NATIONAL GRID CONTEXT: Background and Terms

Why this was commissioned

- Results of stakeholder Priority Outcomes research Nov ‘23
- Acceleration to reach net zero
- Willingness to Pay consumer testing challenge
- Whole bill analysis signifying a positive impact to bill stabilisation and potential cost saving

To understand affordability of cost in terms of impact on whole energy bill over time

Framing ‘terms’

2 x scenarios

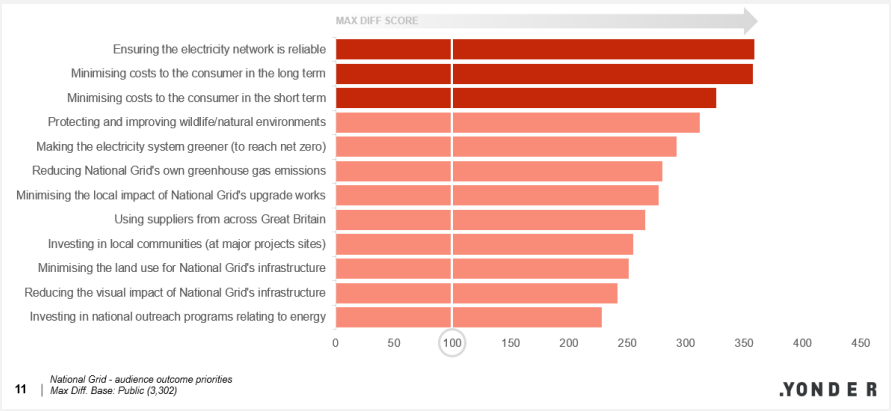
‘Frontload’ – hypothetically going faster with upgrade works and what that does to the whole bill over time.

‘Backload’ – hypothetically going later with upgrade works

And taking members of the public through the other salient pros and cons of doing this so that they can make considered decisions.

THE RESEARCH FOCUSED ON TRANSMISSION AND BALANCING COSTS AND SCENARIOS OVERALL, SO THAT THE MAIN OUTPUTS WERE RELEVANT TO ALL TOS AND ONLY NEEDED TO BE DONE ONCE

Stakeholder Priority Outcomes (of the energy transition)



This Consumer Affordability study is a follow up to Market Research - Stakeholder Priority Outcomes (of the energy transition), Conducted by Yonder Consulting, November 2023

DEBRIEF FOR NATIONAL GRID ENERGY TRANSMISSION

Consumer Affordability

Testing public responses to investment choices and the values that underpin them

SEPTEMBER 2024

Sustainability *first* .YONDER

This project sought to inform four main objectives

To understand:

1. Over what time period costs should be optimised from a whole bill perspective
2. Should network upgrade plans be ‘frontloaded’ or ‘backloaded’
3. Could any works be considered to move to a future price control.
4. Are the costs affordable

Note: for objectives 1 to 3 this research project was designed to inform NGET’s ultimate decision making but with the recognition that it cannot answer those questions on its own.

CONTENTS

SUMMARY

+ There is a clear preference for frontloading investment among the general public. This applies at all stages of deliberations: instinctively, when further informed, and when informed of associated anticipated price points. Generally, greater information on pros and cons and price points leads to stronger preference for frontloading.

+ A majority of the public thinks frontloading will better deliver what they see as the country's long-term energy priorities: to keep bills low, ensure long-term reliability, make Britian's energy more independent, and contribute to a more sustainable future. At a baser level, though, this preference is often more simply motivated by a fundamental preference for 'getting necessary work done' rather than delaying, prevaricating, and allowing the country to fall behind.

+ There is nevertheless a significant minority that instinctively favours backloading – and, critically, a significant portion of 'frontloaders' who also sympathise with many of their concerns. These concerns are spearheaded by cost (Why should consumers pay more during a cost-of-living crisis? Why should vulnerable people pay more? Should consumers have to foot the bill?). But also relevant is a generalised lack of faith in the country's ability to realise the benefits of ambitious infrastructure projects while using consumers' money wisely, especially without the sufficient time to plan and mitigate negative consequences.

+ As such, many call for a third option: a predominantly frontloaded investment but with more time to prepare; checks and balances to support vulnerable people and SMEs; and a diversified and sensible approach to innovation that avoids the risks associated with deploying large amounts of capital in technologies which may become obsolete in future.

+ Preference for frontloading vs backloading is influenced by factors related to people's attitudes (e.g. trust, climate change, risk tolerance) as well as their personal circumstances (ability to pay bills). Certain demographic factors like age and social grade appear to have some influence but less so than the attitudinal and circumstantial factors that they correlate with.

+ There are several important considerations in interpreting research of this kind – especially relating to limited knowledge, the effects of providing more information, the difficulty of engaging with hypothetical scenarios relating to money – which mean we should use the findings to inform understanding of general public priorities and preferences, but without always interpreting those findings literally or to the letter.

Implications for next steps

WHAT DOES THIS IMPLY FOR BILL TOLERANCE?

There is no point at which frontloading becomes unacceptable or unfavoured to a majority.

It can be argued that even £180 is 'acceptable' (albeit less so than £125).

But this is only part of the story.

A small portion say they cannot bear *any* further increase.

And even those who support frontloading and who aren't struggling think steps must be put in place to minimise the burden on the vulnerable.

Bill tolerance can't just come down to a single number (and there is no definitive answer on this anyway).

There is high tolerance for frontloading but the framing, the details of the plan, and the associated support mechanisms matter.

WHAT KIND OF FRAMING (AND ASSOCIATED ACTION) IS NECESSARY TO SUPPORT HIGH TOLERANCE?

National Grid is...

Getting on with necessary upgrades.

Taking advantage of clear opportunities to keep long-term bills down, stable, and less susceptible to price shocks, by making better use of sustainable energy sources.

Responding to real and inevitable risks associated with climate change.

While putting plans in place to avoid...

Putting up bills for no clear benefit or just for the sake of 'net zero'.

Making vulnerable people pay the price.

Wasting consumers' money through rushed planning, overconfidence in new technologies, or inaccurate / misleading budgets that later get inflated.

SUMMARY

1. THE APPROACH

Quantitative and deliberative qualitative research spanning different regions of the UK, informed by a review of existing literature.

2. THE CONTEXT & FUNDAMENTAL PRIORITIES

Limited knowledge of the transmission network mean all findings must be interpreted carefully.

Low bills are a priority (along with reliability, renewable connection, independence).

Instinctive desire to prioritise maintaining, upgrading, and connecting.

3. THE BROADER FACTORS

Six broader factors also influence decision-making:

1. Trust
2. Risk tolerance
3. Attitudes towards climate change
4. Appetite for innovation
5. Importance of bill stability
6. National interest

4. THE OVERALL VERDICT & THE IMPACT OF PRICE

Clear preference for frontloading, especially once shown more information and exposed to anticipated pricing.

But with concerns about cost and deliverability shared by a significant portion of the population.

5. THE SPECIFIC REASONS FOR FRONTLOADING

Five main interlocking reasons:

1. **Generally, getting on with necessary action**
2. Tolerable risk for clear benefits
3. Climate urgency
4. Lower bills over time
5. More stable, independent bills

6. THE SPECIFIC REASONS FOR BACKLOADING

Five main interlocking reasons:

1. **Resistance to any bill increase**
2. General scepticism about benefits
3. Preparing & planning
4. Adapting to new technologies
5. British jobs

SECTION 1

The approach: research objectives and methodology

This project comprised three main workstreams

1 INFORMING STAGES 2&3

2 INFORMING STAGE 3

3

RAPID REVIEW
Of existing evidence

Led by Sustainability First

A review of existing research relevant to this topic. This included cross-sector research and insight from academia, water and energy companies, government, regulators, and public interest groups.

QUALITATIVE
Deliberative workshops

Led by Yonder, in collaboration with Sustainability First

3 x deliberative workshops in Glasgow, Manchester and Cardiff with 76 participants in total. Quotas and controls in place to ensure desired mix of participants (see following slide).

QUANTITATIVE
Nationally representative survey

Led by Yonder, in collaboration with Sustainability First

A nationally representative survey of 3,510 members of the public, with weights and quotas applied.

COVERED IN SEPARATE REPORTING
(With reference here where especially relevant)

COVERED IN THIS REPORT

Qualitative workstream: methodology in more detail

2

QUALITATIVE

Deliberative workshops

Led by Yonder, in collaboration with Sustainability First

3 x deliberative workshops in Glasgow, Manchester and Cardiff with 76 participants in total. Quotas and controls in place to ensure desired mix of participants (see following slide).

- 1 workshop was conducted in Glasgow on 25 June 2024 with 22 participants, 1 in Manchester on 27 June with 28 participants, and 1 in Cardiff on 2 July with 26 participants. Locations were selected to reflect views from across the UK and participants were provided with a monetary incentive.
- All workshops were moderated by independent Yonder and Sustainability First moderators, with four tables of around 5-7 participants at each event and a lead moderator facilitating plenary sessions at key points throughout the day. National Grid representatives were on hand to provide limited clarification of National Grid activity where appropriate.
- The sample frame was as follows:

	GLASGOW	MANCHESTER	CARDIFF
18-24	6	8	7
25-34	4	7	4
35-54	6	6	7
55+	6	7	8
SME	8	8	8

Further loose quotas were applied for gender, ethnicity, SEG, location, house tenure, energy supply, billing, PSR eligibility, vulnerability (including financial), employment, carers, and living situation.

Qualitative workstream: day plan

2

QUALITATIVE
Deliberative workshops

Led by Yonder, in collaboration with Sustainability First

3 x deliberative workshops in Glasgow, Manchester and Cardiff with 76 participants in total. Quotas and controls in place to ensure desired mix of participants (see following slide).

- Each workshop followed a similar structure (though the order of presentation of frontload / backload pros and cons was rotated to reduce bias) in which information was fed to participants throughout the day.

TIME	SESSION	DISCUSSION TOPICS AND INTRODUCTION OF INFORMATION
	Pre-task	*Participants to briefly review their electricity bills*
10:00 – 10:10	Introduction	*Very brief introduction to National Grid and requirement to meet net zero targets*
10:10 – 10:25	Table introductions	*General discussion of individuals' own approaches to maintenance and repair in daily life*
10:25 – 10:55	Pub quiz	*Explanation of transmission companies' role, moving from coal/gas to renewably generated electricity, cost of transmission bill, Ofgem's responsibility for setting this cost, net zero target dates, & expected benefits / challenges of achieving net zero targets*
10:55 – 11:15	National Grid investment	*Discussion of desired National Grid investment priorities*
11:30 – 12:00	National Grid investment	*More detailed discussion of desired National Grid investment priorities with broader challenges in mind*
12:00 – 12:45	Frontload vs backload	*Introduction to frontload and backload options without mention of price points (with advantages and disadvantages of each). Initial discussion of preference. Thoughts shared with room after lunch*
13:30 – 14:30	Different perspectives	*Introduction of 'persona cards' to instigate consideration of different types of consumers*
14:30 – 15:00	Frontload vs backload	*Discussion of merits / drawbacks of frontload vs backload given further discussion*
15:15 – 15:45	Impact on bills & frontload vs backload	*Introduction of anticipated bill impact (an anticipated maximum annual payment of £115 for the typical household in frontloading, and £104 in backloading; with typical savings over ten years of £103 for frontloading compared to backloading). Return to frontloading vs backloading preference*

Breaks and administration omitted from the table above

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Quantitative workstream: methodology in more detail

3

QUANTITATIVE

Nationally representative survey

Led by Yonder, in collaboration with Sustainability First

A nationally representative survey of 3,500 members of the public, with weights and quotas applied.

- A nationally representative survey of 3,510 British adults lasting 15 minutes. 70% of these were the sole or main bill-payers and a further 25% were somewhat involved in paying bills
- Survey conducted 22 – 30 July 2024
- The survey was weighted to be nationally representative according to age, gender, region, and social grade
- Answer options were randomised where appropriate throughout to reduce bias
- Towards the end of the survey, a ‘monadic design’ or ‘split sample’ exercise was carried out to understand preference towards frontloading vs backloading given different price points. To do this, respondents were split into seven equal samples of approximately 500 respondents. Each of these seven samples was given a different maximum anticipated price point associated with the transmission part of the bill for the frontloading option (this price point varied from £105 to £180), while the maximum anticipated price point associated with the backloading option was kept at £104. Quotas and weights were applied to each cell to ensure they were nationally representative.

Quantitative workstream: survey structure

3

QUANTITATIVE

Nationally representative survey

Led by Yonder, in collaboration with Sustainability First

A nationally representative survey of 3,500 members of the public, with weights and quotas applied.

- The survey followed this structure:

Q #	Q theme
Q1-3	Profiling questions
Q12	Views on bills, electricity network, and investment
INFO	*Information screen: UK government commitment to reaching net zero by 2050.*
Q13	Trust in National Grid and other organisations
Q14	Absolute importance of different investment areas (maintenance, upgrading etc.)
Q15	Ranked importance of different investment areas (maintenance, upgrading etc.)
Q16	Top 3 delivery outcomes (e.g. bills, jobs, energy independence etc.)
Q17	Ranked importance of the top 3 delivery outcomes chosen (e.g. bills, jobs, energy independence etc.)
VIDEO	*Video introducing the transmission system and its current contribution to the overall typical bill.*
Q18	ASK 1: very brief summary of frontload vs backload; instinctive preference for frontload vs backload
Q19	ASK 2: more information on impact on bills, savings, and energy supply; informed preference for frontload vs backload
VIDEO	*Video walking through anticipated benefits of frontloading vs backloading in detail*
SPLIT	*Respondents split into 7 different samples, each presented with a different price associated with frontloading*
Q20	ASK 3: more informed preference for frontload vs backload, with specific prices presented
Q21	Acceptability of frontloading and backloading
Q22	Open text box: reasons for unacceptability of frontloading
Q23	Open text box: reasons for unacceptability of backloading
Q4-10	Further profiling questions

The presentation of the frontload vs backload options

Binary choice

In the quantitative and qualitative research, research participants were presented with a binary choice: a) investing more quickly or b) investing more slowly. The order of these options was rotated to reduce bias.

Participants were not presented with intermediate options, and in qualitative research, were instructed not to contest the notion of whether the UK should seek to meet the 2050 net zero target at all.

Modelled figures

For context, participants were told that £38 of the current bill goes towards transmission (or £63 when factoring in other associating costs). They were also told that the typical annual household energy bill was £1,800 in total (and was precited to fall to £1,595).

Participants were eventually presented with modelled figures relating to these two options, provided by National Grid.

In the frontloading scenario, this meant an anticipated maximum annual payment of £115 for the typical household, and in the backloading scenario, the corresponding figure was £104. (As discussed above, in the quantitative survey, alternative figures associated with frontloading were given ranging from £105 to £180).

They were also informed that there would be anticipated typical savings over ten years of £103 for frontloading compared to backloading.

SECTION 2

The context and underlying attitudes: how do participants approach these challenges and National Grid's role in addressing them?

As with any research with members of the public, there are several important considerations which should limit how literally we interpret what participants say to us.

Methodological considerations

Limited initial knowledge

+ Most people know little about the electricity network.
+ As such, their views tend to represent general preferences and instincts.

Numerical hypotheticals

+ We cannot replicate the day-to-day experience of hypothetical bill increases.
+ Many people do not find it easy to engage with abstract numerical information.

Effect of information provided

+ We have provided information to participants throughout this process.
+ As such, certain views are intentionally informed by the provision of information.

Timing

+ This research took place during and after an election campaign in which investment in public services was a central theme.

We should avoid placing spurious degrees of confidence in the extent to which these findings represent a genuinely 'informed' view and avoid interpreting preference for different price points too literally.

We should instead use the findings in a more rounded way: to understand the general degree of acceptability of the different options; the values and reasoning that sit behind this; and the concerns that come along with them.

There are also some key 'starting point' assumptions and attitudes relating to net zero, energy, and National Grid which shape people's deliberations.

Most people think climate change is important, but bills and reliability are the more immediate, instinctive priorities

Net zero needs explaining, and how it is explained matters.

“Not everybody can afford a bleedin’ electric car that gives you a ‘net zero’ this ‘net zero’ that… Tell me something different about the technology that we all understand.”

— *Manchester, 35-54*

It must be tackled in a reasonable and equitable way.

“Even if Britain went to net zero it would have very, very little impact upon what goes on elsewhere. It's a minute percentage, so unless all the other countries do net zero we are wasting our time doing it.”

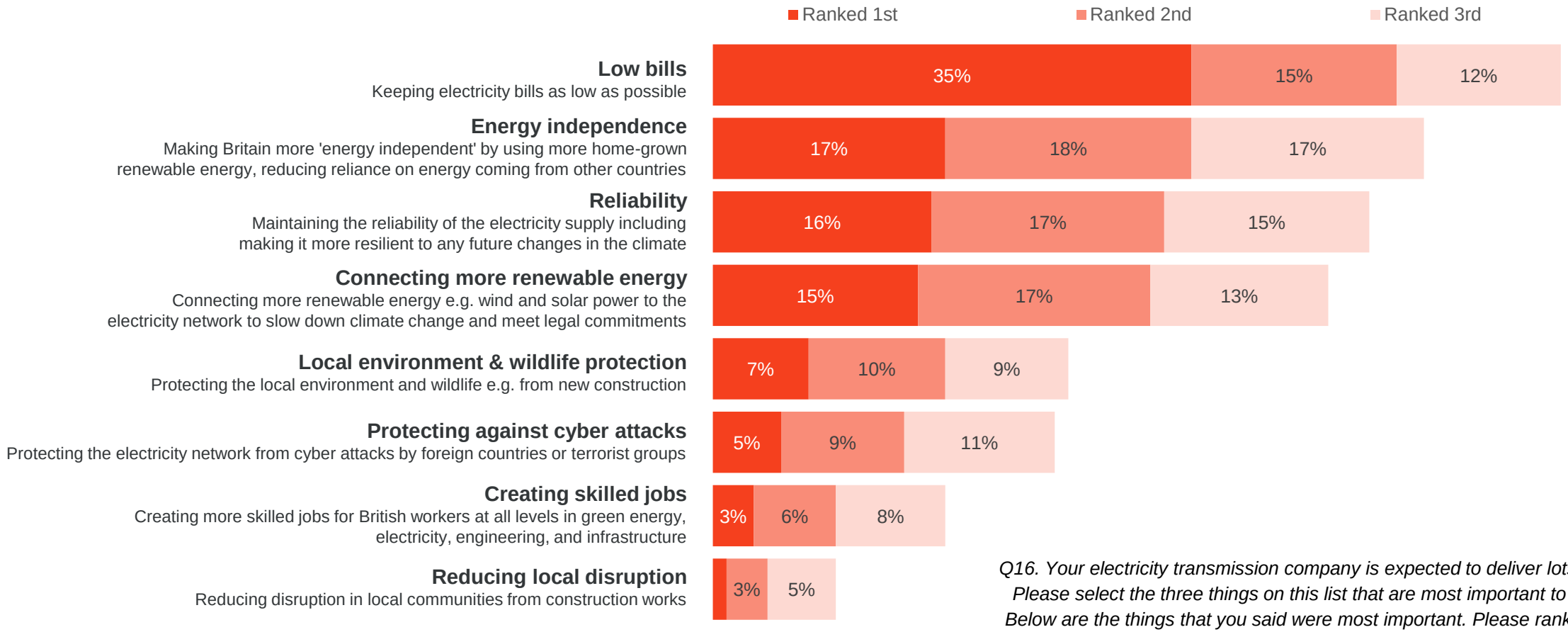
— *Cardiff, 55+*

It must be affordable and must not undermine reliability.

“I would say for most families, and I know through my work from a business point of view as well, if they could give an indication of your bills coming down, then it's something that needs to be done.”

— *Manchester, 35-54*

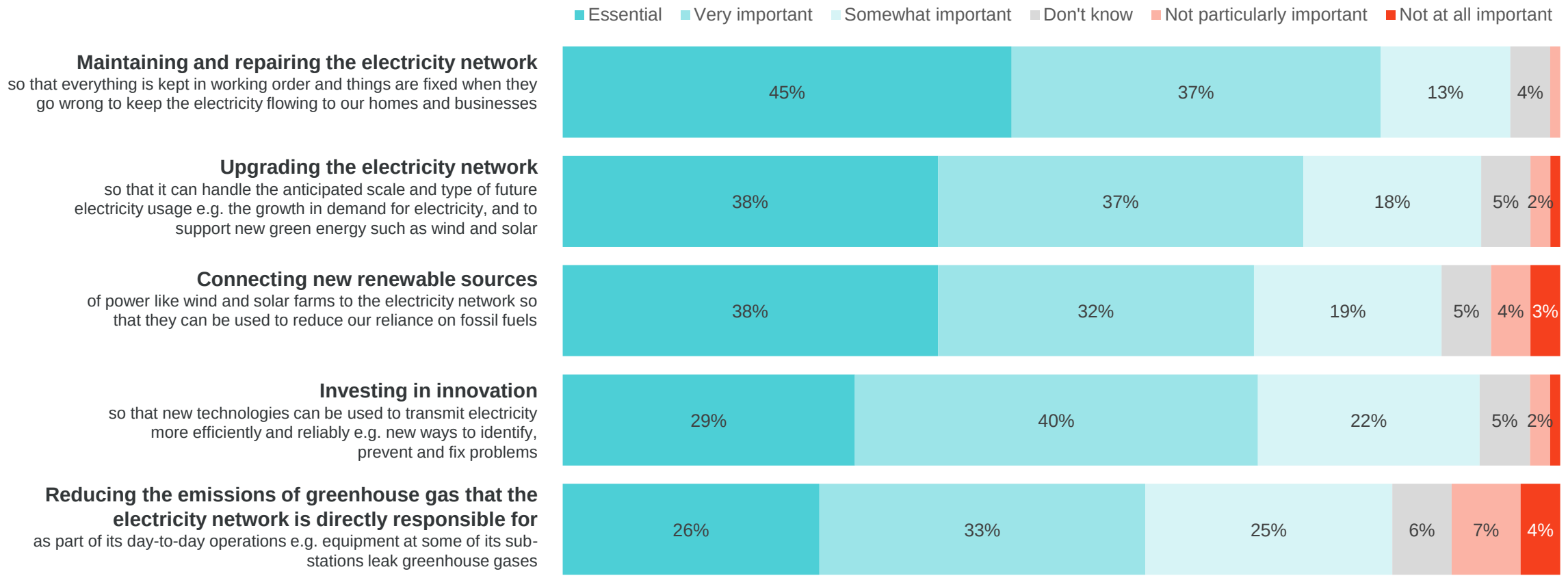
When survey respondents rank desired transmission priorities, low bills are the clear priority



Q16. Your electricity transmission company is expected to deliver lots of things. Please select the three things on this list that are most important to you. / Q17 Below are the things that you said were most important. Please rank them now in order of importance, where 1 is the top priority. Note: headings added here for ease of reading (these did not appear in the survey). Base (3,510).

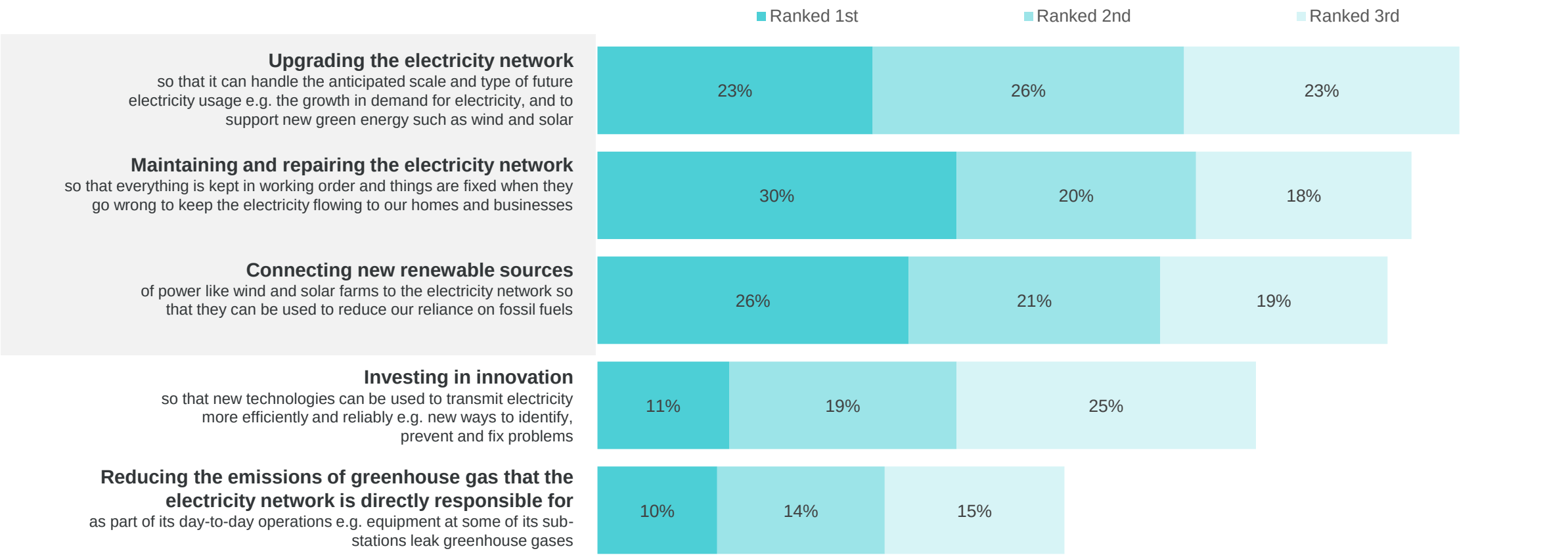
There is a clear desire for National Grid to concentrate on maintaining, upgrading, and connecting.

All five tested priorities are considered important in absolute terms



Q14. Thinking about what Britain will need from its electricity supply in the next 5-10 years, to what extent, if at all, do you think it is important to invest in ...? Base (3,510).

But when asked to rank, upgrading, maintaining and connecting are clearly viewed as most important



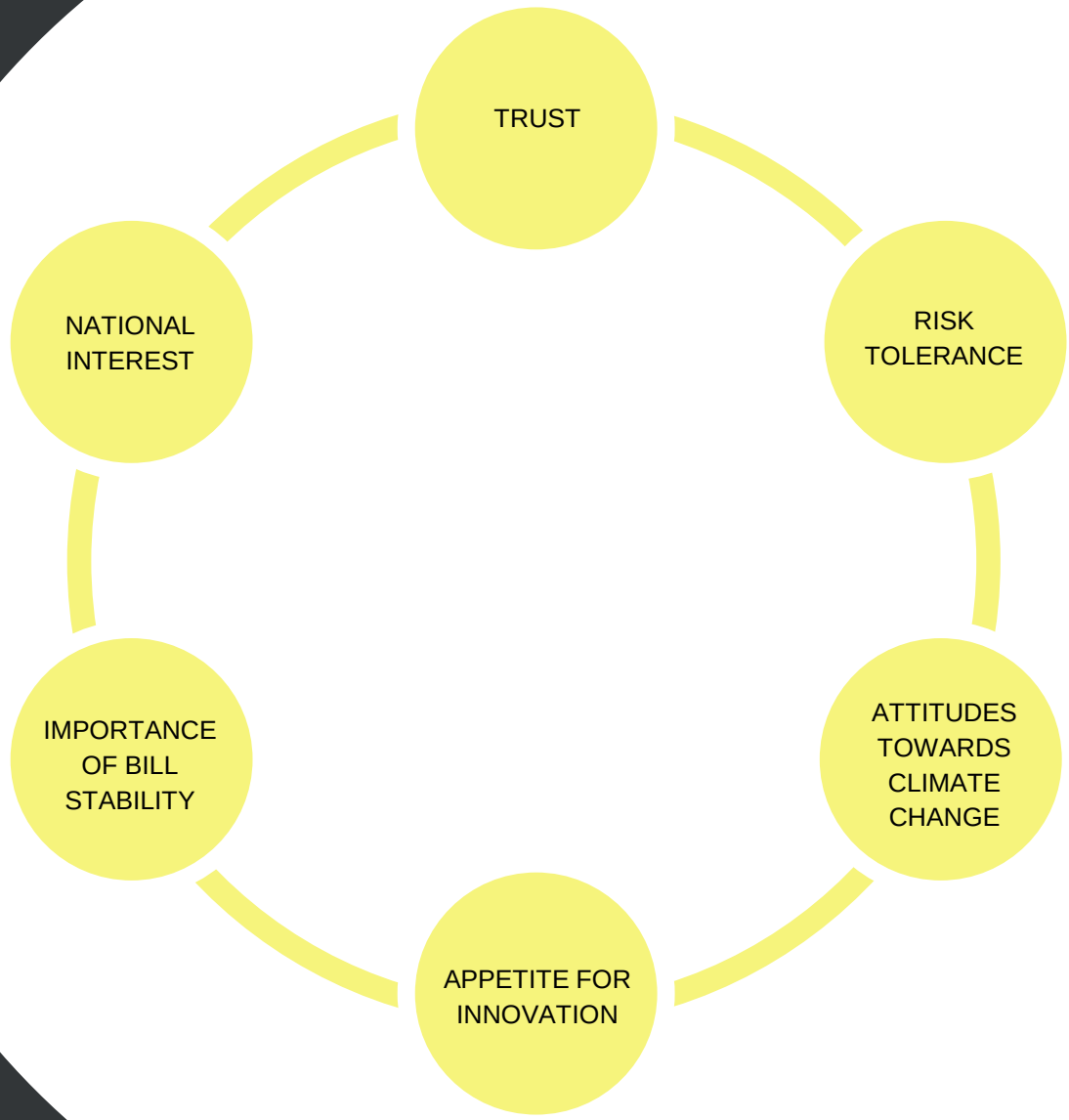
Q15. Thinking about what Britain will need from its electricity supply in the next 5-10 years, please rank each of those activities in order of importance. Base (3,510).

SECTION 3

The broader factors: what attitudinal or behavioural factors are at play in influencing how people think about whether to frontload or backload?

Information was provided within the sessions to explain the pros and cons of front and backloading.

These six broad factors influence preferences to front or backload (beyond the basic need for cheap and reliable energy).



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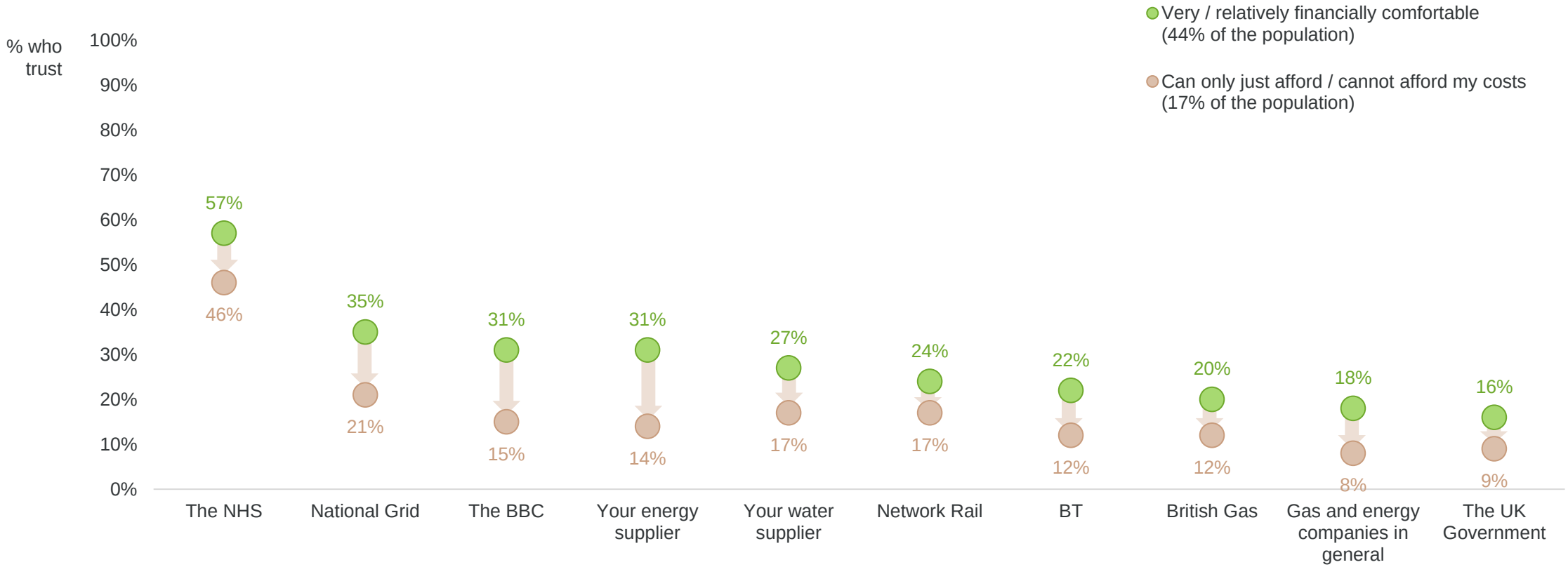
Trust is higher in National Grid than for many other organisations, but a gap persists on financial grounds



Q13. To what extent, if at all, do you trust each of the following organisations? Base: Can only just afford / cannot afford my costs (610), very / relatively financially comfortable (1,559).

Sustainability first .YONDER

The overall verdict and the impact of price: do participants favour frontloading or backloading (and how does this change during deliberations and in different cost scenarios)?

People tend to favour frontloading, and even more so when illustrative price points are revealed*.

*£104 for backloading vs £115 for frontloading (the peak annual bill over the 10 year period for a typical household), with associated 10 year cost savings of around £103 in the frontloading option compared with the backloading option.

Sustainability first .YONDER

Frontloading is preferred, both instinctively and with more information, and when the cost implications are understood

INSTINCTIVE PREFERENCE

39 of 64 participants favoured frontloading in the first instance, having been briefly introduced to the anticipated pros and cons (25 favoured backloading).

WHEN MORE INFORMED

After further deliberation, including consideration of other people's experiences and points of view, **the majority reported that their headline opinion had not changed** even if their perspective had sometimes been broadened.

WITH PRICE POINTS

When anticipated price points (and long-term savings) were revealed, opinion swung further towards frontloading. By the end of the day, **50 of 62 now favoured frontloading** (11 favoured backloading and 1 said 'don't know').

"My philosophy in life is if things need doing, don't hang about, get them done. Do what you've got to do, get the money in, get it done. Just do it."

— *Cardiff, 55+*

"It hasn't changed my mind. For every [role / persona] that made you think one way, another one made you think another. You're never going to please everyone."

— *Manchester, 25-34*

"It's a £1 a month difference. Everyone can afford that. […] It's a no brainer."

— *Manchester, 55+*

The amount of savings can feel disappointing and raise questions about whether public opinion is even necessary

- Given the anticipated scale and size of the upgrade, and the information that renewables would be cheaper in the long term, participants assume that this investment would ultimately lead to a significant reduction in the overall consumer bill.
- As a result, some are disappointed to discover that the expected saving would amount to £103 over 10 years compared with backloading. While this figure pushes more towards frontloading than it does towards backloading, it can also reduce the degree of enthusiasm in investing more quickly.
- The small size of the difference between the two anticipated peak bills, and the long-term savings, also raises questions about whether public opinion is needed to make the decision. Some suggest that National Grid should instead use its own expertise to choose the outcome that would appear to deliver the greatest benefits on behalf of the long-term interests of customers and society.

"The figures at the end of the session were quite disappointing. I was expecting the long term savings as a result of front loading to be much greater."

— Manchester, 18-24

"I was really discouraged to see how little we would be saving. It felt like a bit of an anti climax."

— Manchester, 18-24

"If I was National Grid, I'd prioritise sub-station renewal, innovations, connection of new infrastructure to the grid. I wouldn't worry about taking the public with me. Just do the right thing and get on with it. We have to trust companies like National Grid to do the right thing or the planet is finished!"

— Manchester, 55+

Participants in the quantitative research also favour frontloading. The varying of price points associated with frontloading has little impact overall on preference.

Respondents in the quantitative survey were asked about their preference for frontloading and backloading 3 times

INTRO VIDEO BEFORE FIRST ASK:
Participants were first shown a video explaining the electricity transmission system.

FIRST ASK
INSTINCTIVE

QUESTION WORDING
Q18. In order to meet legal requirements to reduce greenhouse gas emissions, and to meet anticipated electricity demand in future, Britain will need to invest more money into its electricity network in the next ten years. This could either be done more quickly (to bring about the benefits of investment sooner), or more slowly (to spread the cost over a longer time period). Of these two options, which one would you instinctively prefer?

- Investing more quickly
- Investing more slowly
- Don't know

SECOND ASK
INFORMED WITH PROS AND CONS

QUESTION WORDING
Q19. We're now going to give you a little bit more information on those two options. With this information, please now say which one you would prefer. Don't worry about whether you picked the same answer or a different answer to previously.

- Investing more quickly. In this option, you would pay more upfront. This would mean that, in the short term, bills would be more expensive, but the overall 10-year cost to consumers would be less. It would also mean that the electricity supply would take less time to become greener, cleaner, and less reliant on other countries.
- Investing more slowly. In this option, you would pay less upfront. This would mean that, in the short term, bills would be cheaper, but the overall 10-year cost to consumers would be higher. It would also mean that the electricity supply would take longer to become greener, cleaner, and less reliant on other countries.
- Don't know

INFO VIDEO BEFORE THIRD ASK:
Participants were shown a video explaining the choice in more detail with anticipated pros and cons for each option.

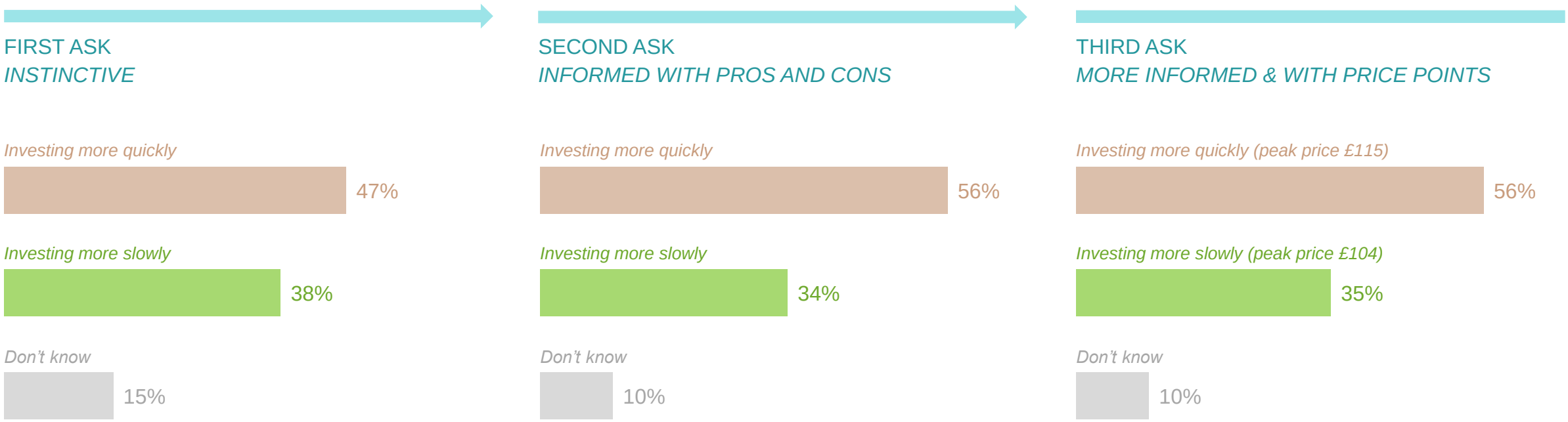
THIRD ASK
MORE INFORMED & WITH PRICE POINTS

QUESTION WORDING
Q20. We will now let you know what the impact would be on your bill between investing more slowly and investing more quickly. If you had to choose between the following two options, which one would you pick?

- Investing more quickly - For this option, the transmission part of the bill would peak at [1 OF 7 PRICE POINTS] per year, on average (vs £63 now). It is expected that the typical bill payer would pay around £100 less than if investment were slower over a ten-year period and the price of your energy would be more predictable (more protected from price changes as a result of global energy costs)..
- Investing more slowly - For this option, the transmission part of the bill would peak at £104 per year, on average (vs £63 now). It is expected that the typical bill payer would pay around £100 more than if investment were quicker over a ten-year period and the price of your energy would be less predictable (unprotected from price changes as a result of global energy costs).
- Don't know

See appendix for video voiceover text.

In each case, the preference is for frontloading rather than backloading, especially when informed with pros and cons

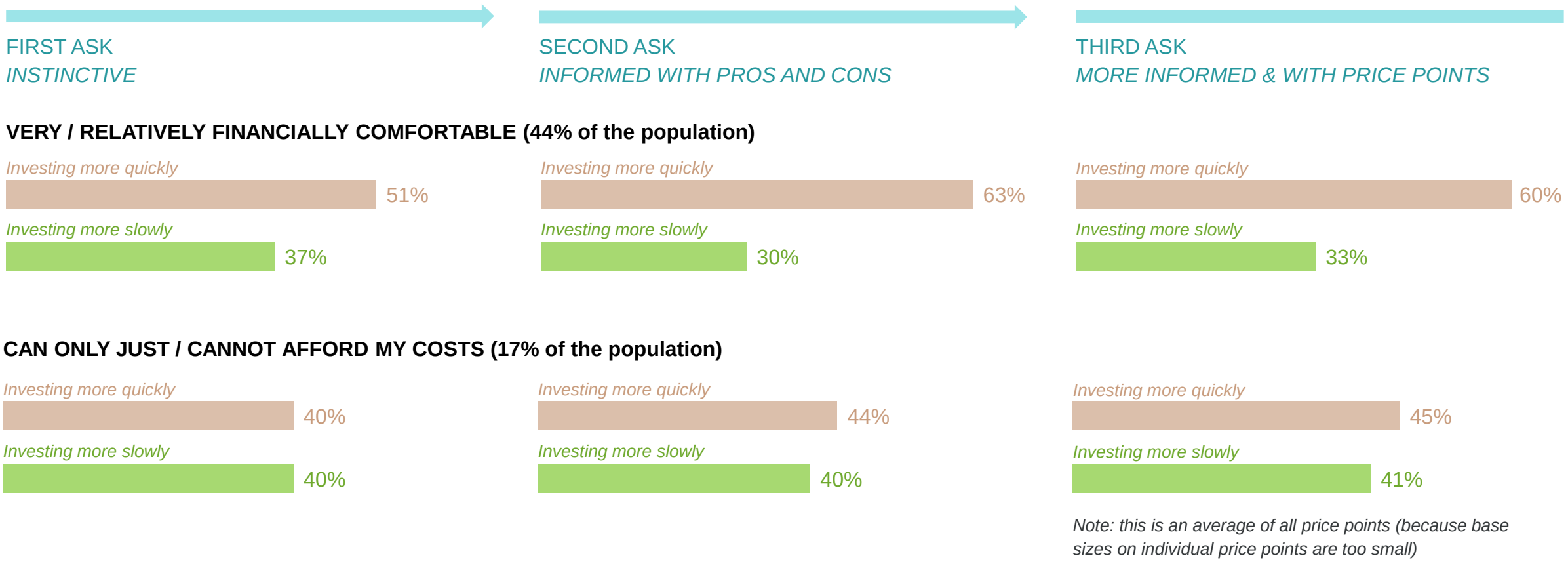


Base: All (3510)

Base: All (3510)

Base: Those shown £115 price point for frontloading (497) – the same price shown to participants in the qualitative research.

Those financially struggling are evenly split. They are also less likely to change minds upon hearing about pros & cons



Note: this is an average of all price points (because base sizes on individual price points are too small)

Base: Very / relatively financially comfortable (1,559), Can only just / cannot afford my costs (610).

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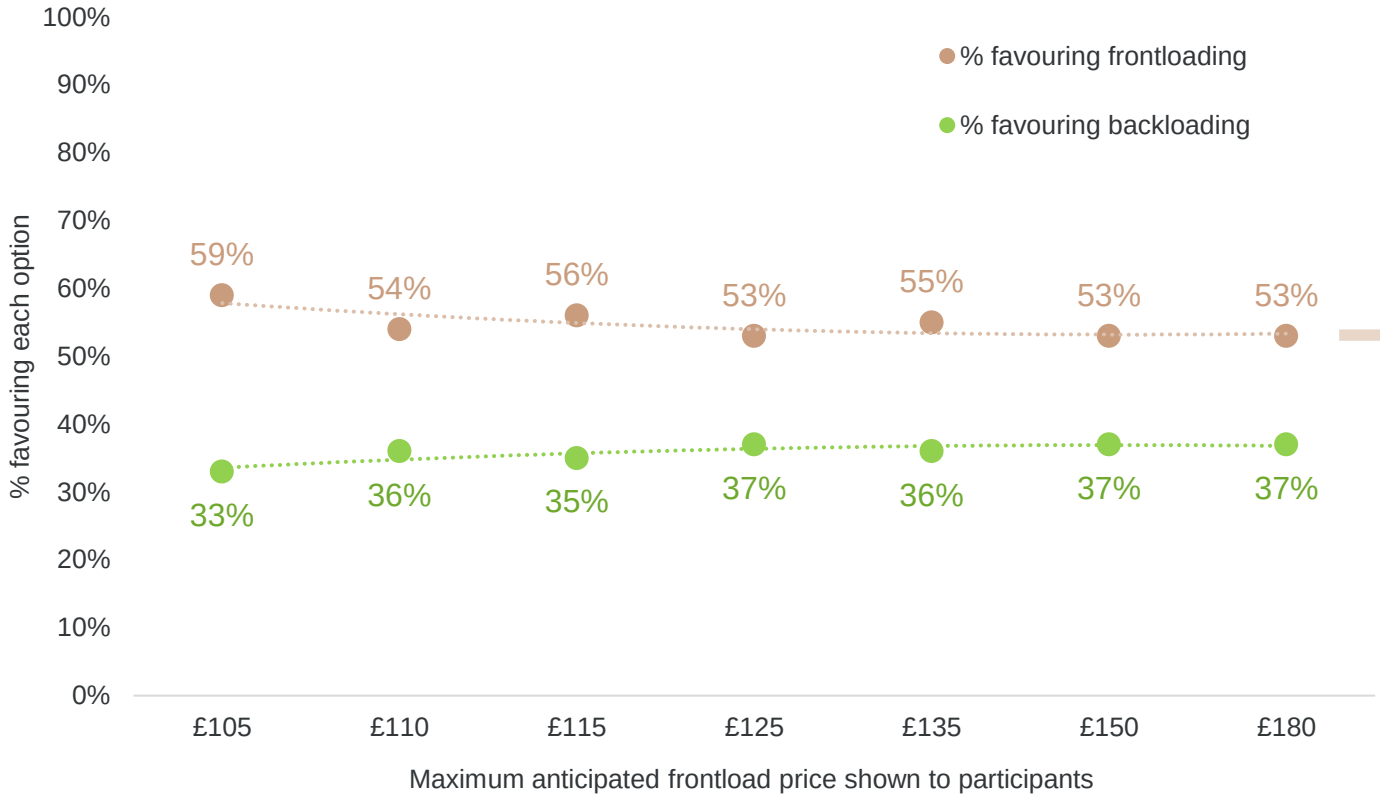
Overall, price makes little difference to levels of preference, especially after it has increased to £110 or more



In this test there was virtually no difference in preference for frontloading when the associated typical bill was presented as peaking at £110 per year vs when it was presented as peaking at £180 per year.

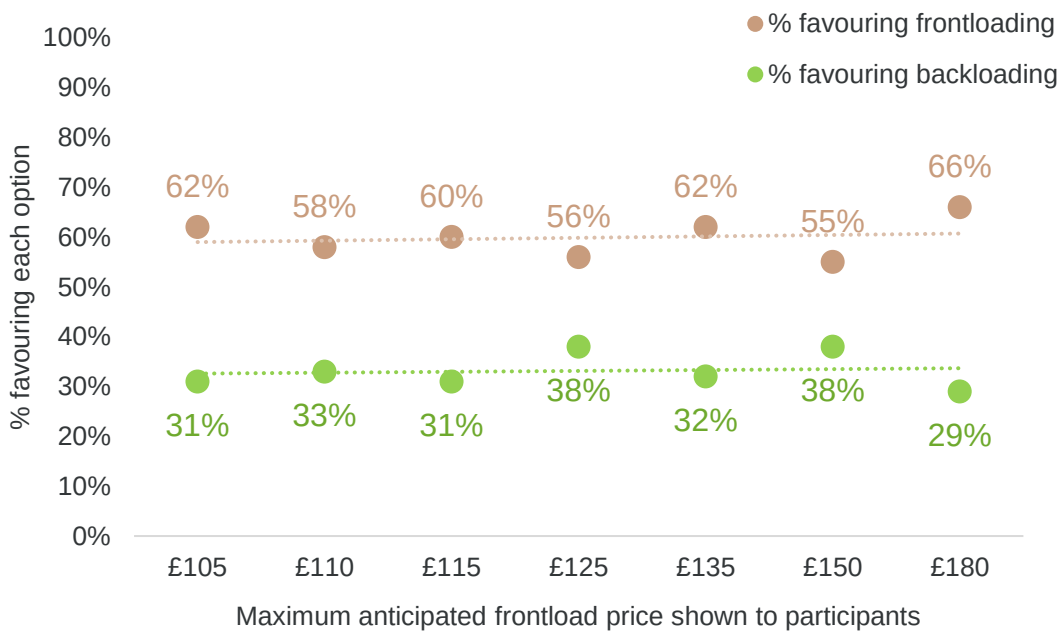
Q20. We will now let you know what the impact would be on your bill between investing more slowly and investing more quickly. If you had to choose between the following two options, which one would you pick? Base size for each sample varied between 489-511.

Sustainability first .YONDER

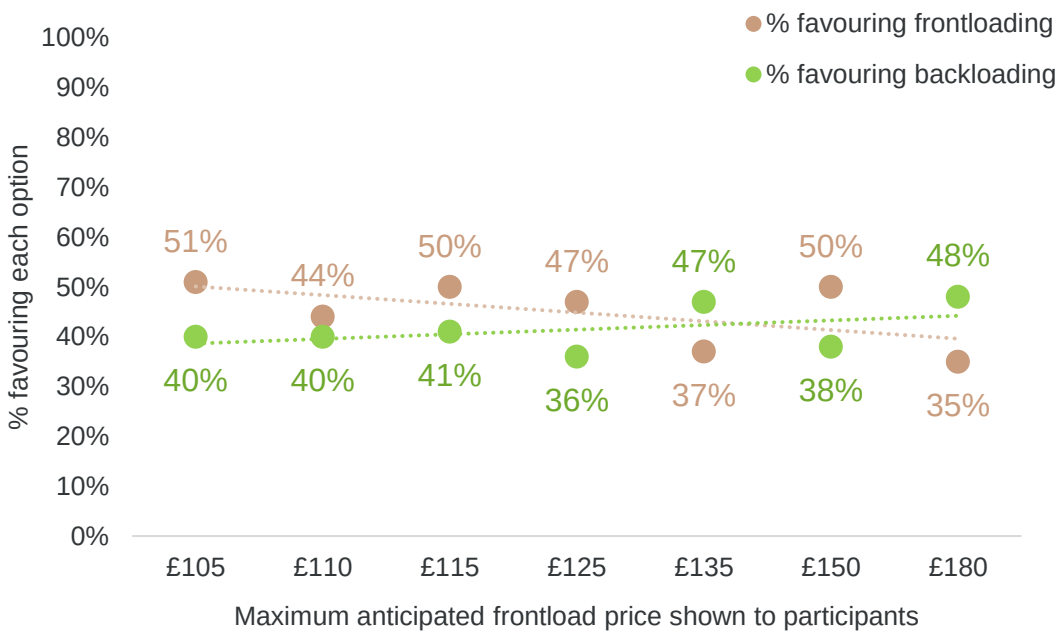
Price appears to make more difference to the choices of those who are financially struggling vs those who are not

NOTE: SMALL BASE SIZES ON INDIVIDUAL PRICE POINTS FOR 'CAN ONLY JUST / CANNOT AFFORD MY COSTS', VARYING BETWEEN 74 AND 97. INTERPRET THESE RESULTS GENERALLY RATHER THAN SPECIFICALLY.

VERY / RELATIVELY FINANCIALLY COMFORTABLE
(44% of the population)



CAN ONLY JUST / CANNOT AFFORD MY COSTS
(17% of the population)



Q20. We will now let you know what the impact would be on your bill between investing more slowly and investing more quickly. If you had to choose between the following two options, which one would you pick?
Base: Very / relatively financially comfortable (206-238), Can only just / cannot afford my costs (74-97).

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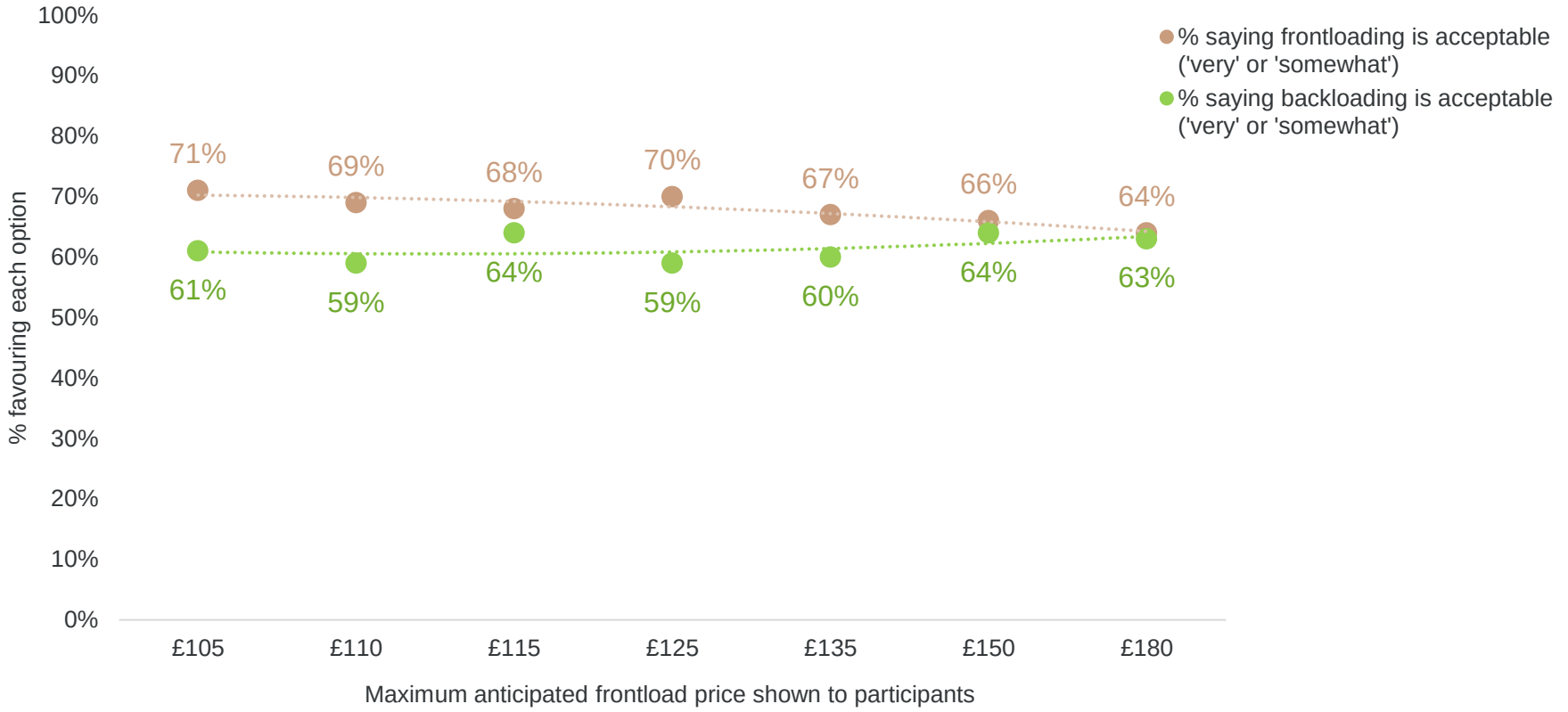
‘Acceptability’ of frontloading is high. It decreases slightly as price goes up, but remains more acceptable than backloading



Q21. Regardless of which option you selected, how acceptable or unacceptable do you think each of the options would be to you? Base size for each sample varied between 489-511.

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In the workshops, participants were presented with pros and cons associated with frontloading and backloading.

	Frontloading	Backloading
PROs	• Lower costs in the long-term • Creation of more jobs in a range of skillsets • Increase in investment to deliver regional/community benefit • Network is better protected against external threats (e.g. cyber, weather) • Faster decarbonised grid more attractive to investors	• Lower bill increases in the short-term • More time to reskill and train the UK workforce • More opportunity to repurpose decommissioned sites • Community benefit investment prioritising the most vulnerable • Opportunity to collaborate across the networks and industry to increase and enhance support
CONs	• Higher bills in the short-term • Disruption to local communities • More of the workforce sourced from overseas (and money given to overseas companies) • Work starting with the infrastructure that is easiest to change which might not be the oldest • Uncertainty in estimating where the highest demand will be in 2035 based on current data	• Slower decarbonisation of the energy system • Initial focus on maintaining the existing network which will become increasingly expensive • Risk of delays when demand increases, if infrastructure cannot deliver capacity • Greater ongoing reliance on coal and gas, meaning greater bill volatility in the event of further gas price shocks

This is a summarised version of the anticipated advantages and disadvantages presented to participants in the workshops.

In the following slides we show the reasons for supporting frontloading and backloading as expressed by participants, having been shown these pros and cons.

SECTION 5

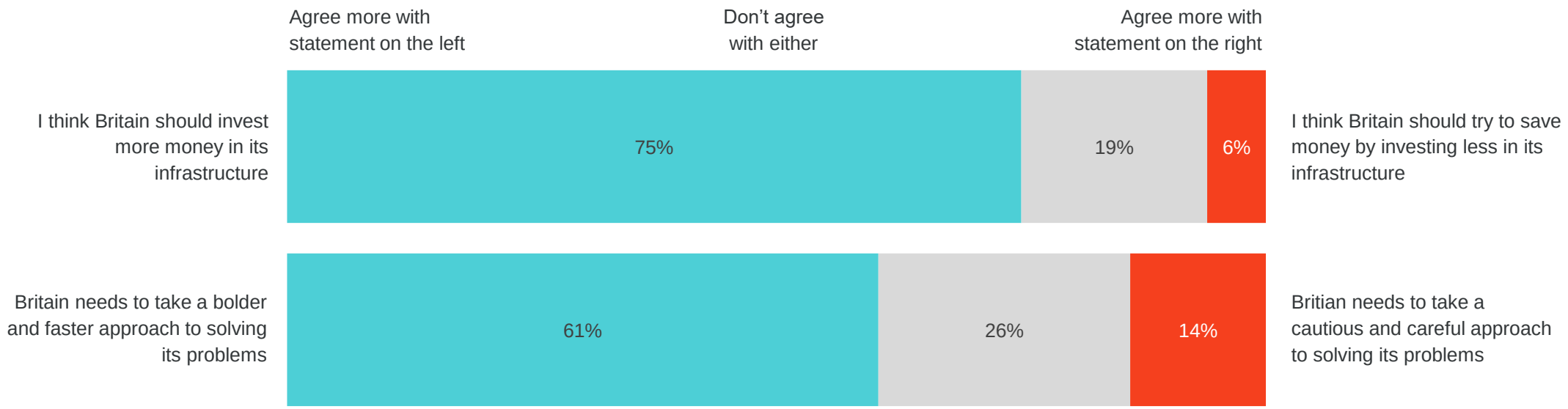
The specific reasons for frontloading: What makes frontloading the preferred option?

Several interlocking reasons make frontloading the more attractive option to a majority.

SEVERAL INTERLOCKING REASONS DRIVE PEOPLE TO FAVOUR FRONTLOADING

1	2	3	4	5
Get on with necessary action	**Tolerable risk for clear benefits**	**Climate urgency**	**Lower bills over time**	**More stable, independent bills**
A general desire / personal tendency towards getting necessary work done in order to realise the benefits more quickly. This is an important motivating factor even before participants engage with the detail of the pros and cons of each option – they understand the work to upgrade the grid as necessary, not optional.	Having engaged with the pros and cons of each option, participants tend to judge that the risk of investing quickly is low in return for the broader benefits on offer (lower and more stable bills, a network fit for future usage, stronger action on climate).	A perceived moral imperative to tackle climate change is important in and of itself for some participants (though many others do not share the same sense of priority even if they do not oppose sustainability action), especially when considering future generations / their own children / grandchildren.	The idea of achieving lower bills over time is broadly attractive. When presented with the anticipated savings (around £103 over ten years), some are disappointed with the small difference compared with the backloading option.	The prospect of more stable energy bills which are less reliant on external factors is also broadly attractive.

This fits with widespread instinctive support for investing in infrastructure and a bold & fast approach to solving problems



Q12. Here are several pairs of statements. In each case, please indicate where your own view lies on a scale where 1 means complete agreement with the statement on the left, 5 means complete agreement with the statement on the right, and 3 means you don't agree with either of the statements. Base (3,510).

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Stable bills go hand-in-hand with lower bills

+ Participants were informed that more stable bills less reliant on the global gas market was an anticipated benefit of frontloading. This idea is appealing and common sense to some participants in principle, as well as because it promises to reduce the volatility of future energy bills.
+ While important in persuading some people of the merits of frontloading, arguments relating to energy independence and bill volatility are generally less readily latched onto than others relating to absolute bill prices, the need to upgrade for future usage, and climate urgency. Some participants bring up bill stability (rarely in connection with energy independence), but they usually focus more on the cost of bills generally.
+ This seems to be partly because the argument is more involved than others and partly because of the perceived difficulty of accurately forecasting future energy bills under any circumstances.

> *"You never know when something else is going to kick off across Ukraine and Russia, Israel, stuff like that. There's always something that's happening in the world. So it would be nice not to be so reliant on gas prices, be a lot more control of things."*
>
> *— Cardiff, 25-34*

> *"Common sense would be to be forward-thinking, to actually spend money on our infrastructure, so we can improve it, and then we can be self-sufficient, because otherwise we'll go backwards."*
>
> *— Manchester, 55+*

SECTION 6

The specific reasons for backloading: what makes backloading appealing to some participants?

Concerns about *any* increase in bill costs predominate among the minority who favour backloading, but this is also important for those favouring frontloading. There is also scepticism about achieving the proposed benefits of frontloading.

FACTORS FOR FAVOURING BACKLOADING

1	2	3	4	5
Resistance to any bill increase	**General scepticism about benefits**	**Preparing & planning**	**Adapting to new technologies**	**British jobs**
The most important factor pushing some towards backloading is a concern about bills increasing by any amount. There is particular concern about financially vulnerable people and small businesses.	Many have low faith in the ability of policy makers and industry professionals to deliver on promises relating to lower bills and better services, and are suspicious of any attempts to do so that require more money from consumers in the short term.	Some think that frontloading would mean 'rushing' the energy transition. Related to their concerns about delivery, they want more time for planning and preparation.	These same people also often believe that backloading would give more leeway to adapt to the emergence of new, unanticipated technological advancements.	For a few people, the idea of being able to train and employ a greater number of British workers to deliver the necessary works is attractive.

Even for those who favour frontloading, recognising the needs of the vulnerable is very important

This leads many to call for other options:

…Either a ‘middle-loading’ approach that attempts to invest more quickly but not so quickly that it is poorly planned or too expensive for the vulnerable

…Or frontloaded investment but with support mechanisms that ensure lower income bill payers would contribute less (e.g. via means testing). This is called for by people who are financially struggling and people who say that they themselves could afford their bills.

“I do think that it has to come with constraints, restrictions, incentives, subsidies, all of that. It can't just be in its plain form if it’s going to put to families and households and businesses into situations that they can’t afford. But I think [frontloading] meets the needs quicker and it also avoid spending money on obsolete systems.”

— Manchester, 55+

“The financially vulnerable shouldn’t have to pay in any shape or form. It should be means tested. Anyone who has worked with vulnerable people knows that they shouldn’t be made to choose between a healthy world [and being able to pay bills].”

— Manchester, 35-54

“We all want it front loaded. But the way it's put across is the main thing. We need to get across to people, not everyone's going to be happy about what’s going to happen. We need to be honest, transparent, and respect everyone's views. We probably need to say ‘it’s gonna be painful’. But we have a duty of care to look after those people who will need their help. And so we need to put things in situ to help those people. But if it needs to be done, we need to get it done, feel a bit of pain first, but in the long run, it will be best for everyone.”

— Cardiff, 25-34

Implications for next steps

WHAT DOES THIS IMPLY FOR BILL TOLERANCE?

There is no point at which frontloading becomes unacceptable or unfavoured to a majority.

It can be argued that even £180 is 'acceptable' (albeit less so than £125).

But this is only part of the story.

A small portion say they cannot bear *any* further increase.

And even those who support frontloading and who aren't struggling think steps must be put in place to minimise the burden on the vulnerable.

Bill tolerance can't just come down to a single number (and there is no definitive answer on this anyway).

There is high tolerance for frontloading but the framing, the details of the plan, and the associated support mechanisms matter.

WHAT KIND OF FRAMING (AND ASSOCIATED ACTION) IS NECESSARY TO SUPPORT HIGH TOLERANCE?

National Grid is...

Getting on with necessary upgrades.

Taking advantage of clear opportunities to keep long-term bills down, stable, and less susceptible to price shocks, by making better use of sustainable energy sources.

Responding to real and inevitable risks associated with climate change.

While putting plans in place to avoid...

Putting up bills for no clear benefit or just for the sake of 'net zero'.

Making vulnerable people pay the price.

Wasting consumers' money through rushed planning, overconfidence in new technologies, or inaccurate / misleading budgets that later get inflated.

SUMMARY

1. THE APPROACH

Quantitative and deliberative qualitative research spanning different regions of the UK, informed by a review of existing literature.

2. THE CONTEXT & FUNDAMENTAL PRIORITIES

Limited knowledge of the transmission network mean all findings must be interpreted carefully.

Low bills are a priority (along with reliability, renewable connection, independence).

Instinctive desire to prioritise maintaining, upgrading, and connecting.

3. THE BROADER FACTORS

Six broader factors also influence decision-making:

1. Trust
2. Risk tolerance
3. Attitudes towards climate change
4. Appetite for innovation
5. Importance of bill stability
6. National interest

4. THE OVERALL VERDICT & THE IMPACT OF PRICE

Clear preference for frontloading, especially once shown more information and exposed to anticipated pricing.

But with concerns about cost and deliverability shared by a significant portion of the population.

5. THE SPECIFIC REASONS FOR FRONTLOADING

Five main interlocking reasons:

1. **Generally, getting on with necessary action**
2. Tolerable risk for clear benefits
3. Climate urgency
4. Lower bills over time
5. More stable, independent bills

6. THE SPECIFIC REASONS FOR BACKLOADING

Five main interlocking reasons:

1. **Resistance to any bill increase**
2. General scepticism about benefits
3. Preparing & planning
4. Adapting to new technologies
5. British jobs

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