbit hole” topics, i.e. well-known topics that garner a lot of opinion, as to avoid repeating what is already known. These topics include:

- Winter Fuel Payments
- Prepayment meters
- State benefits and welfare payments being insufficient
- Support for renewable energy

Moderator Note: we have bolded the most important questions within each section. These should be discussed.

Total time: 115 minutes

Part 1: Introduction (10 minutes)

Introduce the study (by London Economics): *This workshop is one of a number of workshops we are currently conducting on behalf of the Committee on Fuel Poverty. Prior to this workshop, you received from us a brief introduction to the project, but to recap: we are conducting research to understand the challenges faced by fuel poor households this winter 2022/23. The research will aim to better understand the issues faced by those in fuel poverty and the options as to how these issues*

can be best addressed. Today we would like to also be more forward looking, and talk about the needs and policy in the future. The research will be shared with the Department for Energy Security and Net Zero, and more widely across government, helping inform policy development in government on this important issue. Since fuel poverty and energy policy is largely a devolved matter, we would like you to focus on England. Also, we would like to focus on policies within the remit of DESNZ, e.g. benefit/welfare system is not within our remit.

It's important to note that these discussions are intended to be exploratory and aimed at generating dialogue on the topics in question. It is perfectly fine if people disagree with one another. There are no right or wrong answers, we are simply interested in your thoughts on the topics which we will discuss. Also, it will be most interesting for us if you provide your experiences and expertise, rather than only sticking with general impressions, thoughts and ideas.

All views and opinions expressed will remain completely confidential and anonymous outside of this group, unless you give us explicit permission that you are happy for us to attribute what you say to your role.

Request permission to audio record the workshop. The audio-recording will exclusively be used to generate the transcript and deleted once the transcript has been approved. No video-recording is made.

Introduce practicalities (exact details left for facilitator): *The discussion will last approximately 2 hours in total, with a short break in between. In terms of the practicalities of the discussion, please use the hand raise function to indicate you have something to say, so that we are not all speaking at the same time. May I also ask you to check whether your mobile phone and programs that are running on your computer in the background are muted so that these cannot interrupt the discussion.*

Introduction of participants: *Before we start, may I ask each of you to introduce yourself briefly?*

Part 2: General open discussion/ice-breaker (5 minutes) – INTEGRATE WITH INTRODUCTIONS

Do you have any initial high-level thoughts on how consumers coped this winter with rising energy bills? In a couple of words or a sentence.

Part 3: Sense-checking the findings from the literature (45 minutes)

Part 3a: Challenges identified (10 minutes)

@Moderator: please use the whiteboard to show and rank the challenges visually

First, we would like to discuss with you the challenges faced by people in fuel poverty. On the whiteboard, we have shown some of the challenges outlined in the literature.

- Put the following challenges on the whiteboard; these need to be ranked by the participants.
- To be discussed by the group as a whole

- 1) Cold homes
- 2) Rationing appliances/lights
- 3) Rationing (hot) water

- 4) Taking on debt
- 5) Poor physical health
- 6) Poor mental health
- 7) Stigma/isolation
- 8) Poorer education (for children)
- 9) Less food/relying on food banks
- 10) Eating (mostly) cold meals
- 11) Using unsafe cooking methods
- 12) Eating poorer quality food
- 13) Damp and mould
- 14) Navigating the energy market
- 15) Poor access to or knowledge of support
- 16) Poor resilience to unexpected shocks
- 17) Strain and stress in the household

Firstly, did we miss any (obvious) challenges from our list?

- Open discussion
- Add extra challenges to whiteboard if any is missed

Could we as a group talk through which of these challenges are (1) Very important, (2) important, (3) Unimportant or (4) Very unimportant

- "Bucketing" exercise; **integrate this exercise with discussion on why below**
- We leave terms like "important" to be defined by the group.

Why did you identify challenge x as "very important"? How do you encounter these challenges in your work? Why identify challenge y as "very unimportant"?

- **Moderator note:** make a note of the challenges considered very important; this will come back in part 5a
- **Moderator note:** try to get some distinction between challenges; i.e. not everything should be identified as "very important"

Part 3b: Links between the challenges [mapping exercise] (25 minutes)

@Moderator: please use the whiteboard to conduct this exercise visually; use all of the challenges discussed in the previous section

Next, we would like to talk about how the challenges we discussed above link up with each other.

*Since links between challenges can become very complex, I suggest we go over this in more structured way. The challenges we identified in the previous section are obviously all impacted by fuel poverty, but not in the same way. Some challenges are directly impacted by being fuel poor (**moderator prompt: e.g. not being able to heat your house**) whereas others are indirectly impacted (**moderator prompts: e.g. health effects because the house is cold**).*

Let's first discuss this "hierarchy" a bit. What challenges do you feel are directly affected by fuel poverty, and which only indirectly?

- Open discussion with the intent to converge on some hierarchy; show the hierarchy visually.
- Note that the hierarchy can be larger than two levels. E.g. the following is possible: fuel poverty >> direct effect >> indirect effect >> indirect effect 2
- **Moderator:** make a note of the challenges considered first-order (direct) effects; this will come back in part 5a

Now how do the challenges in this hierarchy link up for you?

- Open discussion with the intent to converge towards some list the participants can agree on
- Multiple causes could link up with multiple effects and vice versa. Try to avoid linking up everything with everything as this is not helpful. Instead, prompt participants to focus on the main links they have seen within their work.

If multiple causes are linked to a challenge: *I see that you have linked [name challenge] to multiple other challenges. Which link do you feel is the strongest/weakest?*

- Open discussion with the intent to converge towards some list the participants can agree on
- Use different coloured arrows to denote different levels of importance

Part 3c: Impact of challenges and differences between vulnerable groups (10 minutes)

Before we take a quick break, the last thing we want to discuss is how the challenges impact people in fuel poverty. What are the impacts you see on people of the challenges related to fuel poverty?

And taking challenges combined and how they link together, how do you think that fuel poverty impacts people?

- Open discussion; but focus on the last question (cumulative impact of all challenges and links combined)
- We would only expect qualitative responses in terms of impacts, but if anyone has any monetised (Pound Sterling) valuation that would be appreciated

How do the impacts differ between groups of people? Are any groups hit particularly hard or differently from others? If so, which groups and how do the impacts differ?

- Open discussion
- **Moderator note:** probe for geographic differences
- We are particularly interested in protected and vulnerable groups. Vulnerable characteristics cover (among others):
 - Low-income households
 - Age
 - Single households
 - Having dependent children
 - being pregnant or on maternity leave

- disability/long-term illness
- race including colour, nationality, ethnic or national origin
- (Privately) renting households
- Households on prepayment meters
- Off grid households

Break (5 minutes)

Part 4: This winter (20 minutes)

Welcome back everyone. For the remainder of this workshop, we would like to discuss a bit about the experiences this winter and to look forward towards the future.

Part 4a: What did consumers do this winter? (10 minutes)

*In your experience, what actions have people in fuel poverty taken to deal with energy prices this winter? Which coping strategies have you seen fuel poor people use? **Have these changed since last winter?***

- Open discussion
- **Moderator note:** to be discussed with priority; not to be skipped in the discussion. Focus on what they / their organisation has actually witnessed rather than general thoughts and impressions.
- Keep the discussion more general. Note that government policy and other support is discussion in the next section.

Do you feel that people in fuel poverty are aware of the support that is available to them? Do they use the support schemes available to them?

- Open discussion
- This question is intended to lead naturally to the next subsection
- With support, we mean both government and non-government support

Part 4b: strengths and weaknesses of support (10 minutes)

What are the strengths of government policies in place to help people in fuel poverty? And what are the weaknesses? E.g. is it reaching the right people?

- Open discussion
- **Moderator note:** if discussion is highly unbalanced to weaknesses, ensure that strengths and positive lessons learned are also discussed
- **Moderator note:** The following policies are good to discuss (list not exhaustive):
 - Energy Company Obligation (ECO4)
 - Warm Home Discount
 - Cold Weather Payments
 - Energy Price Guarantee (EPG)
 - Energy Bills Support Scheme (EBSS)
 - Alternative Fuel Payment

- Social Housing Decarbonisation Fund
- Home Upgrade Grant Scheme
- Minimum energy efficiency standards

*What other support (other than government) have people in fuel poverty got access to? How does this differ between groups in fuel poverty (**Moderator: probe for geographic/regional differences**)? What are the strengths and weaknesses of this support?*

- Open discussion

Part 5: Looking ahead (25 minutes)

Finally, we want to talk to you about what will be needed in the future to support people in and reduce fuel poverty.

Part 5a: Government policy (20 minutes)

If there is one policy you would like to see the government implement, what would that be?

- Single short response per respondent
- **Moderator prompt:** we are looking for policies that would reasonably be in the remit of the Department for Energy Security and Net Zero and the Committee on Fuel Poverty. This would rule out, for example, changes to benefits schemes.

Depth of the follow-on discussion depends on available time

Reflecting back on the challenges you identified as important, do you have any further thoughts? Any policies to prioritise? Any thoughts on implementation? Target population (worst-first principle)?

- Open discussion
- We can refer participants back to the whiteboard if they do not remember the challenges

Any particular things, not yet mentioned, that the government should look out for in fuel poverty policy?

- Open discussion
- Mostly as an “afterthoughts” discussion if we have time

Part 5b: Other help (5 minutes) – LOW PRIORITY; CAN BE SKIPPED IF NO TIME

Beyond government, which other players in this area do you feel can support people in fuel poverty?

- Open discussion
- **Moderator note:** Support from other players besides government provided this winter has been mentioned in section 4b. Link back in the discussion to this support.

Do you see any other support system that may be needed to avoid urgent problems caused by fuel poverty? What can the other players do to help?

- Open discussion

If so: *Could you briefly describe what this would look like?*

- Open discussion

Part 6: Close and thank you (5 minutes)

Before we close this workshop, is there anything else that you wanted to discuss or mention?

- Open discussion

If you are aware of any literature or further information that you feel is important for us to know for this project, do not hesitate to share this with us. You can put any information on the chat or get in contact with London Economics.

- No discussion needed; only need to inform

Thank for participation and close the meeting

Analysis

The discussion in each of the workshops were transcribed into detailed, near-verbatim transcription.³ Furthermore, the London Economics project team members sitting in on the workshops made additional notes. Lastly, certain exercises used an online whiteboard to capture the discussion. These three elements combined – transcripts, notes and whiteboard – formed the record of the workshop discussions available to the project team.

Based on this record, the project team members extracted common themes, and notable deviations, emerging from the workshops. These were compared with the results obtained in the REA. The project team met to discuss and agree on the results of the workshops. The findings of the workshops were then integrated in with, and contrasted against, the findings of the REA.

Limitations

The number and length of workshops, as well as the maximum number of invitees, were pre-determined ahead of the sessions. These parameters may have limited the discussion that was able to take place.

The six workshops were two hours each, which was deemed long enough to complete the workshop guide without burdening participants' time. However, within the two hours, not all questions could be explored in-depth. This was especially the case in larger groups, where all participants needed to be given the opportunity to contribute.

Within these limits, we attempted to include a wide variety of voices across industry, academia and the third sector in the workshops. However, there are many other relevant organisations, who were not invited for this study, and it is possible that some voices were missed.

³ The transcriptions were based on recordings of the workshops. These recordings were exclusively made for the purpose of transcription by the facilitation team, and were not shared with either the London Economics project team, the Committee on Fuel Poverty or the Department for Energy Security and Net Zero.

Group dynamics are also a significant consideration in workshops. While a mix of participants can provide valuable insights, groupthink or false consensus can also occur. To minimise the negative effects of group dynamics, a range of diverse voices were included in each group, but it is impossible to eliminate these negative effects.

Lastly, it should be noted that the workshops did not include fuel poor households themselves. Although the research took care to include frontline advisors working directly with fuel poor households, this means that any experiences reported in the workshops are second-hand.

3 Online research

The purpose of the online research was to complement evidence from the REA and workshops, and gather additional evidence and insight on the experiences of fuel poor households in the winter of 2022/23.

The research team undertook two pieces of online research:

- 1) a systematic analysis of online forum threads and comments related to fuel poverty during winter 2022/23; and,
- 2) an assessment of longer-term trends in Google searches of fuel poverty-related search terms.

Online forums

The project team obtained permission to extract information from both the Mumsnet and Reddit forums. Mumsnet is an online network aimed at parents in the UK. Reddit is a forum and link aggregator with a global reach.

Obtaining the information

The project team scraped the Mumsnet website and used the in-built Application Programming Interface (API) for Reddit. In both cases, the project team extracted plain text describing current experiences with energy from threads and comments in both forums. A thread represents an online discussion that connects a number of comments within a single topic together. The thread typically starts with an initial question or discussion statement to which other forum participants can reply, or comment.⁴

As a first step, the team identified relevant categories of threads (also known as ‘topics’ on Mumsnet and ‘subreddits’ on Reddit) to narrow down and direct the search. The team only extracted information for threads in these categories.

For Mumsnet, these topics were:

- Cost of living
- Weather
- Money matters
- Property/DIY
- Chat

And for Reddit, these subreddits were:⁵

⁴ The terminology differs between Mumsnet and Reddit. The overarching conversation is referred to as a “thread” on Mumsnet, but as a “post” on Reddit. On the other hand, the replies to the thread are known as “comments” on Reddit but as “posts” on Mumsnet. Therefore, the term “post” may be confusing. Hence, we refer to the overarching conversation as “thread” (following Mumsnet) and refer to replies as “comments” (following Reddit).

⁵ We selected subreddits that are UK based, since data suggests that the United States accounts for almost half of traffic to Reddit.com. The UK ranks second with a share of 7.5%. See: <https://www.statista.com/statistics/325144/reddit-global-active-user-distribution/>

- AskUK
- UKPersonalFinance
- UnitedKingdom

The text obtained from both Mumsnet and Reddit was filtered so that only threads and comments from 23 September 2022 onwards were retained. This restricted the search to autumn and winter 2022/23, and therefore provided the most recent and relevant insights.

To identify relevant threads and comments within the categories, two lists of search terms were developed (Table 3). These lists focused on search terms suggesting susceptibility to fuel poverty following the REA. However, it must be noted that it was impossible to identify whether commenters were indeed fuel poor. The first list contains terms related to fuel poverty and was used to search **both** the title of threads and the comments within these threads. The second (longer) list consists of a wider set of terms associated with challenges identified from the REA and was used to search **only** the comments.

Table 3 List of search terms for the online forum research

List 1	List 2	
Energy bills	Challenge	Kids
Gas bills	Challenging	Child
Electricity bills	Struggling	Elderly
Fuel	Struggle	Old
Fuel poverty	Anxiety	Pensioner
Fuel poor	Stress	Retired
Priority services register	Worry	Student
Energy vulnerable	Worried	Rent
Pre payment meter	Concern	Social housing
Pre-payment meter	Cope	Tenant
Prepayment meter	Coping	Landlord
Government support energy	Help	Low income
Cold weather payments	Cant afford	Low-income
Warm Home discounts	Can't afford	Health condition
Winter fuel payments	Cannot afford	Medical condition
Freezing	Debt	Disabled
Debt energy	Ration	Long term illness
Heat or eat	Cut down	Pregnant
Heat home help	Winter	Asthma
Damp	Microwave	
Mould	Blankets	
Cold home	Candles	
Warm banks	Single parent	
Heating prescription	Single-parent	

Note: variations in spellings were intentional to pick up any common misspellings within threads or comments.

By structuring the search in this way, noise was reduced amongst the threads identified, whilst also widening the number of comments extracted in each selected thread. For example, this approach did not extract any comments from threads about *microwaves* (a term from List 2) – the majority of these would not be relevant to the study. However, we did extract comments that mention

microwaves, within threads relevant to the topic of fuel poverty found using terms in List 1; people may report using these as a solution to reduce their energy consumption, as found in the REA.

The terms in List 1 were used to search for thread titles on Reddit and Mumsnet using each platform's inbuilt search function. These search functions, similar to web search tools such as Google Search, employ **fuzzy matching**. This means that threads returned from a search term will not necessarily contain the search term verbatim, but will use these words similar or related words to improve the efficacy of the search tool. As an illustrative example, searching the phrase *government support energy* may return a thread title of 'When will the government provide support on energy prices?'. This makes the search more flexible and ensures that threads relating to fuel poverty are not missed because they do not use a specific phrase.

In contrast, all extracted comments within these relevant threads were extracted based on the **strict criteria** of an exact match with a search term from either List 1 or List 2 (having removed cases, punctuation, and other special characters).⁶

For both Mumsnet and Reddit, the team extracted at a minimum for each comment:

- Thread category/subreddit
- Thread title
- Thread URL
- Number of comments in the thread
- Search term(s) (from List 1) that the thread title matched on
- Comment text
- Date and time of the comment

Comments on Reddit provide some additional meta-data such as the comment score, which is determined by the number of 'upvotes' and 'downvotes' the comments received. Upvotes and downvotes can be used by the Reddit community to show that the users agree (upvote) or disagree (downvote) with the comment. This data can be used to infer the quality of the comment.

Data cleaning

The extraction - after discarding comments and threads from before 23 September 2022 and removing duplicates (as some threads were returned by multiple different search terms) – resulted in 17,409 comments in 1,723 threads from Reddit, and 3,611 comments in 256 threads from Mumsnet.⁷

The extraction method was set up to ensure that only threads relevant to fuel poverty, and only on-topic comments within these threads, were extracted to reduce noise in the data. However, due to the fuzzy matching used by each forum's in-built search function, there was a possibility that some threads picked up by List 1 search terms may not be relevant to fuel poverty. It was unfeasible to go through each extracted thread and make a judgement as to whether it was relevant to analysis, so

⁶ This was performed by the research team using data processing software rather than within each forum's in-built search function, as it was not possible to search for specific terms within threads using these search functions.

⁷ In the Reddit extraction, the first comment posted by the user that created the thread at the same time as posting the thread (used as a subheading or a comment to start the discussion) was extracted separately to the rest of the comments. To ensure consistency with Mumsnet, these first 'discussion-starting' comments were grouped with all other comments on the thread.

instead a subset of threads that were most likely to have been picked up erroneously were chosen for review. These were threads that matched **both** the following criteria:

- Only matched on one term for List 1
- Had no relevant comments (i.e., no comments within the thread were extracted because none of the comments matched with any of the terms from List 1 or List 2)

There were zero threads from Mumsnet and 259 threads from Reddit that matched these criteria.⁸ Upon manual inspection, 210 of these threads were considered not related to fuel poverty and therefore excluded from analysis. This left a final sample of 17,409 comments in 1,513 threads from Reddit, and 3,611 comments in 256 threads from Mumsnet.

The thread titles and comments for the remaining extraction were cleaned such that all words were changed to lowercase, and all punctuation and other special characters were removed from words. This was to aid subsequent analysis.

Analysis

While a large literature on extracting meaning from unstructured data exists, these advanced models typically take a significant amount of time to develop and validate. Furthermore, it was not feasible to manually go through comments and threads and qualitatively assess responses. Given the short timelines for this project, we instead focused on a set of more simple analyses that would likely still yield useful insights. These were broadly:

- **Frequency of threads relating to search terms:** this looked at the number of threads returned that related to specific search terms in List 1. Frequencies were considered over the whole period and over time, looking at daily, weekly, and monthly frequencies.
- **Absolute prevalence of keywords in comments:** this involved counting the number of comments that mentioned specific keywords (including common alternate spellings) related to the list of key terms set out in Table 3. Where appropriate, key terms were grouped into themes (e.g., ‘damp’, ‘mould’, and ‘cold home’ into the theme of ‘home environment’) to create more comparable insights. Frequencies were both considered overall and over time, using moving averages to smooth out large day-to-day fluctuations.
- **Relative prevalence of keywords in comments:** this measured the number of comments mentioning specific topics relative to all comments related to fuel poverty in a similar period. This helped identify the salience of certain topics being discussed on forums. It further allowed comparison between Reddit and Mumsnet, as the latter forum had only around a fifth of the activity of the former in terms of comment numbers. Frequencies were considered both overall and over different time periods.
- **Overall mentions of topics related to key terms:** this approach took the whole population of comments and analysed terms used in a ‘wordcloud’. As well as highlighting the key search terms used to extract comments (see Table 3), this approach also highlights frequently mentioned topics associated with these terms, giving insights into related challenges not initially considered.

⁸ From inspection of search results, Reddit’s search function appeared to be ‘fuzzier’ than Mumsnet. For instance, a search on a term would often return threads where the term was only mentioned in the top-level comment, or threads that had a similarly spelled different word (e.g., searching for ‘fuel’ returned some threads with ‘full’ in their title).

Limitations

As noted above, it was impossible to identify whether commenters were fuel poor. The data extracted for both Mumsnet and Reddit only provide meta-data about the thread and comment. This may include the screen name of the commenter, but this cannot be matched to outside data. The lists of search terms were developed to maximise the likelihood of identifying topics on fuel poverty, but this could not be guaranteed. Consequently, the analysis better captures salience of topics related to fuel poverty and increased energy costs, rather than the volume of commenters on forums who were fuel poor.

Simple quantitative analysis of words and phrases in comment data can provide useful insights but cannot provide the full context of topics or challenges discussed. This approach may not include comments discussing challenges where words are misspelled, abbreviations are used, or users write in more circuitous or coded language. In this case, certain fuel poverty related topics may be under-reported. Similarly, noise may be introduced into analysis as comments using key words but otherwise not related to fuel poverty challenges may be picked up. This would lead to the measured incidence of certain topics to be inflated above their actual prevalence if the words used to measure them also appear in unrelated topics.

The demographic of the users of both Mumsnet and Reddit do not reflect the general population. Mumsnet is aimed at parents. Reddit's demographic tends to skew male and younger⁹. To confirm the exact representation, demographic information of users posting in the specific MumsNet topics and Reddit subreddits included in this analysis would be required. However, this was not available. Consequently, results of the online forums research may not reflect the experiences of fuel poor households across all demographics identified in the study. For example, by nature, online research makes it difficult to capture perspectives of the digitally excluded. Instead, we aim to capture these groups experiences through the REA and the workshops.

Furthermore, for both forums, it was not possible to focus on threads and comments relating exclusively to experiences in England, which is the Committee on Fuel Poverty's remit. In this case, it was only possible to focus the extraction on UK threads and comments.

Google Trends

An analysis of Google Trends was conducted to provide a longer-term view from online research. Google Trends provides a normalised rating of the number of times a term has been searched on Google. The point in time when the search was most popular receives a normalised score of 100, whereas the point in time when the search was least popular receives a score of 1¹⁰. By comparing the Google Trends score over time, it is possible to identify when particular search terms were most and least popular. Google Trends can provide insights into internet search behaviour from 2004 onwards. Hence, it provides a long horizon, and allows the team to compare the winter of 2022/23 with previous winters. We focused on comparisons within the last five years. The location of searches was restricted to England, to match the scope of the report.

For the Google Trends analysis, pre-determined search terms were provided to Google Trends (listed in Table 4). These were chosen to be relatively general, as more specific search terms (e.g. 'can't pay

⁹ As noted above, we selected subreddits particularly aimed at the United Kingdom, so we accounted for a skew on nationality.

¹⁰ Points in time when a term has virtually not been searched receives a score of 0.

energy’, ‘government support for energy bills’) would not have enough searches to identify clear trends.

Table 4 List of search terms by category for Google Trends analysis

Energy bill affordability	Home improvements	Coping strategies	Health	Support systems
Energy bill	Insulation	Blanket	Mould	Government help
Gas bill	Heat pump	Wearable blanket	Damp	Government support
Electricity bill	Double glazing	Electric blanket	Flu	Food bank
Prepayment meter		Hot water bottle		Warm bank
		Space heater		
		Air fryer		
		Slow cooker		

Initially, these terms were provided to Google Trends separately. The research team then combined similar terms (e.g. ‘space heaters’, ‘electric blankets’, ‘hot water bottles’) to see how the prevalence compared to one another in relative terms, since Google normalises the score based on the terms provided at the same time.¹¹

The data over time was extracted from Google Trends, and the team assessed whether the data showed any particular increases or decreases of interest for search terms for the winter of 2022/23 compared to previous years.

Limitations

As with the data extracted for the online forums, it was not possible to assess whether the people searching the chosen terms on Google were in fuel poverty or not. The list of search terms was developed to maximise the likelihood of identifying topics on fuel poverty, as found in the REA. However, as with the online forum research, this could not be guaranteed. Consequently, Google Trends analysis is better interpreted as an overall indication of popularity of certain terms that are likely driven by experiences related to fuel poverty and increased energy costs.

Similar to the online forums analysis, search terms may not capture all search activity related to an aspect of fuel poverty experience (e.g., ‘mould’, ‘damp’, and ‘flu’ searches will not constitute all search activity of health issues related to fuel poverty), or exclusively capture searches for these terms that are directly related to fuel poverty. This means Google Trends analysis is best interpreted as evidence on fuel poverty at an indicative level, in the context of other information (e.g., in comparison to previous winters, or contextualised with information on key events and policy announcements).

¹¹ As such, if an extremely popular search term is combined with an unpopular search term, the scores for the unpopular term will always be near zero.

Annex 1 Further workshop guides

A1.1 Original industry expert guide

Text in *italic* is text/questions to be put forward to participants. Timings provided give an indication of the importance of each section; they do not need to be strictly adhered to. Similarly, depending on the discussion, questions may not need to be strictly adhered to.

Moderator note: steer away from “rabbit hole” topics, i.e. well-known topics that garner a lot of opinion, as to avoid repeating what is already known. These topics include:

- Winter Fuel Payments
- Prepayment meters
- State benefits and welfare payments being insufficient
- Support for renewable energy

Moderator Note: we have bolded the most important questions within each section. These should be discussed.

Total time: 115 minutes

Part 1: Introduction (10 minutes)

Introduce the study (by London Economics): *This workshop is one of a number of workshops we are currently conducting on behalf of the Committee on Fuel Poverty. Prior to this workshop, you received from us a brief introduction to the project, but to recap: we are conducting research to understand the challenges faced by fuel poor households this winter 2022/23. The research will aim to better understand the issues faced by those in fuel poverty and the options as to how these issues can be best addressed. Today we would like to also be more forward looking, and talk about the needs and policy in the future. The research will be shared with the Department for Energy Security and Net Zero, and more widely across government, helping inform policy development in government on this important issue. Since fuel poverty and energy policy is largely a devolved matter, we would like you to focus on England.*

It's important to note that these discussions are intended to be exploratory and aimed at generating dialogue on the topics in question. It is perfectly fine if people disagree with one another. There are no right or wrong answers, we are simply interested in your thoughts on the topics which we will discuss. Also, it will be most interesting for us if you provide your experiences and expertise, rather than only sticking with general impressions, thoughts and ideas.

All views and opinions expressed will remain completely confidential and anonymous outside of this group, unless you give us explicit permission that you are happy for us to attribute what you say to your role.

Request permission to audio record the workshop. The audio-recording will exclusively be used to generate the transcript and deleted once the transcript has been approved. No video-recording is made.

Introduce practicalities (exact details left for facilitator): *The discussion will last approximately 2 hours in total, with a short break in between. In terms of the practicalities of the discussion, please*

use the hand raise function to indicate you have something to say, so that we are not all speaking at the same time. May I also ask you to check whether your mobile phone and programs that are running on your computer in the background are muted so that these cannot interrupt the discussion.

Introduction of participants: *Before we start, may I ask each of you to introduce yourself briefly?*

Part 2: General open discussion/ice-breaker (5 minutes)

Do you have any initial high-level thoughts on how consumers coped this winter with rising energy bills?

- Open discussion
- Keep the discussion general, we will revisit and explore this question later on. A similar prompt as above can be given if the discussion runs too deep.

Part 3: Sense-checking the findings from the literature (45 minutes)

Part 3a: Challenges identified (10 minutes)

@Moderator: please use the whiteboard to show and rank the challenges visually

First, we would like to discuss with you the challenges faced by people in fuel poverty. On the whiteboard, we have shown some of the challenges outlined in the literature.

- Put the following challenges on the whiteboard; these need to be ranked by the participants.
- To be discussed by the group as a whole

- 1) Cold homes
- 2) Rationing appliances/lights
- 3) Rationing (hot) water
- 4) Taking on debt
- 5) Poor physical health
- 6) Poor mental health
- 7) Stigma/isolation
- 8) Poorer education (for children)
- 9) Less food/relying on food banks
- 10) Eating (mostly) cold meals
- 11) Using unsafe cooking methods
- 12) Eating poorer quality food

Firstly, did we miss any (obvious) challenges from our list?

- Open discussion
- Add extra challenges to whiteboard if any is missed

Could we as a group talk through which of these challenges are (1) Very important, (2) important, (3) Unimportant or (4) Very unimportant

- "Bucketing" exercise; **integrate this exercise with discussion on why below**
- We leave terms like "important" to be defined by the group.

Why did you identify challenge x as "very important"? How do you encounter these challenges in your work? Why identify challenge y as "very unimportant"?

- **Moderator note:** make a note of the challenges considered very important; this will come back in part 5a
- **Moderator note:** try to get some distinction between challenges; i.e. not everything should be identified as "very important"

Part 3b: Links between the challenges [mapping exercise] (25 minutes)

@Moderator: please use the whiteboard to conduct this exercise visually; use all of the challenges discussed in the previous section

Next, we would like to talk about how the challenges we discussed above link up with each other.

*Since links between challenges can become very complex, I suggest we go over this in more structured way. The challenges we identified in the previous section are obviously all impacted by fuel poverty, but not in the same way. Some challenges are directly impacted by being fuel poor (**moderator prompt: e.g. not being able to heat your house**) whereas others are indirectly impacted (**moderator prompts: e.g. health effects because the house is cold**).*

Let's first discuss this "hierarchy" a bit. What challenges do you feel are directly affected by fuel poverty, and which only indirectly?

- Open discussion with the intent to converge on some hierarchy; show the hierarchy visually.
- Note that the hierarchy can be larger than two levels. E.g. the following is possible: fuel poverty >> direct effect >> indirect effect >> indirect effect 2
- **Moderator:** make a note of the challenges considered first-order (direct) effects; this will come back in part 5a

Now how do the challenges in this hierarchy link up for you?

- Open discussion with the intent to converge towards some list the participants can agree on
- Multiple causes could link up with multiple effects and vice versa. Try to avoid linking up everything with everything as this is not helpful. Instead, prompt participants to focus on the main links they have seen within their work.

If multiple causes are linked to a challenge: *I see that you have linked [name challenge] to multiple other challenges. Which link do you feel is the strongest/weakest?*

- Open discussion with the intent to converge towards some list the participants can agree on
- Use different coloured arrows to denote different levels of importance

Part 3c: Impact of challenges and differences between vulnerable groups (10 minutes)

Before we take a quick break, the last thing we want to discuss is how the challenges impact people in fuel poverty. What are the impacts you see on people of the challenges related to fuel poverty? And taking challenges combined and how they link together, how do you think that fuel poverty impacts people?

- Open discussion; but focus on the last question (cumulative impact of all challenges and links combined)
- We would only expect qualitative responses in terms of impacts, but if anyone has any monetised (Pound Sterling) valuation that would be appreciated

How do the impacts differ between groups of people? Are any groups hit particularly hard or differently from others? If so, which groups and how do the impacts differ?

- Open discussion
- **Moderator note:** probe for geographic differences
- We are particularly interested in protected and vulnerable groups. Vulnerable characteristics cover (among others):
 - Low-income households
 - Age
 - Single households
 - Having dependent children
 - being pregnant or on maternity leave
 - disability/long-term illness
 - race including colour, nationality, ethnic or national origin
 - (Privately) renting households
 - Households on prepayment meters
 - Off grid households

Break (5 minutes)

Part 4: This winter (20 minutes)

Welcome back everyone. For the remainder of this workshop, we would like to discuss a bit about the experiences this winter and to look forward towards the future.

Part 4a: What did consumers do this winter? (10 minutes)

In your experience, what actions have people in fuel poverty taken to deal with energy prices this winter? Which coping strategies have you seen fuel poor people use? Have these changed since last winter?

- Open discussion
- **Moderator note:** to be discussed with priority; not to be skipped in the discussion. Focus on what they / their organisation has actually witnessed rather than general thoughts and impressions.
- Keep the discussion more general. Note that government policy and other support is discussion in the next section.

Do you feel that people in fuel poverty are aware of the support that is available to them? Do they use the support schemes available to them?

- Open discussion
- This question is intended to lead naturally to the next subsection
- With support, we mean both government and non-government support

Part 4b: strengths and weaknesses of support (10 minutes)

What are the strengths of government policies in place to help people in fuel poverty? And what are the weaknesses? E.g. is it reaching the right people?

- Open discussion
- **Moderator note:** if discussion is highly unbalanced to weaknesses, ensure that strengths and positive lessons learned are also discussed

*What other support (other than government) have people in fuel poverty got access to? How does this differ between groups in fuel poverty (**Moderator: probe for geographic/regional differences**)? What are the strengths and weaknesses of this support?*

- Open discussion

Part 5: Looking ahead (25 minutes)

Finally, we want to talk to you about what will be needed in the future to support people in and reduce fuel poverty.

Part 5a: Government policy (20 minutes)

Firstly, we would like to have a bit of a brainstorm about what long-term, sustainable government policy on fuel poverty may look like.

- **Moderator prompt:** we are looking for policies that would reasonably in the remit of the Department for Energy Security and Net Zero and the Committee on Fuel Poverty. This would rule out, for example, changes to benefits schemes.

We don't expect to create a whole new policy from scratch, but want to discuss with you a more high-level framework of the things that the government should be aiming for to create good and working policy.

For the next 10-15 minutes, we encourage to throw whatever ideas come to mind up in the air. Anything goes and there are no wrong answers in this exercise. Then, we will spend the remainder of the time shaping our ideas into a more coherent framework.

- Note that the timings provided above are indicative. The depth of the discussion should be leading. Also, it is fine if the framework already takes shape dynamically.
- It is fine if more ideas are introduced in the second, 'cleaning up' phase

Obviously, the term 'policy' is very broad, so to help you focus we suggest to use the discussion we have already had today. For example, focus on the challenges you identified as very important or as a direct effect earlier. These challenges were [name challenges].

- This should come from the notes taken in part 3a and 3b
- In addition to naming the challenges, also put them on the whiteboard

Furthermore, to help you focus, we provide some broad questions that you might want to consider during your brainstorm, although these are by no means the only things to consider.

- Put the following questions on the whiteboard:
- What should the government want to achieve with the policy?
- How should the policy go about achieving this?
- Who should be targeted? Is the 'worst first' principle appropriate?
- Who should lead on implementation? Government-led? Industry-led? Community-based?
- What would be the key barriers to government policy?
- **Moderator prompt:** urge participants to consider questions other than the ones put on the whiteboard (e.g. cost effectiveness).
- Urge participants to think through how changes in behaviour over the last winter should be addressed.

Brainstorm session for the majority of this session

Before we move on to the last parts of this workshop, do you have any things on the future government support for fuel poverty you want to add?

- This question has been added primarily to cap off the brainstorming session and to be able to move to the next section.

Part 5b: Other help (5 minutes)

Beyond government, which other players in this area do you feel can support people in fuel poverty?

- Open discussion
- **Moderator note:** Support from other players besides government provided this winter has been mentioned in section 4b. Link back in the discussion to this support.

Do you see any other support system that may be needed to avoid urgent problems caused by fuel poverty? What can the other players do to help?

- Open discussion

If so: Could you briefly describe what this would look like?

- Open discussion

Part 6: Close and thank you (5 minutes)

Before we close this workshop, is there anything else that you wanted to discuss or mention?

- Open discussion

If you are aware of any literature or further information that you feel is important for us to know for this project, do not hesitate to share this with us. You can put any information on the chat or get in contact with London Economics.

- No discussion needed; only need to inform

Thank for participation and close the meeting.

A1.2 Frontline advisors workshop guide

Text in italic is text/questions to be put forward to participants. Timings provided give an indication of the importance of each section; they do not need to be strictly adhered to. Similarly, depending on the discussion, questions may not need to be strictly adhered to.

Moderator note: steer away from “rabbit hole” topics, i.e. well-known topics that garner a lot of opinion, as to avoid repeating what is already known. These topics include:

- Winter Fuel Payments
- Prepayment meters
- State benefits and welfare payments being insufficient
- Support for renewable energy

Moderator Note: we have bolded the most important questions within each section. These should be discussed.

Total time: 115 minutes

Part 1: Introduction (10 minutes)

Introduce the study (by London Economics): *This workshop is one of a number of workshops we are currently conducting on behalf of the Committee on Fuel Poverty. Prior to this workshop, you received from us a brief introduction to the project, but to recap: we are conducting research to understand the challenges faced by fuel poor households this winter 2022/23. The research will aim to better understand the issues faced by those in fuel poverty and the options as to how these issues can be best addressed. Today we would like to also be more forward looking, and talk about the needs and policy in the future. The research will be shared with the Department for Energy Security and Net Zero, and more widely across government, helping inform policy development in government on this important issue. Since fuel poverty and energy policy is largely a devolved matter, we would like you to focus on England.*

It's important to note that these discussions are intended to be exploratory and aimed at generating dialogue on the topics in question. It is perfectly fine if people disagree with one another. There are no right or wrong answers, we are simply interested in your thoughts on the topics which we will discuss. Also, it will be most interesting for us if you provide your experiences and expertise, rather than only sticking with general impressions, thoughts and ideas.

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Introduction of participants: *Before we start, may I ask each of you to introduce yourself briefly?*

Part 2: General open discussion/ice-breaker (5 minutes)

Do you have any initial high-level thoughts on how consumers coped this winter with rising energy bills?

- Open discussion
- Keep the discussion general, we will revisit and explore this question later on. A similar prompt as above can be given if the discussion runs too deep.

Part 3: Sense-checking the findings from the literature (45 minutes)

Part 3a: Challenges identified (10 minutes)

@Moderator: please use the whiteboard to show and rank the challenges visually

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- Put the following challenges on the whiteboard; these need to be ranked by the participants.
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Firstly, did we miss any (obvious) challenges from our list?

- Open discussion
- Add extra challenges to whiteboard if any is missed

Could we as a group talk through which of these challenges are (1) Very important, (2) important, (3) Unimportant or (4) Very unimportant

- "Bucketing" exercise; **integrate this exercise with discussion on why below**
- We leave terms like "important" to be defined by the group.

Why did you identify challenge x as "very important"? How do you encounter these challenges in your work? Why identify challenge y as "very unimportant"?

- **Moderator note:** make a note of the challenges considered very important; this will come back in part 5a
- **Moderator note:** try to get some distinction between challenges; i.e. not everything should be identified as "very important"

Part 3b: Links between the challenges [mapping exercise] (25 minutes)

@Moderator: please use the whiteboard to conduct this exercise visually; use all of the challenges discussed in the previous section

Next, we would like to talk about how the challenges we discussed above link up with each other.

*Since links between challenges can become very complex, I suggest we go over this in more structured way. The challenges we identified in the previous section are obviously all impacted by fuel poverty, but not in the same way. Some challenges are directly impacted by being fuel poor (**moderator prompt: e.g. not being able to heat your house**) whereas others are indirectly impacted (**moderator prompts: e.g. health effects because the house is cold**).*

Let's first discuss this "hierarchy" a bit. What challenges do you feel are directly affected by fuel poverty, and which only indirectly?

- Open discussion with the intent to converge on some hierarchy; show the hierarchy visually.
- Note that the hierarchy can be larger than two levels. E.g. the following is possible: fuel poverty >> direct effect >> indirect effect >> indirect effect 2
- **Moderator:** make a note of the challenges considered first-order (direct) effects; this will come back in part 5a

Now how do the challenges in this hierarchy link up for you?

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- Multiple causes could link up with multiple effects and vice versa. Try to avoid linking up everything with everything as this is not helpful. Instead, prompt participants to focus on the main links they have seen within their work.

If multiple causes are linked to a challenge: *I see that you have linked [name challenge] to multiple other challenges. Which link do you feel is the strongest/weakest?*

- Open discussion with the intent to converge towards some list the participants can agree on
- Use different coloured arrows to denote different levels of importance

Part 3c: Impact of challenges and differences between vulnerable groups (10 minutes)

Before we take a quick break, the last thing we want to discuss is how the challenges impact people in fuel poverty. What are the impacts you see on people of the challenges related to fuel poverty? And taking challenges combined and how they link together, how do you think that fuel poverty impacts people?

- Open discussion; but focus on the last question (cumulative impact of all challenges and links combined)
- We would only expect qualitative responses in terms of impacts, but if anyone has any monetised (Pound Sterling) valuation that would be appreciated

How do the impacts differ between groups of people? Are any groups hit particularly hard or differently from others? If so, which groups and how do the impacts differ

- Open discussion
- **Moderator note:** probe for geographic differences
- We are particularly interested in protected and vulnerable groups. Vulnerable characteristics cover (among others):
 - Low-income households
 - Age
 - Single households
 - Having dependent children
 - being pregnant or on maternity leave
 - disability/long-term illness
 - race including colour, nationality, ethnic or national origin
 - (Privately) renting households
 - Households on prepayment meters
 - Off grid households

Break (5 minutes)

Part 4: This winter (25 minutes)

Welcome back everyone. For the remainder of this workshop, we would like to discuss a bit about the experiences this winter and to look forward towards the future.

Part 4a: What did consumers do this winter? (15 minutes)

In your experience, what actions have people in fuel poverty taken to deal with energy prices this winter? Which coping strategies have you seen fuel poor people use? Have these changed since last winter?

- Open discussion

- **Moderator note:** to be discussed with priority; not to be skipped in the discussion. Focus on what they / their organisation has actually witnessed rather than general thoughts and impressions.
- Keep the discussion more general. Note that government policy and other support is discussion in the next section.

Do these coping strategies differ between groups of people?

Do you feel that people in fuel poverty are aware of the support that is available to them? Do they use the support schemes available to them?

- Open discussion
- This question is intended to lead naturally to the next subsection
- With support, we mean both government and non-government support

Part 4b: strengths and weaknesses of support (10 minutes)

What are the strengths of government policies in place to help people in fuel poverty? And what are the weaknesses? E.g. is it reaching the right people?

- Open discussion
- **Moderator note:** if discussion is highly unbalanced to weaknesses, ensure that strengths and positive lessons learned are also discussed

*What other support (other than government) have people in fuel poverty got access to? How does this differ between groups in fuel poverty (**Moderator: probe for geographic/regional differences**)? What are the strengths and weaknesses of this support?*

- Open discussion

Part 5: Looking ahead (20 minutes)

Finally, we want to talk to you about what will be needed in the future to support people in and reduce fuel poverty.

Part 5a: Government policy (10 minutes)

What more could be done by the government to make the lives of fuel poor households easier? How might this be achieved in practice?

- **Moderator prompt:** Urge participants to think through how changes in behaviour over the last winter should be addressed. We are looking for policies that would reasonably in the remit of the Department for Energy Security and Net Zero and the Committee on Fuel Poverty. This would rule out, for example, changes to benefits schemes.
- **Moderator prompt:** Put the following questions on the whiteboard and urge participants to consider these questions when they answer.
 - What more could be done?
 - By whom?
 - What could this look like?

Part 5b: Other help (10 minutes)

Beyond government, which other players in this area do you feel can support people in fuel poverty?

- Open discussion
- **Moderator note:** Support from other players besides government provided this winter has been mentioned in section 4b. Link back in the discussion to this support.

Do you see any other support system that may be needed to avoid urgent problems caused by fuel poverty? What can the other players do to help?

- Open discussion

If so: Could you briefly describe what this would look like?

- Open discussion

Part 6: Close and thank you (5 minutes)

Before we close this workshop, is there anything else that you wanted to discuss or mention?

- Open discussion

If you are aware of any literature or further information that you feel is important for us to know for this project, do not hesitate to share this with us. You can put any information on the chat or get in contact with London Economics.

- No discussion needed; only need to inform

Thank for participation and close the meeting



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