




Acceptability Testing – National Grid Gas Transmission

Summary Report – Gas Transmission

National Grid

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Document version

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Executive summary

Introduction

The report summarises the main findings from acceptability testing research with household consumers and business end-users for National Grid's RII0-T2 Gas Transmission (GT) Business Plan. The research was carried out between July – September 2019 using a combination of quantitative and qualitative methods to obtain a robust and representative understanding of consumers' views on National Grid's proposals.

Research approach

The research featured three main stages, which considered the acceptability of National Grid's proposals for electricity transmission and gas transmission both separately and in combination in the context of overall energy bills:

Stage 1 - Qualitative Research: to probe consumers' understanding of National Grid and their overall views on the GT Business Plan proposals (July 2019 submissions). Findings also informed the design of the quantitative research material, to help ensure it gave the right level of information to consumers to provide informed views on the acceptability of National Grid's proposals.

Stage 2 - Quantitative Research: design, implementation and analysis of nationally representative surveys of household and business consumers. Survey respondents were presented with National Grid's proposals for the gas transmission system (Box ES.1) and directly asked whether they found the overall plan and bill impact acceptable, and whether they supported each of the component investments and associated bill impacts.

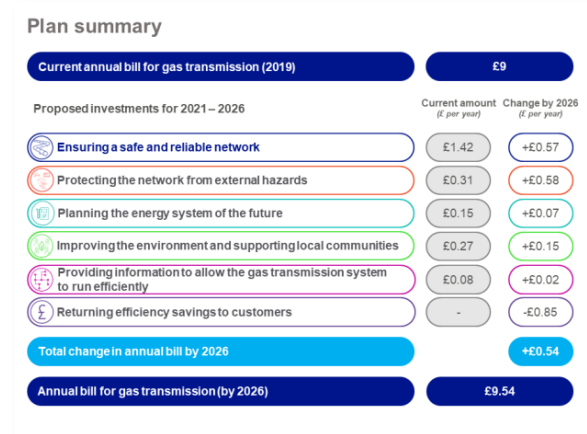
Stage 3 - Qualitative Research: to test and validate the survey findings, with particular emphasis on understanding the factors and motivations taken into account by consumers when considering the acceptability of National Grid's proposals. This included the overall bill impact for the transmission system, the proposed investments and their individual bill impact, along with wider considerations – such as the combined effect of the ET and GT bill impacts, the total amount paid for energy and other household expenses, and the value for money of overall energy bills.

Almost 3,000 consumers participated in the acceptability testing for the GT and ET Business Plans across the three stages of research. This included 1,270 household respondents and a further 163 business respondents to the GT version of the Stage 2 survey.

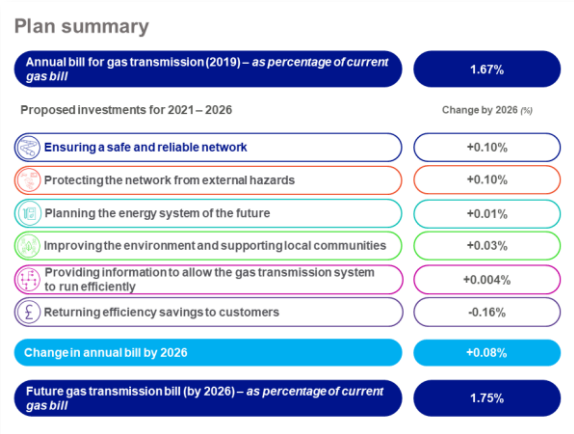
Box ES.1: Business Plan descriptions

Survey respondents and participants in the qualitative research were presented with a range of information describing National Grid’s proposals for the gas transmission system.

High level summary of key investment areas, bill impacts, and overall change in bill by 2026



Household consumer version: additional bill impact for gas transmission of +£0.54 per year by 2026 (on top of current gas transmission bill).



Business consumer version: additional bill impact for gas transmission of +0.08 percentage points per year by 2026 (as percentage of current overall gas bill).

Example of explanation of investment area and specific investments

Ensuring a safe and reliable network

To make sure the transmission system is operating safely and in line with all regulations, our equipment is maintained in a healthy state and is replaced as it reaches the end of its life.

- Overall we manage the system to make sure the gas gets from where it arrives in the country to where it's eventually used.
- We check, repair and replace our gas pipelines and equipment. Our investments meet all legal requirements for health and safety, and the environment.
- Ultimately this protects against significant health and safety risks, and interruptions to gas supplies that can affect thousands of homes and business. Gas interruptions may still occur, but this will most likely be due to local distribution problems and not the transmission network that we operate.

| | | |
|---|-----------------------|-----------|
| Maintaining compliance with safety standards and environmental regulation | Current amount (2019) | £0.13 |
| Investments that are required to maintain zero harm on our sites and make sure we meet all environmental and climate change regulations. | Change by 2026 | No change |
| | Total amount (2026) | £0.13 |
| Maintaining the condition of pipes and equipment | Current amount (2019) | 1.08 |
| Investment to replace and refurbish the ageing equipment on the network. | Change by 2026 | +£0.47 |
| This means we will continue to keep the network safe and maintain the current level of reliability, meaning that the chance of a gas interruption affecting lots of people is very low. | Total amount (2026) | £1.53 |
| Managing the gas transmission system | Current amount (2019) | £0.23 |
| Investments that will make sure we can get gas on to the network, move it across the whole network, and make it available when it's needed. | Change by 2026 | +£0.10 |
| This is needed due to the changes in the use of natural gas across the country in the coming years. | Total amount (2026) | £0.33 |

The overall sample profiles were nationally representative in terms of key consumer characteristics (e.g. age, socio-economic group; or business size and sector) and geographic spread across England, Wales, and Scotland. Participants in the qualitative research stages reflected a mix of socio-economic and demographic backgrounds, ensuring that all aspects of the Business Plan acceptability testing provided a full and rounded account of consumer views.

Headline findings

Overall Business Plan acceptability

There is a high level of acceptability for the GT Business Plan:

- Over 80% of business consumers and almost 90% of household consumers stated that the overall plan and bill impact was either “acceptable” or “very acceptable”.
- For household consumers, the acceptability of the Business Plan was largely driven by perceived affordability of the transmission bill. For business consumers the need to maintain current high levels of reliability was also an important factor alongside the affordability of National Grid’s proposals.

The high levels of acceptability are, though, subject to limited changes in overall energy bills:

- The ‘limit’ within which the Business Plan proposals were acceptable was around a 2% change in overall energy bill for household consumers. For a dual fuel consumer with an average bill (approximately £1,100 per year), this is approximately +£23 on the annual current bill.
- The ‘switching-point’ from “acceptable” to “unacceptable” for the gas transmission component of the bill for household consumers was about +£11 on top of the current amount paid. For business consumers the equivalent threshold was +7% on top of the transmission bill amount.

The Business Plan proposal with a 6% increase in the transmission bill amount - corresponding to +£0.54 by 2026 on the current transmission bill amount for household consumers (approximately £9 per year) - is therefore within the constraints for both household and business consumers.

Overall, there was limited variation in the levels of acceptability between different consumer segments, in terms of socio-economic and demographic characteristics:

- The greatest difference for household consumers was observed for the lowest income group (less than £6k per year). This finding though is subject to a relatively small sample size and even these respondents tended not to outright reject National Grid’s proposals, but rather were unsure if the plan was acceptable or not.
- Lower levels of acceptability were also observed for households that were potentially in vulnerable circumstances – based on indicators such as disability in the household, or self-reported measures such as difficulty paying utility bills. However, the differences from the overall sample results are not particularly great, and the overall level of acceptability was still above 80% of consumers.

Acceptability of proposed investments

For the most part, consumers viewed the individual investments in the GT Business Plan as representing value for money:

- Typically, high levels of support (around 60 - 70% consumers) were stated for both the proposed investment and the associated bill impact. Moreover, very few outright rejected the investment proposals (typically less than 5%).
- Investments in safety and reliability were viewed as the top priority by both household and business consumers. After this, though, there was less distinction in the ranking of other investments (external hazards; future energy system; environment and local communities).

Given the overall levels of support for each investment, however, the priority ranking across the range of investment areas is of secondary relevance.

A significant proportion of consumers (around 30%), though – whilst supporting the investment proposals in principle, and indeed the overall plan – consistently challenged the individual investment bill impacts as “not acceptable”. Two main viewpoints underlie this finding:

- The first was from a relatively small subset of consumers who expressed concerns about the affordability of National Grid’s proposals (around 10% overall). These respondents were (compared to the overall sample) more likely to receive some form of support for their energy bills, tended to be lower income households and less likely to be in employment. Accordingly, the group also tended to include higher proportions of consumers in the youngest (16-24 years) and oldest (65+) age groups, and also a greater proportion paying energy bills via pre-payment meters. Hence whilst they supported National Grid’s proposals in principle, their main concern was the change in bill and impact on their household budget.
- The second group (around 20% overall) in contrast featured higher proportions of consumers in higher socio-economic groups and above average (median) household incomes, and also with fewer dependents than the overall sample. Rather than being concerned about the affordability of National Grid’s proposals, they tended to question the value for money of the individual investments and hold the view that current service levels were good enough. Hence, they challenged the need for the scope and scale of National Grid’s proposals, but ultimately most consumers even in this group found the overall plan acceptable because of minimal impact on household budgets.

Views on efficiency savings

Consumers were also very supportive of the efficiency savings that were reported in the summary of the Business Plan bill impacts. Indeed, this appears to offset the concerns of some consumers that the bill impact of a particular investment might be too high. It was also evident – especially in the

qualitative research – that consumers expected National Grid to meet efficiency challenges, although not to the extent where this would compromise current or future service or reliability. In this regard, there was support for National Grid reinvesting efficiency savings if it meant that more could be done in the Business Plan to address future investment needs. The investment areas that consumers had the strongest preferences for higher levels of investment over the current proposals were ‘maintaining compliance with safety standards and environmental regulation’, ‘innovation projects to trial greener alternatives to natural gas’, and ‘reducing carbon emissions from operations’.

Conclusions

All in all, the main findings from the research show that there is a high level of support for National Grid’s proposals for the gas transmission system. Almost 9 in 10 household and 8 in 10 business consumers expressed their support for the Business Plan.

The research process is judged to be robust and the results appropriate for use in National Grid’s continuing planning for RIIO-T2. The initial stage of the research featured an iterative test and re-test approach for the development of the explanatory material and investment descriptions that were presented to survey respondents and participants in the qualitative research. The purpose was to ensure that consumers were able to provide informed views on the acceptability of National Grid’s proposals.

Feedback from consumers was very positive. Most found the survey easy to complete, and sizeable proportions of respondents also stated that the survey topic areas were interesting and educational. Overall, the feedback across each stage of the research indicated that there was a good level of engagement from consumers and that they gave valid and considered responses. Moreover, the survey samples were nationally representative in terms of key consumer characteristics (e.g. age, socio-economic group; or business size and sector) and geographic spread across England, Wales, and Scotland. Added to this, participants in the qualitative research stages reflected a mix of socio-economic and demographic backgrounds, ensuring that acceptability testing gave a full and rounded account of consumer views.

The high levels of acceptability are, though, subject to some limits, particularly in terms of changes in overall energy bills. National Grid’s current proposals are, though, well within these limits and also within the ‘switching point’ between an “acceptable” vs. “unacceptable” bill impact for the transmission component. It is also evident that consumers expect National Grid to be cost-efficient in its investments and associated bill impacts. However, there does not appear to be a strong appetite amongst consumers for significant bill reductions if the trade-off was to compromise either current and/or future safety and reliability in the system. Indeed, consumers typically recognised that increased levels of investment where needed by National Grid to meet future needs and demands on the transmission system, and in order to protect the environment and further reduce carbon emissions from operations.

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1. Introduction

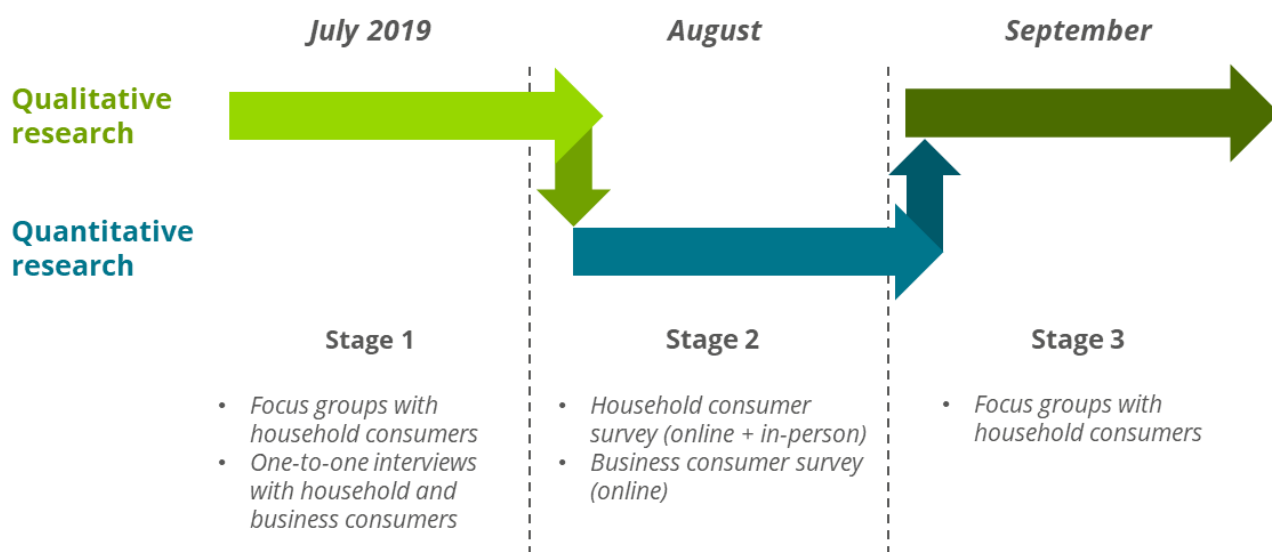
1.1 Overview

National Grid is undertaking a programme of consumer research to test the acceptability of the Electricity Transmission (ET) and Gas Transmission (GT) Business Plans for RIIO-T2. This report summarises the main findings from the acceptability testing for the Gas Transmission (GT) Business Plan. It is one of four reports prepared for National Grid. The accompanying Electricity Transmission (ET) Summary Report outlines the equivalent findings for the Electricity Transmission Business Plan. Detailed accounts of the research methods and their implementation are provided in the Qualitative Research and Quantitative Research Reports. These describe the main aspects of the research - including the iterative test-re-test development process of the research materials (survey questionnaires and qualitative research topic guides), the fieldwork processes, and analysis – and present the full research findings and a detailed understanding of consumer views on National Grid’s proposals.

1.2 Research approach

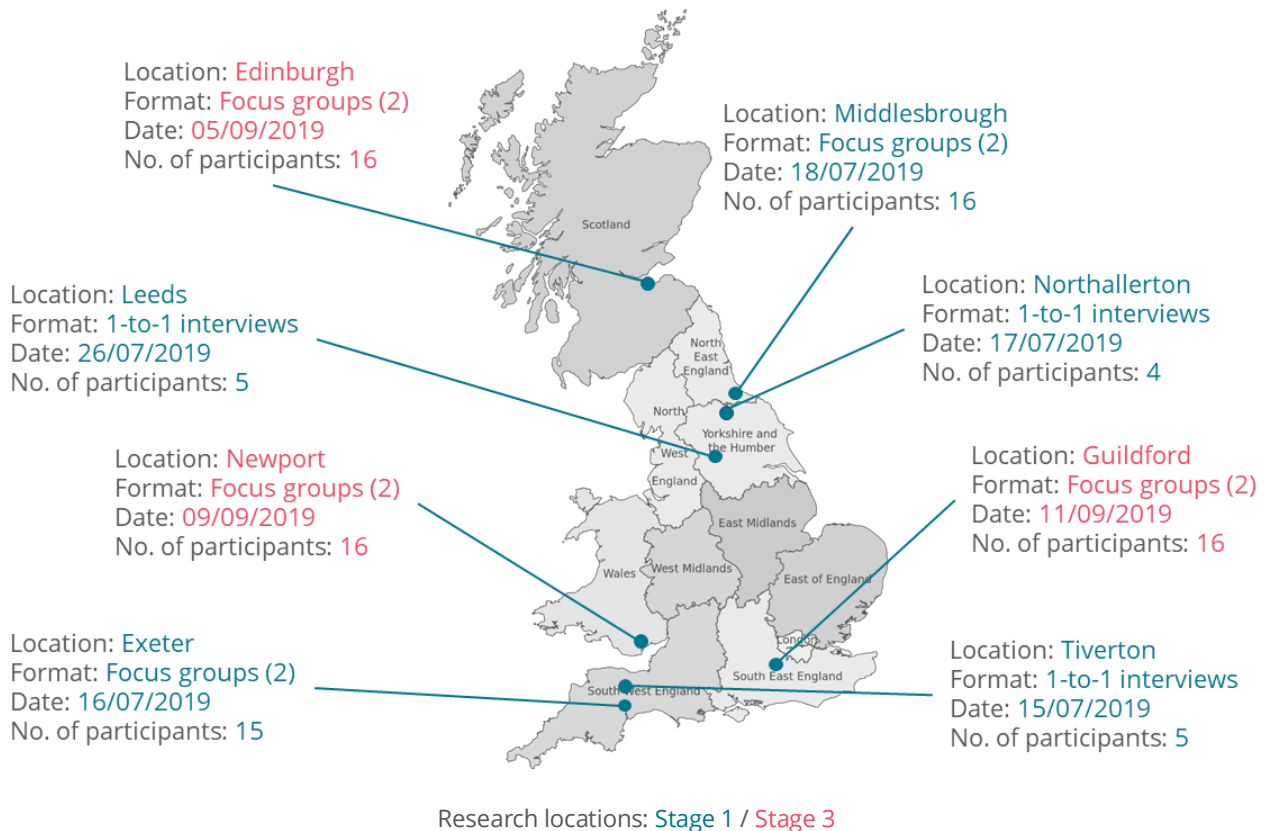
The acceptability testing research was carried out between July and September 2019 in three principal stages (Figure 1.1 **Error! Reference source not found.**).

Figure 1.1: Outline of acceptability testing research process



Locations and the number of participants for the qualitative research stages (Stage 1 and 3) are shown in Figure 1.2. The quantitative research was conducted as a nationally representative survey with a varied geographical spread of respondents across England, Wales and Scotland. Full details of the sampling approach and respondent quotas are provided in the Quantitative Research report.

Figure 1.2: Qualitative research locations (Stages 1 and 3)



Note: Gas transmission and electricity transmission topics were discussed at all locations.

1.2.1 Stage 1 qualitative research

The Stage 1 research was implemented via a combination of 90-minute focus group sessions and 45-minute one-to-one interviews with household and business end-user consumers (Figure 1.2). A total of 46 consumers participated in the research covering both the GT and ET Business Plan proposals (31 focus groups; 14 one-to-one interviews), from a mix of socio-economic and demographic backgrounds. The business consumer participants were representatives from micro and small-sized enterprises.

As the starting point for the research programme, the purpose of Stage 1 was to probe consumers' understanding of the energy industry and the role of National Grid, before gathering participants' views on the ET and GT Business Plan proposals (July 2019 Business Plan submissions). Findings from the research informed the iterative development and updates of the quantitative survey material, to help ensure it provided the right level of information to consumers to provide informed views on the acceptability of National Grid's proposals. The feedback and views from participants also helped to identify the topics and issues that required further examination in the Stage 3 research.

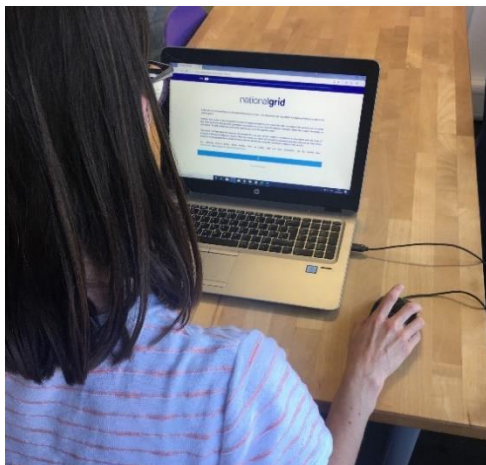
Figure 1.3: Stage 1 focus groups (Middlesbrough, July 2019)



1.2.2 Stage 2 research

The Stage 2 research took forward the quantitative component of the research, building on the research materials – explanatory information about National Grid’s transmission role, descriptions of the Business Plan proposal and investments, etc. – prepared and tested in Stage 1 and developed the GT and ET versions of the acceptability survey for household and business end-user consumers (Figure 1.4). Each variant was initially tested in a small-scale pilot prior to full implementation.

Figure 1.4: Online version of survey [left]; survey start screen [right]



A total of 2,852 consumers participated in the Stage 2 research across the ET and GT versions of the survey. This included 1,433 respondents for the GT version, with 1,270 in the household sample and 163 in the business (online sample).

The household versions of the survey were administered to nationally representative samples of consumers through a combination of online and in-person interviews. Analysis of household consumer responses is primarily based on the pooled data that combines the online and in-person survey data. The business consumer versions were administered via the online format. The achieved sample sizes for each

survey variant are summarised in Table 1.1 **Error! Reference source not found..** Household and business respondents were randomly allocated to either the ET or GT version. Average survey completion times were 18 minutes for household variants and 15 minutes for business variants.

Table 1.1: Stage 2 sample sizes by survey version and administration mode (no. respondents)

| | ET version | GT version | Total | Overall targeted sample |
|-----------------------|--------------|--------------|--------------|-------------------------|
| Household - online | 1,056 | 1,058 | 2,114 | 2,000 |
| Household - in-person | 202 | 212 | 414 | 400 |
| Business – online | 161 | 163 | 324 | 300 |
| Total | 1,419 | 1,433 | 2,852 | 2,700 |

The household and business versions of the survey followed the same general structure, but featured different consumer profile questions:

- Section A: respondent screening and quotas questions.
- Section B; D: explanation of National Grid’s transmission role and composition of energy bills, and introduction to the business planning process.
- Section C; E: presentation of the ET / GT Business Plan, including investment themes and overall bill, and detail on specific investment proposals. Respondents provide their views on the acceptability of each individual investment prior to giving their overall response on the acceptability of the Business Plan.
- Section F: follow-up questions that probe respondents’ motives and reasons for their responses about the acceptability of the Business Plan proposals.
- Section G: consumer profile questions.
- Section H: Survey with additional information for household consumers to find out more information about the Priority Services Register (PSR).

Overall respondent feedback was positive. Around 90% of the household and 87% of business respondents stating the survey was either ‘very easy’ or ‘easy’ to understand and complete. In addition, the majority indicated that the survey was interesting (household pooled: 70%; business: 56%), and a significant proportion also stating that they found it educational (household pooled: 30%; business: 25%).

1.2.3 Stage 3 research

The Stage 3 research was implemented via longer focus group sessions with household consumers (six groups, approximately 120 minutes each – see Figure 1.2) with the purpose of testing and validating the key findings and results from the Stage 2 survey. A total of 48 household consumers participated in the groups, again from a mix of socio-economic and demographic backgrounds, including a number on pre-payment meters.

Particular emphasis was placed on understanding the factors and motivations taken into account by consumers when considering the acceptability of National Grid’s proposals, including the overall bill impact for transmission, the proposed investments and their individual bill impact, as well as wider considerations – such as the combined effect of the ET and GT bill impacts, the total amount paid for energy, and other

household expenses. Discussions also included consumers' views on the affordability of the proposals and whether they represent value for money.

1.3 Report structure

The remainder of this summary report is structured as follows:

- Section 2: Overall Business Plan Acceptability – the 'headline' acceptability testing results for the GT Business Plan and the reasons for consumers' responses.
- Section 3: Acceptability of Proposed Investments – the level of consumer support for the range of investments set out in National Grid's proposals.
- Section 4: Conclusions – key summary points for the acceptability of the GT Business Plan.

Full results and analysis of the Stage 2 survey are provided in the Quantitative Research report, along with details of the survey questionnaire and accompanying explanatory material provided to respondents. The Qualitative Research report summarises the main findings from the Stage 1 and 3 research stages.

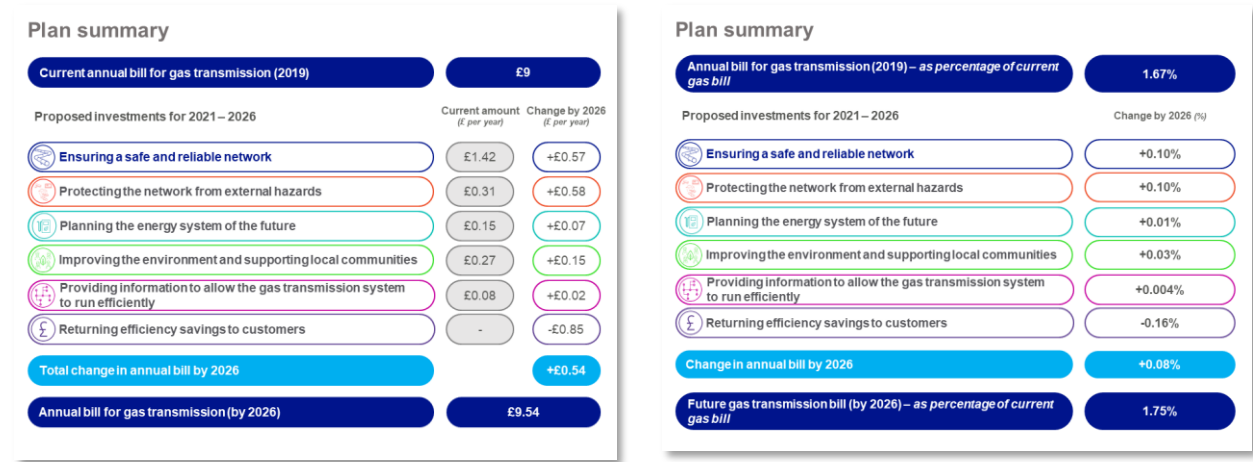
2. Overall Business Plan Acceptability

Key messages

- Consumers were presented with an overview of the Gas Transmission Business Plan and asked whether they found the plan acceptable.
- For household consumers the bill impact was an increase in their current annual gas transmission bill of +£0.54 by 2026. This is approximately a 6% increase from current transmission bill amount of £9 per year.
- The equivalent bill impact for business consumers was presented as a percentage of the overall electricity bill, changing from 1.67% to 1.75% (a 0.08 percentage point increase).
- There is a high level of acceptability for the GT plan, with over 80% of business consumers and almost 90% of household consumers stating it was acceptable. For household consumers, the acceptability of the Business Plan is largely driven by affordability of the transmission bill. However, this is conditional on limited increases in other components of their overall energy bill.
- There is limited variation in the level of acceptability across different consumer segments, in terms of household composition (e.g. age, socio-economic group) or indicators of households in vulnerable circumstances (e.g. disability in household, PSR, support with bill payments). A lower level of acceptability was, though, found for consumers who stated that they encountered difficulty paying utility bills or were behind with payments; hence whilst most viewed National Grid's proposals as affordable, a small number of consumers were concerned about overall pressures on household budgets – particularly if other components of the overall energy bill were also to increase.
- For business consumers, acceptability is largely motivated by ensuring a secure gas supply now and in the future. This is in line with the majority of consumers (63%) indicating that they are reliant on gas supply.
- Consumers that did not find the Business Plan acceptable stated that the bill impact is too high, or that National Grid shouldn't need to increase bills to pay for the investments.

This section summarises the overall acceptability of the GT Business Plan and reasons given by consumers for their responses. In both the quantitative and qualitative research, consumers were presented with a summary of the Business Plan in terms of investment areas and associated bill impacts, and the overall bill impact relative to the current amount paid for gas transmission (Box 2.1).

Box 2.1: Gas Transmission Business Plan Summary



Household consumer version

Business consumer version

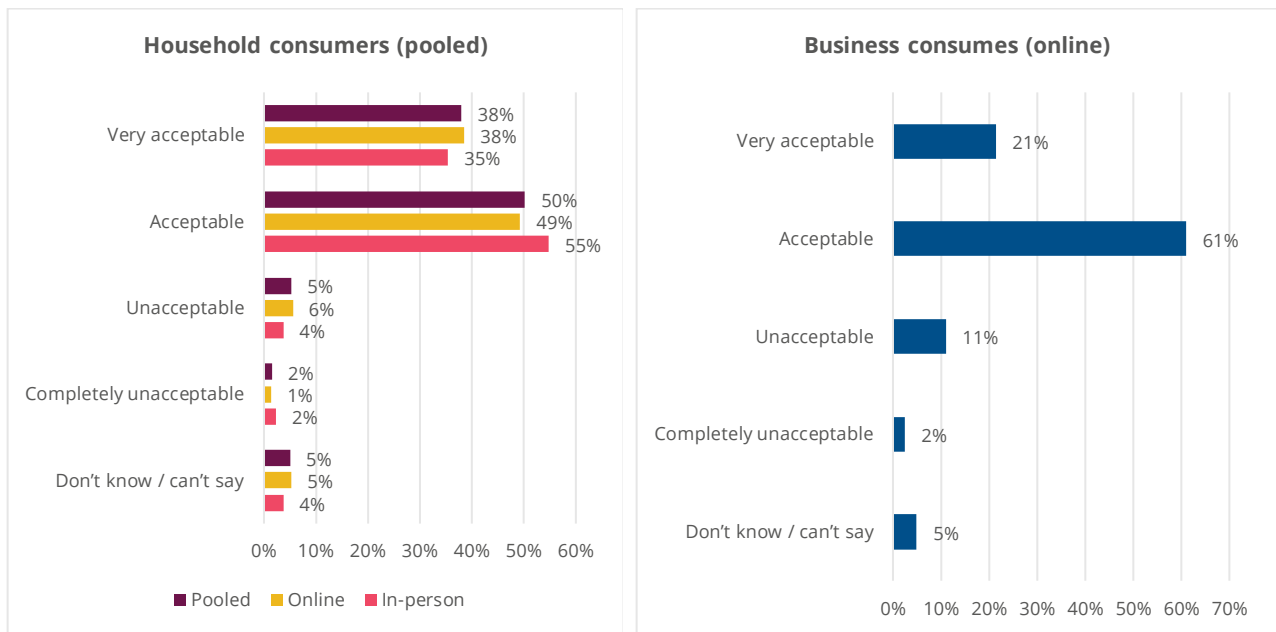
In both the quantitative and qualitative research, the GT Business Plan was described in terms of main investment areas and the associated bill impact relative to the current transmission bill amount. Subsequent information then set out the specific investments in each area and their contribution to the bill impact. For household consumers, bill impacts were presented in monetary terms. Accompanying explanatory information informed respondents that all bill impacts were presented in current day prices (i.e. excluding inflation – but the potential effect of inflation was also described). Business consumers were presented with bill impacts in percentage (%) change terms – showing the GT bill impact (current and additional) relative to the overall electricity bill - in order to accommodate the much greater variation in current bill amounts.

2.1 Overall Business Plan acceptability

The majority of consumers that took part in the survey and qualitative research stated that the GT Business Plan and associated bill impact was acceptable. In the survey 88% of household consumers (87% online; 90% in-person); and 82% of business consumers said that the plan was either “acceptable” or “very acceptable”**Error! Reference source not found.**¹. Similarly, high levels of acceptability were observed in the qualitative research. In the Stage 1 research, all but one participant across the focus groups and cognitive interviews (45 participants in total) felt that National Grid’s proposals were acceptable.

¹ Note that the confidence limits or ‘error margins’ for these results are around +/- 3 percentage points for the overall household consumer sample and +/- 6 percentage points for the business consumer sample based on the sample sizes for the respective surveys.
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Figure 2.1: Overall Business Plan acceptability – gas transmission



Household pooled: n=1,270 (online: n=1,058; In-person n=212); Business n=163.

The Stage 3 focus groups asked participants whether they agreed with and understood why high levels of acceptability had been found in the preceding research stages. The majority felt that the acceptability results were reasonable, based on National Grid’s proposals. Indeed, participants were clear that this level of acceptability was well above any threshold needed to ensure the plan is ‘right’. Moreover, some held the view that it may not be possible to achieve higher levels of acceptability, especially as National Grid is a monopoly business that makes profits. The Stage 3 participants were also posed with the question if it would be more acceptable to keep the bills flat, but the consensus was that it would be less acceptable than the proposed plans.

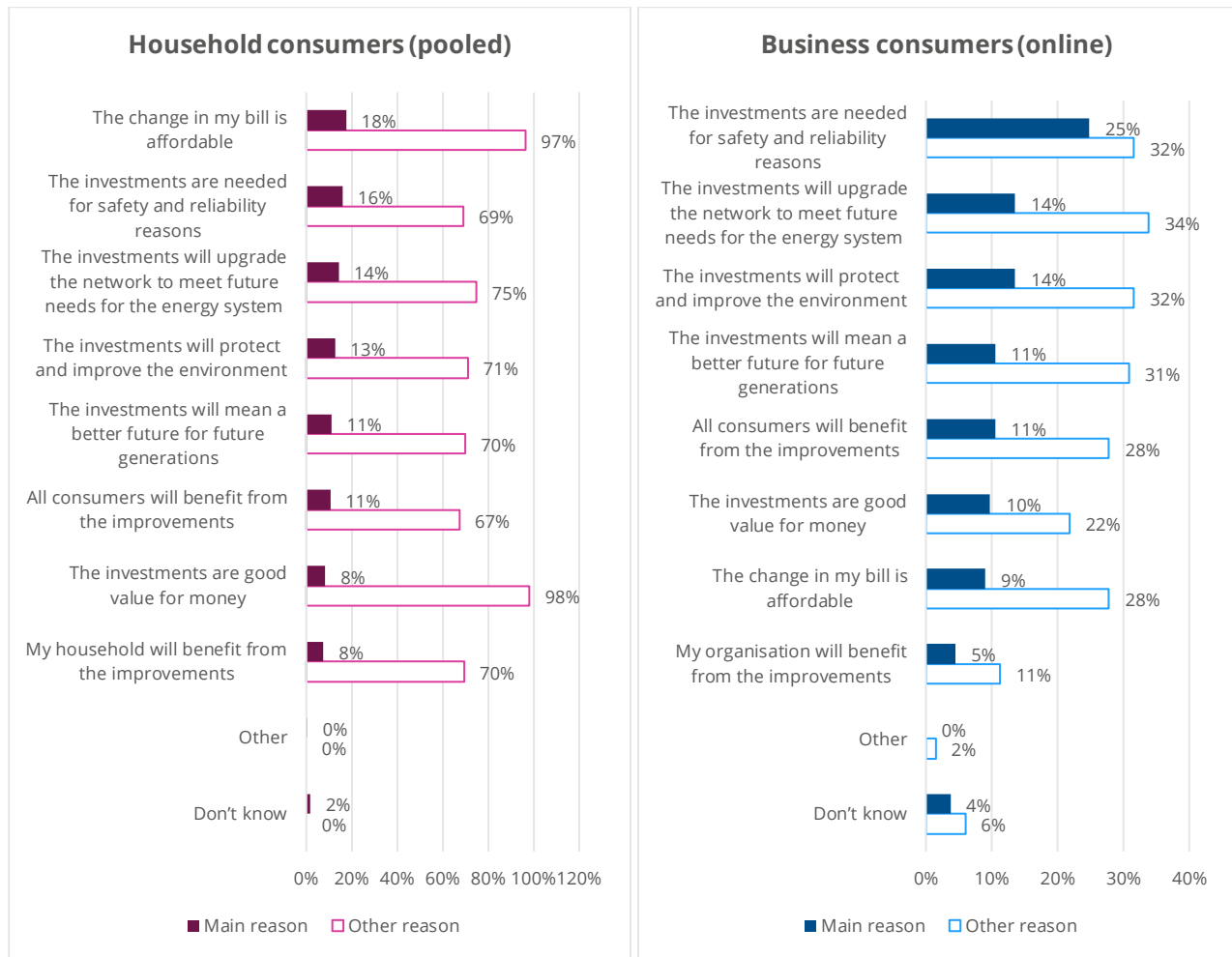
2.2 Reasons for acceptability of the Business Plan

A series of follow-up questions in the survey and discussion points in the qualitative research probed the reasons for consumers’ views on the acceptability of National Grid’s proposals, including the acceptable limit for bill impacts and other considerations that conditioned their responses.

2.2.1 Reasons for stating the GT Business Plan was acceptable

Survey respondents provided both their main reason for stating why the GT Business Plan was acceptable, plus any other reason(s) that were important in their response (Figure 2.2). For household consumers, a varied range of reasons were provided as the main motivation, including the affordability of the bill impact, agreement that the proposed investments were needed to ensure safety and reliability, protect the environment, meet future needs, or because of the overall benefits of the proposed investments to all consumers.

Figure 2.2: Reasons for acceptability of Business Plan – gas transmission



Household pooled (online + in-person): n=1,119; Business n=133. Only includes respondents that indicated that the ET Business plan was either “acceptable” or “very acceptable”.

Taking account of the full set of motivating factors for household consumers, however, shows that the key reasons for the acceptability of the plan are the affordability of the bill impact and associated view that the proposed investments represent value for money. These reasons were given by 97% and 98% of respondents, respectively, who stated that the ET Business Plan was acceptable.

The survey results are in line with the qualitative research findings. Stage 1 participants viewed the proposed additional bill impact as minimal, particularly when taking into account the investment needs to ensure the reliability of the gas transmission system for years to come, and a general view that it was preferable to be proactive now to maintain service levels rather than reactive to problems later on. In Stage 3 focus groups, a further view was that most consumers would not notice the proposed change to bill (even with inflation), since it was negligible and would be dwarfed by changes in other household bills.

For business consumers there was a more distinct view that the Business Plan proposals would ensure safety and reliability of the gas supply and address future needs. In turn this would be to the benefit of end users, especially in the longer term. This finding is consistent with significant proportions of business consumer respondents who indicated that their organisation’s day-to-day activities are either “very reliant” (20%) or “somewhat reliant” (43%) on gas supply. Understandably then, reliability is a key concern for

business consumers and therefore has greater prominence as a motivating factor compared to household consumers.

2.2.2 Reasons for stating the GT Business Plan was unacceptable

Two main reasons were apparent for the small proportion of survey respondents (7% overall; a total of 87 household respondents) who stated that the GT Business Plan was either “unacceptable” or “very unacceptable”. For some (22%; 19 respondents), the main issue was an objection to paying a higher bill irrespective of the investments that were proposed – an additional 30% (26 respondents) indicated that this was a secondary reason. A further 20% (17 respondents) stated that energy companies make too much profit. In combination, these responses reflect a form of protest response, which is based more on principles than the actual plan and investments proposed by National Grid. A smaller proportion of respondents highlighted affordability issues (15%; 13 respondents). This was evenly split between concern over the affordability of the transmission bill impact and concern that other parts of the energy bill would also increase. The latter finding is consistent with the Stage 3 qualitative research, where participants suggested that affordability of the overall energy bill would likely be the primary reason why consumers might find the Business Plan proposals unacceptable. In particular there was recognition that for some consumers, even a £0.54 on the annual bill may not be affordable.

Overall conclusions are harder to draw for business consumers. This is because of the small number of survey respondents that stated that the GT Business Plan unacceptable (13% overall; a total of 22 respondents). The range of responses provided, though, were similar to the households in terms of objections to paying higher bills, the view that investments should be made with current bill amounts, and affordability concerns.

2.2.3 Wider views on affordability

The issue of affordability was explored further with household consumers in both the quantitative and qualitative research stages. Whilst the majority felt the GT bill impact was affordable to them and therefore the proposals were acceptable, more nuanced views were apparent.

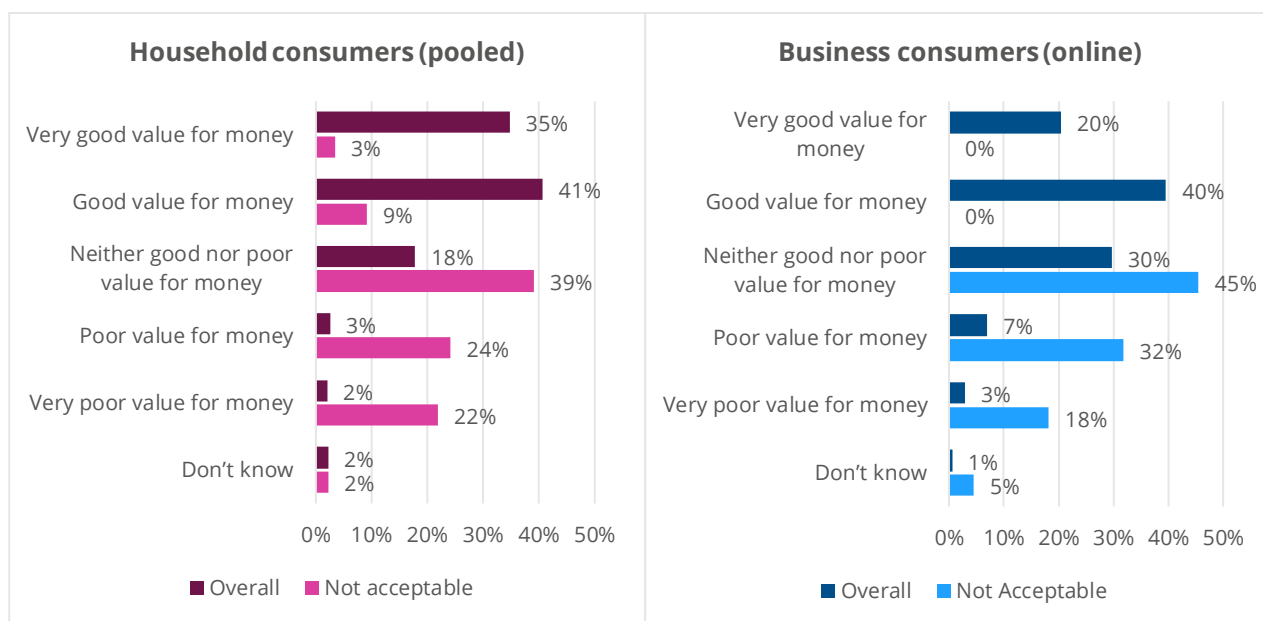
The Stage 3 qualitative research highlighted how consumers made the distinction between the affordability and value for money considerations of the Business Plan. Participants were clear that affordability was concerned with the ability to pay given household income and other expenses. In contrast, value for money was concerned with fair prices and service reliability. In this context there were mixed opinions on the value for money for the overall energy bill. In general, the qualitative research found that household consumers did not consider overall energy bills to be value for money. The survey results, though, showed that a large proportion of consumers felt their overall bill did represent either “good” or “very good” value for money (44% households (pooled); 50% business consumers). Smaller proportions explicitly stated that overall energy bills were “poor” or “very poor” value for money (20% households (pooled); 13% business)

Much greater consistency was observed with respect to the gas transmission component of the bill, particularly in the qualitative research (Stages 1 and 3). The overall consensus – following an explanation of the role of transmission operators - was that it represented good value for money. It is also evident that additional bill impact of the GT Business Plan does not substantially alter this view. In the survey 75% of household and 60% of business respondents also viewed the additional bill increase – when taking into

account the associated investments - value for money. Smaller proportions explicitly stated that overall energy bills were “poor” or “very poor” value for money (5% households (pooled); 10% business)

Overall, the conclusion is that if the consumer does not feel the proposed investments in the GT Business Plan are value for money, they are unlikely to find the Business Plan acceptable. This is borne out in the survey results, which show a clear pattern of consumers who stated the GT Business Plan was not acceptable were also more likely to find it to be either poor value for money or be indifferent (neither good or poor value for money) (Figure 2.3). The observed pattern in responses also follows through to results concerning the acceptability of individual investment areas (see Section 3).

Figure 2.3: Value for money of Business Plan proposals – overall sample vs. ‘not acceptable’



Household pooled (online + in-person): Overall n=1,270; Not acceptable n=87. Business: Overall n=172; Not acceptable n=22.

2.2.4 Limits of acceptable bill impacts

Whilst both the survey results and qualitative research findings show a high level of consumer support for the GT Business Plan, it is evident that the acceptability of National Grid’s proposal is subject to limits and conditions. For instance:

- In the qualitative research (Stage 1) some participants recognised that whilst the plan was acceptable in absolute terms (i.e. +£0.54/year), a different perspective could be taken when viewed in relative terms (approx. a +6% increase on current transmission bill amount). For the most part, this recognition sharpened the view that National Grid’s proposals would not be acceptable if all parts of the energy bill were to increase by similar proportions.
- In line with this view, the majority of survey respondents (82% of household; 86% of business) indicated that they took their overall energy bill into account at least “a little” when deciding whether the GT Business Plan was acceptable. Hence the headline acceptability results need to be interpreted in the context of current overall energy bills, and not accounting for significant changes in other components

of the bill. Indeed, only 28% of household and 26% of business consumers indicated that the National Grid's proposals were acceptable irrespective of changes in the rest of the energy bill, while notable proportions (12% household and 8% business) indicated that the plan would not be acceptable if other parts of the bill increased.

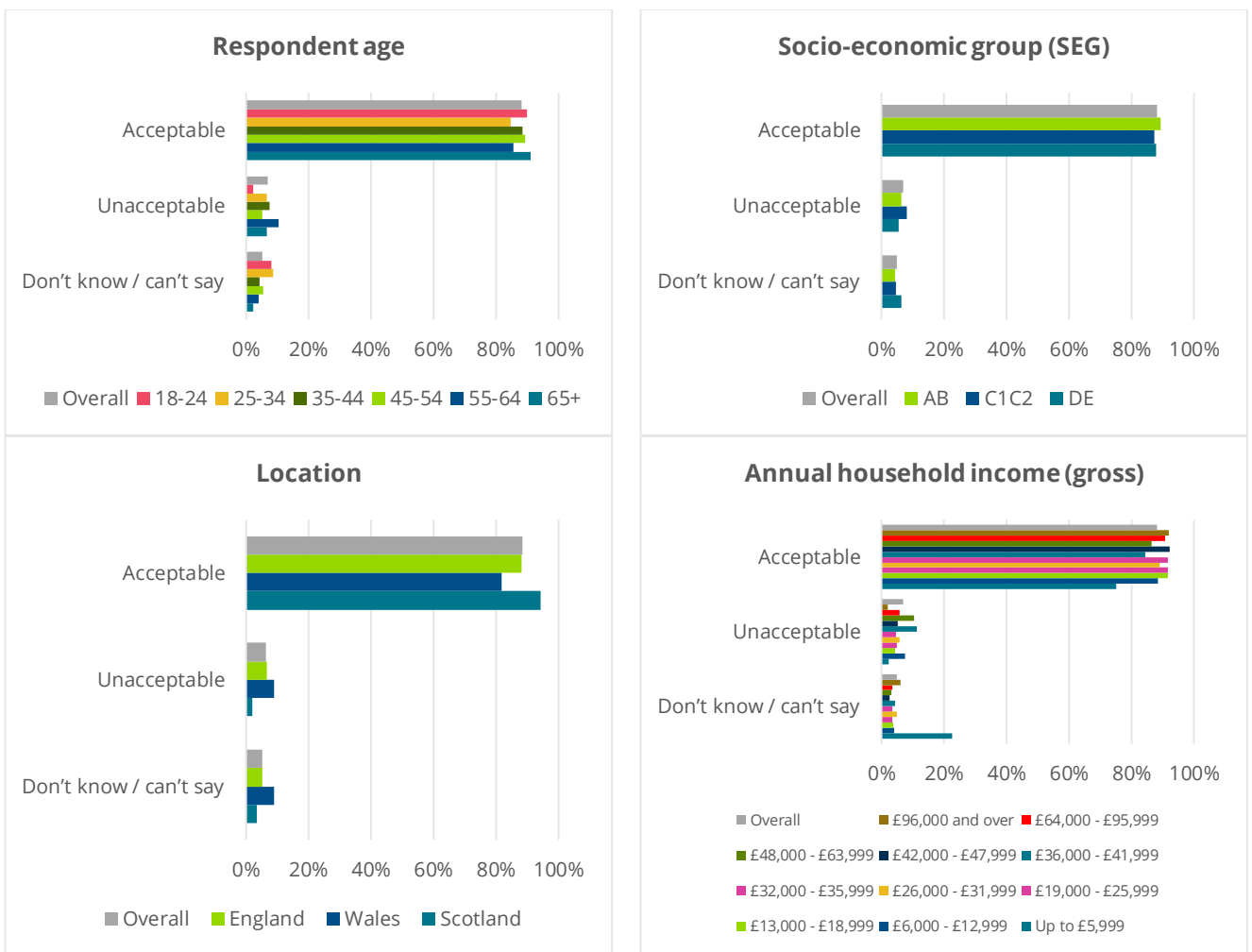
- Accordingly, most survey respondents (56% household and 62% business) were clear that the GT transmission plan was acceptable up to a certain point in terms of the bill impact. For household consumers, the limit of acceptability or 'switching point' for the additional bill impact for the GT bill amount was approximately +£11 per year (n=710) on top of the current amount (£9 per year). This is based on the (mean) average maximum acceptable change in bill for household consumers; the median result is lower at +£3 per year. National Grid's proposal (+£0.54 per year) is within these thresholds. For business consumers, the average maximum acceptable change in bill was +7 percentage points (on current amount paid), with a median of +2 percentage points (n=81). From the perspective of business consumers, the proposed change (approx. 6%) is therefore closer to the limit compared to household consumers.
- The limit in terms of the overall energy bill for household consumers was around +£23 per year (mean average) – i.e. roughly +£2 per month – with a median of +£10 per year (n=470). Hence the 'headroom' around the acceptability of the GT Business Plan is about a 2.1% increase in the overall household energy bill – assuming an annual dual fuel bill of approx. £1,100 per year.
- Broader considerations were also heard in the Stage 3 focus groups, where 'conditions' of the acceptability of the GT Business Plan included that bills need to be efficient, National Grid should not take financial risks, and that returns to executives and shareholders should be fair and reasonable. Some participants even challenged whether National Grid would be incentivised to put in higher costs than it would need – in anticipation of a regulator giving them less.

Overall, a coherent set of messages came through the survey and qualitative research, that sets the high levels of acceptability for the GT Business Plan in an appropriate context. Specifically, that overall energy bills do not commensurately increase, that National Grid's investments are cost efficient, and that top-level salaries and dividends are not excessive.

2.3 Results by consumer segments

The high level of acceptability of the GT Business Plan suggests that there is likely to be limited variation in consumer views across different segments, such as socio-economic group (SEG)², age cohort, location, etc. A series of such comparisons are shown in Figure 2.4, which show the extent of variation in the level of acceptability for different types of socio-demographic breakdowns of the household consumer survey responses³.

Figure 2.4: Overall Business Plan acceptability by household consumer segments – gas transmission



² Market Research Society definitions are: A = professionals, very senior managers, etc.; B = middle management in large organisations, top management or owners of small businesses, educational and service establishments; C1 = junior management, owners of small establishments, and all others in non-manual positions; C2 = skilled manual labourers; D = semi-skilled and unskilled manual workers; E = state pensioners, casual and lowest grade workers, unemployed with state benefits only

³ Note also that these comparisons do not control for other potential explanatory factors, and the reported results are subject to certain confidence limits or error margins based on the number of observations for each consumer sub-group. These are up to around +/- 8 percentage points for each sub-group.

For the most part, the observed differences between different consumer segments are not statistically significant. The main patterns in the results are:

- Respondent age: there is very limited variation in the level of acceptability of the GT Business Plan for these segments (“acceptability” range = 85% to 91%);
- Location: consumers in Wales (“acceptability” = 82%) were observed to have a lower level of overall acceptability for the GT Business Plan compared to Scotland and England. Note there was no noticeable difference in the acceptability in urban versus rural consumers.
- Annual household income: consumers with the lowest household income (less than £6k per year) have a notably lower level of overall acceptability for the Business Plan (“acceptability” = 75%), but there is not a corresponding increase in the proportion of respondents stating that the plan is not acceptable (“unacceptable” = 2%). Instead there is a higher proportion that stated, “don’t know/can’t say” (23%). Regardless, this finding aligns with the view that affordability of the bill impact is the principal consideration for household consumers. It is not unreasonable that the lowest income consumers could be uncertain as to the implications for their household budgets and the potential for overall energy bills to change too.

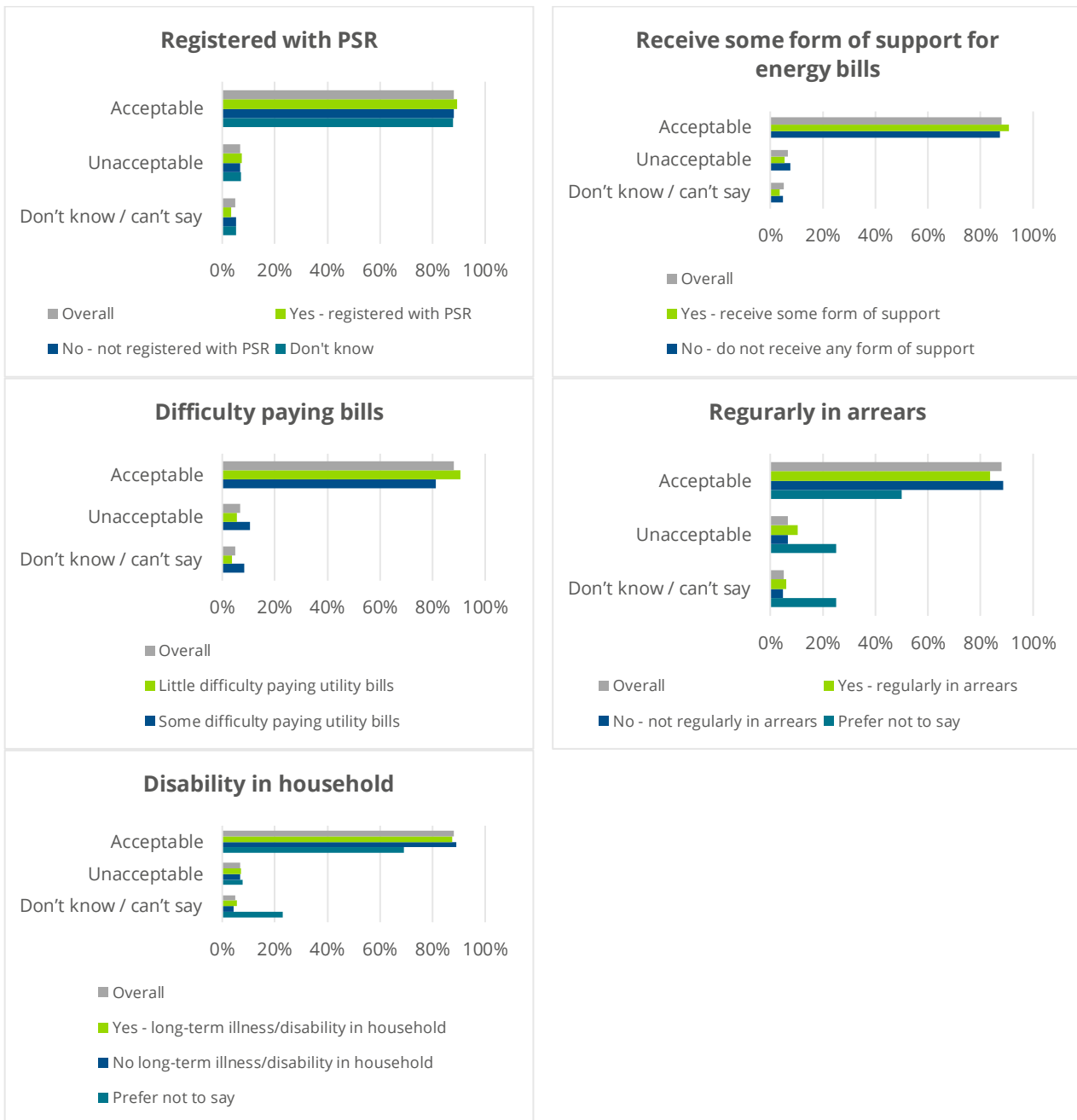
Figure 2.5 shows breakdowns of the acceptability results by whether a respondent reported that their household: (a) is on Priority Services Register (PSR); (b) had received some form of support for paying energy bills (e.g. winter fuel payments); (c) encountered difficulties paying utility bills; (d) was regularly in arrears; and/or (e) whether any members have a long term illness or disability. The main observations are:

- Registered with PSR and/or receive some form of support for energy bills: no clear difference in level of acceptability for the GT Business Plan compared to the overall sample.
- Difficulty paying bills: consumers who stated that they encountered difficulty paying their utility bills (“acceptability” = 81%) had a lower level of overall acceptability for the plan compared to those who did not⁴.
- Regularly in arrears: consumers who stated their household was regularly in arrears with bill payments (“acceptability” = 84%) had a lower level of overall acceptability for the plan compared to those who did not⁵.
- Disability in the household: consumers who stated that a household member had a long-term illness or disability had similar levels of overall acceptability for the plan compared to those who did not.

⁴ Given the sample size – ‘Some difficulty paying bills’ (n= 324; error margin approximately +/- 4 percentage points) - it is not possible to conclude that the observed difference is statistically significant. This is because the result overlaps the error margin for the main sample result (87%; +/- 3 percentage points). Nevertheless, it can be interpreted as indicative that the GT plan has a lower level of acceptability among household consumers who stated they struggled with paying bills (noting, though, that the level of support is still relatively high at over 8 in 10 consumers in this group finding National Grid’s proposal acceptable).

⁵ Similarly, the respective error margins overlap, and it is not possible to conclude that this result is statistically different from the main sample result. (Yes – regularly in arrears; n=67; error margin approximately +/- 8 percentage points).

Figure 2.5: Overall Business Plan acceptability by vulnerable circumstances indicators – gas transmission



Household pooled (online + in-person): n=1,270

These findings help to reinforce the preceding observations that whilst for most National Grid’s proposals are affordable because of the minimal additional bill impact (Section 2.2.3), a proportion of consumers do struggle with paying bills. That even a marginal increase in the transmission bill is seen is unacceptable likely ties in with the concerns raised that other aspects of energy bills will increase. If these are in similar relative terms (approx. 4% increase) there could be significant pressure on household budgets. In further follow-up questions in the survey, around 25% of household respondents were concerned about difficulty paying bills in the future⁶.

⁶ This is based on responses to the question “If the bill that you pay for electricity transmission was to increase... how easy or difficult would it be for you to pay your overall energy bill? 20% of household respondents stated, “I would sometimes find it difficult to pay my future energy bill”; 5% stated “I would always find it difficult paying my future energy bill”.

3. Acceptability of Proposed Investments

Key messages

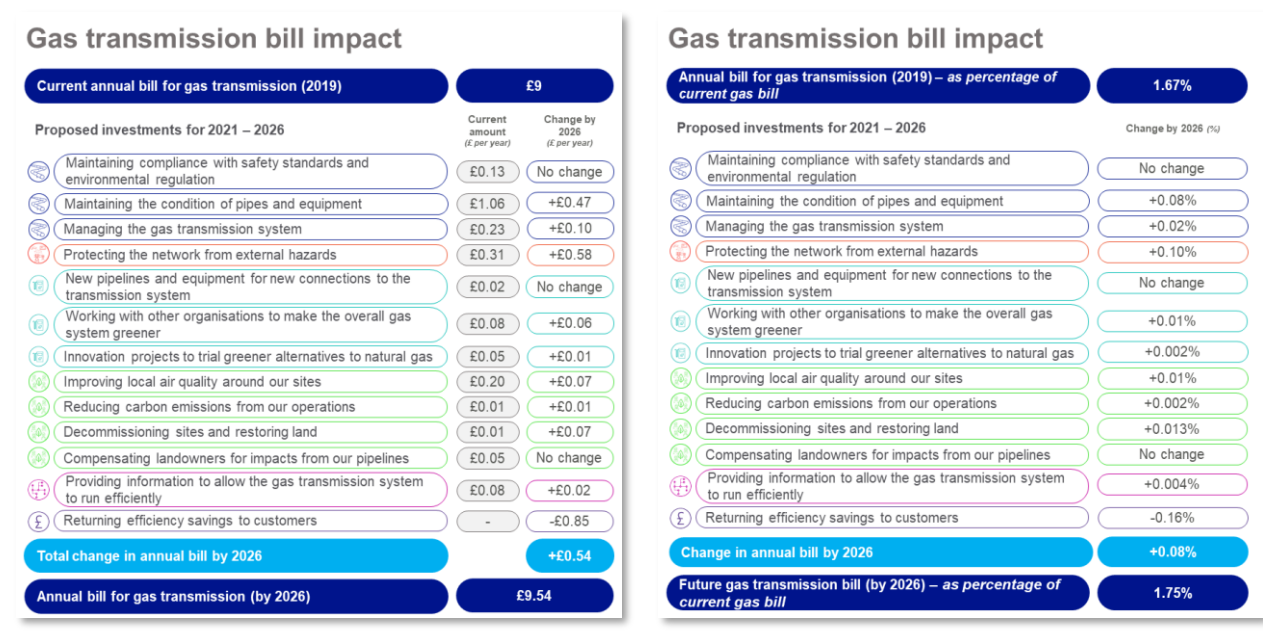
- Consumers were presented with details of the proposed investments featured in the gas transmission Business Plan and asked to state whether they supported the proposal and the associated bill impact.
- The majority of household and business consumers (over 50%) expressed their support for the proposed investments and the individual bill impacts were also acceptable to consumers. However, a relatively significant proportion (around 20 – 35%) stated their support for the proposed investments in principle but consistently challenged the bill impact, either due to concerns regarding the affordability of energy bills or their value for money.
- Consumers viewed investments that maintain the safety and reliability of the gas transmission system the main priority for National Grid. There was less distinction in the ranking of other investment areas. However, given the overall levels of support for each investment, the priority ranking across the range of investment areas is of secondary relevance.
- Consumers were also very supportive of the efficiency savings and these helped offset the concerns of some that the bill impact of a particular investment might be too high. It was evident also that consumers expected National Grid to meet efficiency challenges, although not to the extent where this would compromise current or future service or reliability.
- Furthermore, there was support for National Grid reinvesting efficiency savings if it meant that more could be done in the Business Plan to address future investment needs. The investment areas that consumers had the strongest preferences for higher levels of investment were ‘maintaining compliance with safety standards and environmental regulation’, ‘innovation projects to trial greener alternatives to natural gas’, and ‘reducing carbon emissions from operations’.

This section summarises consumers’ views on the acceptability of a range of investments proposed in the GT Business Plan. As part of the explanatory information presented in the survey and qualitative research, consumers were given a breakdown of the bill impact of the plan and the ‘line-by-line’ investments (Box 3.1). Further information was then provided about the overall investment area along with more specific descriptions of the individual investments (see Sections 3.2 – 3.7).

The high-level investment areas in the GT Business Plan were described as:

- Ensuring a safe and reliable network;
- Protecting the network from external hazards;
- Planning the energy system of the future;
- Supporting communities and improving the local environment;
- Providing information to allow the gas transmission system to run efficiently; and
- Returning efficiency savings to consumers.

Box 3.1: Gas Transmission Business Plan bill impact breakdown



Household consumer version

Business consumer version

As with the summary shown to consumers (Box 2.1), the bill impact breakdown was presented in monetary terms for household consumers and percentage (%) change terms for business consumers (excluding the effect of inflation).

A total of 13 individual investments were presented within the six high-level areas. In the survey, respondents were asked in turn about the acceptability of each individual investment proposal (with the order rotated across respondents to avoid potential sequencing biases). The qualitative research featured a broader discussion about the rationale and requirement for action by National Grid within the higher-level investment areas.

3.1 Overview of findings

There were high levels of acceptability for the individual investment proposals in the GT Business Plan, with around 90% of respondents in both the household and business consumer survey expressing their support for a given investment proposal. Respondents were able to state whether: (a) they agreed with the proposed investment and its specific bill impact; (b) they agreed with the proposed investment but not the bill impact; (c) they did not agree with the proposed investment; or (d) don't know. The purpose of this approach was to obtain a more varied pattern of responses by giving consumers the opportunity to state their support for the investment itself but challenge the cost-efficiency in delivering it.

The pattern of results across the 13 investment proposals was fairly consistent:

- The majority of household and business consumers expressed their support for the proposed investments and indicated that the individual bill impacts were acceptable (57% - 76% of household

respondents across the 13 proposed investments; 49% - 70% of business respondents);

- A smaller, but consistent proportion of consumers stated their support for the investment proposals, but challenged the individual bill impacts (16% - 34% household respondents across the 13 proposed investments; 19% - 38% of business respondents);
- There was a slightly higher level of “don’t know” responses from consumers (5% - 7% among household respondents; 8% - 12% of business respondents) compared to the overall acceptability of the GT Business Plan (Section 2.1), although this is a reasonable answer if a respondent did not feel well positioned to make a judgement on the need for a particular investment; and
- Very few consumers outright rejected the proposed investments and the need for action by National Grid (1% - 3% of household respondents; 0% - 4% of business respondents).

Analysis of the survey responses of consumers who accepted the need for the investment but challenged the efficiency of bill impact revealed two distinct profiles (Table 3.1).

Table 3.1: Profile of household consumers that stated individual investment bill impacts were not acceptable – gas transmission

| | Group 1: Affordability concerns | Group 2: Attitudinal factors |
|---|--|---|
| Respondent profile – compared to overall sample | <p>Consumers who were more likely to:</p> <ul style="list-style-type: none"> • Pay their energy bills using a prepayment card/meter • Be registered with their energy supplier’s Priority Services Register • Not be in employment (i.e. unemployed, a student, retired, or unable to work) • Be in low income group, with gross annual household income less than £13k • Be in either the youngest age group (18-24) or the oldest (65+) • Receive some form of financial support for energy bills (e.g. cold weather payment) • Report some difficulty paying household bills and regularly being in arrears with household energy bills • Pay a higher energy bill than average | <p>Consumers who were more likely to:</p> <ul style="list-style-type: none"> • Be in a higher SEG and gross annual household income greater than UK median (approx. £32k) • Be employed with no dependents (children or elderly) • State that their overall energy bill did not represent value for money • State that National Grid’s proposals for gas transmission did not represent value for money |
| Percentage of consumers | Around 10% of overall sample (roughly 1/3 of respondents that stated individual investment bill impacts were not acceptable) | Around 20% of overall sample (roughly 2/3 of respondents that stated individual investment bill impacts were not acceptable) |

The responses from the first profile of consumers (about 1 in 10 consumers) were primarily driven by affordability considerations. These respondents were more likely to receive some form of support for energy bills, be a prepayment card/meter customer, and indicate they encountered difficulty paying household bills. Hence whilst they supported National Grid’s proposals in principle, their main concern was the change in bill and impact on their household budget.

The second profile of consumers (about 2 in 10) tended to hold the view that current service levels were good enough and correspondingly viewed the proposed investments and overall energy bills as representing less value for money (compared to the overall sample results). This group tended to have

higher than average household income. The affordability of the bill impacts was not their key concern, but rather they questioned the need for the investments at the present time.

3.2 Ensuring a safe and reliable network

This topic area presented consumers with investments for inspecting, maintaining and replacing existing equipment to ensure reliable service and that legal and regulatory obligations for safety and protecting the environment continue to be met (Figure 3.1). Three specific investment requirements were set out (Figure 3.2).

Figure 3.1: Investment area description – safe and reliable network

Ensuring a safe and reliable network

To make sure the transmission system is operating safely and in line with all regulations, our equipment is maintained in a healthy state and is replaced as it reaches the end of its life.

- Overall we manage the system to make sure the gas gets from where it arrives in the country to where it's eventually used.
- We check, repair and replace our gas pipelines and equipment. Our investments meet all legal requirements for health and safety, and the environment.
- Ultimately this protects against significant health and safety risks, and interruptions to gas supplies that can affect thousands of homes and business. Gas interruptions may still occur, but this will most likely be due to local distribution problems and not the transmission network that we operate.




Figure 3.2: Individual investment descriptions (household consumers)

Maintaining compliance with safety standards and environmental regulation

- Investments that are required to maintain zero harm on our sites and make sure we meet all environmental and climate change regulations.

| | |
|-----------------------|------------------|
| Current amount (2019) | £0.13 |
| Change by 2026 | No change |
| Total amount (2026) | £0.13 |

Maintaining the condition of pipes and equipment

- Investment to replace and refurbish the ageing equipment on the network.
- This means we will continue to keep the network safe and maintain the current level of reliability, meaning that the chance of a gas interruption affecting lots of people is very low.

| | |
|-----------------------|---------------|
| Current amount (2019) | 1.06 |
| Change by 2026 | +£0.47 |
| Total amount (2026) | £1.53 |

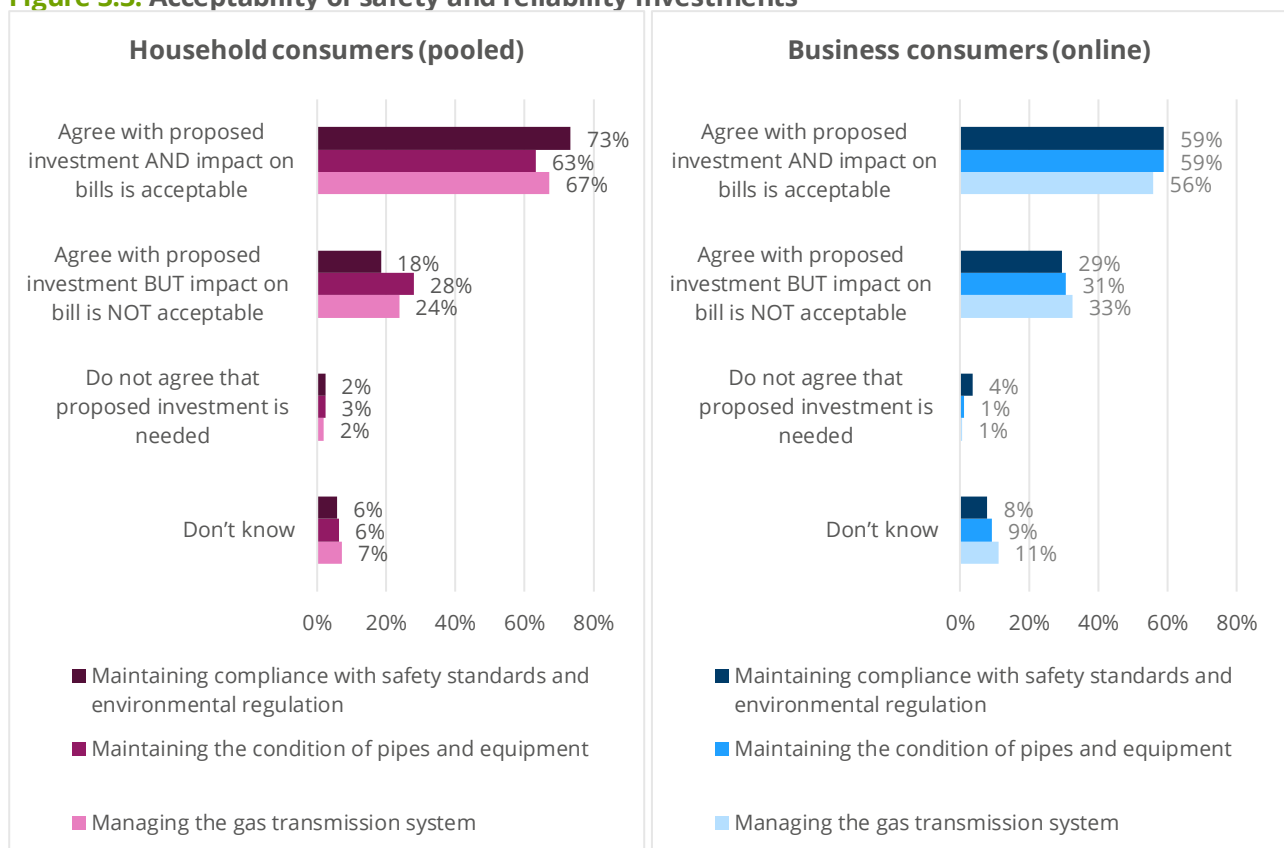
Managing the gas transmission system

- Investments that will make sure we can get gas on to the network, move it across the whole network, and make it available when it's needed.
- This is needed due to the changes in the use of natural gas across the country in the coming years.

| | |
|-----------------------|---------------|
| Current amount (2019) | £0.23 |
| Change by 2026 | +£0.10 |
| Total amount (2026) | £0.33 |

Safety and reliability were consistently considered to be the most important investment area for both household and business consumers. Overall, 90% of consumers indicated that they agreed with the set of proposed investments. As shown in Figure 3.3 this was split between the majority (63-73%) that indicated the investment proposals and their bill impacts were acceptable, and a smaller proportion (18-28%) that agreed with the investment need but not the bill impact. For business respondents, the majority (56-59%) also indicated both the proposal and bill impacts were acceptable, whilst a minority (29-33%) agreed with the investment need but not the bill impact. Fewer than 5% of both household and business respondents expressed the view that the investments were not needed.

Figure 3.3: Acceptability of safety and reliability investments



Household pooled (online + in-person): n=1,270. Business online: n=163

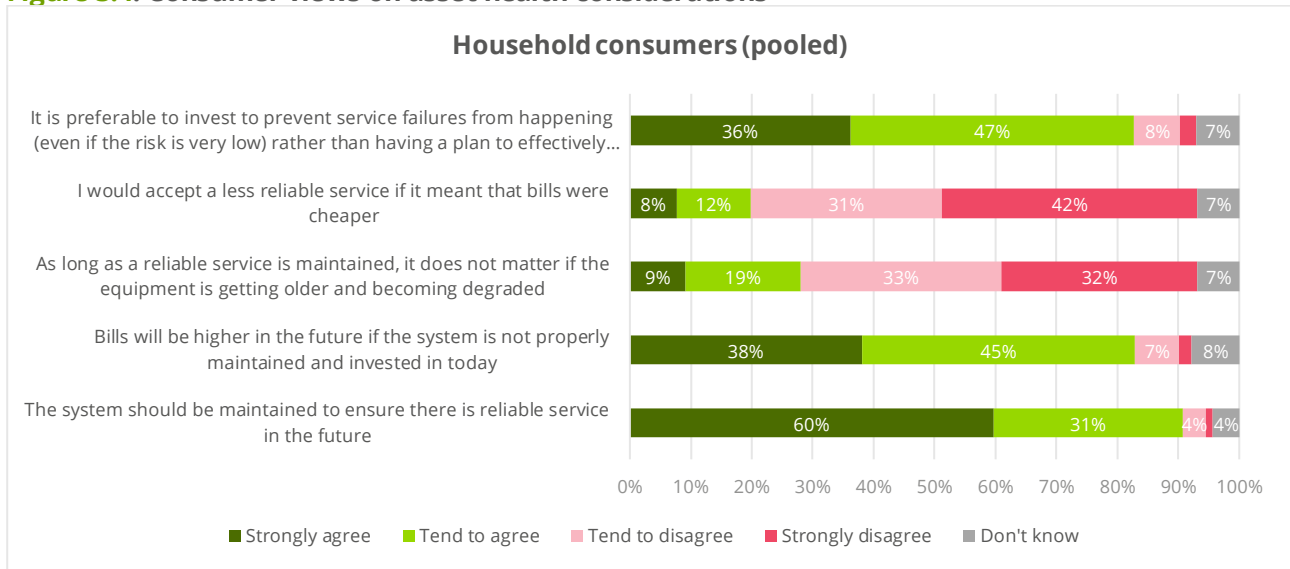
The most commonly cited factor by the small number of respondents disagreeing with the need for the investment was cost, particularly since ‘Maintaining the condition of pipes and equipment’ had – by a significant margin - the highest individual bill impact of all proposed investments in the GT Business Plan.

Among the consumers that indicated that the investment was acceptable, but the bill impact was not, approximately a third of respondents matched the ‘Group 1 – affordability concerns’ profile (Table 3.1). The remaining two thirds were reflective of the ‘Group 2 – attitudinal factors’ profile. Whilst the majority of these respondents stated the overall GT Business Plan was acceptable, they tended to place a higher priority on efficiency savings than safety and reliability investments.

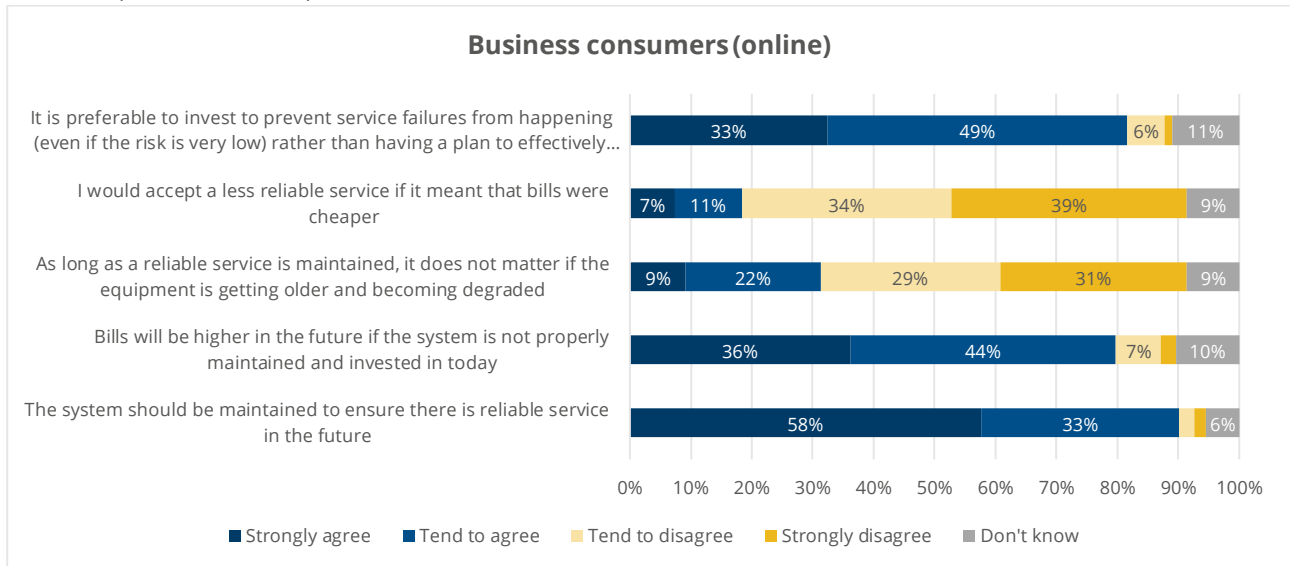
Broader views on asset health were also sought, with survey respondents asked to consider how much they agreed or disagreed with a set of attitudinal statements concerning trade-offs between investment

levels and reliability in the short and longer term (Figure 3.4). In all cases, the largest proportions of consumers agreed to statements that emphasised the need to ensure long-term reliability and disagreed with those that suggest a compromise between lower bills and lower reliability. That said, there was an observed tendency for respondents in the ‘Group 2 – attitudinal factors’ to disagree with the need for proactive investments that prevent interruptions to the gas supply from occurring instead of dealing with them if they occur.

Figure 3.4: Consumer views on asset health considerations



Household pooled (online + in-person): n=1,270



Business online: n=163

Overall, though, the overriding observation from the acceptability testing – particularly from the qualitative research – is that consumers are aware of the consequences of deteriorating reliability and support National Grid improving and maintaining their infrastructure for the long term. Participants indicated that they thought it was acceptable to pay the proposed (overall) bill impacts for investment in this area, with several commenting that a safe and reliable network is essential, and (at the time of testing) the additional impact on transmission bills was minimal, especially in the context of the overall energy bill.

3.3 Protecting the network from external hazards

This investment area presented consumers with resilience investments to protect gas pipelines, systems and employees against criminal activity and extreme weather (Figure 3.5). Only one specific investment need was set out (Figure 3.6).

Figure 3.5: Investment area description – external hazards

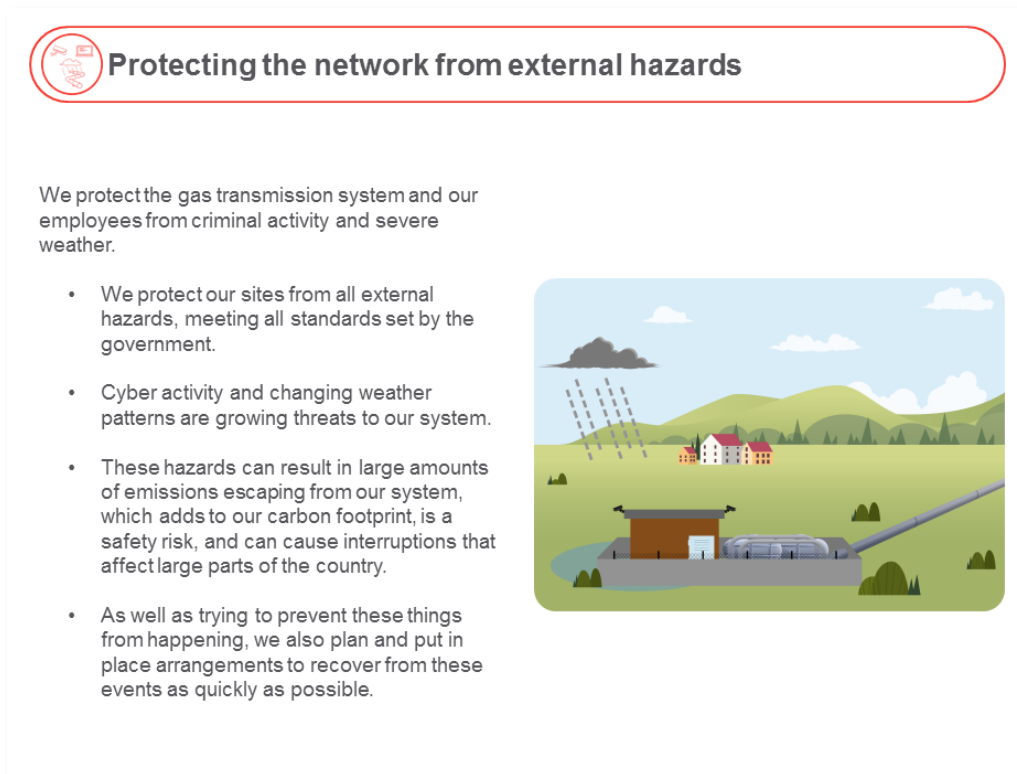
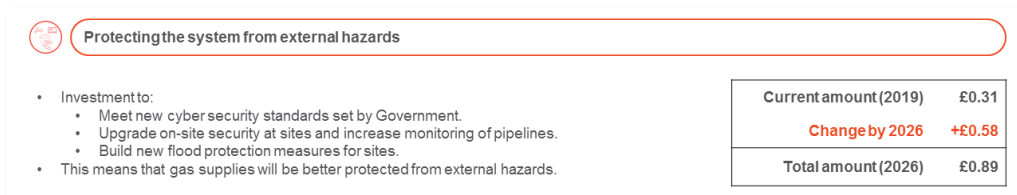


Figure 3.6: Individual investment description (household consumers)

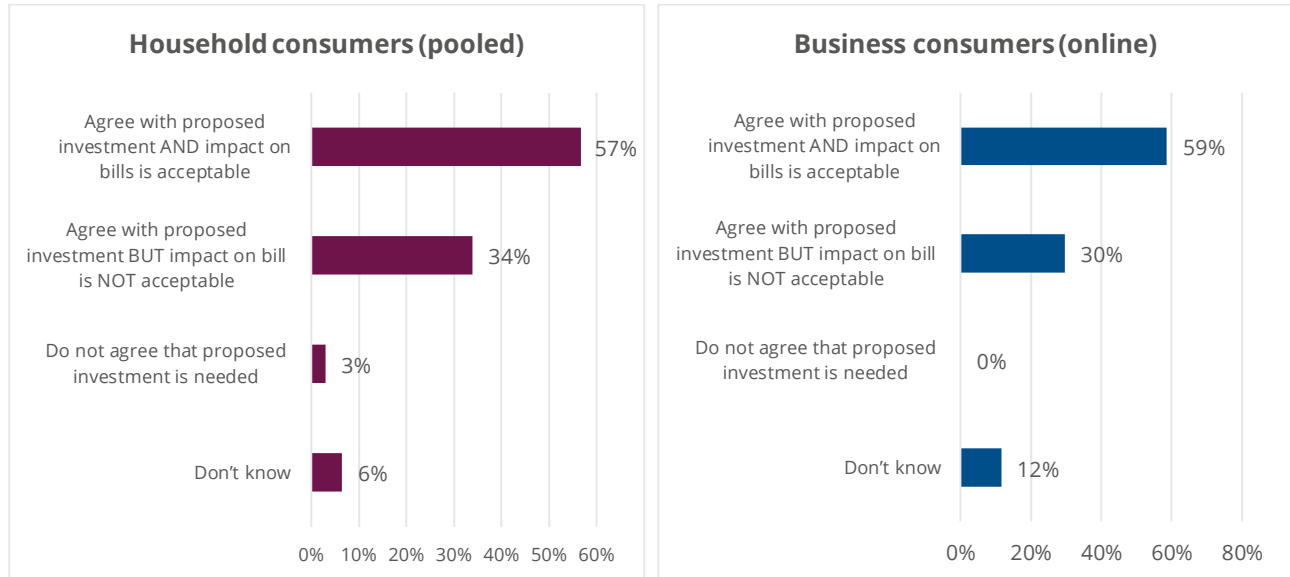


Typically, this investment area was ranked at the lower end in terms of the priority for National Grid, particularly among respondents who matched the ‘Group 2 – attitudinal factors’ profile (approx. 20% overall). In contrast, respondents in line with the ‘Group 1 – affordability concerns’ profile (approx. 10% overall) actually tended to place a higher level of importance on this investment area.

Nevertheless, overall, 89% of consumers indicated that they supported the proposed investments. As shown in Figure 3.7, the level of support among household consumers was split between 53% that viewed both the investment and additional bill impact as acceptable, and a further 36% that supported the investment but did not find the bill change acceptable. For business consumers, support was also split between the majority (57%) that indicated the proposal and bill impacts were acceptable, and a smaller

proportion (30%) that agreed with the investment need but not the bill impact. Again, only a small proportion of respondents (household 3%; business 0%) disagreed with the need for the investment.

Figure 3.7: Acceptability of external hazards investments



Household pooled (online + in-person): n=1,270. Business online: n=163

The lower level of importance placed on this investment area by survey respondents is to some extent contrary to the initial findings from the Stage 1 qualitative research. There, most participants welcomed this as a priority area for investment by National Grid and were reassured that the company was taking measures to safeguard its networks and systems. This discrepancy was highlighted in the Stage 3 qualitative research. The general view was that the extent of risks faced by National Grid might not be immediately apparent. For example, whilst cyber security was understood to be a growing problem for all types of organisations, few thought National Grid would be a high priority target – mainly because the headline hacking cases tended to involve consumers’ personal information which National Grid does not hold (e.g. compared to banks, other financial institutions, and retailers). But once discussed in more detail and the potential threats outlined, it was recognised that cyber security is critical and utility networks absolutely need to be protected.

Overall, the added insight from the qualitative research helps to illustrate the limitations on the depth of understanding for specific details of investments that can be expected in the survey setting. Largely though this has implications for importance or relative priority assigned to an investment, rather than the support or acceptability from consumers. It also demonstrates the usefulness of following-up the survey with the Stage 3 focus groups to test and ‘validate’ the research findings.

3.4 Planning the energy system of the future

This investment area presented consumers with investments that are intended to meet the changing needs for the gas transmission system in the future (Figure 3.8), including new connections and testing lower carbon technologies. Three specific investment needs were set out (Figure 3.9).

Figure 3.8: Investment area description – energy system of the future

Planning the energy system of the future

We ensure the gas system can meet the demands of the future.

- Extending the system to connect new gas sources to the system (e.g. biogas, liquefied natural gas).
- Upgrading the system to connect to new large gas customers, for example gas fuelled power stations (e.g. that convert from less efficient fuels such as coal to gas).
- Trialling new ways to reduce carbon emissions. This includes testing to see how our equipment (pipes and valves) cope with low carbon gas including hydrogen. Testing new technologies can help the government and stakeholders decide future energy policy around the gas industry.




Figure 3.9: Individual investment descriptions (household consumers)

New pipelines and equipment for new connections to the transmission system

- Investments to make sure that new sources of gas supply can connect to the network in the coming years.

| | |
|-----------------------|------------------|
| Current amount (2019) | £0.02 |
| Change by 2026 | No change |
| Total amount (2026) | £0.02 |

Working with other organisations to make the overall gas system greener

- Working with all companies in the gas system (across production/imports, distribution and supply) to phase-in lower carbon and more environmentally friendly technologies.

| | |
|-----------------------|---------------|
| Current amount (2019) | £0.08 |
| Change by 2026 | +£0.06 |
| Total amount (2026) | £0.14 |

Innovation projects to trial greener alternatives to natural gas

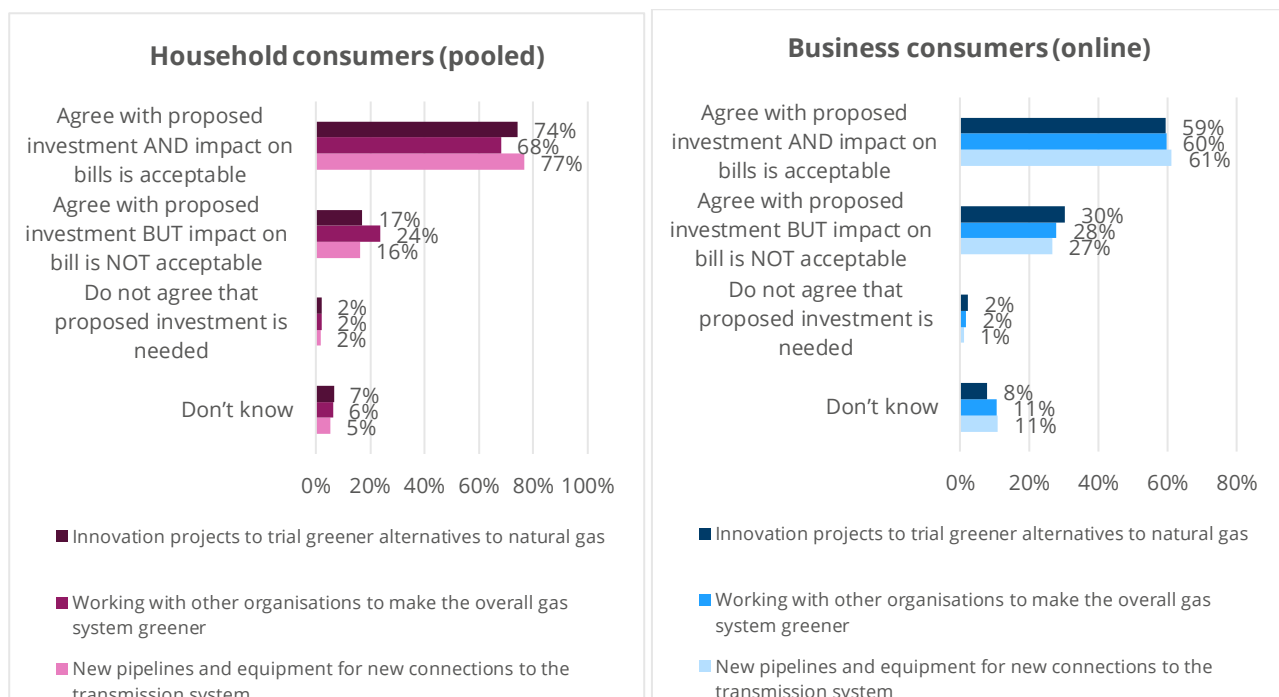
- Investments in projects to test the use of new (lower carbon) technologies, such as biogases and hydrogen, which would be 'blended' (mixed) with the current natural gas that is used.
- These technologies are in their early stages and we will be testing to see how well our equipment operates under different alternatives to better understand which perform best.

| | |
|-----------------------|---------------|
| Current amount (2019) | £0.05 |
| Change by 2026 | +£0.01 |
| Total amount (2026) | £0.06 |

For the most part, these investments were viewed as a high priority area for National Grid. In the Stage 3 qualitative research there was concern from participants that demand for energy is growing and this will put further strain on resources and energy security in the future. Whilst the current level of resilience and reliability was understood to be high - and this needs to be maintained – there was an understanding that these investments would help to ensure secure energy supplies in the future.

In the survey around 90% of household and business consumers indicated that they agreed with the proposed investments. As shown in Figure 3.10, for household consumers this was split into 68% - 77% of respondents stating that the investments and their individual bill impacts were acceptable, and a further 16% - 24% supporting the investments but not the bill impacts. For business consumers, this was split into the majority (59% - 61%) of respondents stating that both the investment and bill impacts were acceptable, a smaller portion (27% -30%) supporting the investments but not the bill impacts.

Figure 3.10: Acceptability of future energy system investments



Household pooled (online + in-person): n=1,270. Business online: n=163


Across each individual proposal, only 1- 2% of household and business respondents stated that the investment was not needed. Reasons for these responses included views that the UK should be following policies that reduced gas consumption and promoted greener energy sources (including concerns about ‘fracking’), rather than building new pipelines. Other reasons include the impacts on bill and that National Grid should be paying for these investments themselves.

For consumers that indicated that the investment was acceptable, but the bill impact was not, there was a larger proportion of ‘Group 1 – affordability concern’ profiles compared to other investment areas (roughly 2/5 rather than 1/3). The ‘Group 2 – attitudinal factors’ profile still though represented the majority of these responses (3/5) and they tended to view these investments as lower priority (although not the lowest priority).

3.5 Improving the environment and supporting local communities

Consumers were presented with a variety of investments under the general theme of continuing to protect and help improve the environment and supporting the local communities (Figure 3.11). Four specific investment needs were described (Figure 3.12).

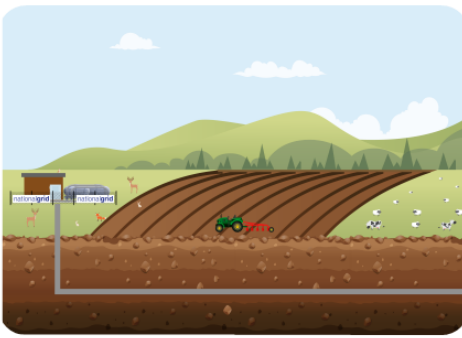
Figure 3.11: Investment area description – environment and communities



Improving the environment and supporting local communities

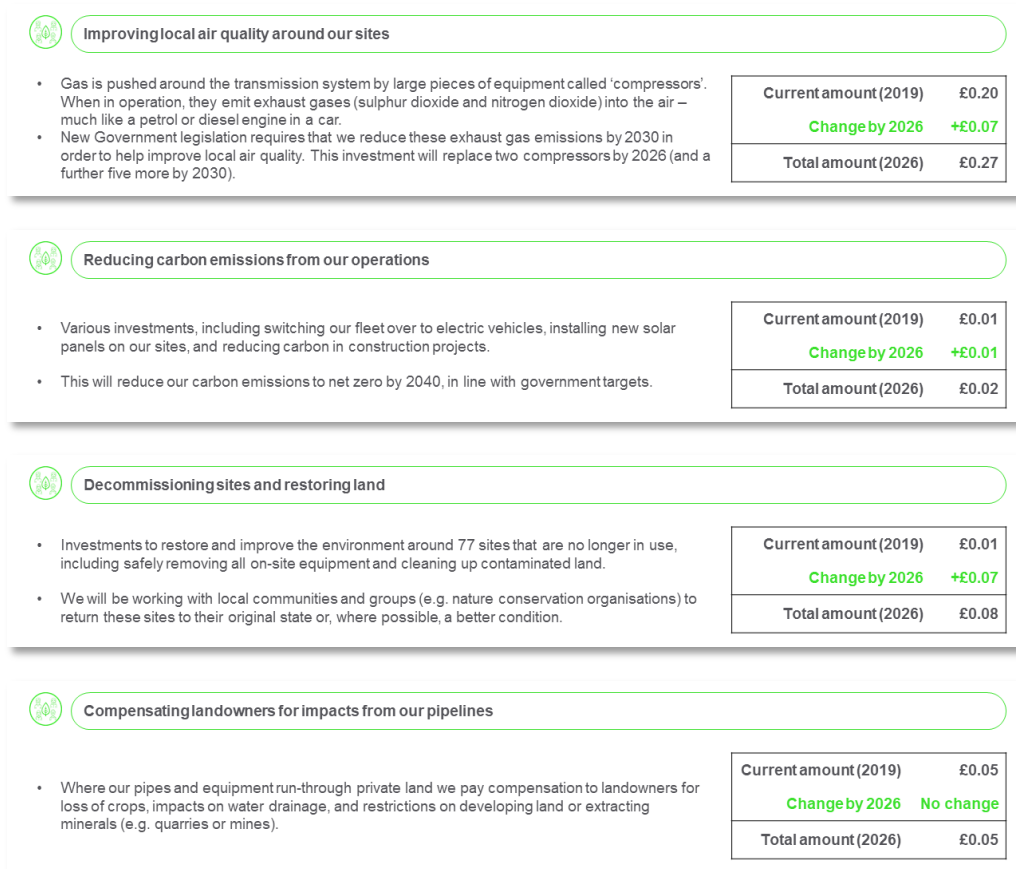
We invest to support communities and protect the environment.

- Improving wildlife in and around our sites - including introducing wildflower meadows, introducing animals to graze or manage the local woodland.
- Specialist equipment used to push gas through the pipes to where it's needed emits carbon and other pollutants and can cause noise for local communities. We are investing in cleaner, less disruptive equipment.
- Reducing our own carbon impact, for example by changing our vehicle fleet to low/zero emissions.
- Responsibly decommissioning equipment and sites that are no longer needed.
- Minimising damage and disruption from our pipelines that pass through farmland and the countryside.



Overall contrasting views were observed between the survey responses and qualitative research in terms of the priority for these investments. In the survey, environment and communities tended to be assigned a low priority (usually ranked close to the bottom by respondents). Yet, in the qualitative research it received greater levels of attention by participants. For instance, in the Stage 1 qualitative research the general view was that, particularly ‘environment’ investments, were almost as important as safety and reliability for National Grid. Indeed, a number of the participants felt passionately about the environment and were very supportive of National Grid working to improve it. Similar views were also heard in the Stage 3 research, including suggestions that some consumers would be happy to forfeit the return of efficiency savings if they were channelled into improved environmental outcomes.

Figure 3.12: Individual investment descriptions (household consumers) – environment and communities



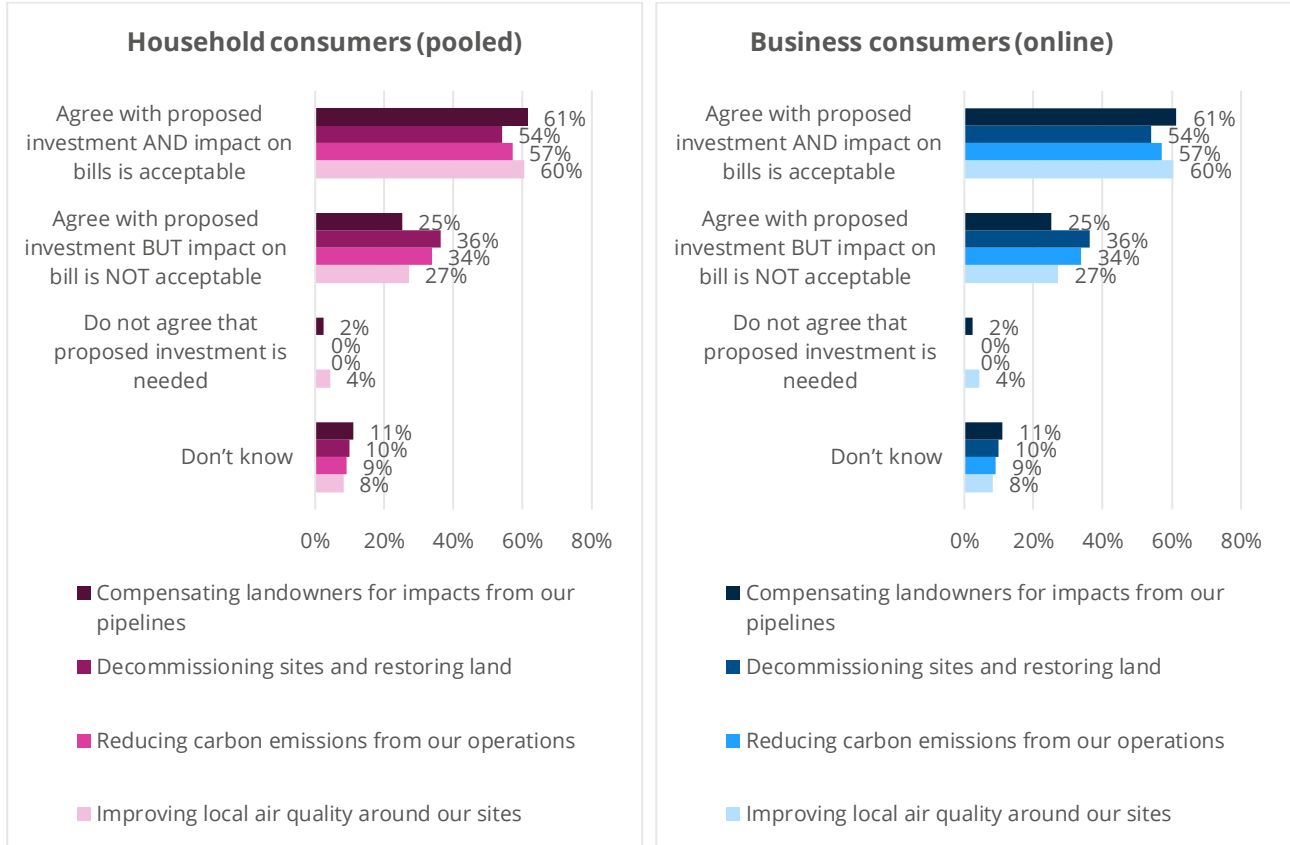
In part, the differing views may be a reflection of the general value attached to the ‘environment’ *per se* – which tended to underlie the qualitative research discussion – versus the specific investments set out in the GT Business Plan, which potentially are not as far reaching as consumers would prefer. Indeed, supplemental responses show that the highest level of support would be for more investment in further reducing carbon emissions from operations (around 20% respondents in total).

In addition, the survey responses may also reflect the effect of combining local community outcomes and environment investments under one topic area. Certainly, lower priority was assigned to local community investments in the qualitative research, since these were seen as somewhat targeted in scope and therefore having a small number of beneficiaries – in contrast to reducing carbon emissions, for example. Added to this, there was recognition among participants in both the Stage 1 and Stage 3 research that environmental benefits would also be delivered through the other investment areas, including safety and reliability, and the future energy systems.

As with other investment areas, a lower priority in the survey responses did not, though, equate to lower levels of consumer support for the proposed investments. Overall, 91% - 93% of household consumers and 87% - 91% of business consumers indicated that they agree with the proposed investments (Figure 3.13). The pattern of results is consistent with other investment areas, with around 54% - 61% stating that both the individual investments and impacts on bills were acceptable, and between 25% - 36% stated their support for the proposed investments but not the associated bill impacts. For business consumers, this was split into the majority (54% - 61%) of respondents stating that both the investment and bill impacts

were acceptable, a smaller portion (27% -30%) supporting the investments but not the bill impacts. In each case, less than 4% of respondents stated that the investment was not needed.

Figure 3.13: Acceptability environment and communities investments



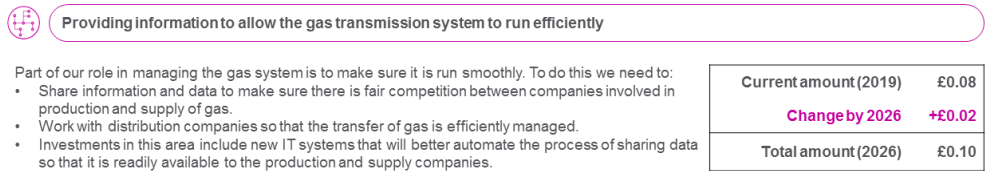
Household pooled (online + in-person): n=1,270. Business online: n=163

Among the consumers that indicated that the investment was acceptable, but the bill impact was not, the environment and local community investments tended to be given the lowest priority by respondents matching the 'Group 1 - affordability concerns' profile. Indeed, in their overall responses on the acceptability of the business, these consumers were less likely to give the reason that the investments are needed to 'protect and improve the environment (Figure 2.2). This is consistent with the higher weight these consumers placed on affordability of bills and aspects such as efficiency savings in terms of National Grid's priorities.

3.6 Information provision

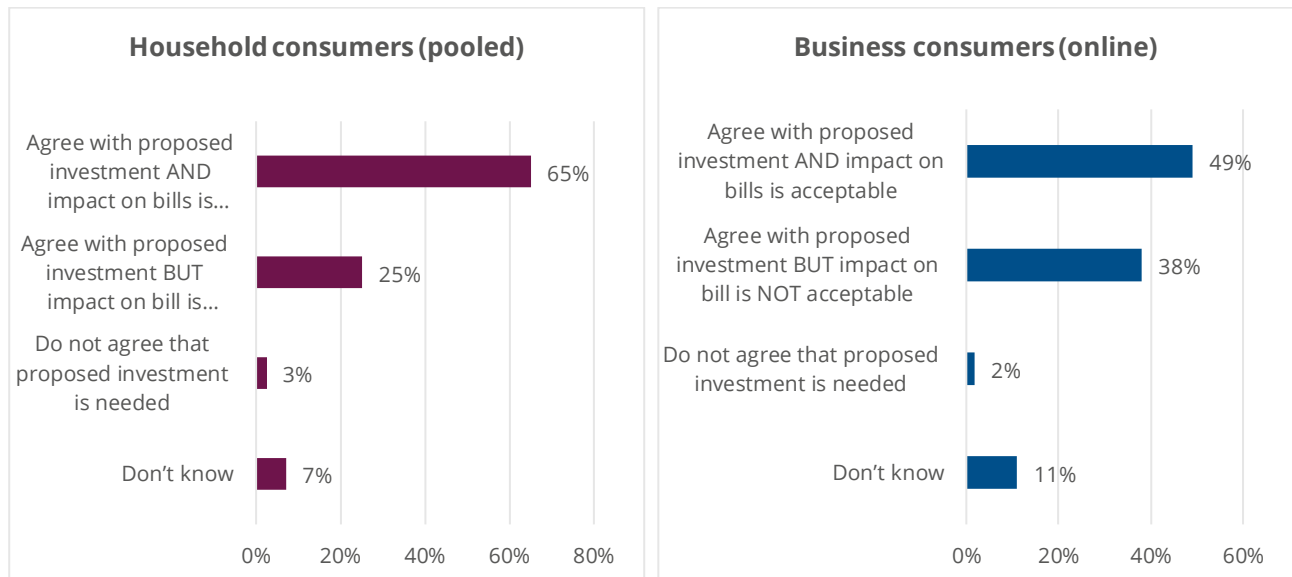
This investment area was presented as part of the additional bill changes in the GT Business Plan, relating to National Grid’s role in providing information to the market to enable an efficient energy market (Figure 3.14).

Figure 3.14: Investment area description – Information provision



Overall, this investment area was consistently ranked as the lowest priority by consumers, with very little distinction between different segments and profiles. Nevertheless, the majority of consumers (90% household and 87% business) indicated that they agree with the proposed investment (Figure 3.15). For household consumers, as shown in the figure, this was split into 65% that indicated the investment and the impact on bill was acceptable, and 25% that indicated that the investment was acceptable but the bill was not. For business consumers, a smaller portion of consumers indicated that they agree with the proposed and the bill impact (49%) and 38% indicated that they agreed with the investment but not the bill impact. Again, very few household and business consumers stated that the investment was not needed (fewer than 3%).

Figure 3.15: Acceptability of information provision investment



Household pooled (online + in-person): n=1,270. Business online: n=163

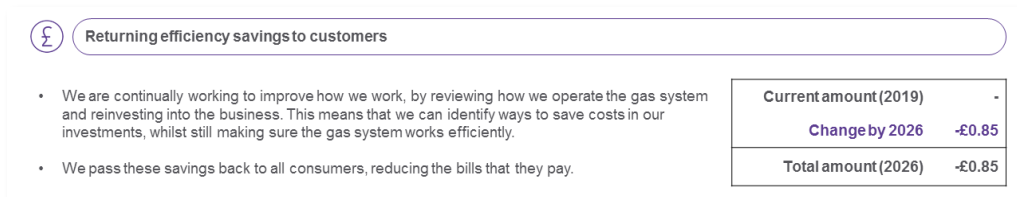
The lower levels of priority for this investment area – and to some extent support for the bill impact – is likely due to the lower familiarity that consumers have with the gas system operator role in information provision. This was apparent in the qualitative research, where even in Stage 3, participants asked for further clarification and explanation of what the investments would actually deliver for consumers. Prior discussion in the Stage 1 research showed that consumers accepted that this investment was important for National Grid, but they were unsure as to how much prominence it should have in the survey, given the emphasis that was being placed on explaining the transmission network and distinguishing it from other parts of the system.

Whilst the findings for this investment area are subject to greater uncertainty concerning consumer understanding – and hence might warrant more effort to educate and inform consumers – the overriding view was that the bill impact was minimal and that National Grid was trusted to deliver what was required in order ensure the smooth running of the gas system.

3.7 Efficiency savings

The final component of the GT Business Plan breakdown set out the efficiency savings that would be returned to consumers, in terms of a reduction in their annual bill (Figure 3.16).

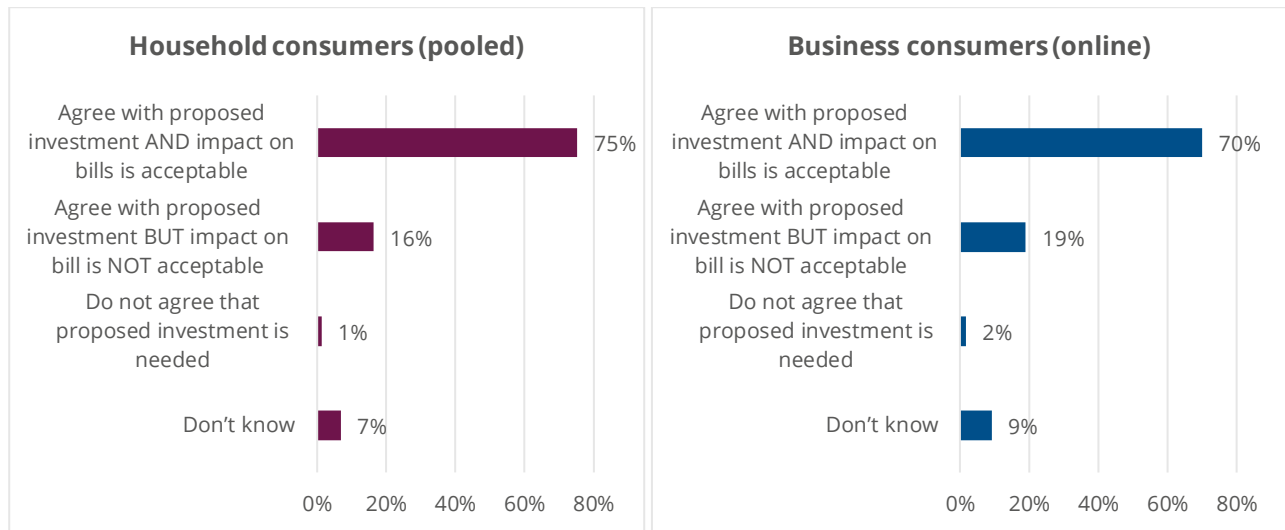
Figure 3.16: Investment area description – efficiency savings



Overall this aspect of the bill impact for consumers was neither high nor low priority (ranked third out of six among consumers). Overall, approximately 90% of household and business consumers indicated that they agreed with National Grid’s proposal, although a proportion (16% household; 19% business) still did not support the bill change amount (Figure 3.17).

A consistent observation throughout the qualitative research was that consumers were very supportive of the savings and these helped to offset some participants’ views that bill impacts were a bit high for other investment areas. This finding helps to reconcile the differences that were observed between the overall acceptability of the GT Business Plan, and the lower levels of acceptability that were seen for the bill impacts associated with the individual investments. Overall it was recognised that there is a balance to be achieved: consumers were keen to point out that National Grid does need to challenge itself and be sure the costs are efficient; however, at the same time, it was apparent that consumers do not want National Grid to ‘cut corners’ either.

Figure 3.17: Acceptability of returning efficiency savings to customers



Household pooled (online + in-person): n=1,270. Business online: n=163

The Stage 3 qualitative research also highlighted that for some consumers the efficiency savings are very small per household (-£0.85 per year). Given this, they took the view that it would be preferable for National Grid to reinvest the overall savings, rather than dividing them up to negligible amounts. Underlying this view was concern about future service levels and investment needs and questions on whether National Grid could actually do more in the Business Plan. For example, some consumers felt that they would rather see a mechanism that drives reinvestment rather than set an efficiency challenge that is too tough. In effect the view was if there is financial resilience in place then the efficiency challenge does not have to be so tough as to risk the outcomes of the plan.

4. Conclusions

4.1 Summary

The acceptability testing research for National Grid's RIIO-T2 Gas Transmission (GT) Business Plan used a combination of quantitative and qualitative methods to obtain a robust and representative understanding of consumers' views.

The initial stage of the research featured an iterative test and re-test approach to develop the explanatory material and investment descriptions that were presented to survey respondents and participants in the qualitative research. The purpose was to ensure that this material gave the right level of information to consumers to provide informed views on the acceptability of National Grid's proposals. Feedback from consumers as to the research process was very positive. Most found the survey easy to complete, and sizeable proportions of respondents also stated that survey topic areas were interesting and educational. Similar feedback was provided by qualitative research participants, who felt that it was important for National Grid to engage with end-users over the plans and the impact on consumer bills. Overall, the response across each stage of the research indicates that there was a good level of engagement from consumers and that respondents gave valid and considered responses.

Almost 3,000 household and business end-user consumers participated across the three stage of research, which included 1,270 household respondents and a further 163 business respondents for the GT version of the Stage 2 survey. The overall sample profiles were nationally representative in terms of key consumer characteristics (e.g. age, socio-economic group; or business size and sector) and geographic spread across England, Wales and Scotland. Participants in the qualitative research stages reflected a mix of socio-economic and demographic backgrounds, ensuring that all aspects of the Business Plan acceptability testing provided a full and rounded account of consumer views.

4.2 Main findings

All in all, the main findings from the research show that there is a high level of support for National Grid's proposals for the gas transmission system. Over 80% of business consumers and almost 90% of household consumers stated that the overall plan and bill impact (approximately a 6% increase on current transmission bill) was either "acceptable" or "very acceptable". For household consumers, the acceptability of the Business Plan was largely driven by perceived affordability of the transmission bill. For business consumers, the need to maintain current high levels of reliability was also an important factor alongside the affordability of National Grid's proposals.

The high levels of acceptability are, though, subject to limited changes in overall energy bills. The 'limit' within which the business plan proposals were acceptable is around a 2.1% change in the overall energy bill. For a dual fuel consumer with an average bill (approx. £1,100 per year), this is approx. +£23 on the annual current bill. The 'switching-point' (from "acceptable" to "unacceptable") for the transmission component of the bill for household consumers was about +£11 on top of the current amount paid. For business consumers the equivalent 'switching-point' on the overall bill was +7 percentage points on top of the transmission bill amount. The Business Plan proposal is therefore well within constraints for household consumers (bill impact: +£0.54 per year); while for business consumers there is less headroom with respect

to the switching point threshold (i.e. 6 percentage points% vs. 7 percentage points constraint).

In addition to the high level of overall acceptability, there is also limited variation in the levels of acceptability between different customer segments, in terms of socio-economic and demographic characteristics. The greatest difference for household consumers was observed for the lowest income groups (less than £6k per year). This finding, however, is subject to a relatively small sample size and even these respondents tended not to outright reject National Grid's proposals, but rather, were unsure if the plan was acceptable or not. Lower levels of acceptability were also observed for households that reported difficulty paying utility bills or were behind with payments. Therefore, whilst most viewed National Grid's proposals as affordable, a small proportion of consumers were concerned about overall pressures on household budgets – particularly if other components of the overall energy bill were also to increase. The differences from the overall sample results are, though, not particularly great, and the overall level of acceptability was still above 80% of consumers.

For the most part, consumers also viewed the individual investments in the GT Business Plan as value for money. Typically, high levels of support (around 69% of household consumers and 59% of business consumers) were stated for both the proposed investment and the associated bill impact. Moreover, very few outright rejected the investment proposals (typically 2% or fewer). Overall, investments in safety and reliability were viewed as the top priority by both household and business consumers. After, this though, there was less distinction in the ranking of other investments (external hazards; future energy system; environment and local communities). Given the overall levels of support for each investment, though, the priority ranking across the range of investment areas is of secondary relevance.

It is also evident that consumers expect National Grid to be cost-efficient in its investments and associated bill impacts. However, there does not appear to be a strong appetite amongst consumers for significant bill reductions if the trade-off was to compromise either current and/or future safety and reliability in the system. Indeed, consumers typically recognised that increased levels of investment were needed by National Grid to meet future needs and demands on the transmission system, and in order to protect the environment and further reduce carbon emissions from operations.

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